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POLICY DEPARTMENT **A**  
ECONOMIC AND SCIENTIFIC POLICY

Economic and Monetary Affairs

Employment and Social Affairs

Environment, Public Health  
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# Public Health in the EU: State-of-Play and Key Policy Challenges

In-depth Analysis for the ENVI Committee



**DIRECTORATE GENERAL FOR INTERNAL POLICIES**  
**POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY**

# **Public Health in the EU: State-of-Play and Key Policy Challenges**

## **IN-DEPTH ANALYSIS**

### **Abstract**

Citizen's health is a core value of the EU (Art.168, TFEU). While EU public health policy complements national policies, it encourages cooperation across countries and facilitates coordination. Particularly, EU public health policy generates economies of scale by pooling resources to tackle common challenges, such as pandemics or the risk factors associated with chronic diseases. The EU brings added value in fostering research and improving health outcomes through frameworks such as Horizon2020 and the third multi-annual Health Programme. This document was provided by Policy Department A in view of the Hearings of Commissioner-Designates of the Environment, Public Health and Food Safety Committee (ENVI).

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## LIST OF ABBREVIATIONS

<b>AMR</b>	Antimicrobial Resistance
<b>ATMPs</b>	Advanced Therapy Medicinal Products
<b>COPD</b>	Chronic Obstructive Pulmonary Disease
<b>CVD</b>	Cardiovascular Disease
<b>ECDC</b>	European Centre for Disease Prevention and Control
<b>ECHI</b>	European Community Health Indicators
<b>EIP-AHA</b>	European Innovation Partnership on Active and Healthy Ageing
<b>EUROPLAN</b>	European Project for Rare Diseases National Plans Development
<b>EU2020</b>	Europe 2020 Strategy
<b>GDP</b>	Growth Domestic Product
<b>HTA</b>	Health Technology Assessment
<b>MDR-TB</b>	Multidrug Resistant Tuberculosis
<b>NCD</b>	Non-communicable disease
<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>SARS</b>	Severe Acute Respiratory Syndrome
<b>SIP</b>	Social Investment Package for Growth and Cohesion
<b>TB</b>	Tuberculosis
<b>TFEU</b>	Treaty on the Functioning of the European Union
<b>UN</b>	United Nation
<b>WHO</b>	World Health Organisation

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## EXECUTIVE SUMMARY

### Background

European countries have faced major gains in population health in recent decades, resulting in an increased life expectancy and better access to care and quality of care. Mortality rates following, for example, a heart attack or a stroke, have sharply decreased. Notably, there is a transition from 'acute conditions' to 'chronic conditions'<sup>1</sup>. Pressure on health and social systems is therefore building up and is expected to further increase due to demographic changes, reforms of healthcare systems and the burden of chronic diseases. Moreover, new threats such as (re)emerging infectious diseases and antimicrobial resistance pose additional challenges to Member States and the EU.

EU Member States are facing a difficult economic situation that is calling into question the sustainability of the European social welfare model, as a whole, and necessitating even greater cost-effectiveness of health systems and its deliverables. In fact, the sizeable share of public money that is devoted to health and the ever-increasing cost pressures and demands to cut public expenditure, put health systems at the heart of the policy debate<sup>2</sup>.

In February 2013, the European Commission adopted the 'Social Investment Package (SIP) for Growth and Cohesion'<sup>3</sup> as a new policy framework to reform and strengthen EU social protection and health systems and, transversally, to mainstream health in policies affecting the social determinants of health through the development of integrated approaches: improving cost-efficiency through sound innovation, investing in human capital and reducing inequalities in health.

The EU will support reforms through the European Semester process and through its funding instruments, e.g. Horizon 2020 Health Research and Innovation and the EU multi-annual Health programmes (see Tables 1 and 2, Annex II). Key challenges analysed in this document, i.e. lifestyle and related risk factors for chronic diseases, the spread of infectious diseases – especially HIV, TB, Hepatitis, antimicrobial resistance and healthcare-associated infections – are fully aligned with the 3<sup>rd</sup> Health Programme priorities for 2014-2020 (see table 1, Annex II). Other additional policy challenges, either directly or indirectly related to the EU public health policy agenda, are described in Annex I and include the use of illicit drugs, cross-border healthcare, eHealth practices and solutions, and new technologies, therapies and treatments.

### Aim

The aim of this document is to provide an overview of the state-of-play of public health in the EU and current challenges, and sets out how these are being addressed through the EU institutional frameworks, its legislation and policy programmes. The content of this document is by no means exhaustive, but it provides a snapshot and illustrative examples of issues that are currently on the EU policy agenda.

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<sup>1</sup> European Society of Cardiology, 20 August 2014. See: <http://www.escardio.org/about/press/press-releases/pr-14/Pages/heart-disease-stroke-decline-europe.aspx?hit=dontmiss>.

<sup>2</sup> Health at a Glance: Europe 2013, OECD. See: <http://www.oecd.org/els/health-systems/Health-at-a-Glance-2013.pdf>.

<sup>3</sup> Towards Social Investment for Growth and Cohesion – including implementing the European Social Fund 2014-2020, COM(2013) 83 final. See: <http://ec.europa.eu/social/BlobServlet?docId=9761&langId=en>.

# 1. HEALTH IN THE EU: STATE-OF-PLAY

A number of developments have changed the public health landscape in Europe. Most importantly, these include demographic changes and the impact of the economic crisis on health budgets, particularly those related to prevention and health promotion. Various policies and actions have been put in place to address the current public health situation.

## 1.1 Ageing populations: one of the greatest challenges of the 21st century

During the past decades, major progress has been made in the area of public health as a result of key achievements in European health research and medicine, improved living standards and levels of education, better nutrition, and better access to high quality healthcare<sup>4</sup>. The result of economic development and successes in public health and health care has resulted in an increase in **life expectancy**. Life expectancy at birth in the EU-28 is generally higher compared to most other regions of the world, and is expected to further increase (see Figure I, Annex 2). In 2012, the average life expectancy at birth in the EU-28 was 80.3 years, reaching 83.1 years for women and 77.5 years for men – with some disparities between countries<sup>5</sup>.

At the same time, **fertility** has been steadily declining in the EU since the mid-1960s and is currently, in particular, decreasing in Eastern and Southern Europe (see Figure 2, Annex 2)<sup>6,7</sup>. The share of older people is therefore growing, and is already greater than the proportion of children in the population, i.e. 23 % of elderly people compared to 16 % children in 2012<sup>8</sup>. This development will fuel rising rates of chronic diseases, as these mostly affect the elderly (see Section 2.1). By 2060, the share of people in the population who are over 65 years of age will more than double in number, with an associated increase in neurodegenerative diseases, such as Alzheimer and other dementia<sup>9</sup>. Since the older-age groups in the population are the largest recipients of health and long-term care, they are putting increasing pressure on health and social welfare systems, which will need to be adapted in order to provide adequate care and remain financially sustainable.

Furthermore, as the share of older people is increasing, the number of deaths per year is also expected to rise as compared to the number of births. This will result in a negative natural change, which cannot be excluded in the future. This will result in a negative natural change – more deaths than births –, which cannot be excluded in the future. In this event, the extent of population decline or population growth is likely to depend on the contribution made by migration – this is already the case in several EU Member States. During 2012, while around 2.7 million people were reported to have left the EU-27, nearly

<sup>4</sup> Improving health for all European EU citizens, European Commission, 1 October 2013. See: [http://ec.europa.eu/health/health\\_policies/publications/index\\_en.htm](http://ec.europa.eu/health/health_policies/publications/index_en.htm).

<sup>5</sup> Mortality and life expectancy statistics, Eurostat, May 2014. Looking at the extremes of the ranges for life expectancy at birth, a woman born in 2012 is expected to live between 77.9 years (Bulgaria) and 85.5 years (Spain), a range of 7.6 years. A man born in 2012 can be expected to live between 68.4 years (Lithuania) and 79.9 years (Sweden), a range of 11.5 years. See: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Mortality\\_and\\_life\\_expectancy\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Mortality_and_life_expectancy_statistics)

<sup>6</sup> [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Fertility\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Fertility_statistics).

<sup>7</sup> Fertility statistics, Eurostat, 3 June 2014: the lowest fertility rates in 2012 were recorded in Portugal, Poland, Romania, Spain, Hungary, Slovakia and Greece (all around 1.3 live births per woman). Some of these Member States were particularly affected by the financial and economic crisis. See: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Fertility\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Fertility_statistics).

<sup>8</sup> Population ageing and development 2012 – wall chart, United Nations. Available at: <http://www.un.org/en/development/desa/population/publications/ageing/population-ageing-development-2012.shtml>.

<sup>9</sup> Help wanted Providing and Paying for Long-Term Care, OECD 2011 Paper. See: <http://www.oecd.org/els/health-systems/helpwantedprovidingandpayingforlong-termcare.htm>.



3.4 million people immigrated to one of the EU Member States. The number of people newly arriving in the EU was thus higher than the share leaving, and this positive net migration is believed to be one of the main drivers of current population growth in the EU<sup>10</sup>.

The EU has put a wide range of policy frameworks and measures in place to address the issue of ageing populations. For example, the European Innovation Partnership on active and healthy ageing (EIP-AHA) is a collaborative partnership which aims to improve older people's lives, helping them to contribute to society, and reducing pressure on health and care systems<sup>11</sup>. The Europe 2020 strategy acknowledges that addressing ageing populations is crucial in order to reach its objectives for smart and inclusive growth<sup>12</sup>.

## 1.2 Impact of the economic crisis on public health

In the decade before the crisis, health was one of the fastest growing spending items for governments in most Member States, considerably outpacing GDP growth<sup>13</sup>. However, **health budgets**, particularly those related to prevention and health promotion, have been dramatically cut during the past few years. Countries that have reduced their healthcare budgets in response to the crisis include: Bulgaria, Estonia, Hungary, Ireland, Italy, Greece, Latvia, Romania, Portugal and Spain (see Figure 3, Annex 2)<sup>14</sup>. The OECD recently reported that *"health spending starts to rise but remains weak in Europe"*<sup>15</sup> and the WHO emphasised that *"health systems and public health in general are not a drain on resources but an investment in health and wealth – that is in the health of the population and in economic growth"*<sup>16</sup>. Various bodies such as the European Commission, the WHO, and the OECD have analysed the effects of the crisis and reduced budgets on health outcomes and health systems in Europe in order to develop adequate frameworks for integrated action.

Findings of such studies include, for example, a correlation between rises in unemployment and debt, and significant short-term increases in mental health disorders such as depression and suicide (see Figure 4, Annex 2)<sup>17</sup>. Moreover, it is likely that there will be negative effects on health in the longer term, particularly if the number of long-term unemployed people continues to grow, if social safety nets experience further cutbacks, and if there are changes in access to much needed healthcare and services<sup>18</sup>.

<sup>10</sup> Migration and migrant population statistics, Eurostat May 2014. See: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Migration\\_and\\_migrant\\_population\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Migration_and_migrant_population_statistics). Germany reported the largest number of immigrants in 2012, followed by the United Kingdom, Italy, France and Spain. Spain reported the highest number of emigrants in 2012, followed by the United Kingdom, France and Poland. A total of 14 of the EU-27 Member States reported more immigration than emigration in 2012. However, in Bulgaria, the Czech Republic, Ireland, Greece, Spain, Cyprus, Poland, Portugal, Romania and the three Baltic Member States, emigrants outnumbered immigrants, as they did in Croatia.

<sup>11</sup> [http://ec.europa.eu/health/ageing/innovation/index\\_en.htm](http://ec.europa.eu/health/ageing/innovation/index_en.htm).

<sup>12</sup> [http://ec.europa.eu/health/europe\\_2020\\_en.htm](http://ec.europa.eu/health/europe_2020_en.htm).

<sup>13</sup> Health at a Glance: Europe 2013, OECD. See: <http://www.oecd.org/els/health-systems/Health-at-a-Glance-2013.pdf>.

<sup>14</sup> Health policy responses to the financial crisis in Europe, WHO Policy Summary 5, WHO, 2012. See: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0009/170865/e96643.pdf](http://www.euro.who.int/_data/assets/pdf_file/0009/170865/e96643.pdf).

<sup>15</sup> OECD Health Statistics Data, 2014, see <http://www.oecd.org/health/health-systems/health-data.htm>.

<sup>16</sup> See Josep Figueras and Martin Mc Kee, Health Systems, Health, Wealth and Societal Well-Being : Assessing the case for investing in health systems, European Observatory on Health Systems and Policy Series, WHO 2012. See: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0009/83997/E93699.pdf](http://www.euro.who.int/_data/assets/pdf_file/0009/83997/E93699.pdf).

<sup>17</sup> Impact of economic crisis on mental health, WHO European office, 2011. See: [http://www.euro.who.int/data/assets/pdf\\_file/0008/134999/e94837.pdf](http://www.euro.who.int/data/assets/pdf_file/0008/134999/e94837.pdf).

<sup>18</sup> Health, health systems and economic crisis in Europe. Impact and policy implications, WHO Regional Office for Europe, 2013.: [http://www.euro.who.int/data/assets/pdf\\_file/0011/186932/Health-and-economic-crisis-in-Europe4.pdf](http://www.euro.who.int/data/assets/pdf_file/0011/186932/Health-and-economic-crisis-in-Europe4.pdf).

Sudden significant reductions in healthcare budgets, growing unemployment and poverty rates are likely to increase **health inequalities** – not only between European countries but also within countries. Investing in health as a way of reducing inequalities for socio-economic cohesion and improving growth is crucial<sup>19</sup>. Active labour market programmes that keep and reintegrate workers in jobs can mitigate some of the adverse health effects of economic downturns<sup>20</sup>.

### 1.3 EU policy response towards better health

The Europe 2020 Strategy, launched in 2010 as the EU's 10-year strategy for smart, sustainable and inclusive growth, acknowledges that good health is a prerequisite for smart and inclusive growth<sup>21</sup>. Improving public health in the EU requires action across sectors and the involvement of stakeholders from different levels.

An important document to further translate this into action was adopted in February 2013, when the Commission published its Social Investment Package (SIP)<sup>22</sup>. The SIP was proposed by the European Commission as a new policy framework to reform and strengthen EU social protection and health systems and, transversally, to mainstream health in policies affecting the social determinants of health through the development of integrated approaches. Based on the recommendations of the SIP, Member States have started to include health systems reform in their National Reform Programmes that are published as part of the European Semester<sup>23</sup>.

The SIP was accompanied by various Commission Staff working documents, one of them being "Investing in Health", which describes four objectives specifically focusing on health:

- a. reducing inequalities in health** towards reaching the Europe 2020 poverty and social exclusion target;
- b. investing in health through frameworks for integrated action and adequate EU financing instruments for investing in health** such as Horizon 2020 and the new 3<sup>rd</sup> Health programme for 2014-2020 (See Table I in ANNEX 2);
- c. improving cost-efficiency through sound innovation** such as Health Technology Assessment (HTA), e-Health and the European Community Health Indicators (ECHI) to measure health systems performance;
- d. health as an investment in human capital** by contributing to employability and enabling people to remain active for longer, promoting good health and investing in the health workforce sector.

The third EU Health Programme (2014-2020) addresses the impacts of the financial crisis as a stronger emphasis is put on the need to identify disease prevention and health promotion activities that are cost-effective, and one of its operational objectives is to develop tools and mechanisms at EU level to address shortages of resources (human and financial). Improving the sustainability of health systems is a key priority too<sup>24</sup>.

<sup>19</sup> Understanding the Social Investment package and Social Innovation, EuroHealthNet, February 2013. See: <http://eurohealthnet.eu/sites/eurohealthnet.eu/files/publications/Understanding%20the%20Social%20Investment%20Package.pdf>.

<sup>20</sup> Idem. The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis. Lancet July 2009. See <http://www.cadca.org/files/resources/suicidestudy.pdf>.

<sup>21</sup> Europe 2020 – for a healthier EU – European Commission [http://ec.europa.eu/health/europe\\_2020\\_en.htm](http://ec.europa.eu/health/europe_2020_en.htm).

<sup>22</sup> <http://ec.europa.eu/social/BlobServlet?docId=9761&langId=en>.

<sup>23</sup> [http://ec.europa.eu/europe2020/making-it-happen/index\\_en.htm](http://ec.europa.eu/europe2020/making-it-happen/index_en.htm).

<sup>24</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0282&from=EN>.

Furthermore, the new research programme, Horizon 2020, addresses the current EU context since EUR 1.200 million will be invested to improve, for example, understanding of the causes and mechanisms underlying healthy ageing and diseases, and to support older persons to remain active and healthy<sup>25</sup>. For more information see Table 1 and 2 in Annex 2.

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<sup>25</sup> <http://ec.europa.eu/programmes/horizon2020/>.

## 2. KEY EU HEALTH POLICY CHALLENGES

This section highlights three key public health issues and challenges for Europe that will need to be addressed during the next legislative period. These include the prevention and control of chronic diseases, the spread of infectious diseases, resistance against antimicrobials such as antibiotics, and the prevalence of rare diseases in the EU. Cross-cutting issues, such as ageing populations, cuts in health budgets, increasing migration, and rising levels of health inequalities, will also be addressed throughout the section.

### 2.1 Increasing burdens of chronic diseases

Chronic diseases represent a major share (77 %) of the total burden of disease in Europe and are responsible for 86 % of all deaths (see Figure 5, Annex 2)<sup>26,27</sup>. They affect more than 80 % of people aged 65 years and older, but are increasingly common among younger people as well. Moreover, the number of people with multiple chronic diseases, or co-morbidities, is growing and is causing a multiplier effect on the burden of disease – which is currently around 50 % of the burden of disease in most OECD countries, and on management costs<sup>28</sup>. At the moment, around EUR 700 billion are spent in the European Union each year on chronic diseases, that can represent 70-80 % of a country's total health expenditure<sup>29,30,31,32</sup>.

The rises in chronic diseases are putting an increasing strain on health and social systems in the EU and on the health and wellbeing of EU citizens. Additionally, the main challenge is two-fold: on the one hand there is upward pressure on public spending, e.g. social welfare and healthcare, due to greater demands with clinicians facing increasing numbers of patients with multiple chronic conditions and the high costs of technological progress; on the other hand the accessibility and quality of care should be maintained<sup>33</sup>.

Chronic diseases cannot be ignored – particularly, since the four main chronic diseases together, i.e. cardiovascular disease, cancer, diabetes and chronic respiratory diseases, kill three in five people worldwide<sup>34</sup>.

<sup>26</sup> Tackling Chronic Disease in Europe: Strategies, interventions and challenges. World Health Organization, on behalf of the European Observatory on health Systems and Policies, 2010. Available at: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0008/96632/E93736.pdf](http://www.euro.who.int/_data/assets/pdf_file/0008/96632/E93736.pdf).

<sup>27</sup> Action plan for implementation of the European Strategy for the Prevention and Control of Noncommunicable diseases 2012-2016, WHO Regional Office for Europe, 2013. See: <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/cancer/publications/2012/action-plan-for-implementation-of-the-european-strategy-for-the-prevention-and-control-of-noncommunicable-diseases-20122016>.

<sup>28</sup> Responding to the Growing Cost and Prevalence of People with Multiple Chronic Conditions. Presentation by Prof Gerard Anderson. Available at: <http://www.oecd.org/health/health-systems/48245231.pdf>.

<sup>29</sup> The 2012 ageing report: Economic and budgetary projections for the 27 EU Member States (2010-2060). European Commission, 2012. Available at: [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2012/pdf/ee-2012-2\\_en.pdf](http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-2_en.pdf).

<sup>30</sup> The 2014 EU Summit on chronic diseases: Conference conclusions. Brussels, 3-4 April 2014. Available at: [http://ec.europa.eu/health/major\\_chronic\\_diseases/docs/ev\\_20140403\\_mi\\_en.pdf](http://ec.europa.eu/health/major_chronic_diseases/docs/ev_20140403_mi_en.pdf).

<sup>31</sup> Investing in health – Commission staff working document – published in February 2013 as part of the Social Investment Package for growth and cohesion, see: [http://ec.europa.eu/health/strategy/policy/index\\_en.htm](http://ec.europa.eu/health/strategy/policy/index_en.htm).

<sup>32</sup> Kamil Dybczak, Bartosz Przywara. European Economy. Economic papers 400. February 2010. The role of technology in health care expenditure in the EU.: 7. Available from: [http://ec.europa.eu/economy\\_finance/publications/economic\\_paper/2010/ecp400\\_en.htm](http://ec.europa.eu/economy_finance/publications/economic_paper/2010/ecp400_en.htm).

<sup>33</sup> Ageing and welfare state policies – European Commission, 16 April 2014. See [http://ec.europa.eu/economy\\_finance/structural\\_reforms/ageing/index\\_en.htm](http://ec.europa.eu/economy_finance/structural_reforms/ageing/index_en.htm).

<sup>34</sup> Assessment of global megatrends – an update. Global megatrend 3: changing disease burdens and risk of pandemics, European Environment Agency, 2014. Available at: <http://www.eea.europa.eu/publications/global-megatrends-update-3>.

Even though overall mortality rates due to **cardiovascular disease** (CVD), such as stroke and ischemic heart disease, are decreasing, it is still the main cause of death (40 %) in the EU, especially in central and Eastern Europe. Moreover, the cost to the European Union economies linked to CVD is not decreasing and is currently estimated to be EUR 196 billion a year, i.e. 54 % is due to health care costs, 24 % to productivity losses and 22 % to the informal care of people with CVD<sup>35</sup>. Risk factors that are associated with increased rates of CVD are stress and depression, intake of unhealthy foods, obesity, physical inactivity, tobacco use and alcohol consumption.

In 2012, 2.6 million people were newly diagnosed with **cancer** in the European Union (76% of the European total) and 1.26 million people died that year because of the disease and its complications. More than half of the overall burden of cancer in the EU is due to breast cancer (13.8 %), prostate cancer (13.7 %), colorectal cancer (13 %) and lung cancer (11.8 %) – lung cancer is by far the most common cause of death (21 %)<sup>36</sup>. Tobacco smoking is the single most important risk factor for cancer, particularly lung cancer. The number of smokers in the EU is, despite increasing efforts, still the highest among all WHO regions – 28 % of the overall population and 29 % of people aged 15-24 years smoke<sup>37</sup>. To address this situation, the EU has taken various tobacco control measures in the form of legislation<sup>38</sup>, recommendations<sup>39</sup> and information campaigns<sup>40</sup>. Additionally, high taxes on tobacco products are extremely effective in reducing tobacco use, particularly among young people, which has been addressed by EU legislation<sup>41</sup> as well. Excessive alcohol consumption, inappropriate diets, obesity and insufficient physical activity are other risk factors that have an impact on the prevalence of cancer.

Incident rates of **diabetes** are also showing worrying trends; not only because the number of people having diabetes in the EU has exploded during the past decade and is expected to continue to rise (the number of people living with diabetes will rise from 33 million in 2010 to 38 million in 2030), but also because the disease has started to appear earlier in life due to lifestyle changes<sup>42</sup>. The problem, which is largely due to the growing prevalence of type II diabetes, is further exacerbated by the growing obesity problem throughout Europe. According to the latest Eurostat data, more than half of the EU population is currently overweight or obese<sup>43</sup>. Concerning the costs related to diabetes, in 2011, most countries in the WHO European region predicted to spend in excess of 9 % of their total health expenditure on diabetes. However, these estimates of the costs of diabetes are, like for the other chronic diseases, considered to be underestimates due to the lack of consideration and unawareness of the indirect costs associated with diabetes and its complications<sup>44</sup>.

<sup>35</sup> European Cardiovascular Disease Statistics, 2012 Edition. European Heart Network and European Society of Cardiology, September 2012. Available at: <http://www.ehnheart.org/cvd-statistics.html>.

<sup>36</sup> Cancer incidence and mortality patterns in Europe: Estimates for 40 countries in 2012. J. Ferlay et al. European Journal of Cancer (2013) 49, 1374-1403. Available at: [http://www.ejancer.com/article/S0959-8049\(13\)00007-5/pdf](http://www.ejancer.com/article/S0959-8049(13)00007-5/pdf).

<sup>37</sup> DG SANCO, Tobacco policy. Available at: [http://ec.europa.eu/health/tobacco/policy/index\\_en.htm](http://ec.europa.eu/health/tobacco/policy/index_en.htm).

<sup>38</sup> Directive 2014/40/EU on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products and repealing Directive 2001/37/2014, L 127/1, see : <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003L0033>.

<sup>39</sup> Council Recommendation (2003/54/EC) on the Prevention of Smoking and on Initiatives to improve tobacco control, see: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0054&from=EN>.

<sup>40</sup> [http://ec.europa.eu/health/tobacco/ex\\_smokers\\_are\\_unstoppable/index\\_en.htm](http://ec.europa.eu/health/tobacco/ex_smokers_are_unstoppable/index_en.htm).

<sup>41</sup> Council Directive 2010/12/EU on the structure and rates of excise duty applied on manufactured tobacco. See: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0012&from=EN>.

<sup>42</sup> The Global burden of chronic diseases, WHO, 2012 see [http://www.who.int/nutrition/topics/2\\_background/en/](http://www.who.int/nutrition/topics/2_background/en/).

<sup>43</sup> Overweight and obesity – BMI statistics, Eurostat, Data from November 2011. Available at: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Overweight\\_and\\_obesity\\_-\\_BMI\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Overweight_and_obesity_-_BMI_statistics).

<sup>44</sup> Diabetes – The Policy Puzzle: Is Europe Making Progress? Third Edition, 2011. Available at: [http://ec.europa.eu/health/major\\_chronic\\_diseases/docs/policy\\_puzzle\\_2011.pdf](http://ec.europa.eu/health/major_chronic_diseases/docs/policy_puzzle_2011.pdf).

**Chronic respiratory diseases**, such as asthma, sleep apnoea and COPD, is the fourth most common chronic disease group in Europe. In Europe, around 30 million children and adults younger than 45 years of age have asthma – with the UK and Ireland having some of the highest rates of asthma in the world. Of all adults aged over 40 years, 5-10 % have COPD, with a higher prevalence among men. Key risk factors contributing to the development of chronic respiratory diseases include tobacco smoke, i.e. about 40-50 % of lifelong smokers will develop COPD, and outdoor and indoor air pollution

Apart from risk factors such as alcohol consumption, unhealthy diets, physical inactivity and smoking, the chances of developing a chronic disease are inversely related to socioeconomic status, e.g. income, education, gender and ethnic differences. Therefore, increasing rates of chronic diseases are responsible for many of the growing **health inequalities** in Europe. A recent report by the European Commission found associations between risk factors such as tobacco use and obesity and socioeconomic circumstances, showing that the lack of control, higher levels of stress, lack of security and reduced capabilities to influence one's life, have a strong influence on health outcomes and health-related behaviours (see Figure 6, Annex 2)<sup>45</sup>. Another study showed that the rise in obesity is generally more severe among those with a lower income or lower level of education, or among certain minority ethnic groups<sup>46</sup>.

The relationships between chronic diseases and risk factors that are mainly related to lifestyle and behaviour are clear, and research shows that at least 80 % of all heart disease, stroke and type 2 diabetes cases, as well as 30 % of all cancer cases, are avoidable by acting on them<sup>47</sup>. However, even though the evidence is available, around 97 % of national health budgets are currently spent on treatment and care, and only 3 % is invested in **preventive measures**<sup>48</sup>. Strengthening targeted prevention measures is therefore key in order to maximise the healthy life years enjoyed by EU citizens.

Apart from the promotion of healthy lifestyles and timely interventions, early diagnosis and the identification of the most efficient and cost-effective ways to manage chronic diseases and their effects are also crucial. The health and social sectors need to develop more responsive, integrated and sustainable approaches embedded within a system that promotes prevention and patient empowerment. Targeted action should be taken at all levels and across policy areas. The use of innovative concepts and techniques, e.g. eHealth, should be further explored to avoid or reduce the need for health care interventions and to support evidence-based approaches and strategies to delay the onset of chronic diseases<sup>49,50</sup>.

Various initiatives have been launched by the EU to address these issues, including the EU Joint Action on addressing chronic diseases and promoting healthy ageing<sup>51</sup>, the EU Joint

<sup>45</sup> Health inequalities in the EU – Final report of a consortium led by Sir Michael Marmot. European Commission, 2013. Available at: [http://ec.europa.eu/health/social\\_determinants/docs/healthinequalitiesineu\\_2013\\_en.pdf](http://ec.europa.eu/health/social_determinants/docs/healthinequalitiesineu_2013_en.pdf).

<sup>46</sup> Obesity and socio-economic groups in Europe: evidence review and implications for action. Robertson, A., Lobstein, T. and Knai, C., European Commission, 2007.

<sup>47</sup> Prevention and control of noncommunicable diseases in the European Region: progress report, WHO, 2014. See: [http://www.euro.who.int/en/health\\_topics/noncommunicable\\_diseases/ncd\\_background\\_information/prevention-and-control-of-noncommunicable-diseases-in-the-european-region-a-progress-report](http://www.euro.who.int/en/health_topics/noncommunicable_diseases/ncd_background_information/prevention-and-control-of-noncommunicable-diseases-in-the-european-region-a-progress-report).

<sup>48</sup> Reflection process: Innovative approaches for chronic diseases in public health and health care systems. Council of the European Union, Brussels, 23 September 2013.

<sup>49</sup> Reflection process: Innovative approaches for chronic diseases in public health and health care systems. Council of the European Union, Brussels, 23 September 2013.

<sup>50</sup> Improving health for all European EU citizens, European Commission, 1 October 2013. See: [http://ec.europa.eu/health/health\\_policies/publications/index\\_en.htm](http://ec.europa.eu/health/health_policies/publications/index_en.htm).

<sup>51</sup> EU Joint action on chronic diseases and healthy ageing. See: [http://ec.europa.eu/health/major\\_chronic\\_diseases/reflection\\_process/index\\_en.htm](http://ec.europa.eu/health/major_chronic_diseases/reflection_process/index_en.htm).



Action on Action against Cancer<sup>52</sup>, and activities conducted as part of the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA)<sup>53</sup>.

## 2.2 Persistent infectious diseases, outbreaks of new threats and resistance against medication

Communicable diseases are less frequent in Europe compared to other regions in the world. However, the issues remain high on the public health agenda due to persistent or re-emerging diseases and the increasing risks of outbreaks of new infectious diseases. The infectious diseases that are of most concern to the EU are tuberculosis (TB) and HIV/AIDS.<sup>54</sup> Moreover, the resistance against antimicrobials, which are used to kill micro-organisms and which are commonly used in healthcare facilities to treat a wide variety of infectious diseases, is of high concern<sup>55</sup>.

**Antimicrobial resistance** (AMR) develops when a microorganism, e.g. bacteria, fungus, virus or parasite, no longer responds to a drug to which it was originally sensitive. Therefore, the standard treatments no longer work, infections are harder or impossible to control and the risk of the spread of infection to others increases. Additionally, the risk of death is greater – in some cases twice that of patients who have infections caused by non-resistant bacteria<sup>56</sup>. The ECDC estimates that, each year, AMR results in 25 000 deaths at a cost of over 1.5 billion EUR due to healthcare expenses and productivity losses in the EU.

Resistance against antimicrobials is not only of concern directly in relation to infectious diseases, but also in other fields of the medicine, since antimicrobials are commonly also used during surgical operations, e.g. for hip replacements, organ transplants, cancer chemotherapy and care of premature babies<sup>57</sup>. Additionally, evidence suggests that antibiotics may no longer be readily available in the near future as medical research is not able to keep-up or stay-ahead of the genetic mutation curve of bacteria. Some newly-developed antibiotics are becoming ineffective and it is disconcerting that, currently, there are no drugs available against some bacteria that have developed resistance to our strongest available antibiotics – that have a fatality rate of up to 50 %<sup>58</sup>.

The EU funds various projects focusing on AMR through its Health Programme and the ECDC plays an important role in monitoring AMR risks. Moreover, in 2011, an action plan against the rising threats from antimicrobial resistance was adopted, which sets out twelve actions for implementation within EU member countries and describes seven areas where the measures are most necessary<sup>59</sup>.

Contrary to the global trend of an overall decrease in newly-reported **HIV** infections, the number of new HIV cases is rising in Europe. In the EU, the disease is predominantly

<sup>52</sup> On cancer, The Commission's priorities included improving cancer information, providing advice through the European Code against Cancer and developing guidelines for cancer screening.  
See: [http://ec.europa.eu/health/major\\_chronic\\_diseases/diseases/cancer/index\\_en.htm](http://ec.europa.eu/health/major_chronic_diseases/diseases/cancer/index_en.htm).

<sup>53</sup> The EIP aims at extending average healthy life years in Europe by 2 years by 2020.  
See: [http://ec.europa.eu/research/innovation-union/index\\_en.cfm?section=active-healthy-ageing](http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing).

<sup>54</sup> Leading causes of death in Europe, fact sheet, WHO Regional Office for Europe, 2012. See: <http://www.euro.who.int/en/data-and-evidence/european-health-report-2012/fact-sheets/fact-sheet-leading-causes-of-death-in-europe>.

<sup>55</sup> Antimicrobial resistance, European Food Safety Authority (EFSA), more info on: <http://www.efsa.europa.eu/en/topics/topic/amr.htm>.

<sup>56</sup> AMR, WHO Global report on surveillance.  
See: <http://www.who.int/drugresistance/documents/surveillancereport/en/>.

<sup>57</sup> [http://ec.europa.eu/health/antimicrobial\\_resistance/policy/index\\_en.htm](http://ec.europa.eu/health/antimicrobial_resistance/policy/index_en.htm).

<sup>58</sup> Borer, A., Lisa Saidel-Odes, M.D., Riesenber, K., et al. Attributable Mortality Rate for Carbapenem-resistant Klebsiella Pneumoniae Bacteremia. Infection Control and Hospital Epidemiology, 2009,30:972-6.

<sup>59</sup> Action plan against the rising threats from Antimicrobial Resistance, COM(2011) 748. Available at: [http://ec.europa.eu/dgs/health\\_consumer/docs/communication\\_amr\\_2011\\_748\\_en.pdf](http://ec.europa.eu/dgs/health_consumer/docs/communication_amr_2011_748_en.pdf).

common among men who have sex with men, and those injecting drugs. Other vulnerable groups include migrants, sex workers and prisoners. Evidence suggests that early diagnosis and timely treatment has significant effects on further transmission. However, 49 % of people living with HIV/AIDS in the EU were diagnosed late in the course of the infection. Moreover, particularly in some Eastern European countries, equal access to antiretroviral therapies and targeted prevention measures are limited and pose a serious concern. Also, stigmatisation, discrimination and legal barriers related to HIV status remain a problem<sup>60</sup>.

The EU has implemented various policy frameworks and actions to tackle these issues. A recently adopted Action Plan on HIV/AIDS in the EU and neighbouring countries, which covers the period 2014-2016, and is a prolongation of the 2009-2013 Action Plan, includes a list of specific actions, linked to an overview of partners who should be involved in its realisation. Moreover, various HIV/AIDS projects are being funded through the EU Health Programme and, since last year, a Joint Action on HIV/AIDS<sup>61</sup> aiming to improve the quality and effectiveness of prevention measures, have been implemented. The HIV/AIDS Think Tank and HIV/AIDS Civil Society Forum were set up as bodies to support policy implementation and to strengthen cooperation among countries, civil society and international organisations.

In 2012, **Tuberculosis** accounted for more than 40 % of all deaths due to communicable diseases in the WHO European region. There were around 40 new TB cases per 100.000 people, which represented around 4 % of the total burden of incidental TB cases in the world<sup>62</sup>. Since the start of the millennium, TB incidence has fallen by about 5 % per year, which is the fastest decline in the world. If trends continue, the Millennium Development Goal target will be reached in Europe<sup>63</sup>. Despite notable progress made through increased efforts and the scaling-up of programmes, TB remains a disease of concern.

The reasons why TB is a disease that should remain on the public health agenda are the increasing incidence rates among migrants, the rise of people being co-infected with TB and HIV/AIDS, and the growing resistance to TB medication. The risk of developing TB is estimated to be between 12 and 20 times greater in people living with HIV/AIDS, and around one third of the HIV-positive people in the world are co-infected with TB<sup>64</sup>. Western and eastern countries in the EU have higher levels and increasing trends of co-infection over time – compared with central EU countries<sup>65</sup>. The incidence of TB cases among migrants has increased from 10 % in 2000 to 25 % in 2010<sup>66</sup>. The resistance against antimicrobial medicines that are used for TB are of particular concern. **Multi-drug resistant TB** (MDR-TB) is virtually present in all countries that are surveyed by the WHO and about 10 % of the MDR-TB cases are resistant to the two most commonly-used and

<sup>60</sup> Action Plan on HIV/AIDS in the EU and neighbouring countries: 2014-2016, Commission Staff Working Document, Brussels 14.3.2014, SWD(2014) 106 final. Available at: [http://ec.europa.eu/health/sti\\_prevention/docs/ec\\_hiv\\_actionplan\\_2014\\_en.pdf](http://ec.europa.eu/health/sti_prevention/docs/ec_hiv_actionplan_2014_en.pdf).

<sup>61</sup> Quality Action: Improving HIV Prevention in Europe, <http://www.qualityaction.eu>.

<sup>62</sup> Leading causes of death in Europe, fact sheet, WHO Regional Office for Europe, 2012. See: <http://www.euro.who.int/en/data-and-evidence/european-health-report-2012/fact-sheets/fact-sheet-leading-causes-of-death-in-europe>.

<sup>63</sup> Tuberculosis surveillance and monitoring in Europe - 2014, ECDC. Available at: <http://www.ecdc.europa.eu/en/publications/Publications/tuberculosis-surveillance-monitoring-Europe-2014.pdf>.

<sup>64</sup> Assessment of global megatrends – an update. Global megatrend 3: changing disease burdens and risk of pandemics, European Environment Agency, 2014. Available at: <http://www.eea.europa.eu/publications/global-megatrends-update-3>.

<sup>65</sup> Tuberculosis and HIV co-infection in European Union and European Economic Area countries. Pimpin L. et al, Eur Respir J, 2011 Dec;38(6):1382-92.

<sup>66</sup> Assessing the burden of key infectious diseases affecting migrant populations in the EU/EEA, ECDC Technical report, May 2014. In the EU, migrant TB cases are mainly from Asia, Africa and other parts of the European region. See: [http://ecdc.europa.eu/en/publications/\\_layouts/forms/Publication\\_DispForm.aspx?List=4f55ad51-4aed-4d32-b960-af70113dbb90&ID=1099](http://ecdc.europa.eu/en/publications/_layouts/forms/Publication_DispForm.aspx?List=4f55ad51-4aed-4d32-b960-af70113dbb90&ID=1099).



important drug classes<sup>67</sup>. The ECDC reported that only one-in-three MDR-TB patients has a successful treatment outcome and that more than half of the patients die, fail treatment or stop treatment. This situation has been compared to the pre-antibiotics era<sup>68</sup>.

In 2008, the ECDC issued, in response to a call from the former EU Health Commission, a Framework Action Plan to fight Tuberculosis in the EU<sup>69</sup>. The framework complements the 'Plan to Stop TB in 18 High-Priority Countries in the WHO European Region 2007-2015' and supports the EU in developing an approach to the fight against TB, covering essential elements that need to be addressed, and offering a plan to translate the EU framework into practical actions at national and community levels. Finally, a surveillance network for tuberculosis was created in 1996 called 'Euro-TB' to coordinate and strengthen the surveillance of TB in the WHO European Region<sup>70</sup>.

Apart from infectious diseases such as HIV/AIDS and TB, newly emerging or re-emerging diseases such as **Ebola**, **SARS** and the **H1N1 influenza virus** are posing threats to Europe too. Particularly, due to increased migration and growing trade and travel connections, the world has become increasingly interconnected, fuelling the risks of outbreaks of infectious diseases. For example, since March 2014, the current Ebola outbreak in Africa has resulted in 3,070 infected people and 1,553 deaths<sup>71</sup>. While the risk of Ebola infection for EU residents and visitors is considered low, the risk of the virus arriving in the EU cannot be excluded until transmission has been eliminated in the affected countries. History has shown that pandemics can occur quickly and are able to rapidly mutate and jump between species – the interface between humans and animals is now the source of 75 % of new diseases.<sup>72</sup> For example, the H1N1 virus killed more than 18,000 people from over 214 countries since it first appeared in April 2009<sup>73</sup>.

While monitoring and alert systems, within and between countries, have been put in place and technology and medicine is advancing to meet new diseases with correct treatments, significant risks still exist. The WHO describes the world as: *"ill-prepared to respond to severe pandemics or any other similar global, sustained and threatening public health emergency"*<sup>74</sup>. The EU has established a number of mechanisms to coordinate EU-wide responses in the areas of preparedness, risk assessment, risk management, risk communication and international cooperation. Moreover, the EU adopted in 2013, a decision on serious cross-border threats to health<sup>75</sup>. Article 128 of the Lisbon Treaty introduced new powers for the EU to take action to complement national policies in order to combat serious cross-border health threats<sup>76</sup>.

<sup>67</sup> Multidrug-resistant tuberculosis (MDR-TB), October 2013 Update, World Health Organization. Available at: [http://www.who.int/tb/challenges/mdr/mdr\\_tb\\_factsheet.pdf?ua=1](http://www.who.int/tb/challenges/mdr/mdr_tb_factsheet.pdf?ua=1).

<sup>68</sup> <http://www.ecdc.europa.eu/en/healthtopics/Tuberculosis/Pages/mdr-xdr-tb.aspx>.

<sup>69</sup> Framework Action Plan to fight Tuberculosis in the European Union, ECDC, Stockholm, February 2008, Available at: [http://ecdc.europa.eu/en/publications/publications/0803\\_spr\\_tb\\_action\\_plan.pdf](http://ecdc.europa.eu/en/publications/publications/0803_spr_tb_action_plan.pdf).

<sup>70</sup> [http://ecdc.europa.eu/en/activities/surveillance/european\\_tuberculosis\\_surveillance\\_network/Pages/index.aspx](http://ecdc.europa.eu/en/activities/surveillance/european_tuberculosis_surveillance_network/Pages/index.aspx)

<sup>71</sup> Data of 26 August 2014, ECDC.

<sup>72</sup> Assessment of global megatrends – an update. Global megatrend 3: changing disease burdens and risk of pandemics, European Environment Agency, 2014. Available at: <http://www.eea.europa.eu/publications/global-megatrends-update-3>.

<sup>73</sup> World Health Organization, Pandemic (H1N1) 2009 – update 100. [http://www.who.int/csr/don/2010\\_05\\_14/en/](http://www.who.int/csr/don/2010_05_14/en/).

<sup>74</sup> Implementation of the International Health Regulations (2005): Report of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009, Sixty-fourth World Health Assembly, 5 May 2011.

<sup>75</sup> Decision No 1082/2013/EU on serious cross-border threats to health, 22 October 2013.

<sup>76</sup> [http://ec.europa.eu/health/preparedness\\_response/policy/index\\_en.htm](http://ec.europa.eu/health/preparedness_response/policy/index_en.htm).

## 2.3 Rare diseases

A disease is considered as a **rare disease** when it affects less than 1 in 2,000 citizens is considered rare<sup>77</sup>, however some rare diseases affect less than 1 in 100,000 people. In the EU, this translates into approximately 6-8 % of the population who suffer from a **rare disease** (between 27 and 36 million people). More than 6 000 rare diseases exist, of which 80% are of genetic origin and which are often chronic and life-threatening<sup>78</sup>.

The lack of specific health policies for rare diseases and the scarcity of the required expertise pose a significant challenge, which often translates into delayed diagnosis and difficult access to care. National health services that are able to diagnose, treat and rehabilitate people with rare diseases vary greatly in quality and accessibility across the EU. Misdiagnosis and non-diagnosis, as well as inequalities in terms of access to expert services, are therefore main hurdles to improving the quality of life for thousands of rare disease patients and providing them with the treatments they need<sup>79</sup>. In response to this, the EU has set up European Reference Networks for rare diseases<sup>80</sup>, which serve as research and knowledge centres and allow for sharing, updating and contributing to the latest scientific findings. Moreover, these networks enable patients to be treated in Member States other than their home country, and ensure availability of treatment facilities when necessary.

Another challenge faced by Europe and other regions in the world, is that there is little financial interest from the pharmaceutical industry in developing and marketing products intended for only a small number of patients suffering from (very) rare diseases. These products are therefore called '**orphan medicinal products**'. The EU Orphan Medicinal Product Regulation<sup>81</sup> sets out different incentives to encourage research, development and marketing of medicines to treat, prevent or diagnose rare diseases. As a result, the European Commission has, to date, authorised 106 orphan medicines for the benefit of patients suffering from rare diseases; sponsors responsible for these medicines benefit from incentives such as fee waivers for the regulatory procedures or a 10 year market exclusivity. Moreover, 1059 products have been designated as orphan medicinal products by the EU, for which sponsors who are developing such products benefit from incentives such as protocol assistance<sup>82</sup>. Unfortunately, Member States do not yet ensure full access to each authorised orphan drug approved.

In its Recommendation on action in the field of rare diseases (2009)<sup>83</sup>, the EU recommended Member States to establish and implement, by the end of 2013, national plans to combat rare diseases. These plans continue to guide Member States to structure related actions in their health and social systems, implement relevant initiatives at local, regional and national level, and to define a number of priority actions including follow-up

<sup>77</sup> Regulation (EC) No 141/2000 on orphan medicinal products, L18/1. See: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000R0141&from=EN>.

<sup>78</sup> European Commission, rare diseases, see: [http://ec.europa.eu/health/rare\\_diseases/policy/index\\_en.htm](http://ec.europa.eu/health/rare_diseases/policy/index_en.htm).

<sup>79</sup> Communication on Rare Diseases: Europe's Challenges, COM(2008) 679 final. See : [http://ec.europa.eu/health/ph\\_threats/non\\_com/docs/rare\\_com\\_en.pdf](http://ec.europa.eu/health/ph_threats/non_com/docs/rare_com_en.pdf).

<sup>80</sup> European Commission, European networks of reference for rare diseases. See: [http://ec.europa.eu/health/rare\\_diseases/european\\_reference\\_networks/erf/index\\_en.htm](http://ec.europa.eu/health/rare_diseases/european_reference_networks/erf/index_en.htm).

<sup>81</sup> Regulation (EC) No 141/2000 on orphan medicinal products, L18/1, see <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000R0141&from=EN>.

<sup>82</sup> European Commission, orphan medicinal products. See: [http://ec.europa.eu/health/human-use/orphan-medicines/index\\_en.htm](http://ec.europa.eu/health/human-use/orphan-medicines/index_en.htm).

<sup>83</sup> Council Recommendation on an action in the field of rare diseases (2009/C 151/02), C 151/7. See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:151:0007:0010:EN:PDF>.

mechanisms. To date, and according to the Commission website<sup>84</sup>, 22 Member States have adopted at least one national plan or strategy on rare diseases.

Finally, since 2008, rare diseases have been a priority area for action in the EU public health programmes, and various projects have therefore received funding to conduct work in relevant fields. For example, EUROPLAN<sup>85</sup> (European Project for Rare Diseases National Plans Development) is an initiative that aims to promote and implement national plans or strategies to tackle rare diseases, to share relevant experiences within countries, and to link national efforts with a common strategy at European level. The project received funding from DG SANCO between 2008 and 2011, and continued in 2012 as it is currently receiving funding through the Joint Action on Rare Diseases (EUCERD).

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<sup>84</sup> European Commission, national plans or strategies for rare diseases. See: [http://ec.europa.eu/health/rare\\_diseases/national\\_plans/detailed/index\\_en.htm](http://ec.europa.eu/health/rare_diseases/national_plans/detailed/index_en.htm).

<sup>85</sup> EUROPLAN project website, see <http://www.europlanproject.eu/europlanproject/index.html>.

## REFERENCES

- BLOOMBERG SCHOOL OF PUBLIC HEALTH: Responding to the Growing Cost and Prevalence of People with Multiple Chronic Conditions, Presentation by Prof Gerard Anderson, 2010. Available at: [http://www.oecd.org/health/health\\_systems/48245231.pdf](http://www.oecd.org/health/health_systems/48245231.pdf).
- COUNCIL OF THE EUROPEAN UNION: Reflection process: Innovative approaches for chronic diseases in public health and health care systems, Brussels, 23 September 2013. Available at: [http://ec.europa.eu/health/major\\_chronic\\_diseases/docs/reflection\\_process\\_cd\\_final\\_report\\_en.pdf](http://ec.europa.eu/health/major_chronic_diseases/docs/reflection_process_cd_final_report_en.pdf).
- ECDC: Tuberculosis surveillance and monitoring in Europe, 2014. Available at: [http://www.ecdc.europa.eu/en/publications/Publications/tuberculosis\\_surveillance\\_monitoring-Europe-2014.pdf](http://www.ecdc.europa.eu/en/publications/Publications/tuberculosis_surveillance_monitoring-Europe-2014.pdf).
- ECDC: Assessing the burden of key infectious diseases affecting migrant populations in the EU/EEA, ECDC Technical report, May 2014. Available at: [http://ecdc.europa.eu/en/publications/\\_layouts/forms/Publication\\_DispForm.aspx?List=4f55ad51-4aed-4d32-b960-af70113dbb90&ID=1099](http://ecdc.europa.eu/en/publications/_layouts/forms/Publication_DispForm.aspx?List=4f55ad51-4aed-4d32-b960-af70113dbb90&ID=1099).
- ECDC: Framework Action Plan to fight Tuberculosis in the European Union, Stockholm, February 2008. Available at: [http://ecdc.europa.eu/en/publications/publications/0803\\_spr\\_tb\\_action\\_plan.pdf](http://ecdc.europa.eu/en/publications/publications/0803_spr_tb_action_plan.pdf).
- ECDC: Multidrug- and Extensively Drug Resistant TB, web text. Available at: <http://www.ecdc.europa.eu/en/healthtopics/Tuberculosis/Pages/mdr-xdr-tb.aspx>.
- ECDC: TB Surveillance Network, web text. Available at: [http://ecdc.europa.eu/en/activities/surveillance/european\\_tuberculosis\\_surveillance\\_network/Pages/index.aspx](http://ecdc.europa.eu/en/activities/surveillance/european_tuberculosis_surveillance_network/Pages/index.aspx).
- EEA: Assessment of global megatrends – an update. Global megatrend 3: changing disease burdens and risk of pandemics, 2014. Available at: <http://www.eea.europa.eu/publications/global-megatrends-update-3>.
- EFSA: Antimicrobial Resistance, web text. Available at: <http://www.efsa.europa.eu/en/topics/topic/amr.htm>.
- EMCDDA: Trends and developments, European Drug Report 2014. Available at: <file:///C:/Users/yk/Downloads/TDAT14001ENN.pdf>.
- EUROHEALTHNET: Understanding the Social Investment package and Social Innovation, February 2013. Available at: <http://eurohealthnet.eu/sites/eurohealthnet.eu/files/publications/Understanding%20the%20Social%20Investment%20Package.pdf>.
- EUROPEAN COMMISSION: EU Health Programme, Annual workplan for 2014. Available at: [http://ec.europa.eu/health/programme/events/adoption\\_workplan\\_2014\\_en.htm](http://ec.europa.eu/health/programme/events/adoption_workplan_2014_en.htm).
- EUROPEAN COMMISSION: The 2014 EU Summit on chronic diseases: Conference conclusions, Brussels, 3\_4 April 2014. Available at: [http://ec.europa.eu/health/major\\_chronic\\_diseases/docs/ev\\_20140403\\_mi\\_en.pdf](http://ec.europa.eu/health/major_chronic_diseases/docs/ev_20140403_mi_en.pdf).
- EUROPEAN COMMISSION: Report on advanced therapy medicinal products, Brussels, 28.3.2014, COM(2014) 188 final. Available at: [http://ec.europa.eu/health/files/advtherapies/2014\\_atmp/atmp\\_en.pdf](http://ec.europa.eu/health/files/advtherapies/2014_atmp/atmp_en.pdf).

- EUROPEAN COMMISSION: Action Plan on HIV/AIDS in the EU and neighbouring countries (2014-2016), Commission Staff Working Document, Brussels 14.3.2014, SWD(2014) 106 final. Available at: [http://ec.europa.eu/health/sti\\_prevention/docs/ec\\_hiv\\_actionplan\\_2014\\_en.pdf](http://ec.europa.eu/health/sti_prevention/docs/ec_hiv_actionplan_2014_en.pdf).
- EUROPEAN COMMISSION: Towards Social Investment for Growth and Cohesion – including implementing the European Social Fund 2014-2020, COM (2013) 83 final. Available at: <http://ec.europa.eu/social/BlobServlet?docId=9761&langId=en>.
- EUROPEAN COMMISSION: Health inequalities in the EU, Final report of a consortium led by Sir Michael Marmot, 2013. Available at: [http://ec.europa.eu/health/social\\_determinants/docs/healthinequalitiesineu\\_2013\\_en.pdf](http://ec.europa.eu/health/social_determinants/docs/healthinequalitiesineu_2013_en.pdf).
- EUROPEAN COMMISSION: Investing in health, Commission staff working document, published in February 2013 as part of the Social Investment Package for growth and cohesion, 2013. Available at: [http://ec.europa.eu/health/strategy/policy/index\\_en.htm](http://ec.europa.eu/health/strategy/policy/index_en.htm).
- EUROPEAN COMMISSION: Improving health for all European EU citizens, 1 October 2013. Available at: [http://ec.europa.eu/health/health\\_policies/publications/index\\_en.htm](http://ec.europa.eu/health/health_policies/publications/index_en.htm).
- EUROPEAN COMMISSION: The 2012 ageing report: Economic and budgetary projections for the 27 EU Member States (2010-2060), 2012. Available at: [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2012/pdf/ee-2012-2\\_en.pdf](http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-2_en.pdf).
- EUROPEAN COMMISSION: Diabetes – The Policy Puzzle: Is Europe Making Progress? Third Edition, 2011. Available at: [http://ec.europa.eu/health/major\\_chronic\\_diseases/docs/policy\\_puzzle\\_2011.pdf](http://ec.europa.eu/health/major_chronic_diseases/docs/policy_puzzle_2011.pdf).
- EUROPEAN COMMISSION: Action plan against the rising threats from Antimicrobial Resistance, COM(2011) 748. Available at: [http://ec.europa.eu/dgs/health\\_consumer/docs/communication\\_amr\\_2011\\_748\\_en.pdf](http://ec.europa.eu/dgs/health_consumer/docs/communication_amr_2011_748_en.pdf)
- EUROPEAN COMMISSION: European countries on their journey towards national e-health infrastructures, eHealth Strategies and ICT for Health, Information Society and Media DG, January 2011. Available at: [http://www.ehealth-strategies.eu/report/ehealth\\_strategies\\_final\\_report\\_web.pdf](http://www.ehealth-strategies.eu/report/ehealth_strategies_final_report_web.pdf).
- EUROPEAN COMMISSION: The role of technology in health care expenditure in the EU. Kamil Dybczak, Bartosz Przywara, Economic papers 400: 7, February 2010. Available at: [http://ec.europa.eu/economy\\_finance/publications/economic\\_paper/2010/pdf/ecp400\\_en.pdf](http://ec.europa.eu/economy_finance/publications/economic_paper/2010/pdf/ecp400_en.pdf).
- EUROPEAN COMMISSION: Communication on Rare Diseases: Europe's Challenges, COM (2008) 679 final. Available at: [http://ec.europa.eu/health/ph\\_threats/non\\_com/docs/rare\\_com\\_en.pdf](http://ec.europa.eu/health/ph_threats/non_com/docs/rare_com_en.pdf).
- EUROPEAN COMMISSION: Obesity and socio-economic groups in Europe: evidence review and implications for action. Robertson, A., Lobstein, T. and Knai, C., 2007. Available at: [http://ec.europa.eu/health/ph\\_determinants/life\\_style/nutrition/document/s/ev20081028\\_rep\\_en.pdf](http://ec.europa.eu/health/ph_determinants/life_style/nutrition/document/s/ev20081028_rep_en.pdf).
- EUROPEAN COMMISSION: Europe 2020 – for a healthier EU, web text. Available at: [http://ec.europa.eu/health/europe\\_2020\\_en.htm](http://ec.europa.eu/health/europe_2020_en.htm).
- EUROPEAN COMMISSION: EU 2014-2020 Health Programme, web text. Available at: [http://ec.europa.eu/health/programme/policy/index\\_fr.htm](http://ec.europa.eu/health/programme/policy/index_fr.htm).
- EUROPEAN COMMISSION: EU Horizon 2020 Framework Programme, web text. Available at: [http://ec.europa.eu/research/health/health-research-intro\\_en.html](http://ec.europa.eu/research/health/health-research-intro_en.html).

- EUROPEAN COMMISSION: Antimicrobial resistance, web text. Available at: [http://ec.europa.eu/health/antimicrobial\\_resistance/policy/index\\_en.htm](http://ec.europa.eu/health/antimicrobial_resistance/policy/index_en.htm).
- EUROPEAN COMMISSION: Cross-border care, web text. Available at: [http://ec.europa.eu/health/cross\\_border\\_care/policy/index\\_en.htm](http://ec.europa.eu/health/cross_border_care/policy/index_en.htm).
- EUROPEAN COMMISSION, EU anti-tobacco campaigns, web text. Available at: [http://ec.europa.eu/health/tobacco/ex\\_smokers\\_are\\_unstoppable/index\\_en.htm](http://ec.europa.eu/health/tobacco/ex_smokers_are_unstoppable/index_en.htm).
- European Commission, e-Health, web text. Available at: [http://ec.europa.eu/information\\_society/activities/health/policy/index\\_en.htm](http://ec.europa.eu/information_society/activities/health/policy/index_en.htm).
- EUROPEAN COMMISSION: European networks of reference for rare diseases, web text. Available at: [http://ec.europa.eu/health/rare\\_diseases/european\\_reference\\_networks/erf/index\\_en.htm](http://ec.europa.eu/health/rare_diseases/european_reference_networks/erf/index_en.htm).
- EUROPEAN COMMISSION: Healthy Ageing, web text. Available at: [http://ec.europa.eu/health/ageing/innovation/index\\_en.htm](http://ec.europa.eu/health/ageing/innovation/index_en.htm).
- EUROPEAN COMMISSION: Illicit drugs, Civil Society involvement, web text. Available at: [http://ec.europa.eu/health/drugs/civil\\_society\\_involvement/index\\_en.htm](http://ec.europa.eu/health/drugs/civil_society_involvement/index_en.htm).
- EUROPEAN COMMISSION: National plans or strategies for rare diseases, web text. Available at: [http://ec.europa.eu/health/rare\\_diseases/national\\_plans/detailed/index\\_en.htm](http://ec.europa.eu/health/rare_diseases/national_plans/detailed/index_en.htm).
- EUROPEAN COMMISSION: Neurodegenerative diseases, web text. Available at: [http://ec.europa.eu/health/major\\_chronic\\_diseases/diseases/brain\\_neurological/index\\_en.htm](http://ec.europa.eu/health/major_chronic_diseases/diseases/brain_neurological/index_en.htm).
- EUROPEAN COMMISSION: Rare diseases, web text. Available at: [http://ec.europa.eu/health/rare\\_diseases/policy/index\\_en.htm](http://ec.europa.eu/health/rare_diseases/policy/index_en.htm).
- EUROPEAN COMMISSION, Tobacco policy, web text. Available at: [http://ec.europa.eu/health/tobacco/policy/index\\_en.htm](http://ec.europa.eu/health/tobacco/policy/index_en.htm).
- EU JOINT ACTION ON CANCER. Available at: <http://www.epaac.eu/>.
- EU JOINT ACTION ON RARE DISEASES. Available at: <http://www.eucerd.eu/>.
- EU JOINT ACTION ON CHRONIC DISEASES AND HEALTHY AGEING. Available at: <http://www.chrodis.eu/>.
- EU JOINT ACTION ON HEALTH INEQUALITIES. Available at: <http://www.equityaction-project.eu>.
- EU JOINT ACTION ON IMPROVING HIV PREVENTION IN EUROPE. Available at: <http://www.qualityaction.eu>.
- EUROPEAN INNOVATIVE PARTNERSHIP ON ACTIVE AND HEALTHY AGEING (EIP – AHA). Available at: [http://ec.europa.eu/research/innovation-union/index\\_en.cfm?section=active-healthy-ageing](http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing).
- EUROPEAN JOURNAL OF CANCER: Cancer incidence and mortality patterns in Europe: Estimates for 40 countries in 2012, J. Ferlay et al. European Journal of Cancer (2013) 49, 1374-1403. Available at: [http://www.ejancer.com/article/S0959-8049\(13\)00007-5/pdf](http://www.ejancer.com/article/S0959-8049(13)00007-5/pdf).
- EUROPEAN RESPIRATORY JOURNAL: Tuberculosis and HIV co-infection in European Union and European Economic Area countries, Pimpin L. et al, Eur Respir J, 2011 Dec;38(6):1382-92. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/21737549>.

- EUROPEAN SOCIETY OF CARDIOLOGY: Latest research shows rates of heart disease and stroke continue to decline in Europe, but most people are hospitalized, Press release, 20 August 2014. Available at: <http://www.escardio.org/about/press/press-releases/pr-14/Pages/heart-disease-stroke-decline-europe.aspx?hit=dontmiss>.
- EUROPEAN SOCIETY OF CARDIOLOGY/EUROPEAN HEART NETWORK: European Cardiovascular Disease Statistics 2012, September 2012. Available at: <http://www.ehnheart.org/cvd-statistics.html>.
- EUROPEAN UNION, Regulation No 282/2014 on the establishment of the Third Programme for the Union's action in the field of health (2014 – 2020), 11 March 2014. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0282&from=EN>.
- EUROPEAN UNION: Directive 2014/40/EU on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products, L 127/1. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003L0033>.
- EUROPEAN UNION: Decision No 1082/2013/EU on serious cross-border threats to health, L 293/1, 5 November 2013. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:293:0001:0015:EN:PDF>.
- EUROPEAN UNION: Directive 2011/24/EU on the application of patients' rights in cross-border healthcare, L 88/45. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0045:0065:EN:PDF>.
- EUROPEAN UNION: Council Directive 2010/12/EU on the structure and rates of excise duty applied on manufactured tobacco. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0012&from=EN>.
- EUROPEAN UNION: Council Recommendation on an action in the field of rare diseases (2009/C 151/02), C 151/7. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:151:0007:0010:EN:PDF>.
- EUROPEAN UNION: Regulation (EC) No 1394/2007 on advanced therapy medicinal products, L 324/121. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:324:0121:0137:en:PDF>.
- EUROPEAN UNION: EU Drugs Strategy (2005-2012), Brussels, 22 November 2004, 1507/04. Available at: <http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2015074%202004%20INIT>.
- EUROPEAN UNION: Regulation (EC) No 141/2000 on orphan medicinal products, L18/1, 11 January 2000. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000R0141&from=EN>.
- EUROPEAN UNION: Council Recommendation (2003/54/EC) on the Prevention of Smoking and on Initiatives to improve tobacco control. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0054&from=EN>.
- EUROSTAT: Fertility statistics, 3 June 2014. Available at: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Fertility\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Fertility_statistics).
- EUROSTAT: Mortality and life expectancy statistics, May 2014. Available at: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Mortality\\_and\\_life\\_expectancy\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Mortality_and_life_expectancy_statistics).



- EUROSTAT: Migration and migrant population statistics, May 2014. Available at: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Migration\\_and\\_migrant\\_population\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Migration_and_migrant_population_statistics).
- EUROSTAT: Overweight and obesity – BMI statistics, Eurostat, Data from November 2011. Available at: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Overweight\\_and\\_obesity\\_-\\_BMI\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Overweight_and_obesity_-_BMI_statistics).
- LANCET: The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis, July 2009. Available at: <http://www.cadca.org/files/resources/suicidestudy.pdf>.
- OECD: Health Statistics Data, 2014. Available at: <http://www.oecd.org/health/health-systems/health-data.htm>.
- OECD: Health at a Glance: Europe 2013. Available at: <http://www.oecd.org/els/health-systems/Health-at-a-Glance-2013.pdf>.
- OECD: Help wanted Providing and Paying for Long-Term Care, 2011. Available at: <http://www.oecd.org/els/health-systems/helpwantedprovidingandpayingforlong-termcare.htm>.
- UNITED NATIONS: Population ageing and development 2012. Available at: <http://www.un.org/en/development/desa/population/publications/ageing/population-ageing-development-2012.shtml>.
- WHO: Global report on surveillance, 2014. Available at: <http://www.who.int/drugresistance/documents/surveillancereport/en/>.
- WHO: Multidrug-resistant tuberculosis (MDR-TB), October 2013 Update. Available at: [http://www.who.int/tb/challenges/mdr/mdr\\_tb\\_factsheet.pdf?ua=1](http://www.who.int/tb/challenges/mdr/mdr_tb_factsheet.pdf?ua=1).
- WHO: The Global burden of chronic diseases, 2012. Available at: [http://www.who.int/nutrition/topics/2\\_background/en/](http://www.who.int/nutrition/topics/2_background/en/).
- WHO: Implementation of the International Health Regulations (2005), Report of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009, Sixty-fourth World Health Assembly, WHO, 5 May 2011. Available at: [http://apps.who.int/gb/ebwha/pdf\\_files/WHA64/A64\\_10-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_10-en.pdf).
- WHO: Pandemic (H1N1) 2009 – update 100. Available at: [http://www.who.int/csr/don/2010\\_05\\_14/en/](http://www.who.int/csr/don/2010_05_14/en/).
- WHO/EURO OFFICE: Prevention and control of non-communicable diseases in the European Region: progress report, 2014. Available at: <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/ncd-background-information/prevention-and-control-of-noncommunicable-diseases-in-the-european-region-a-progress-report>.
- WHO/EURO OFFICE: Health, health systems and economic crisis in Europe. Impact and policy implications, 2013. Available at: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0011/186932/Health-and-economic-crisis-in-Europe4.pdf](http://www.euro.who.int/_data/assets/pdf_file/0011/186932/Health-and-economic-crisis-in-Europe4.pdf).
- WHO/EURO OFFICE: Action plan for implementation of the European Strategy for the Prevention and Control of Non-communicable diseases (2012-2016), 2013. Available at: <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/cancer/publications/2012/action-plan-for-implementation-of-the-european-strategy-for-the-prevention-and-control-of-noncommunicable-diseases-20122016>.
- WHO/EURO REGION: Leading causes of death in Europe, fact sheet, 2012. Available at: [http://www.euro.who.int/en/data\\_and\\_evidence/european\\_health\\_report\\_2012/factsheets/fact-sheet-leading-causes-of-death-in-europe](http://www.euro.who.int/en/data_and_evidence/european_health_report_2012/factsheets/fact-sheet-leading-causes-of-death-in-europe).



- WHO/EURO OFFICE: Health policy responses to the financial crisis in Europe. WHO Policy Summary 5, 2012. Available at:  
[http://www.euro.who.int/\\_data/assets/pdf\\_file/0009/170865/e96643.pdf](http://www.euro.who.int/_data/assets/pdf_file/0009/170865/e96643.pdf).
- WHO/EUROPEAN OBSERVATORY ON HEALTH SYSTEMS AND POLICY: Health Systems, Health, Wealth and Societal Well-Being: Assessing the case for investing in health systems, Josep Figueras and Martin Mc Kee, 2012. Available at:  
[http://www.euro.who.int/\\_data/assets/pdf\\_file/0009/83997/E93699.pdf](http://www.euro.who.int/_data/assets/pdf_file/0009/83997/E93699.pdf).
- WHO/EURO OFFICE: Impact of economic crisis on mental health, 2011. Available at:  
[http://www.euro.who.int/\\_data/assets/pdf\\_file/0008/134999/e94837.pdf](http://www.euro.who.int/_data/assets/pdf_file/0008/134999/e94837.pdf).
- WHO/EUROPEAN OBSERVATORY ON HEALTH SYSTEMS AND POLICY: Tackling Chronic Disease in Europe: Strategies, interventions and challenges, 2010. Available at:  
[http://www.euro.who.int/\\_data/assets/pdf\\_file/0008/96632/E93736.pdf](http://www.euro.who.int/_data/assets/pdf_file/0008/96632/E93736.pdf).
- WORLD ECONOMIC FORUM: Global Risks 2013: the danger of Hubris on Human Health, Research by Borer, A., Lisa Saidel-Odes, M.D., Riesenber, K., et al. (Attributable Mortality Rate for Carbapenem-resistant Klebsiella Pneumoniae Bacteremia. Infection Control and Hospital Epidemiology, 2009,30:972-6.). Available at:  
<http://reports.weforum.org/global-risks-2013/view/risk-case-1/the-dangers-of-hubris-on-human-health/>.

*Note: All websites were accessed between 18 August and 16 September 2014.*

## ANNEX 1: BRIEF DESCRIPTION OF OTHER POLICY CHALLENGES

### The use of illicit drugs

Drug abuse is another key public health and social concern across the EU. The worry is not only the 6,500-8,500 drug-related deaths that still occur every year, but also domestic violence, accidents, crimes, illnesses, lost opportunities and reduced productivity, which are the direct consequences of illicit drug abuse. The largest share of the current costs related to treating drug use stem from problems that are linked to the heroin 'epidemics' of the 1980s and 1990s, and these groups thus remain a key focus for interventions. Moreover, this group of drug users is ageing, and their vulnerabilities to a range of other health problems are likely to increase. The overall heroin problem is however decreasing in the EU, and stimulants, synthetic drugs, cannabis and medicinal products are starting to play a bigger part<sup>86</sup>. Additionally, although progress has been made in recent years, drug overdose remains a major cause of avoidable mortality among youth in the EU.

As drug problems are closely related to other health and social problems, the EU has set up two platforms to bring together different stakeholder groups. The Civil Society Forum on Drugs is a platform for information exchanges of views and information between the Commission and civil society organisations, while the European Action on Drugs invites stakeholders from a wide range of sectors and levels to make concrete commitments that aim to increase drug awareness, particularly among youth<sup>87</sup>. The EU Drugs Strategy (2005-2012)<sup>88</sup> aimed to prevent and reduce drug use in Europe, by focusing on reducing its demand and supply.

### Cross-border healthcare

As a result of an increase in the number of patients seeking healthcare across the EU, health professionals working in different EU countries, and new developments in health technologies, European health policies and health systems are increasingly becoming interconnected. To address this development, the Commission adopted in 2011 the Cross-Border Healthcare Directive<sup>89</sup>, which aimed to facilitate the access to cross-border health care and promote cooperation on health care between Member States. It codifies patients' rights to seek treatment in another Member State and sets out rules for e.g. reimbursement of such treatment.

Challenges that are being posed on the EU as a result of the increasing use of healthcare across borders, include ensuring that Member States work closely together in the interest of the patient, maintaining the sustainability of health systems while protecting patients' rights to seek treatment outside their home country, avoiding widening the gap in inequalities in access to high quality care between countries, and meeting patients' expectations<sup>90</sup>; The second Health Programme (see Table 1, Annex II) placed an emphasis on patients' mobility and the provision of cross-border care but did not refer so much to

<sup>86</sup> European Monitoring Centre for Drugs and Drug Addiction, European Drug Report, trends and developments, 2014. See: <file:///C:/Users/yk/Downloads/TDAT14001ENN.pdf>.

<sup>87</sup> European Commission, Illicit drugs, Civil Society involvement. See: [http://ec.europa.eu/health/drugs/civil\\_society\\_involvement/index\\_en.htm](http://ec.europa.eu/health/drugs/civil_society_involvement/index_en.htm).

<sup>88</sup> EU Drugs Strategy (2005-2012), Brussels, 22 November 2004, 1507/04. See: <http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2015074%202004%20INIT>.

<sup>89</sup> Directive 2011/24/EU on the application of patients' rights in cross-border healthcare, L 88/45. See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0045:0065:EN:PDF>.

<sup>90</sup> European Commission, cross-border care. See: [http://ec.europa.eu/health/cross\\_border\\_care/policy/index\\_en.htm](http://ec.europa.eu/health/cross_border_care/policy/index_en.htm).

patients' rights as such. The third Health Programme (2014-2020) on the other hand, mentions topics such as patients' empowerment, health literacy and informed choices, and availability of reliable, independent and user-friendly information in the context of patients' rights in cross-border care.

## **eHealth practices and solutions**

Many EU countries, in the development of telemedicine, e-prescribing, e-referral and e-reimbursement capabilities, are making progress towards modern e-health infrastructures and implementations. Challenges remain to achieve wider implementation at country level and the implementation of a coherent EU approach for overall coordination. Large scale deployment will occur once the pilot phases of current research projects end<sup>91</sup>.

Commitment and leadership by health authorities, on issues related to finance and organisation, are essential elements for the successful deployment of e-health services in order to improve the way healthcare is provided. It needs to be combined with organisational changes and the development of new user skills<sup>92</sup>. The EU support various projects in the field of eHealth, and to ensure that policy making stays informed by the latest developments and information<sup>93</sup>.

## **New technologies, therapies and treatments**

Various new technologies, therapies and treatments are emerging, including gene and cell therapy, tissue engineering, regenerative medicine and the development of nanomedicines. These advanced therapies herald revolutionary treatments of a number of diseases or injuries - such as skin in burns victims, Alzheimer's disease, cancer and muscular dystrophy - and therefore have a huge potential for patients as well as industry. This was acknowledged in 2007 by the EU, when the Regulation on advanced therapies<sup>94</sup> was adopted to guarantee the highest level of health protection of patients, as well as to ensure the free movement of advanced therapy products, to facilitate access to the EU market and to foster the competitiveness of EU companies in the field.

There is significant research in advanced therapies and treatments in the EU. Between 2004 and 2010, approximately 250 distinct advanced therapy medicinal products (ATMPs) were reported – the majority of which are produced by small companies and entities that operate on a non-for-profit basis. The translation of such research into products that will be made available to patients is generally challenging, and only a small fraction (less than a quarter) of the molecules investigated and potential medicines will eventually obtain a marketing authorisation. Additional difficulties include the long production time, small batch sizes, short shelf-lives, realisation of controlled clinical trials and lack of appropriate funding and regulatory expertise. The uncertainties in the return for investment are therefore a major deterrent to investors<sup>95</sup>.

<sup>91</sup> European countries on their journey towards national e-health infrastructures, eHealth Strategies and ICT for Health, Information Society and Media DG, European Commission, January 2011. See: [http://www.ehealth-strategies.eu/report/ehealth\\_strategies\\_final\\_report\\_web.pdf](http://www.ehealth-strategies.eu/report/ehealth_strategies_final_report_web.pdf).

<sup>92</sup> European Commission, e-Health. See: [http://ec.europa.eu/information\\_society/activities/health/policy/index\\_en.htm](http://ec.europa.eu/information_society/activities/health/policy/index_en.htm).

<sup>93</sup> European Commission, eHealth, Coordination. See: [http://ec.europa.eu/health/ehealth/coordination/index\\_en.htm](http://ec.europa.eu/health/ehealth/coordination/index_en.htm).

<sup>94</sup> Regulation (EC) No 1394/2007 on advanced therapy medicinal products, L 324/121. See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:324:0121:0137:en:PDF>.

<sup>95</sup> Report on advanced therapy medicinal products, Brussels, 28.3.2014, COM(2014) 188 final. See: [http://ec.europa.eu/health/files/advtherapies/2014\\_atmp/atmp\\_en.pdf](http://ec.europa.eu/health/files/advtherapies/2014_atmp/atmp_en.pdf).

## ANNEX 2: FIGURES AND TABLES

**Figure 1: Life expectancy at birth, 1980-2012**

	Total						Men						Women					
	1980	1990	2000	2010	2011	2012	1980	1990	2000	2010	2011	2012	1980	1990	2000	2010	2011	2012
EU-28 <sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup>	:	:	:	79.9	80.3	80.3	:	:	:	76.9	77.4	77.5	:	:	:	82.8	83.1	83.1
Belgium <sup>(2)</sup>	73.3	76.2	77.9	80.3	80.7	80.5	69.9	72.7	74.6	77.5	78.0	77.8	76.7	79.5	81.0	83.0	83.3	83.1
Bulgaria <sup>(4)</sup>	71.1	71.2	71.6	73.8	74.2	74.4	68.4	68.0	68.4	70.3	70.7	70.9	73.9	74.7	75.0	77.4	77.8	77.9
Czech Republic	70.4	71.5	75.1	77.7	78.0	78.1	66.9	67.6	71.6	74.5	74.8	75.1	74.0	75.5	78.5	80.9	81.1	81.2
Denmark	74.2	74.9	76.9	79.3	79.9	80.2	71.2	72.0	74.5	77.2	77.8	78.1	77.3	77.8	79.2	81.4	81.9	82.1
Germany	73.1	75.4	78.3	80.5	80.8	81.0	69.6	72.0	75.1	78.0	78.4	78.6	76.2	78.5	81.2	83.0	83.2	83.3
Estonia	69.5	69.9	71.1	76.0	76.6	76.7	64.2	64.7	65.6	70.9	71.4	71.4	74.3	74.9	76.4	80.8	81.3	81.5
Ireland	:	74.8	76.6	80.8	80.9	80.9	:	72.1	74.0	78.5	78.6	78.7	:	77.7	79.2	83.1	83.0	83.2
Greece	75.3	77.1	78.2	80.6	80.8	80.7	73.0	74.7	75.5	78.0	78.0	78.0	77.5	79.5	80.9	83.3	83.6	83.4
Spain	75.4	77.0	79.3	82.4	82.6	82.5	72.3	73.4	75.8	79.2	79.5	79.5	78.4	80.6	82.9	85.5	85.6	85.5
France <sup>(1)</sup>	:	77.0	79.2	81.8	82.3	82.1	:	72.8	75.3	78.2	78.7	78.7	:	81.2	83.0	85.3	85.7	85.4
Croatia	:	:	:	76.7	77.2	77.3	:	:	:	73.4	73.8	73.9	:	:	:	79.9	80.4	80.6
Italy	:	77.1	79.9	82.2	82.4	82.4	:	73.8	76.9	79.5	79.7	79.8	:	80.3	82.8	84.7	84.8	84.8
Cyprus	:	:	77.7	81.5	81.2	81.1	:	:	75.4	79.2	79.3	78.9	:	:	80.1	83.9	83.1	83.4
Latvia	:	:	:	73.1	73.9	74.1	:	:	:	67.9	68.6	68.9	:	:	:	78.0	78.8	78.9
Lithuania	70.5	71.5	72.1	73.3	73.7	74.1	65.4	66.4	66.7	67.6	68.1	68.4	75.4	76.3	77.4	78.9	79.3	79.6
Luxembourg <sup>(2)</sup>	72.8	75.7	78.0	80.8	81.1	81.5	70.0	72.4	74.6	77.9	78.5	79.1	75.6	78.7	81.3	83.5	83.6	83.8
Hungary <sup>(3)</sup>	69.1	69.4	71.9	74.7	75.1	75.3	65.5	65.2	67.5	70.7	71.2	71.6	72.8	73.8	76.2	78.6	78.7	78.7
Malta	70.4	:	78.4	81.5	80.9	80.9	68.0	:	76.2	79.3	78.6	78.6	72.8	:	80.3	83.6	83.0	83.0
Netherlands	:	77.1	78.2	81.0	81.3	81.2	:	73.8	75.6	78.9	79.4	79.3	:	80.2	80.7	83.0	83.1	83.0
Austria	72.7	75.8	78.3	80.8	81.2	81.1	69.0	72.3	75.2	77.9	78.3	78.4	76.1	79.0	81.2	83.5	83.8	83.6
Poland <sup>(5)</sup>	:	70.7	73.8	76.4	76.9	76.9	:	66.3	69.6	72.1	72.6	72.7	:	75.3	78.0	80.7	81.1	81.1
Portugal	71.5	74.1	76.8	80.1	80.7	80.6	67.9	70.6	73.3	76.8	77.3	77.3	74.9	77.5	80.4	83.2	83.8	83.6
Romania	69.2	69.9	71.2	73.8	74.6	74.5	66.6	66.7	67.7	70.2	71.1	71.0	71.9	73.1	74.8	77.5	78.2	78.1
Slovenia	:	73.9	76.2	79.8	80.1	80.3	:	69.8	72.2	76.4	76.8	77.1	:	77.8	79.9	83.1	83.3	83.3
Slovakia	70.4	71.1	73.3	75.6	76.1	76.3	66.7	66.7	69.2	71.8	72.3	72.5	74.4	75.7	77.5	79.3	79.8	79.9
Finland	73.7	75.1	77.8	80.2	80.6	80.7	69.2	71.0	74.2	76.9	77.3	77.7	78.0	79.0	81.2	83.5	83.8	83.7
Sweden	75.8	77.7	79.8	81.6	81.9	81.8	72.8	74.8	77.4	79.6	79.9	79.9	79.0	80.5	82.0	83.6	83.8	83.6
United Kingdom	:	:	78.0	80.6	81.0	81.0	:	:	75.5	78.6	79.0	79.1	:	:	80.3	82.6	83.0	82.8
Iceland	76.8	78.1	79.7	81.9	82.4	83.0	73.5	75.5	77.8	79.8	80.7	81.6	80.4	80.7	81.6	84.1	84.1	84.3
Liechtenstein	:	:	77.0	81.8	81.9	82.5	:	:	73.9	79.5	79.5	79.7	:	:	79.9	84.3	84.2	85.2
Norway	75.8	76.6	78.8	81.2	81.4	81.5	72.4	73.4	76.0	79.0	79.1	79.5	79.3	79.9	81.5	83.3	83.6	83.5
Switzerland <sup>(2)</sup>	75.7	77.5	80.0	82.7	82.8	82.8	72.3	74.0	77.0	80.3	80.5	80.6	79.0	80.9	82.8	84.9	85.0	84.9
Montenegro	:	:	:	76.1	76.1	76.4	:	:	:	73.6	73.4	74.3	:	:	:	78.5	78.9	78.4
FYR of Macedonia	:	:	73.0	75.0	75.1	74.9	:	:	70.8	72.9	73.1	73.0	:	:	75.2	77.2	77.2	76.9
Serbia <sup>(2)</sup>	:	:	71.6	74.4	74.6	74.9	:	:	68.9	71.8	72.0	72.3	:	:	74.4	77.0	77.2	77.5
Turkey	:	:	:	76.8	77.1	77.6	:	:	:	74.2	74.4	74.8	:	:	:	79.4	79.8	80.5

<sup>(1)</sup> Excluding French overseas departments before 1991.

<sup>(2)</sup> 2011: break in series.

<sup>(3)</sup> 2012: break in series.

<sup>(4)</sup> 2010: break in series.

<sup>(5)</sup> 2000 and 2011: break in series.

Source: Eurostat (online data code: demo\_mlexpec)

**Source:** Eurostat, May 2014.

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Mortality\\_and\\_life\\_expectancy\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Mortality_and_life_expectancy_statistics).

**Figure 2: Total fertility rate, 1960-2012 (live births per woman)**

	1960	1970	1980	1990	2000	2005	2010	2011	2012
EU-28 <sup>(1)</sup>	:	:	:	:	:	1.51	1.61	1.58	1.58
Belgium <sup>(2)</sup>	2.54	2.25	1.68	1.62	1.67	1.76	1.86	1.81	1.79
Bulgaria <sup>(3)</sup>	2.31	2.17	2.05	1.82	1.26	1.32	1.57	1.51	1.50
Czech Republic	2.09	1.92	2.08	1.90	1.15	1.29	1.51	1.43	1.45
Denmark	2.57	1.95	1.55	1.67	1.77	1.80	1.87	1.75	1.73
Germany	:	:	:	:	1.38	1.34	1.39	1.36	1.38
Estonia	1.98	2.17	2.02	2.05	1.36	1.52	1.72	1.61	1.56
Ireland	3.78	3.85	3.21	2.11	1.89	1.86	2.05	2.03	2.01
Greece	2.23	2.40	2.23	1.40	1.27	1.32	1.51	1.39	1.34
Spain	:	:	2.20	1.36	1.23	1.33	1.37	1.34	1.32
France <sup>(4)</sup>	2.73	2.47	1.95	1.78	1.89	1.94	2.03	2.01	2.01
Croatia	:	:	:	:	:	1.50	1.55	1.48	1.51
Italy	2.37	2.38	1.64	1.33	1.26	1.34	1.46	1.44	1.43
Cyprus	:	:	:	2.41	1.64	1.48	1.44	1.35	1.39
Latvia	:	:	:	:	1.25	1.39	1.36	1.33	1.44
Lithuania	:	2.40	1.99	2.03	1.39	1.29	1.50	1.55	1.60
Luxembourg <sup>(5)</sup>	2.29	1.97	1.50	1.60	1.76	1.63	1.63	1.52	1.57
Hungary <sup>(5)</sup>	2.02	1.98	1.91	1.87	1.32	1.31	1.25	1.26	1.34
Malta	:	:	1.99	2.04	1.70	1.38	1.36	1.45	1.43
Netherlands	3.12	2.57	1.60	1.62	1.72	1.71	1.79	1.76	1.72
Austria	2.69	2.29	1.65	1.46	1.36	1.41	1.44	1.43	1.44
Poland <sup>(6)</sup>	:	:	:	2.06	1.37	1.24	1.38	1.30	1.30
Portugal	3.16	3.01	2.25	1.56	1.55	1.41	1.39	1.35	1.28
Romania	:	:	2.43	1.83	1.31	1.39	1.54	1.46	1.53
Slovenia	:	:	:	1.46	1.26	1.26	1.57	1.56	1.58
Slovakia	3.04	2.41	2.32	2.09	1.30	1.27	1.43	1.45	1.34
Finland	2.72	1.83	1.63	1.78	1.73	1.80	1.87	1.83	1.80
Sweden	:	1.92	1.68	2.13	1.54	1.77	1.98	1.90	1.91
United Kingdom	:	:	1.90	1.83	1.64	1.76	1.92	1.91	1.92
Iceland	:	2.81	2.48	2.30	2.08	2.05	2.20	2.02	2.04
Liechtenstein	:	:	:	:	1.57	1.49	1.40	1.69	1.51
Norway	:	2.50	1.72	1.93	1.85	1.84	1.95	1.88	1.85
Switzerland <sup>(2)</sup>	2.44	2.10	1.55	1.58	1.50	1.42	1.52	1.52	1.52
Montenegro <sup>(1)</sup>	:	:	:	:	:	1.60	1.69	1.65	1.71
FYR of Macedonia	:	:	:	:	1.88	1.46	1.56	1.46	1.51
Serbia <sup>(2)</sup>	:	:	:	:	1.48	1.45	1.40	1.40	1.45
Turkey	:	:	:	:	:	:	2.04	2.03	2.09

<sup>(1)</sup> 2010–12: break in series.<sup>(2)</sup> 2011: break in series.<sup>(3)</sup> 2010: break in series.<sup>(4)</sup> Excluding French overseas departments, up to and including 1990. Breaks in series: 2001, 2005 and 2010–12.<sup>(5)</sup> 2012: break in series.<sup>(6)</sup> 2000 and 2011: break in series.

Source: Eurostat (online data code: demo\_frate)

Source: Eurostat 2014.

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Fertility\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Fertility_statistics).

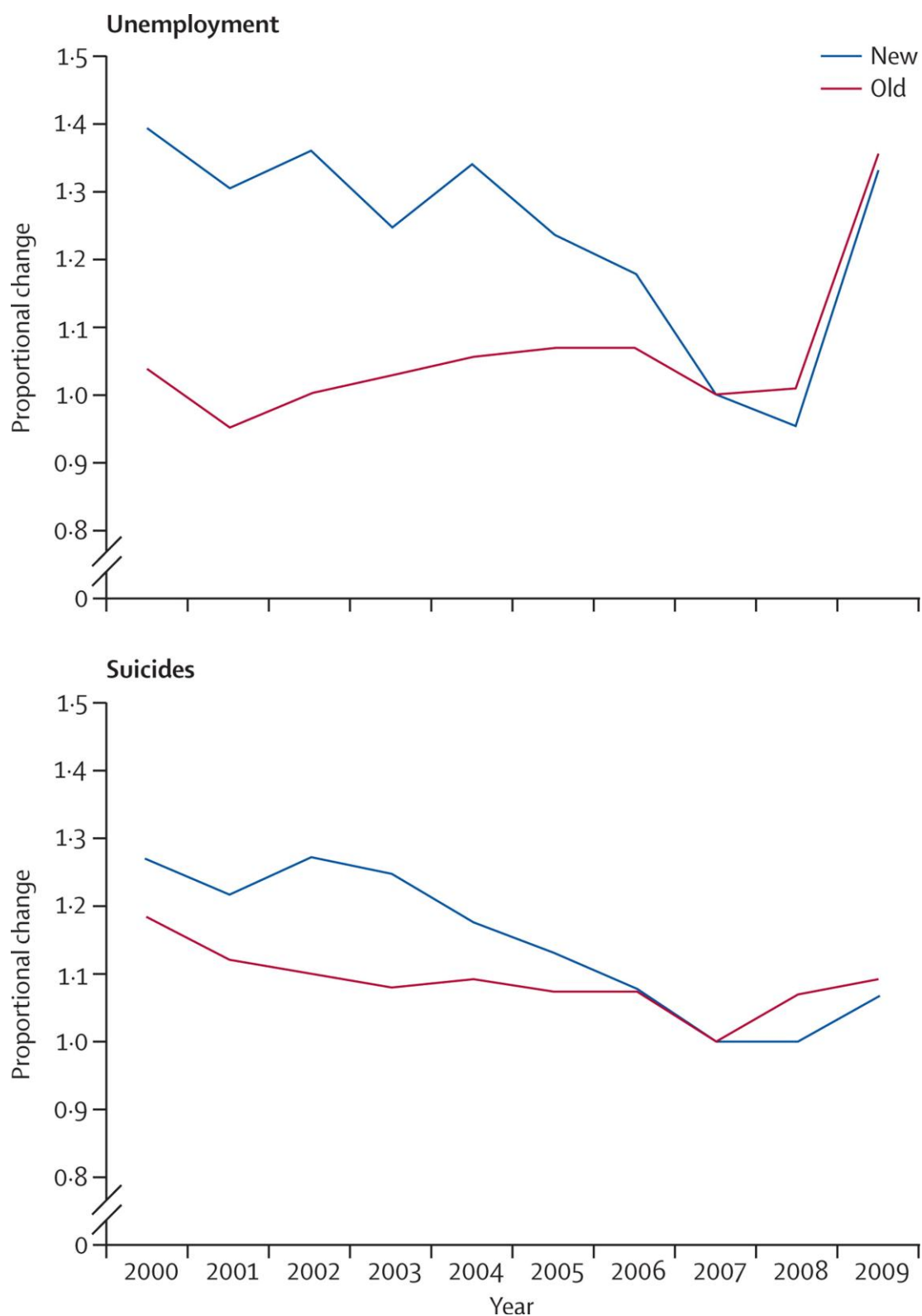
**Figure 3: Countries with a reduction in per capita public spending on health**

2008	2009	2010	2011
<b>Andorra</b>	<b>Andorra</b>	Albania	<b>Andorra</b>
France	Bulgaria	<b>Armenia</b>	<b>Armenia</b>
Luxembourg	<b>Croatia</b>	<b>Croatia</b>	<b>Czech Republic</b>
Malta	<b>Estonia</b>	<b>Czech Republic</b>	Germany
	Hungary	<b>Estonia</b>	<b>Greece</b>
	<b>Ireland</b>	Finland	<b>Ireland</b>
	<b>Latvia</b>	<b>Greece</b>	Netherlands
	<b>Lithuania</b>	Iceland	Portugal
	FYR Macedonia	<b>Ireland</b>	Slovakia
	Romania	<b>Latvia</b>	<b>Spain</b>
	San Marino	<b>Lithuania</b>	United Kingdom
		Montenegro	
		Slovenia	
		<b>Spain</b>	

**Source:** Public health effects of the economic crisis, September 27 2013.

[http://www.ose.be/files/slides/Karanikolos\\_2013\\_Presentation270913.pdf](http://www.ose.be/files/slides/Karanikolos_2013_Presentation270913.pdf).

**Figure 4: Impact on health: indexed changes in adult unemployment and in age-standardized suicide rate (age 0-64 years) in old (pre-2004) and new EU Member States**



**Source:** Effects of the 2008 recession on health: a first look at European data David Stuckler, Sanjay Basu, Marc Suhrcke, Adam Coutts and Martin McKee, *The Lancet* Volume 378, Issue 9786, Pages 124-125 (July 2011).



**Figure 5: Causes of deaths in the EU and standardized death rates, 2010 (per 100,000 inhabitants)**

	Total									Females		
	Circulatory disease	Heart disease <sup>(1)</sup>	Cancer <sup>(2)</sup>	Lung cancer <sup>(3)</sup>	Colorectal cancer	Respiratory diseases	Diseases of the nervous system	Transport accidents	Suicide	Breast cancer	Cancer of the cervix	Cancer of the uterus
EU-28	418.3	147.2	270.4	55.9	32.2	81.2	34.6	7.0	11.8	33.9	4.2	6.4
Belgium	317.1	91.6	270.1	66.8	29.0	107.3	45.6	8.4	18.7	40.9	2.9	6.4
Bulgaria	1 176.0	206.4	226.9	43.4	34.5	61.4	14.8	9.8	11.8	27.2	8.9	8.9
Czech Republic	698.8	327.7	314.1	60.1	44.9	76.4	12.3	8.7	14.5	32.2	6.5	7.9
Denmark <sup>(4)</sup>	322.8	119.7	314.4	75.6	41.6	134.2	35.5	6.0	11.9	45.1	3.3	5.5
Germany	429.0	160.9	258.3	50.5	30.8	72.8	26.1	4.7	11.8	36.3	3.3	4.9
Estonia	786.5	393.4	292.6	52.0	34.4	35.5	20.9	7.2	16.8	29.8	9.5	6.6
Ireland	361.3	180.4	286.0	59.3	33.4	128.4	38.1	4.2	10.9	39.6	4.9	5.8
Greece	461.2	105.2	247.1	58.0	21.7	100.6	13.9	12.5	3.3	33.7	3.0	5.1
Spain	277.3	82.4	244.6	49.9	35.2	93.5	44.4	5.6	6.8	26.1	2.8	6.2
France	231.0	57.7	257.7	50.6	28.4	51.8	51.6	6.6	17.0	34.6	2.4	7.0
Croatia	753.4	327.2	338.8	65.9	49.6	55.1	20.9	11.4	18.1	42.2	5.5	9.5
Italy	335.3	110.2	260.9	53.1	29.3	58.5	34.0	7.4	6.3	33.5	1.1	6.7
Cyprus	386.5	114.1	197.1	32.3	17.3	73.9	25.6	10.5	4.7	31.9	2.0	6.5
Latvia	899.5	475.7	305.7	50.0	35.1	33.8	13.2	12.2	20.8	34.0	11.9	11.0
Lithuania	915.0	593.4	286.5	45.6	34.2	46.5	21.1	12.0	32.9	32.7	13.9	8.0
Luxembourg	344.7	86.1	264.6	50.7	32.9	74.8	39.7	5.4	10.9	40.3	2.0	5.3
Hungary	803.2	413.3	358.7	92.8	56.3	72.9	19.9	9.9	25.6	37.2	7.1	7.1
Malta	386.5	214.0	242.9	44.4	32.5	102.1	23.8	3.9	7.9	39.8	1.1	8.3
Netherlands	297.1	77.5	302.6	72.0	37.1	99.9	35.3	4.7	9.7	39.7	2.5	5.4
Austria	433.2	195.0	255.5	47.1	28.0	55.1	32.0	6.9	15.2	32.9	3.6	5.4
Poland	650.6	166.5	304.2	71.6	37.0	70.4	17.4	11.8	16.6	28.5	9.2	7.4
Portugal	347.6	76.1	246.8	35.9	37.4	122.1	31.2	9.6	10.5	28.6	4.0	7.1
Romania	1 016.3	342.9	261.6	51.9	30.9	75.5	15.5	14.1	13.7	31.1	16.7	5.4
Slovenia	451.5	121.3	324.5	59.7	44.7	69.5	16.9	8.3	20.3	38.8	3.9	8.5
Slovakia	877.9	528.6	307.5	52.1	47.0	97.1	18.6	9.6	12.0	33.4	8.1	8.7
Finland	425.2	243.5	230.1	43.5	23.1	40.6	112.2	6.7	17.8	30.8	1.9	6.5
Sweden	381.3	160.6	240.0	40.2	28.9	54.7	39.0	3.4	12.4	28.3	2.9	7.1
United Kingdom	325.9	146.8	287.5	64.2	29.3	138.8	37.6	3.6	6.8	37.3	3.1	6.4
Iceland <sup>(4)</sup>	362.9	174.4	265.0	63.0	30.4	86.8	80.2	4.3	12.3	31.8	1.7	2.3
Liechtenstein	363.2	107.3	213.3	22.6	5.8	77.8	59.0	16.6	28.3	33.0	:	6.1
Norway	313.3	124.4	269.5	54.3	39.5	94.0	39.8	5.6	11.7	29.1	3.5	5.1
Switzerland	307.9	116.8	229.7	44.6	24.5	52.6	45.6	4.7	13.0	34.9	1.5	5.3
FYR of Macedonia	1 108.3	141.2	260.0	52.3	27.6	65.8	12.0	6.7	6.7	38.2	3.8	14.2

<sup>(1)</sup> Ischaemic heart diseases.<sup>(2)</sup> Malignant neoplasms.<sup>(3)</sup> Malignant neoplasm of trachea, bronchus and lung.<sup>(4)</sup> 2009.

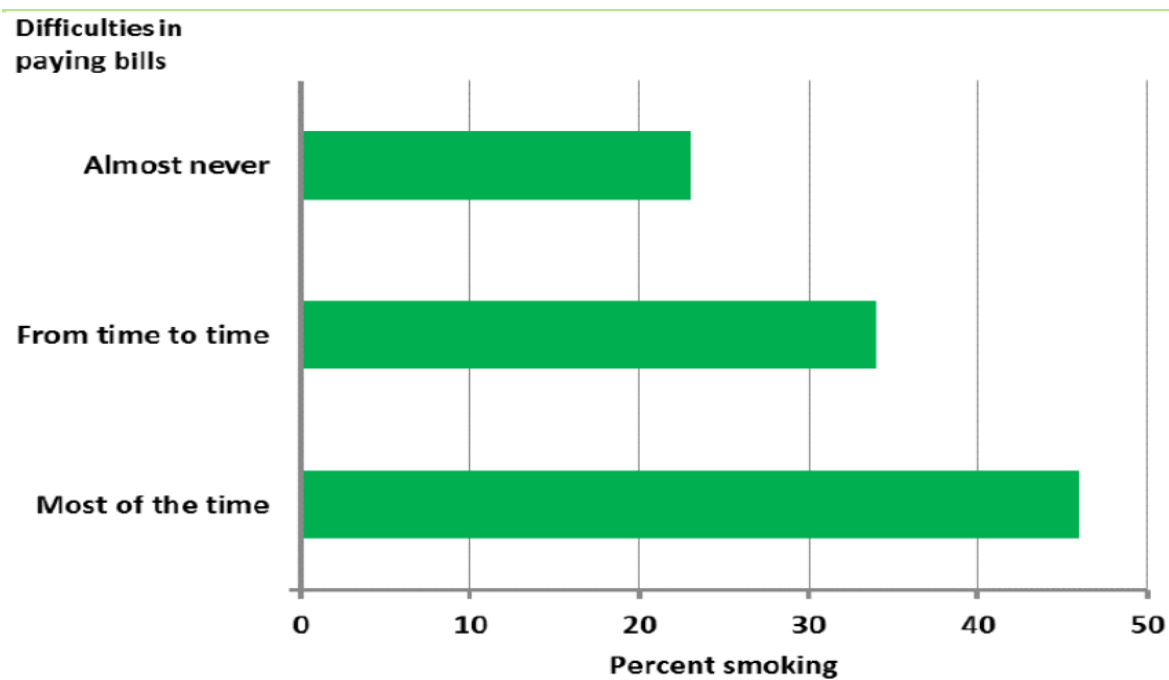
Source: Eurostat (online data code: hlth\_cd\_asdr)

Source: Eurostat, June 2014.

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/File:Causes\\_of\\_death\\_%E2%80%94\\_94\\_standardised\\_death\\_rate,\\_2010\\_\(per\\_100\\_000\\_inhabitants\)\\_YB14\\_II.png#filelinks](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:Causes_of_death_%E2%80%94_94_standardised_death_rate,_2010_(per_100_000_inhabitants)_YB14_II.png#filelinks).



**Figure 6: Correlation between people having difficulties paying bills and smoking**



**Source:** European Commission (2013), Health Inequalities in the EU – final report of a consortium led by Sir Michael Marmot.

**Table 1: European health strategies: Frameworks for integrated action**

Periods and budgets	Scope and objectives
1993 - 2002	8 different Action Programmes (health promotion, cancer, drug dependence)
2003 – 2007 EUR 312 million	<b>1<sup>st</sup> Community Action Programme for Public Health</b> <ul style="list-style-type: none"> <li>• Health information</li> <li>• Health treats</li> <li>• Health determinants</li> </ul>
2008 – 2013 EUR 321,5 million	<b>2<sup>nd</sup> Programme of Community Action in the field of Health</b> <ul style="list-style-type: none"> <li>• Health security and safety</li> <li>• Health promotion and Health Inequality</li> <li>• Health information</li> </ul>
2014 – 2020 EUR 449,4 million	<p>The third EU Health Programme for 2014-2020<sup>96</sup> was adopted and published on 21 March 2014 to respond to the economic and demographic challenges faced by EU health systems. Its related 2014 workplan was adopted on 26 May 2014<sup>97</sup>.</p> <b>3<sup>rd</sup> Programme of Community Action in the field of Health</b> <ol style="list-style-type: none"> <li><i>Promote health, prevent diseases and foster supportive environments for health lifestyles</i> <ul style="list-style-type: none"> <li>• Tobacco, alcohol, unhealthy dietary habits, physical inactivity</li> <li>• Chronic diseases including cancer</li> <li>• HIV/AIDS, TB and hepatitis</li> <li>• Legislation on tobacco products</li> <li>• Health information</li> </ul> </li> <li><i>Protect citizens from serious cross-border health threats</i> <ul style="list-style-type: none"> <li>• Legislation in the fields of communicable diseases and other health threats (Health security initiative)</li> <li>• Improving risk assessment</li> <li>• Capacity building</li> </ul> </li> <li><i>Facilitate access to better and safer healthcare for EU citizens</i> <ul style="list-style-type: none"> <li>• Health Technology Assessment</li> <li>• Health innovation and e-health solutions</li> <li>• Health workforce</li> <li>• Pool of expertise and good practices on health systems reforms</li> <li>• Active and healthy ageing</li> <li>• Legislation on medical devices, medical products and cross-border healthcare</li> <li>• Health information</li> </ul> </li> </ol>

<sup>96</sup> The 2014-2020 Health Programme is linked to: the Europe 2020 Strategy, the EU Health Strategy "Together for Health" and its shared principles and objectives, taking forward work already started in the past Health Programme 2008-2013; and supporting EU health policy and legislation including legislation on medical products and medical devices.

<sup>97</sup> Health Programme – Annual workplan for 2014. See: [http://ec.europa.eu/health/programme/events/adoption\\_workplan\\_2014\\_en.htm](http://ec.europa.eu/health/programme/events/adoption_workplan_2014_en.htm).

Periods and budgets	Scope and objectives
	<p>4. <i>Contribute to innovative, efficient and sustainable Health Systems</i></p> <ul style="list-style-type: none"> <li>• European Reference Networks</li> <li>• Rare diseases (networks, databases and registries)</li> <li>• Patient safety and quality of healthcare including the prevention and control of healthcare-associated infections</li> <li>• Antimicrobial resistance</li> <li>• Legislation in the field of tissues and cells, blood, organs</li> </ul>

**Note:** The Consumers, Health and Food Executive Agency (Chafea) - which is the former Executive Agency for Health and Consumers (EAHC) – is entrusted by the European Commission to implement the Health Programme.

**Source:** EU Health Programme 2014 – 2020

[http://ec.europa.eu/health/programme/policy/index\\_en.htm](http://ec.europa.eu/health/programme/policy/index_en.htm)

**Table 2: Other EU funding programmes contributing to public health**

Title	Description
<p><b>Seventh Framework Programme (FP7)</b> 2007-2013 EUR 50,5 billion</p>	<p>The FP7 research programme supported the following areas: brain research and related diseases; human development and ageing; major diseases and disorders – including cancer, cardiovascular diseases, diabetes and obesity; rare diseases<sup>98</sup>; severe chronic diseases<sup>99</sup>.</p>
<p><b>Horizon 2020: health research and innovation</b> 2014 – 2020 EUR 79,3 billion</p>	<p>Responding to societal challenges, research and innovation under the new Horizon 2020 framework programme<sup>100</sup>, is an investment in better health for all.</p> <p>During 2014-15, the EU will invest some EUR 1,200 million in the challenge to foster medical research through: 1) improving the understanding of the causes and mechanisms underlying health, healthy ageing and disease; 2) enhancing our ability to monitor health and to prevent, detect, treat and manage disease; 3) supporting older people to remain active and healthy; 4) testing and demonstrating new models and tools for health and care delivery.</p>

**Source:** Horizon 2020

<http://ec.europa.eu/programmes/horizon2020/>

<sup>98</sup> Chronic diseases also include a large number of rare conditions. The EU has also developed a common framework for addressing the challenge of rare diseases: The EUCERD Joint Action: Working for Rare Diseases (N° 2011 22 01) started on 1 March 2012 for a three-year duration. See: [http://ec.europa.eu/health/rare\\_diseases/policy/index\\_en.htm](http://ec.europa.eu/health/rare_diseases/policy/index_en.htm).

<sup>99</sup> Neurodegenerative diseases:  
See: [http://ec.europa.eu/health/major\\_chronic\\_diseases/diseases/brain\\_neurological/index\\_en.htm](http://ec.europa.eu/health/major_chronic_diseases/diseases/brain_neurological/index_en.htm)  
and the EU Joint Programming initiative on neurodegenerative diseases (in particular Alzheimer). See: <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2213-hco-07-2014.html>.

<sup>100</sup> EU Horizon 2020 Framework Programme. See: [http://ec.europa.eu/research/health/health-research-intro\\_en.html](http://ec.europa.eu/research/health/health-research-intro_en.html).

## DIRECTORATE-GENERAL FOR INTERNAL POLICIES

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