Inequalities in health and access to health care

Discussion Paper

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Introduction

In May 2004 ten countries joined the EU, bringing the number of Member States to 25 and additional countries are expected to join in the near future. Although mortality has declined and life expectancy has increased everywhere, there is still a wide level of heterogeneity that can be explained by different living conditions such as absolute and relative income, education, employment, housing, and transport. Changes in socioeconomic conditions affect population health directly and indirectly. It is indeed not only important to improve average levels of population health but also to reduce the health gap between people belonging to different socioeconomic stratum.

Differences in health status appear not randomly distributed since systematic differences in health pattern emerge across different socio-economic groups. These differences seem determined not as much by genetic characteristics but by social process. Health equity implies the "absence of unfair and avoidable or remediable differences in health among population or groups defined socially, economically, demographically or geographically" (Macinko and Starfield 2002). The WHO Constitution, already in 1946, assessed that "the highest standard of health should be within reach of all, without distinction of race, religion, political belief, and economic or social condition".

Lower socioeconomic status leads to ill health through a number of other "links" between socioeconomic status and health (Mackenbach 2002). Genetic predispositions have the main role in determining why among the exposed a person is more likely to get ill than another. However, the individual level of analysis may miss the social causes of diseases. Marmot and Wilkinson (1999) link biological and social determinants of health (see below); individual genetic predisposition, environment and lifestyle characteristics are all factors that affect ill health. The influence of social structure operates via three main pathways. Material circumstances are related to health directly and via the social and work environment; and these in turn affect psychological and health behaviours. The life course is also important; early life together with cultural and genetic factors influences the probability of becoming sick.

Looking at the social gradient in health, income, education and occupational status affect health, life expectancy, and mortality risk both directly, and indirectly, through psychosocial factors. People at the lower end of the social ladder are more likely to report ill health than those near the top, both at the individual and population level. A health gradient is present all along the social spectrum. Lifestyle choices such as diet, housing, job control, physical exercise, smoking, and alcohol consumption clearly have an effect on health that are also influenced by social factors (Mackenbach 2002).

The health care system also plays a role in explaining health inequalities. The contribution of health care to the population health has long been controversial. However, by differentiating causes of death into conditions amenable or not to medical care, various researches (Carr-Hill 1987, Mackenbach 1988, 1996; McKee) have shown that since the mid 1950s there has been a more rapid decline in amenable causes than in non-amenable causes. Mackenbach (1988) found that in the Netherlands between 1875 and 1970 the medical contribution to the decline in mortality ranged between 4.7% and 18.5%; and between 1950 and 1984 without the significant reduction in amenable causes of mortality, male life expectancy at birth would have actually fallen by almost a year due to increases in other causes of death (Mackenbach, 1996). There is also evidence that in Europe barriers to access adequate health care may contribute to the east-west gap in mortality and to social inequalities in mortality. Bojan et al. (1991) and Boys et al. (1991) show that death rates from amenable causes were higher in the east than in the west; and Velkova et al (1997) estimated that amenable causes account for 24% of the east-west gap in male life expectancy and 39% of the gap in female life expectancy between birth and age 75. These findings were also confirmed by the more recent study of Nolte and McKee (2004) on avoidable mortality.

Although most research in the area of health equity has focused on the social determinants of health, it is important to understand the contribution of health care to both improving health, and possibly reducing inequalities. Most importantly, access to health care may not be equitable across social groups, thus exacerbating existing health inequalities. Individuals in most need of health care may be less able to benefit from the services available to them, whether due to geographical, financial, or socio-cultural barriers. The burden of payment for health care is a growing concern for people socially and economic vulnerable; and there is clear evidence that “the availability of good medical care tends to vary inversely with the need for it in the population served” (Hart, 1991). Offering universal access to health care services does not eliminate inequalities, as shown by most industrialized countries that have removed financial barriers to access. “Equity means that everyone should, in practice and not just in theory, be able to access and use appropriate health services (Healy and McKee 2004). Moreover, to understand the concept of equity in access to health care it is necessary to introduce the concept of need for health care services. If people in different socioeconomic groups report the same use of health care, this does not signify that there is equity in health care access. On the contrary, this situation may be inequitable since poor people have often more needs. The goal of equity in access to health care can therefore be achieved only if there is a equal access for equal need.

Health status in the EU

Improvements have been seen over the past few decades in both health status, and living and working conditions in Europe. However, the level of heterogeneity in living conditions characteristics has and will continue to widen tremendously in the EU. The diversity in living conditions has translated into a diversity in patterns of health across the region. Good health can be considered one of the most fundamental resources for social and economic prosperity. While the goal to improve average levels of population health is important for any government, there has been an increasing focus on disparities at the national and European level.

The EU-15 countries, Malta and Cyprus have experienced a steady increase in life expectancy over the last 25 years. Most of them have high life expectancies when compared to central and eastern European (CEE) countries. While initial improvements in longevity resulted from declining infant mortality rates, more recent gains are largely due to a significant fall in mortality at advanced ages, although there is a high degree of heterogeneity across countries.

The former Eastern Bloc countries that are now members of the EU experienced stagnating male mortality and only very minor improvements in female mortality in the 1970s and particularly the 1980s. Death rates among middle-aged men were about 2.5 times higher in CEE than in western Europe. Most countries in the former Eastern Bloc experienced a mortality crisis in the early 1990s after the fall of communism. This worsening of mortality was in many cases short-lived and followed by improvements in health. Indeed Poland, the Czech Republic, Slovenia and Slovakia are now approaching or surpassing the EU average in certain health indicators. The Baltic states appear to have begun recovering only recently. In these countries men have been especially vulnerable to political and economic instability, as they have experienced a significant deterioration in health, probably associated with excessive alcohol consumption. Reflecting this, the Baltic countries have the highest sex differences in life expectancy in the EU.

In all of Europe, women are expected to live longer than men. However, there has been a narrowing gender gap in life expectancy among many European countries, both in the east and west, over the past decade. Rising levels of smoking-related mortality among women contributed significantly to this pattern. Age standardized male death rates for lung cancer have been steadily decreasing in most western European countries over the last 20 years. Unfortunately, mortality for lung cancer among women is increasing almost everywhere, except the UK and to some extent Ireland and Denmark.
While generally higher than the EU average, infant and child mortality rates in central and eastern Europe have been falling since the 1980s, and accelerated in the 1990s. Impressively, the Czech Republic and Slovenia are in fact now among the countries with the lowest infant deaths per 1000 live births in all of Europe. This has been attributed to a large extent to improvements in quality of health care.

Socioeconomic inequalities in morbidity and mortality

Health inequalities have surely decreased in absolute terms in the last 30 years, but it is not clear whether they have also declined in relative terms. Income, education and occupational status affect health and life expectancy both directly and indirectly through psychosocial factors. People at the lower end of the social ladder are more likely to report ill health than those near the top, both within and across countries. Eradication of poverty and social exclusion were among the objective of the special European summit in Lisbon in 2000.

National studies

Among western countries a clear relation between employment grade and both health status and mortality was found for both men and women in England by the results of the Whitehall studies (Asthana et al. 2000; Marmot, 1999; Marmot et al. 2005). In Finland, metabolic syndrome and coronary heart diseases (CHD) were more prevalent in individuals with low education compared with university education (Silventoinen et al. 2005). Household income, education and occupational class were also found to be powerful determinants of inequalities in longstanding illness for both Finnish men and women (Lahelma et al. 2004). In Sweden, a social gradient for occupational class was found for all cause mortality and cardiovascular mortality (Hemmingsson and Lundberg 2005). In Northern Ireland and France (PRIME study), a socioeconomic gradient was found for long-term risks of CHD (Yarnell et al. 2005). Among Spanish men, job insecurity was associated with a nearly three-fold higher risk of having poor health; and the prevalence of poor self-assessed health status was higher among people in unskilled jobs than among managers and supervisors (Borrell et al. 2004).

Among central and eastern European countries income differences were found to be the main determinants of poor self-assessed health in Latvia, (Monden 2004). In Lithuania, between 1989 and 2001 education inequalities in mortality have increased, in particular among women (Kelediene and Petrauskiene 2005) since mortality rates have decreased among people with high education but increased among people with low education. A similar pattern was observed in Estonia. Educational differences in mortality have registered a steep increase from 1989 and 2000 for both men and women (Leinsalu et al. 2003). In 2000, the gap in life expectancy between men aged 25 years with a university degree and those with low education was 13.1 years and among women, the gap was 8.6 years; nearly 5 years larger than in 1989. Large inequalities in favour of people with higher education level were observed for all selected causes of mortality; and particularly so for infectious diseases, alcohol poisoning, transport accident, chronic respiratory diseases, and lung cancer.

In Slovenia, various factors related with premature risk of dying (age: 25-64) were recently analysed (Artnik et al. 2004). The main causes of death for men aged 25-44 were injuries. The probability of dying of neoplasms or circulatory diseases increased with age. Women lived longer and premature deaths among women were mainly due to breast and cervical cancer. The role of education as a determinant of premature death varied with specific causes of death. Women with the lowest educational level were more likely to die from cardiovascular diseases while, the contrary was observed for deaths due to breast cancer. Among men, the probability of dying for respiratory and digestive diseases was larger for those who had not completed primary school. On the contrary, men with higher education level were more likely to die of circulatory diseases. Moreover, the authors emphasized the positive effect of marriage, which might be linked to both socioeconomic and psychosocial factors on health status.

Similar trends are seen in the Czech Republic. Mortality was significantly higher among men with a low level of education but no inequality was found among women in the period 1988-1992 (Mackenbach et al. 1999). Inequalities favouring the better educated were recorded for different

causes of death[1] but breast cancer and lung cancer which were more common among women with high education; no inequality was found for external causes of disease among women. Among men, education-related inequalities were particularly large in respiratory diseases, lung cancer, gastrointestinal diseases, and external causes. Educational differences in specific causes of mortality were, on average, smaller among women than among men.

Among Hungarian men, the main risk factors of self reported morbidity were low personal income, alcohol consumption and BMI (body mass index) in 1988 (Kopp et al. 2004); while among women, they were BMI, number of cigarettes per day and wine consumption. By 1995, cigarette consumption was a significant risk factor for poor health for men and women; together with educational level among men, and personal income among women. Moreover, an ecological study showed that male mortality was associated not only with income and education but also with female social status, (Kopp et al. 2005), implying that improvements in socioeconomic status among women might bring along an increase in life expectancy for both men and women.

International studies

Education-related inequalities in common chronic diseases were found also in Belgium, Denmark, Finland, France, Great Britain, Italy, the Netherlands, and Spain (Dalstra et al. 2005). Most diseases showed higher prevalence among people with low educational level, only allergy was more common in the high education group. Significant inequalities favouring the better-off were reported for stroke, diseases of the nervous system, diabetes and arthritis. The size of socioeconomic differences in chronic diseases varied largely between men and women.

Moreover, education- and occupation- related inequalities in mortality favouring the better-off increased between 1981-1985 and 1991-1995 in Denmark, England and Wales, Norway, Sweden, Italy (Turin), and particularly so, among Finnish men (Mackenbach et al. 2003). The main cause of this widening gap was the proportional faster relative decline of mortality in the higher socioeconomic classes although the decrease in absolute mortality has been similar in the lower and upper groups. A similar decline was also found in cardiovascular mortality for all socioeconomic classes, but again the relative decline was larger among the rich (Mackenbach et al. 2003). Socioeconomic differences in cardiovascular mortality explained almost half of the widening relative gap in mortality in all populations but Italy. The widening in inequality in total mortality was also caused by increasing rates of mortality in the lower socioeconomic classes for lung cancer, breast cancer, respiratory diseases and gastrointestinal diseases among both men and women in almost all countries but Italy.

Men and women with lower education level had significantly higher stroke mortality than those with a middle/high educational level in Finland, Norway, Denmark, England/Wales, Belgium, Switzerland, Austria, Italy (Turin), and Spain (Barcelona and Madrid) (Avedano et al. 2004). The magnitude of education inequalities in stroke mortality was similar across Europe. The contribution of education inequalities in stroke mortality to the overall education differences in life expectancy at age 30 years

[1] The causes of death analysed are neoplasm, lung cancer, breast cancer, cardiovascular diseases, ischemic heart diseases, cerebrovascular diseases, respiratory diseases, gastrointestinal diseases, cancer and external causes of death.

was 7% among men and 14% among women. The elimination of education inequalities in stroke mortality would have reduced education differences in life expectancy by 9% among men and 18% among women in Turin, and by 7% and 18% respectively in Austria.

Chronic diseases

The most important causes of the burden of disease in the WHO European Region are non communicable diseases (NCDs – 77% of the total). In 2002, NCDs caused 86% of the 9.6 million deaths and 77% of the 150.3 million DALYs (disability-adjusted life years) in the Region (WHO Regional Office for Europe 2005). The main risk factors to NCDs are eating habits, physical activity, smoking and alcohol consumption. These causes are expressed through the following intermediary risk factors: raised blood pressure, raised glucose levels, abnormal blood lipids (particularly cholesterol), and overweight and obesity. These risk factors (in conjunction with age and heredity) in turn explain the majority of variation in rates of the main chronic diseases: heart disease, stroke, chronic respiratory diseases, diabetes and some cancers (WHO 2005a). In the following section we will briefly describe the trends and the differences in Europe in cardiovascular diseases and some cancers.

Heart disease and stroke (cardiovascular diseases)

Ischaemic disease was the leading cause of death in all the EU and ACC, except Greece, TFYR Macedonia and Portugal where it was stroke, another cardiovascular disease (WHO Regional Office for Europe 2005). Northern countries such as Finland and the UK have reported the highest rates; double the average of the 25 states that now constitute the EU in the mid-1980s. Southern European countries such as Italy and France have reported relatively low age standardized death rates from ischaemic heart disease for the last 20 years when compared to the rest of Europe. The North-South gradient in myocardial infarction and coronary death rates in western European regions was described by the WHO MONICA Project in the 1990s and has been attributed in part to the Mediterranean diet.

Standardized death rates for heart disease have fallen, in some cases steeply, in the last 20 years in western Europe, both in the north and south, for men and for women. For example, mortality from coronary heart disease in England and Wales fell by 54% between 1981 and 2000 (Unlal et al 2005); and the national rate in Finland now approaches the EU average. These favourable trends have been caused by falling rates in the population of high blood pressure, cholesterol and smoking, which countries achieved by implementing public health programmes (for example the North Karelia Project in Finland) and improving diagnosis, prevention and treatment of risk factors at the health service level.

Cardiovascular disease (CVD) has been frequently highlighted as playing an important role in the rise and subsequent decline of adult mortality in the countries of CEE (Mesle' 2002; McKee & Shkolnikov 2001; Zatonski & Boyle 1996). Indeed, the main contributors to differences in health indicators between east and west Europe are vascular diseases and injuries for people below age 60 (Powles

et al. 2005). While the standardized death rate for ischaemic heart disease has halved since the fall of communism in some CEE countries such as the Czech Republic and Poland due to improvements in nutrition and health services, particularly medication, narrowing the 'east-west gap', the rate in other countries such as Hungary and Slovakia remains more than double that of the EU average.

In the countries of the former Soviet Union, such as the Baltic states, the burden of CVD accounted for almost one third of the overall burden of disease, as measured by disability-adjusted life years (Nolte et al. 2005). The risk of death for ischaemic heart diseases and diseases of the circulatory system increased sharply for men and women at the beginning of the 1990s, immediately after the fall of the Communist system to start decreasing again in the middle late 1990s; but large differences are still present between the East and the West. Traditional risk factors such as smoking, diets rich in saturated fats and low in antioxidants, in addition to alcohol (specifically binge drinking) largely account for this east-west gap (Bobak et al. 1997; Britton & McKee 2000; Pomerleau et al. 2001). Of the Baltic countries, Estonia is the only country to have shown signs of improvement; whereas rates of heart disease deaths have fluctuated in Lithuania and Latvia since 2000. The main determinants of such a reversal may be due to a combination of several factors, such as changes in diets, the growth of systematic prevention and screening, the spread of new forms of treatment, and cardiac surgery (Mesle 2004).

Cancer

There were over two million (2 060 400) incident cases of cancer in 2004 and over one million cancer deaths (1 161 300) recorded in the 25 Member States that now constitute the European Union (Boyle and Ferlay 2005). Between 1990 and 2000, cancer incidence rose across all 25 European countries for which data are available, by an average of 63 new cases per 100,000 inhabitants (Boyle and Ferlay 2005). However, this increase was less than expected, due to the decline in risk observed since 1985 (Boyle et al 2003). Using population projections, if the age-specific death rates remain constant, the absolute numbers of cancer deaths in 2015 will increase to 1 405 000 (Boyle and Ferlay 2005). Wide heterogeneity across countries is evident, with Hungary having the largest cancer incidence -more than 700 per 100,000 inhabitants-, followed by Czech Republic and Denmark. The lowest rates of cancer are found in Cyprus, Romania and Poland, with less than 300 per 100,000 inhabitants (WHO Health for All data, 2006).

Lung cancer was the commonest cause of death after CVD in more than half the EU and ACC in 2002, making it an important public health challenge for Europe. In Belgium, Croatia Czech Republic, France, Germany, Greece, Hungary, Italy, Luxembourg, Netherlands, Poland, Slovenia and Spain lung cancer accounted for more than 5% of total mortality (WHO Regional office for Europe 2005). Age standardized male death rates for lung cancer have been steadily decreasing in most western European countries over the last 20 years, except in France, Spain and Portugal. New Member States except for Hungary have also experienced overall decreases in male lung cancer deaths over the last twenty years, albeit with temporary increases in the late 1980s / early 1990s. Unfortunately, mortality for lung cancer among women is increasing almost everywhere, except the UK and to some extent Ireland and Denmark (Didkowska et al. 2005). The leading contributors of lung cancer are the number of cigarettes smoked per day, the degree of inhalation and the initial age of smoking

(Tyczynski et al. 2002; Didkowska et al. 2005). The relative risk of developing lung cancer is 20-30 times higher for smokers than for non-smokers.

There is a great deal of variation between the EU countries in breast cancer incidence (WHO Health for All data, 2006). In most countries incidence is rising quite dramatically; for example Finland, Sweden, the UK and Poland have experienced 30% or greater increases in the last 20 years. Other countries such as Italy, Germany and the Netherlands reported a stabilization or even slight decrease in breast cancer incidence during this time. The unfavorable trend is thought to be due in part to decreased childbearing and breast-feeding, increased exogenous hormone exposure, and detrimental dietary and lifestyle changes, including obesity and less physical activity (Parkin and Fernandez 2006). However, there continues to be uncertainty on the causes of breast cancer (Boyle 2005).

Until the mid-1980s, breast cancer mortality rates were increasing or stable in Europe, except for Sweden, where they have been decreasing since the 1960s. In the UK and the Netherlands, which reported particularly high rates of breast cancer mortality, achieved dramatic decreases in the late 1980s and now approach the EU average. This favourable trend has been associated with increased breast awareness, earlier detection, for example through the introduction of screening and the delivery of the most appropriate therapy to women with the disease (Boyle 2005). Other countries such as Slovakia and Spain also experienced declines from the mid-1980s but did not introduce screening, highlighting the importance of improvements in treatment (Botha et al 2003). As well as earlier diagnosis and improved treatment, changes in levels of fertility have been proposed as possible explanations for the trends observed in eastern Europe (Tyczynski et al 2004).

Alongside incidence and mortality, information on the survival of all patients after a cancer diagnosis is a key indicator of cancer control. The EUROCARE-3 study measured survival up to 5 years after diagnosis for 1.8 million adults and 24 000 children who were diagnosed with cancer during the period 1990–1994 and followed up to the end of 1999. The 20 participating countries included 11 of the EU-15 and six of the NMS (Malta, the Czech Republic, Estonia, Poland, Slovakia and Slovenia). Survival was generally below the European average in the five eastern European countries, and in Denmark, England, Scotland, Wales, Malta and Portugal among the western European countries. For the UK and Denmark, melanoma of the skin, testicular cancer and Hodgkin's disease were notable exceptions to this pattern. Sweden tended to have the highest survival rates among the five Nordic countries, and Poland the lowest among the five eastern European countries, whilst French and Swiss populations often had the highest survival rates among western European countries (Coleman et al 2003). Among the most lethal and common cancers, lung cancer survival varied by more than two-fold across Europe (Austria having the highest rate, Poland the lowest), but the highest 5-year survival rate for men diagnosed during the period 1990–1994 was still <15%. The patterns for women were similar. The poor survival rate is thought to be because most patients were still diagnosed with metastatic disease where treatment of curative intent is rarely possible. The reported low survival rate in Denmark may be due to particularly late stage at diagnosis (Coleman et al 2003).

For breast cancer, differences in survival at 5 years were narrower. Survival was highest in the Nordic countries and in most southern and central European countries (~80%), and lowest in all five eastern European countries (60–70%). Survival was below the European average in Denmark,

England, Scotland and Wales. Differences in western Europe are likely to be due to an advanced stage of disease at diagnosis in the countries with lower survival rates, while in eastern Europe, differences in treatment are also likely to play a role (Coleman et al 2003).

Evidence that health services affect cancer survival is provided by analysis of the EUROCARE data which suggests that although survival was related to the wealth (GDP), this was only up to a certain level, after which survival continued to be related to the level of health investment (both TNEH and TPEH). The study concludes that cancer survival depends on the widespread application of effective diagnosis and treatment modalities, but that the availability of these depends on macro-economic determinants, including health and public health investment. However, analysis of the relationship between health system organization and cancer outcome is complicated and requires more information than is at present available (Micheli et al 2003).

Avoidable mortality in Europe

Several approaches have been developed in attempts to quantify the contribution of the health system to health improvement. The most widely used to date makes use of readily available mortality data and makes assumptions about certain causes of death that should not occur in the presence of timely and effective medical intervention. This method has given rise to the development of numerous terms including “avoidable mortality” and “mortality amenable to health care” (Rutstein, Berenberg et al. 1976: Charlton, Hartley et al. 1983; Holland and Breeze 1985; Holland 1988; Mackenbach, Bouvier-Colle et al. 1990; Holland 1991; Westerling 1992; Holland 1993; Holland, Fitzgerald et al. 1994; Holland 1997; Nolte and McKee 2004).

Analyses of avoidable mortality are essentially based on a list of selected disease groups that are considered to be effectively treatable or preventable by health care services. This work has focused on differentiating the causes that are responsive to medical intervention through secondary prevention and treatment (‘treatable conditions’), and those responsive to interventions that are usually outside the direct control of the health services through inter-sectoral health policies (‘preventable’ conditions)[2].

Improved access to timely and effective health care has a significant impact on health, in particular through reductions in infant mortality and in deaths among the middle aged and older people. Studies indicate that improvements in life expectancy can be attributed largely to improvements in mortality from amenable conditions, particularly during the 1980s (Nolte and McKee 2004). These improvements in most countries resulted from falling infant mortality, although falling mortality among the middle-aged was the main driver of improved amenable mortality in Denmark, the Netherlands,

[2] There are over 30 conditions considered treatable, some examples are: cancer of the colon, skin, cervix, testis and breast; diabetes mellitus; epilepsy; pneumonia; appendicitis; thyroid disease; measles. Three conditions are considered preventable: deaths from lung cancer, motor vehicle and traffic accidents and cirrhosis of the liver. It is important to note that over time the conditions that are considered treatable may change, therefore it is difficult to draw conclusions about time trends. However cross-country comparisons are not subject to the same methodological limitation, since at one point in time, the same standards in terms of quality of health care should apply to all countries.

the UK, France (men) and Sweden (women). In the 1990s, while amenable mortality remained an important contributor to improvements in life expectancy in southern Europe (especially Portugal and Greece), its contribution to improvement in health in other countries was less significant, although still accounted for 20% of the total improvement among women.

Mackenbach (1988) found that in the Netherlands between 1875 and 1970 the medical contribution to the decline in mortality ranged between 4.7% and 18.5%; and between 1950 and 1984 without the significant reduction in amenable causes of mortality, male life expectancy at birth would have actually fallen by almost a year due to increases in other causes of death (Mackenbach, 1996). Bojan et al. (1991) and Boys et al. (1991) show that death rates from amenable causes were higher in the east than in the west; and Velkova et al (1997) estimated that amenable causes account for 24% of the east-west gap in male life expectancy and 39% of the gap in female life expectancy between birth and age 75. These findings were also confirmed by the more recent study of Newey et al. (2003) on treatable and avoidable mortality. Albert et al (25) separated conditions amenable to medical care from those related to national health policies in the region of Valencia, Spain, for the period 1975 to 1990. They found that deaths from causes amenable to medical care fell whereas those amenable to national health policies increased. However, they also noted that while the net trend was downward, some causes amenable to medical care, such as cancer of the cervix, increased. This last finding implies that one factor preventing medical care exerting its potential impact on health is the existence of barriers to access. Some evidence supporting this argument is from a study of "avoidable" deaths in counties in Sweden, focusing on the proportion that took place outside hospital (26).

A recent comprehensive study of avoidable mortality in Europe uses data extracted from the WHO mortality files for the period 1990-2002 (Newey, Nolte et al. 2003). Levels and trends in avoidable mortality are examined by calculating age-standardized death rates with direct standardization to the European standard population. This analysis is restricted to the larger countries of the EU, with sufficient data for the time period, thus excluding Malta, Luxemburg, Cyprus, Turkey, Belgium, Slovakia, Denmark and Greece.

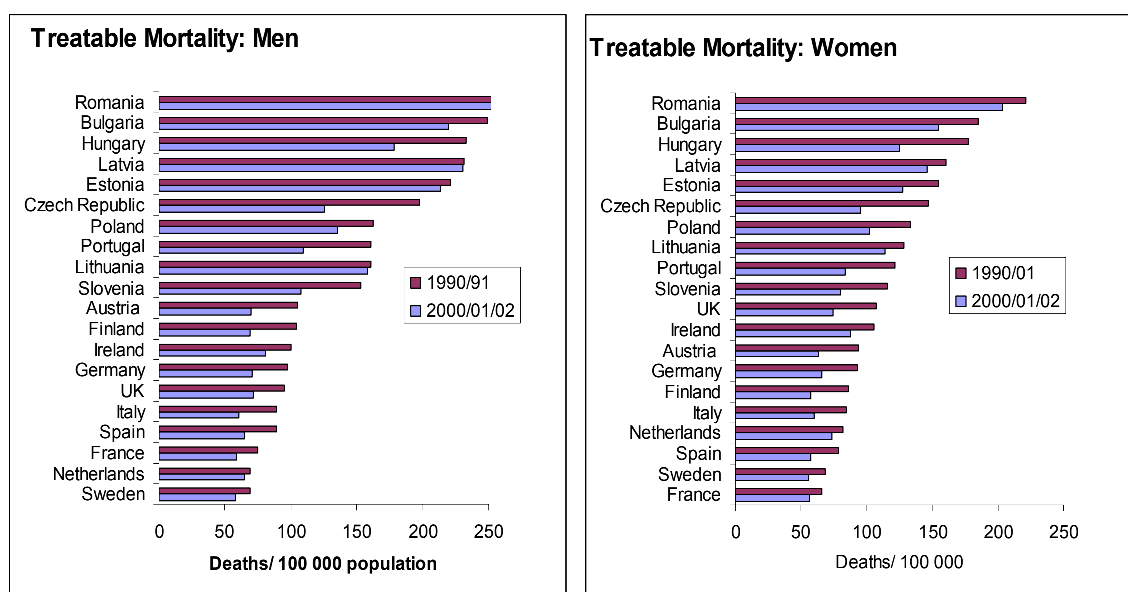
Treatable mortality

Three of the main causes of treatable deaths include infant mortality, cerebrovascular disease, and testicular cancer. Treatable mortality was highest in central and eastern European countries (particularly Romania, Bulgaria and Hungary) in both 1990/91 and 2000/02 (figure 1). Portugal is the only EU 15 country to display similarly high levels. Levels were lowest in France (women) and Sweden (men). All countries, except Romania (men), experienced declines in treatable mortality during the 1990s, particularly Portugal, Austria and Finland as well as new EU member states (in Czech Republic, rates declined by around one-third). Comparatively less progress was made in the Baltic States Latvia, and Lithuania, declining by only 0.4% and 1% form men respectively, and 9% and 11% for women over the time period.

Analysis of treatable mortality can also reveal the proportion of all cause mortality is from treatable disease. In 1990/91, treatable mortality accounted for between 13% (Netherlands) and 30% (Bulgaria) of mortality under 75 in men, and 26% (Sweden) and 44% (Romania) in women. These

relative proportions changed very little over time for both men and women. Therefore, it seems that much can be done to reduce overall mortality rates by targeting the health system – even Sweden, which has one of the healthiest populations in Europe, could cut mortality by a quarter by better treating disease.

Figure 1. Age-standardized death rates of treatable mortality in 18 European countries, 1990/91 and 2000/02



Source: Newey, Nolte et al. 2003

Preventable mortality

Preventable mortality estimates combine three major causes: deaths from lung cancer, motor vehicle and traffic accidents and cirrhosis of the liver. There is a substantial gap between men and women rates of preventable mortality in all countries, with death rates among men at least twice those of women (Newey, Nolte et al. 2003). This gender gap in preventable mortality is most pronounced in the new Member States of central and eastern Europe, which also show the highest absolute values, especially for Hungarian men. This gap reflects the much greater exposure to risks such as drinking and smoking among men. For women, death rates were again highest in Hungary, followed at some distance by Slovenia and Romania, as well as the United Kingdom.

Unlike the situation with treatable causes, throughout the 1990s men have consistently seen declines in preventable mortality whilst women have not. The declines among men were most prominent in Italy, Austria, Portugal, Finland, the United Kingdom Czech Republic and Slovenia. Preventable mortality among women declined in some countries, particularly those in the Mediterranean region, and increased in Sweden and the Netherlands and all new member states (except Slovenia) and Romania. By 2000/2002, levels of preventable mortality among women were lowest in Spain and Portugal, as well as Bulgaria.

Overall, deaths from preventable causes accounted for between 10% of all-cause mortality (Sweden) and 21% (Italy) for men and between 4% (Bulgaria) and 11% (Hungary) for women in 1990. While for men the share remained fairly stable over the 1990s, it increased for women in all countries except Spain and Portugal, to over 10% in most EU15 countries in 2000/02, with highest proportion in Slovenia and Hungary (13-14%).

Inequality in access to health care services

As evidenced in the previous section health care system plays an important role in the overall achievement of population health. Moreover, in light of increasing social inequalities in health in many European countries, there is growing interest in assessing also the inequity in access to health care. For differences in access to health services across socioeconomic groups may exacerbate existing health inequalities.

Universal coverage of the population for a fairly comprehensive package of medical services is a fundamental policy goal within the EU. Governments are not only committed to pursuing the efficient delivery of high quality medical care, but also to ensuring equitable access to these services. This goal can be achieved only if access depends on population need and not on the ability to pay as expressed in many European policy documents and easily identifiable in the recent joint declaration of Belgium, Germany, Portugal, Spain, Sweden, and the United Kingdom; "*The fundamental values of equity, universality and solidarity underpin health systems throughout Europe. All our systems, although they vary greatly in how they are organised, managed, and financed, seek to provide equity of access to high quality, efficient and financially sustainable health care services to the entire population, based on need rather than ability to pay. All systems are based on solidarity – between ill and health, between poor and rich, between young and old and between who live in urban and rural areas*." (Judge et al. 2005: 17) Recently, European health care systems are faced with increasing pressures since a globalised Europe and world brings along a society where diverse groups have particular needs and expectations in regard to health care.

In European countries the health care system is financed either through taxation or social health insurance and it covers the all population although there are some exceptions such as in Austria, Estonia, Germany, Greece, the Netherlands, Slovenia, and the Slovak Republic. This is due to either the organization of the provision of a universal system (e.g. Germany, the Netherlands, and Ireland where a large proportion of the population needs to purchase substitute VHI) or for the entitlement criteria (residency or citizenship) or a failure to register with the relevant authority (e.g in Austria coverage for unemployed people is related with appearance to a job centre).

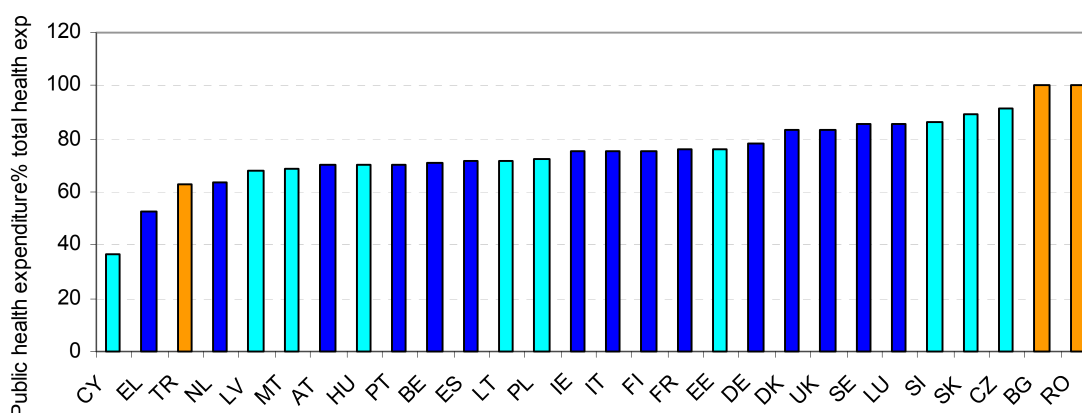
Health care financing and delivery across Europe

The amount of public health expenditure as percentage of total health expenditure varies from 36.6% in Cyprus and around 50% in Greece to 100% in Romania and Bulgaria[3] and no systematic differences across Europe were identified (Figure 3). In recent years due to an increasing burden of health care expenditure many countries have introduced or increased co-payments, co-insurance with the aim of decreasing unnecessary health care demand. User-charges are particularly common for pharmaceuticals but also for secondary and sometimes primary care.

In Belgium households spend on average 8% of their budget on health care, but the oldest and the poorest spends approximately 15% against a 4% for the richest households. Moreover the same survey showed that while on average 29% of interviewers reported difficulties in bearing the financial burden of out-of pocket payments for health care; this percentage increased to 68% among households in the lowest income group compared to 7% in the highest income group (Loucky et al. 2001).

In France, towards the end of 1990s 15% of the population faced substantial financial barriers to accessing health care (Couffinhal and Paris, 2003). With the introduction of compulsory health insurance for those on low income (CMU) in 2000 the situation has improved, although in 2003 still 11% of the population reported to have forgone health care because of the costs (Auvray, Doussin and Le Fur, 2003).

Figure 2. Public health expenditure as % of total health expenditure in Europe, 2002



In Poland, various surveys showed that 40% of the population had to pay out-of-pockets for health care in 2003 (Czapinski and Panek, 2004) and that the amount of out-of-pockets payments rose to 0.9% for inpatient care and 70% for pharmaceuticals, but fell for dental care. And although there were fluctuations between 2000 and 2003 out-of pocket payments were perceived as a barrier to access health care for more than a quarter of the population and approximately 60% of households not

[3] Although it is unlikely that expenditure estimates are accurate. For example, this figure does not account for the significant level of informal payments in these countries.

having enough money to pay for the prescribed drugs decided not to buy them.

A quarter of a million Swidish faced difficulties in purchasing drugs (Whitehead & Dahigren, 2006) and indeed 60% of people with economic problems did not but the prescribed medicines. Moreover, approximately 28% of individuals in poor socioeconomic circumstances did not seek medical care although they need to in comparison with 10% of those with a stable economic situation.

Germany in 2004 has introduced a 10 euros fee for the first contact with an ambulatory doctor or with a dentist. Recent results show that this has lead to a reduction in the number of doctor visits, but there is still no evidence regarding the proportion of unnecessary to necessary visits reduction and the effect on people with lower socioeconomic circumstances (Grabka, Schreyogg, and Busse, 2005; Zok, 2005).

A Report from WHO Europe in 2005 emphasised that financial barriers were the most limiting factors to accessing appropriate health care in the CCEE and CIS and the since the early 1990s the situation has deteriorated (Walters & Suhrcke, 2005).

Although in all countries there are mechanism in place to protect the more vulnerable categories, surely cost-sharing and out of pocket payments as well as informal payments are a financial barrier to access health care and a major burden for the elderly and the poor. "*If the assessment shows that out of pocket payments to be low, it does not necessary indicate that all is well. The low burden could be because poorer groups cannot use the service at all, because of the cost.*" (Whitehead & Dahigren, 2006: 68) Morover, although they reduce they reduce the demand of health care it is less clear if they are efficient and equitable. The RAND Health Insurance experiment showed not only that the introduction of cost-sharing reduced inappropriate services but also appropriate service; but they also increased the demand of emergency services for people in lower socioeconomic groups. Moreover, as shown by a Dutch experiment cost-sharing is not effective if applied to secondary care under a gatekeeper regime, since patients often do not have control over follow-up treatments and they may costs more than they generate (Louckx, 2002).

Geographical barriers

Availability of health care resources is a prerequisite for achieving equal access across the population. There is no clear pattern between western and CEE countries in the number of hospitals and hospital beds per 100,000 inhabitants (Table 1). The number of hospitals per 100,000 ranges from 0.9 in Sweden to 16.7 in Cyprus, and the number of beds from 255 in Turkey to 892 in Germany. The number of hospitals and hospital beds are larger among the new Member States than in the EU-15, consistent with the literature indicating an oversupply of health care resources in this region.

In addition to limited supply of health care resources, geographical distance to hospital might be a barrier in fulfilling the goal of universal access to health care. In the EU-15 more than 50% of citizens live close to hospitals (the distance can be covered in less than 20 minutes either by car, public transport or foot). The proportion lowers somewhat for the new Member States and three Candidate

Countries, where 38% of citizens have easy access to hospitals (Alber and Kohler 2004). Citizens of the EU-15 are more likely to reach hospitals by using either their cars or public transport, whereas in the new Member States and three candidate countries it is more common to bridge distances by foot.

Table 1. Number of hospital and hospital bed per 100,000 inhabitants in Europe, 2003

	Hospital beds per 100 000	Hospitals per 100 000
Austria	834.1	3.4
Belgium	699.0	2.2
Denmark	413.4	1.3
Finland	724.9	7.3
France	780.1	5.3
Germany	892.7	4.4
Greece	471.7	3.1
Ireland	351.5	2.5
Italy	411.8	2.2
Luxembourg	676.7	8.4
Netherlands	457.7	1.2
Portugal	363.7	2.1
Spain	360.6	1.9
Sweden	522.0	0.9
UK	421.8	2.7
Cyprus	436.3	16.7
Czech Republic	855.5	3.6
Estonia	595.3	3.7
Hungary	783.5	1.8
Lithuania	868.2	5.6
Latvia	781.4	5.6
Malta	482.2	2.5
Poland	557.1	2.2
Slovakia	732.3	2.6
Slovenia	495.6	1.4
EU-15	558.8	3.3
NMC	658.7	4.6

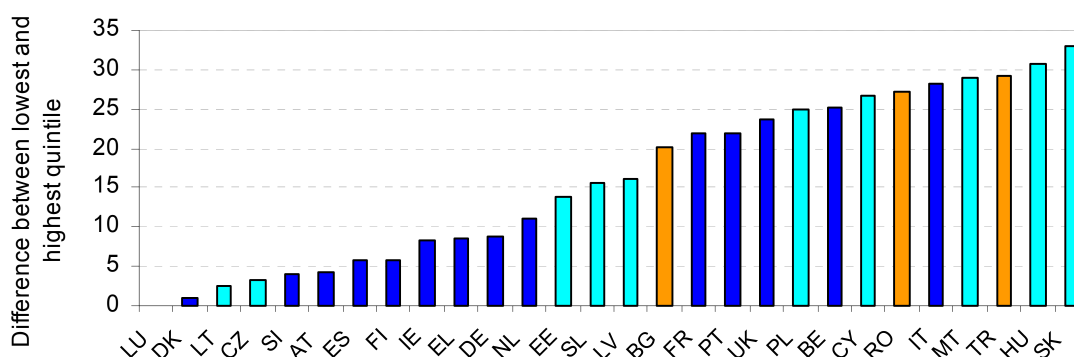
Source: WHO Health for All 2004.

Easy access to primary care is secured for 85% of the EU-15 citizens but only for 62% of the citizens in new Member States and Candidate Countries. In the EU-15 only in Portugal and Spain more than

30% of the respondents reported to travel more than 20 minutes to reach a primary care facility. In the new Member States and three Candidate Countries the countries with a smaller percentage of citizens that report easy access (< 40%) are Estonia, Turkey, Lithuania and Latvia (Alber and Kohler 2004).

To achieve equal access to health care, proximity to hospital or primary care should not depend on individual socioeconomic characteristics such as income and economic activity. However, in some EU-15 and almost all new Member States and three Candidate Countries people with higher income report easier access to hospitals (Figure 4). The accessibility gap in the EU-15 between the highest and lowest income quartile is higher than 20% in Belgium, France, Italy, Portugal and the UK; in the new Member States only Czech Republic, Slovenia, Estonia, Lithuania, and Latvia the difference is less than 20%, but in Hungary and Slovakia is even larger than 30%. Unemployed and retired people have on average greater difficulty in reaching hospitals than the employed in all European countries, but the difference is more marked in the new Member States and the three candidate countries (Alber and Kohler 2004).

Figure 3. Proximity to hospitals: differences between lowest and highest income quartile



For proximity to general practitioners the level of income-related inequalities is lower in all countries.

The average difference between the lowest and highest income quartile is 2.7% in the EU-15, and 11.9% in the new Member States; but large heterogeneity is observed across the EU-15 countries (Mossialos et al, 2005). Individuals with lower income have significantly easier access in Austria (17.9% difference favouring lower income groups), but the reverse is true in Greece (14.9), Finland (14.4), Belgium (13.4%), and the UK (12.3). In the new Member States and the three Candidate Countries, people with higher income live closer to a doctor, in particular in Cyprus (21.2%), Hungary (15.5%), Slovakia (14.6%), and Poland (12.9%). Unemployment does not seem to be related to greater difficulties in reaching a general practitioner, but working people have on average easier access to a doctor than the retired in almost all European countries. The gap tends to be larger among the new Member States but differences are significant almost everywhere (Alber and Kohler 2004).

Inequity in access to health care –results from the OECD study

European countries finance the majority of their health services from public sources and embrace the equity principle that health care should be allocated according to need, and not on the basis of willingness or ability to pay for the services. Yet, notable differences in the characteristics of each health care system are observed. The increasing tension between affordability and equity has encouraged many countries to re-examine their public-private mix and implement reforms that aim at improving efficiency while maintaining equity.

Socioeconomic inequalities in health care use have been detected in Estonia in 1999 (Habicht and Kunst 2005). Individuals living in rural areas were more likely to visit a GP or to use telephone consultations but less likely to seek specialist care. Women used all health services, except hospital care, more intensively than men. Education, income and economic activity were important determinants of health use even after controlling for health needs. People with a more favourable socioeconomic status were more likely to use all services but hospitals.

The remainder of this section will present results from an international comparison of horizontal equity: the degree of inequality in use is measured by income, after standardising for (measurable) need differences (Van Doorslaer et al. 2004). Inequity is measured using concentration indices of need-standardized distributions for total doctor visits and separately for general practitioner and medical specialist visits, inpatient care and dentist visits in 21 OECD countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Mexico, the Netherlands, Norway, Portugal, Sweden, Spain, Switzerland, the UK and the USA.

Physician visits

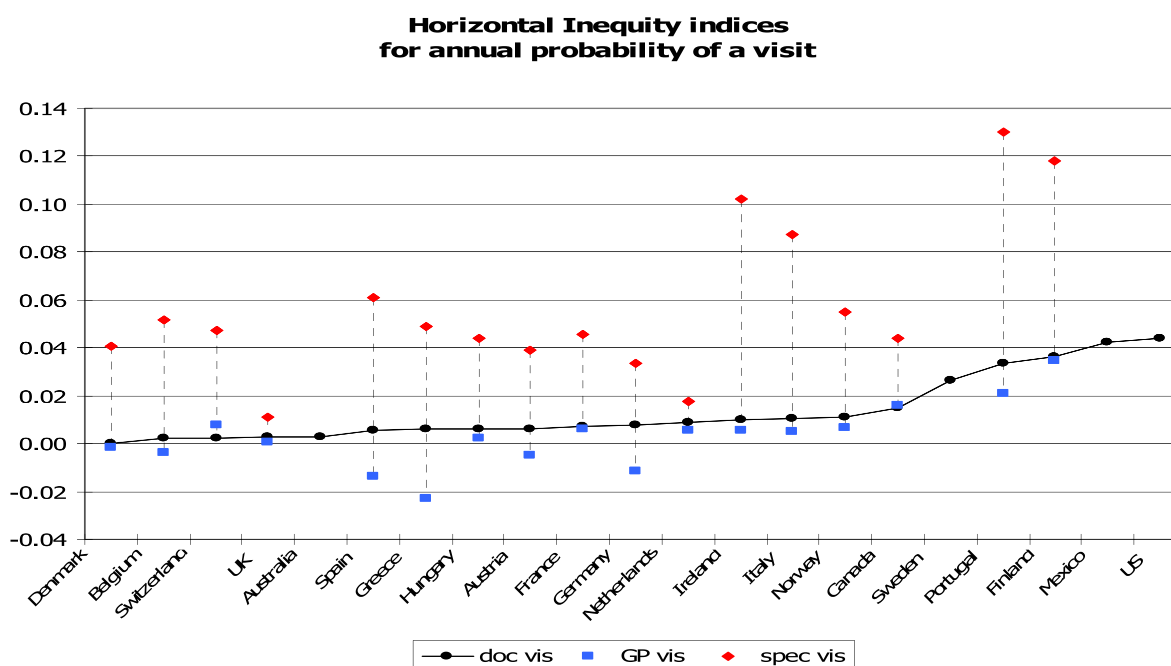
There are important differences between countries in rates of doctor visits (Van Doorslaer et al. 2004). On average, more than 70% of the adult population visited a doctor in the last year; this proportion is lower in Greece (63%) among the EU countries. Much larger variation is found for the percentage of people visiting a specialist. This ranges from 20% in Ireland or 30% in Denmark and Norway, to 60% in Austria and France. In high-use countries like Germany, Hungary, France, Belgium and Austria the frequency of visits is around 7-8 doctors' visits per year, which is twice the rate in low-use countries like Finland, Switzerland, or Denmark. These cross-country differences in utilisation rates are not correlated with doctor/population ratios. However, differences in remuneration types and cultural differences in seeking medical advice might partly contribute to these differences.
When considering within-country variations in use by income, in virtually every OECD country, low-income groups are more intensive users of doctor services than higher income groups. The differences vary by country but, on average, the bottom income quintiles report about 50% more doctor visits per year than the top income quintiles. However, the probability of doctor visits is higher among richer groups after standardizing for population's needs (as indicated by positive HI[4] index

[4] HI is defined as the difference between the degree of income-related inequality in *actual* hospital admissions and the income-related inequality in *need-expected* use. Horizontal inequity is pro-rich and favours the better-off when the horizontal inequity index, HI_{WV}, is positive and pro-poor when negative.

values for most countries; Van Doorslaer et al, 2004). The HI indices are significantly different from zero (indicating inequality) in Finland, Italy, Netherlands, Norway, Portugal, and Sweden. No violation of the horizontal equity principle (i.e. the HI is not significantly different from zero) was found in Austria, Belgium, Denmark, France, Germany, Greece, Hungary, Ireland, Spain, and the UK. The level of income-related inequity in total number of doctor visits seems to be less pro-rich than when the probability of a doctor visit is measured (Figure 5). Pro-rich inequity was found to be statistically significant only in Finland, Portugal, Sweden and Austria, while the reverse is seen in Belgium and Ireland (pro-poor).

The probability of contacting a GP is fairly equitably distributed by income, with a few pro-rich exceptions (Finland, and Portugal). Pro-poor inequalities occur in countries where the access to a medical specialist is direct (i.e. Greece, Spain and Germany where there is no gate-keeping systems). But, on the whole, the likelihood of seeing a GP appears distributed according to need, and is not influenced by income. The need-standardized distributions of total GP visits are significantly pro-poor in ten countries. In only one country, Finland there is pro-rich inequity. Therefore, given that the probability of seeking GP care is equitably distributed, most of the pro-poor distributional pattern in mean visits must be due to the pro-poor conditional use But. In almost every OECD country, the probability of seeing a GP is fairly equally distributed across income, but once people go, the poor are more likely to consult more often.

Figure 4. Horizontal inequity indices for annual probability of a doctor visit, 21 OECD countries



Notes: Countries ranked by HI for doctor visits. HI indices are estimated concentration indices for need-standardized use. Positive (negative) index indicates pro-rich (pro-poor) distribution. German GP and specialist indices for ECHP 1996.
Source: Van Doorslaer, Masseria, and Koolman 2005.

The pattern is very different for specialist visits; in all countries, the better-off have a significant higher probability of visiting a specialist. Although there are important differences between countries in the degree to which this occurs, access to specialist services seems not equally distributed across income groups. In all countries, controlling for need, the rich are more likely to seek specialist care than the poor, and especially so, in countries that offer options to seek private care like Finland, Portugal, Ireland, Italy and Spain, but not only. Indeed, pro-rich inequity in specialist visits was observed also in countries without such private options, and with GP gatekeepers, like Denmark, Norway, Sweden, and to much less extent also in the Netherlands and the UK. The level of pro-rich inequity is even higher when the total number of specialist visits is measured, since the conditional use reinforces the pro-rich patterns induced by the inequitable probability distribution. In virtually all countries, distributions are significantly in favour of the higher income groups. The only exceptions are Norway, the Netherlands and the UK, where the HI indices are positive but not significantly different from zero.

Inpatient care

The probability of being admitted to hospital varies across OECD countries and for the European ones it ranges from 5% in Greece to 14% in Austria (Van Doorslaer et al. 2004). Distributional patterns are different for the number of nights spent in hospitals; among the European countries those with the lowest average numbers of nights spent in hospitals are Portugal (0.63) and Greece (0.66), while those with the largest are Hungary (2.5) and Austria (2.01).

People at the bottom end of the income distribution are more likely to be admitted to hospitals in almost all OECD countries and to spend more nights in hospitals, but the picture is more heterogeneous after standardizing for population's needs (i.e. inequity). For the majority of countries it was impossible to detect any inequity both in the probability and the total number of nights spent in hospitals. This might be due to the skewed distributions of hospitals care (i.e. many people did not go to hospitals) and the difficulty of explaining length of stay with the information available in these surveys. Significant inequality was found only for the countries with large sample sizes. Individuals with higher income were more likely to be admitted to hospitals in Mexico and Portugal. On the contrary, pro-poor inequity was found in Australia, Canada, Switzerland and the USA (Van Doorslaer et al. 2004).

Different results have been found by Masseria et (2006) by pooling several waves of the European Community Household panel Survey (from 1994 to 1998) for 12 European countries: Austria, Belgium, Denmark, Italy, France, Germany, Greece, Ireland, the Netherlands, Portugal, Spain, and the UK[5]. In almost all these countries, the index of horizontal inequity for the probability of hospital admission is positive, indicating income-related inequity in favour of the better-off. The level of inequity is particularly large in Portugal, Greece, Italy, Austria, and Ireland. All these countries, except Austria, offer hospital physicians some way to practice privately alongside the public sector. Belgium is the only country with a negative and statistically significant index, indicating horizontal inequity favouring the poor.

[5] Finland was excluded because data were available only for two years; for Austria data were available only from the second year (1995); for Germany and the UK comparable data were available only for the first three years

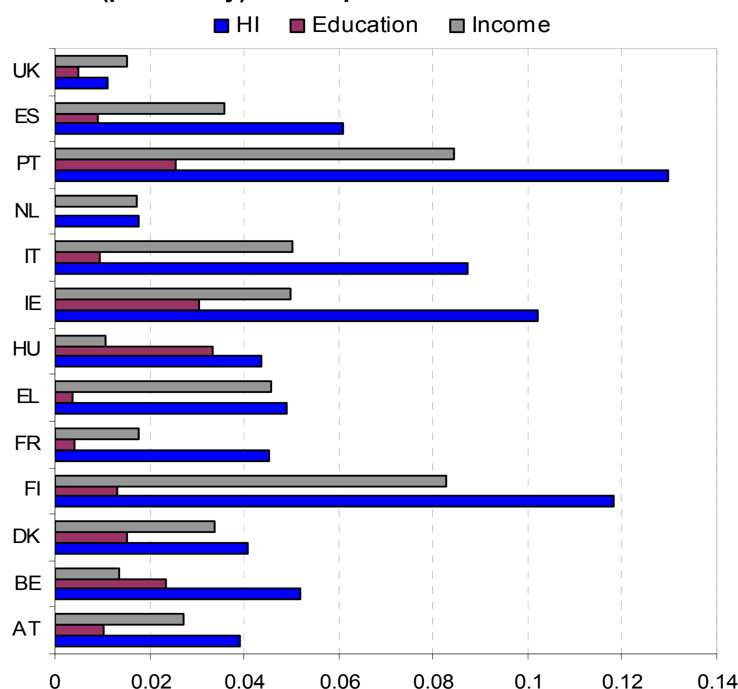
Understanding the source of inequity in access to health care

Education is an important socioeconomic factor that is related to both income and health. Indeed, differences in medical care use by level of education often reflect the utilisation patterns by income. The higher educated, ceteris paribus, are more inclined to visit specialists almost everywhere and particularly so in Hungary where the contribution[6] of education to the pro-rich inequity in specialist visits is larger than the contribution of income (Figure 5). The picture is less clear-cut with respect to GP visits, total doctor visits and hospital care use; contributions are smaller, and most often negative. This means that education appears to be a more important cause of inequality in specialist care than in other health care services.

Differences in employment status might also affect access to medical care, for example by impacting the time costs of using the health system. Ceteris paribus, not being in paid employment seems to influence the degree to which utilisation patterns vary by income, and its contribution is generally negative (Van Doorslaer et al. 2004). Individuals receiving a retirement or a disability pension, holding everything else constant (e.g. self-reported health and age), have lower incomes and are less healthy than their working counterparts. Activity status might, therefore, operate as (imperfect) need proxies. However, the difference between needed use and actual use distributions might be driven by the different time costs that people out of work face in comparison with their counterparts.

[6] The contribution of each variable to total inequality in specialist visits depends on three factors: (1) the importance of this variable (as indicated by its mean), (2) the extent to which it is distributed across income (as indicated by its concentration index value), and (3) the (marginal) effect of this variable on the number of specialist visits (as indicated by the regression coefficient). A positive (negative) contribution increases (decreases) the overall level of inequity. For example, in Hungary the contribution of education is 0.03, and this means that the inequality in specialist use is 0.03 higher than it would have been if education did not have an effect on use.

Figure 5. Contribution of education and income to the overall level of inequality in specialist visits (probability) in Europe



Source: European Community Household Panel.

The impact of activity status on inequalities varies tremendously across countries. In Denmark and Hungary, the pro-poor contribution to inequity of employment status is driven by the retired; the (early) retired in these countries are worse off than those in the same age category who continue working, and also seek more medical care. In Finland, the pro-rich inequity in GP care is caused by the higher utilization rates of employed versus non-employed; and this is partly due to the inclusion of occupation-based health visits[7], among general primary health care.

Discussion

Europe has seen improvements in both health status, and living and working conditions over the past few decades. However, there is still large heterogeneity in living conditions that translate into diversity in patterns of health across the region. Good health can be considered one of the most fundamental resources for social and economic prosperity. Changes in socioeconomic conditions affect population health directly and through psychosocial factors. People at the lower end of the social ladder are more likely to report ill health than those near the top, both within and across countries.

[7] A more meaningful disaggregation of doctor visits in Finland by sector reveals a high degree of pro-rich inequity for occupational care and private visits, a very low degree of pro-rich inequity in outpatient care visits and a pro-poor distribution of health centre contacts (Unto Häkkinen, personal communication).

Reducing inequalities in health is a specific goal of public health or broader health policy in most EU countries. Although significant policy developments aimed at reducing health inequalities have been seen in some countries (e.g. England, Sweden and at local level in the Netherlands), to date there has been little evidence that they have been successful. This relative lack of evidence is due on the one hand to the long time lags from policy implementation and changes in population health, and on the other hand limited capacity for research and evaluation. Furthermore, in many countries, data collection and accuracy on health and health inequalities is limited, making developing policies difficult. In new Members States and ACC, policies to tackle health inequalities are more limited than in the west, although actions to address poverty and social exclusion have been or are in the process of being developed and implemented. It is vital that countries move towards formal coordination across sectors if improvements in health inequalities are to be realized. A common limitation is the lack of evidence to support policy decisions and to evaluate effectiveness of programmes. Finally, it is important to note that there are several limitations with the surveys available for comparing data between European countries. Improvements are needed in:
1) scope;
2) comparability;
3) motivations of behaviours; and
4) accessibility.

Various policies and initiatives have been implemented across Europe to reduce the prevalence of tobacco use. Policies in Ireland, the UK, Norway, and Iceland appear to have been the most effective in reducing national smoking rates between 1985-2005, where prevalence declined by 20% to 25%; the least successful were Luxemburg, Romania, and Latvia. Ireland was in the forefront regarding the prohibition of smoking in public areas, followed by Norway, Malta, and Italy. While more research is needed to evaluate the effectiveness and cost-effectiveness of national tobacco strategies, evidence suggests that increases in cigarette prices and taxes and the implementation of comprehensive clean air laws have been successful in reducing smoking rates. In light of the increasing rates among young people in many countries, further policy action is needed targeting youth; evaluations of the impact of recent tobacco control measures aimed at children and adolescents are needed. Also, numerous studies point to the link between socioeconomic status and smoking habits, such that individuals in lower socioeconomic groups have higher rates of smoking in all countries. Therefore, policies need to take this into account and to target the more disadvantaged groups. Encouragingly, initial evidence suggests that recent tobacco control measures have reduced health inequalities.

At the national level, there has been renewed attention to obesity with many countries in all parts of the EU recently introducing public health programmes. These largely focus on improving nutrition and levels of physical activity in the population. Recognising that childhood obesity requires urgent attention, many countries have also introduced policies focusing on schoolchildren to reduce obesity. Some countries, including Sweden, Belgium, the Netherlands and Ireland, have taken action to restrict advertising of low-nutritional value products to children. However, difficultly in assessing the effectiveness of individual policy interventions to combat obesity has hindered EU-wide strategy development. EU-wide policy holds a particularly important place because of the transnational nature of some aspects of factors influencing obesity rates, such as food manufacturing and agricultural policies. The results of the 2005 European Commission green paper for consultation on fighting obesity are eagerly awaited.

The health care system also plays a role in explaining differences in health status both within and across countries. In the Netherlands between 1875 and 1970 the medical contribution to the decline in mortality ranged between 4.7% and 18.5% (Mackenbach 1988), and between 1950 and 1984 without the significant reduction in amenable causes of mortality, male life expectancy at birth would have actually fallen by almost a year due to increases in other causes of death (Mackenbach, 1996). In 1990/91, treatable mortality accounted for between 13% (Netherlands) and 30% (Bulgaria) of mortality for men under 75, and 26% (Sweden) and 44% (Romania) for women. These relative proportions changed very little over time for both men and women (Newey et al. 2003). Therefore, it seems that much can be done to reduce overall mortality rates by targeting the health system – even Sweden, which has one of the healthiest populations in Europe, could cut mortality by a quarter by better treating disease. Effective treatments and preventive care also played a major role in reducing mortality rates for cardiovascular diseases and various cancers in various European countries.

Most importantly, if access to health care is not equitable across social groups, it can exacerbate existing health inequalities. There is evidence that although people in more vulnerable categories have more need for health care they do not receive the care they need. Inequity is present almost everywhere and this is due to geographical, financial, and/or socio-cultural barriers. The burden of payment for health care is a growing concern for people socially and economic vulnerable; and there is clear evidence that "the availability of good medical care tends to vary inversely with the need for it in the population served" (Hart, 1991). Offering universal access to health care services does not eliminate inequalities, as shown by most industrialized countries that have removed financial barriers to access. Different population groups such as the poor, the elderly, immigrant either legal or illegal, disabled, ethnic minorities may have different need for health care and different expectancies. A health system should be designed to address the needs of all the population in an equitable, efficient and responsive way.

The WHO Venice Office after analyzing the various health care systems concluded that the health care system can help reducing poverty and inequity in health by (Ziglio et al. 2003):

1. Confronting the inverse care law by improving coverage, eligibility, geographical and cultural access, and equitable resource allocation
2. Prevent that use of health care causes poverty by addressing the burden of payments
3. Help counteract the effect of socioeconomic inequalities in health for examples by proving outreach services to homeless, people belonging to ethnic minorities, and other people living in poverty
4. Tackle the wider determinants of health inequalities by promoting multisectorial perspectives.

A discussion of all policy makers in Europe is therefore essential to develop health care systems able to respond to the changing environment and expectations of the various population groups in each country that guarantees equity, efficiency.

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