

**Various studies on policy implications of demographic changes  
in national and Community policies**

**LOT 5**

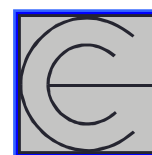
**IMPLICATIONS OF DEMOGRAPHIC AGEING IN THE ENLARGED EU  
IN THE DOMAINS OF  
QUALITY OF LIFE, HEALTH PROMOTION AND HEALTH CARE**

**Summary**

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Stefanos GRAMMENOS  
**Centre for European Social and Economic Policy (CESEP)**  
**Rue de la Pacification, 65.**  
**B-1000 BRUXELLES**  
Tel. : 02/230.63.96  
Fax: 02/230.94.51  
E-Mail : [cesep@skynet.be](mailto:cesep@skynet.be)

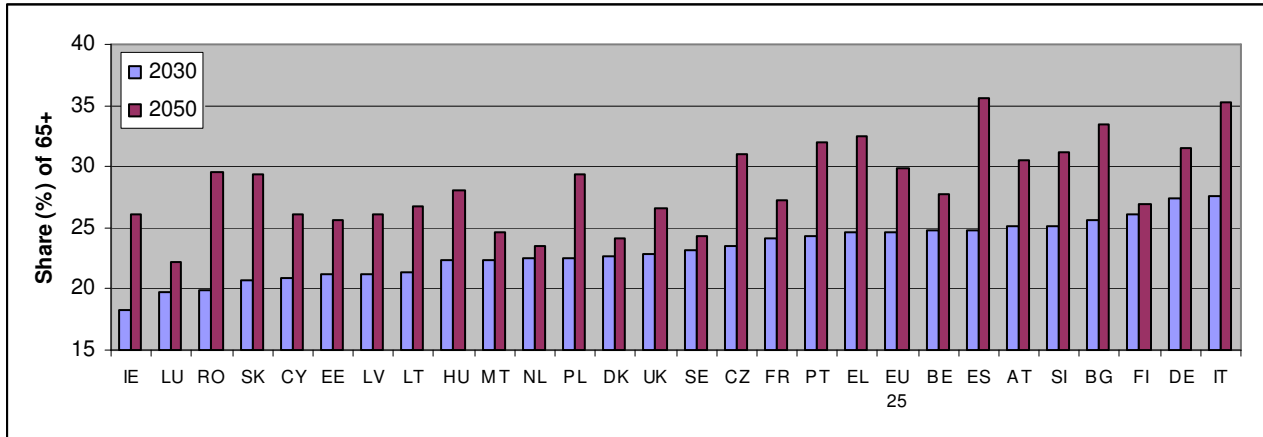


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## 1. Demographic ageing and health

The ageing of the population generates a certain number of imbalances. Eurostat projections reveal that the share of elderly people (65+) will grow from about 15% in 2000 to about 30% in 2050. However, data indicate a big diversity among member states.

**Figure 1: Evolution of the share of elderly people by country; Share of 65+ in the total population**

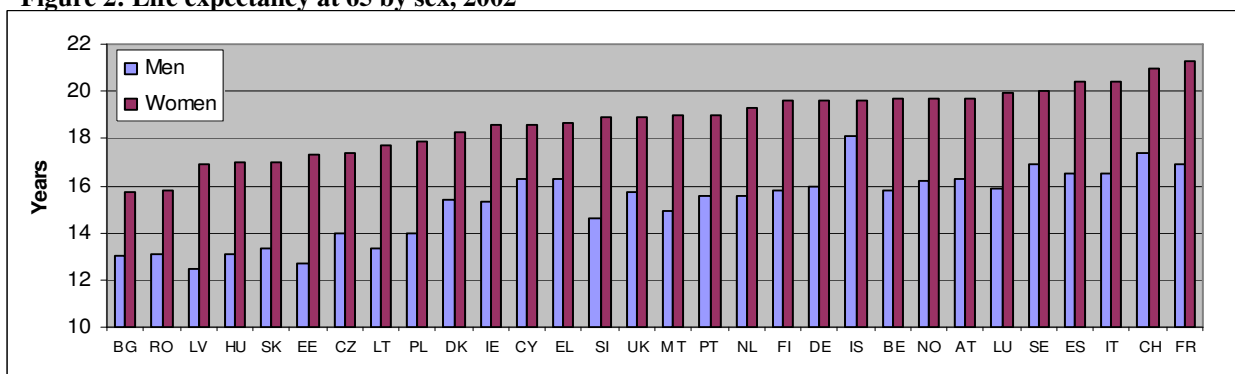


Data source: Eurostat

This raises the question of the financial sustainability of social security systems. Increased labour participation and high labour productivity are not a solution by themselves. The first needs to be translated into effective jobs and the second ought to respect the relative position of elderly people. Health costs related to elderly people constitute an important share of total health care expenditures. Consequently, savings on health care costs could help reduce future strains on public budgets.

During the last 40 years both elderly men and women at age 65 gained about 5 years of life expectancy. However, big differences exist between countries and genders. Additional years of life do not always mean years lived in good health. Concerning men, the disability free life expectancy is 6,1 years in Hungary and 11,8 years in Italy. The respective years for women are 7,2 and 13,7 years. The variability (standard deviation) across countries of disability free life expectancy at 65 is higher compared to life expectancy at 65, both for men and women. This means that health gains might be achieved in certain Member States.

**Figure 2: Life expectancy at 65 by sex, 2002**



Data source: Eurostat

The main causes of death for persons aged 65 and over are the diseases of the circulatory system, followed by cancers. Cardiovascular diseases account for almost half of deaths. Malignant neoplasm (cancers) counts for about 25%. Global mortality rate in Europe has decreased steadily in the last 40 years. However, significant differences persist between the New Member States (960 per 100.000) and

the EU 15 (654 per 100.000). Mental health constitutes also an important share of the total burden of disease.

Non-communicable diseases are essentially diseases of later life and many are preventable or can be postponed. The most important non-communicable diseases like cardiovascular diseases, cancer and diabetes are linked to preventable risk factors. This requires monitoring the health of elderly people in order to better design future programmes.

There is a big variability across countries of prevention practices meaning that there is a potential to learn from each other and to define common strategies. Also, as noted above, morbidity incidence varies across countries. Consequently, major health gains might be possible for many countries if successful health promotion activities and preventive public health actions are replicated further.

## 2. Lifestyles and prevention

About 20 percent of all disabling illnesses can be attributable to unhealthy lifestyles and hence theoretically avoidable. Between 5 and 9 percent of total expenses for health care are the result of unhealthy lifestyles, obesity and high blood pressure.

Physical activity reduces notably the number of falls, blood pressure, promotes mental health, and favours independent living and social activity. A better diet would significantly reduce the risk of chronic disease like cardiovascular disease, cancer, diabetes, obesity, osteoporosis, etc. According to the American Nutrition Screening Initiative (NSI), for every \$1 invested in nutrition programmes, \$3,25 is saved in health care costs. Smoking seems to be the most important modifiable risk factor both for young and elderly people. The percentage of present smokers in the European population aged 65-74 years varies between 1% and 39%. Smoking cessation treatments have been shown to be effective for older adults. About 6,6% of medical expenditures for persons 40-94 years of age might be attributable to smoking.

**Table 1: Proportion (%) of the burden of disease (DALYs) attributable to contributory causes (All ages)**

Risk factor	EU	NL	SW
Smoking	9,0	15,0	8,0
Alcohol use	8,4	7,0	3,5
Vegetable/fruit deficiency in food	3,5	4,0	4,0
Overweight	3,7	5,0	2,8
Fat content of food	1,1		1,5
Physical inactivity	4,4	5,0	4,4
Relative poverty	3,1	-	1,2
Work-environment factors	3,6	-	2,2

Source: EU and SW: National Food Administration – Swedish National Institute of Public Health; NL: National Institute of Public Health and the Environment, NL (RIVM)

The increasing prevalence of overweight and obesity has become a major public health problem in developed countries. Obesity reduces life expectancy and increases the risk of disease including cancer, coronary heart disease, diabetes and hypertension. The percentage of people aged 65-74 who is obese varies between 5% and 33% depending on the country and gender. Furthermore, the prevalence of obesity is increasing. People who are obese at the age of 40 can expect their life expectancy to be shortened by up to seven years, compared with people of a healthy weight. Available results indicate that life expectancy might decrease due to increasing obesity in the coming years.

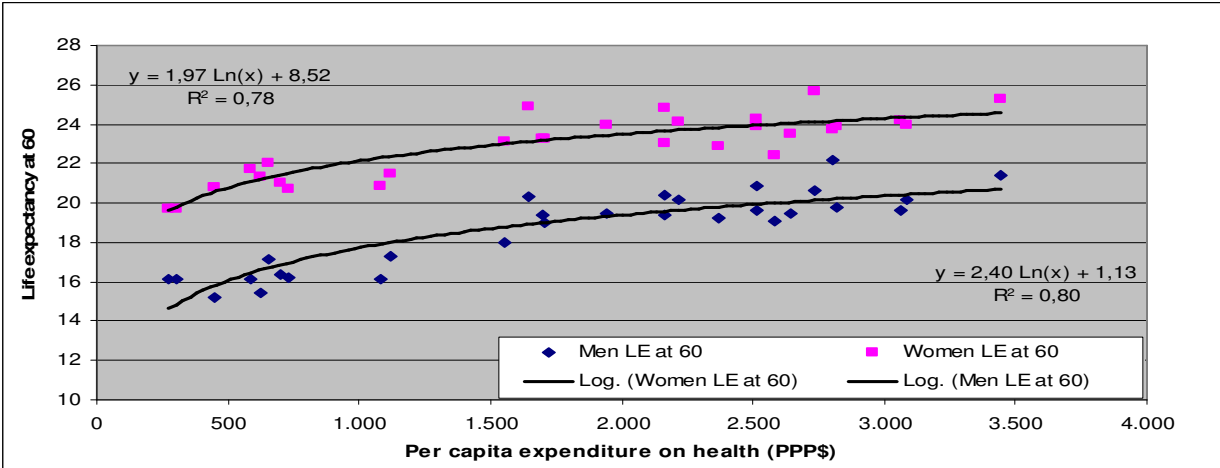
The role of screening has been stressed by several studies. For breast cancer screening campaigns, the cost of diagnosis, treatment and follow-up at an early stage of the cancer was estimated at around € 3.487 in the US, whereas costs related to the treatment of an advanced stage of cancer amounted to some € 10.687, triple the initial costs.

Mental problems are an increasing burden of disease. By 2020 depression is expected to be the second leading cause of disability adjusted life years lost, second only to ischaemic heart disease.

**3. Socio-economic status**

Several studies have established a strong association between socio-economic status (income, education, occupation, etc.) and health. However, there is a big debate on whether this association can be interpreted as causality. Available cross-national data reveal a strong association between life expectancy and income. The relation is very strong for low-income countries but tends to flatten down as income increases. However, income might not affect only years of life but also the quality of life e.g. morbidity, activity limitations, etc.

**Figure 3: Life expectancy at 60 by gender and per capita expenditure on health, 2001**



Note: The data covers 29 European countries. Data source: Eurostat (Life expectancy) and WHO (Expenditures)

Several national studies on adult and elderly population find that mortality decreases significantly as personal income rises. Concerning people aged 65 and over, the relation is slightly weaker compared to the general population but the impact is still significant (e.g. Sweden, UK, Netherlands). The death rate of elderly persons is generally 50% to 100% higher in low-income groups compared to high-income classes. National and European surveys find that elderly people (65+) with a low income declare more often a bad or very bad health status. About 25% of elderly persons (65+) declare a bad or very bad health compared to 13% of the highest income classes.

In several countries, access to medical care is free and universal and one could not expect a significant causal relation between socio-economic status and health. However, income may affect health not only through access to health care but also through nutrition, lifestyles, environmental risks, etc.

Previous occupation seems to play an important role, separate from income, often associated with working conditions. Physical effort, psychological stress, accidents and toxic agents might have an important impact on health. During time they accumulate and their effects might appear after retirement age. Studies covering the total population report that the economic cost of accidents at work and work-related ill health are between 1.4% (UK) and 8.3% (Sweden) of the GNP. Others report that the costs of work-related illness range from 2,6% to 3,8% of GNP.

In several countries, surveys confirm that life expectancy and disability free life expectancy is lower for elderly people who were blue collars. Previous occupational status has also a significant impact on activity limitations. In certain countries, about 6% of high-grade staff reports severe activity limitations, while this rate is 13% among manual workers.

National studies indicate that despite significant improvements in life expectancy, the differences between socioeconomic groups are large both in mortality and in morbidity. The manual to non-manual mortality ratio is similar across countries. Furthermore, inequalities increased in several countries between the 1970s and 1990s, and persist among elderly people. Health policies affect all socio-economic groups but do not reduce the relative difference in mortality between social classes.

Available studies (notably for Denmark, Italy, Norway and Finland) indicate a strong impact of education on mortality. Less educated elderly persons have a higher mortality than more educated people. However, the inequality among elderly people is lower compared to younger groups. The evolution through time indicates that, in most cases, the relative inequality has increased indicating a relative deterioration for low educated groups. National and European surveys indicate a significant impact of educational level on self-perceived health of low-income groups.

The level of education has a strong positive impact on life expectancy and on life expectancy without disability (e.g. Belgium, Netherlands). Disabling illnesses occur systematically more often (up to three times as often) among people with less education, compared to those with higher education. This difference persists among elderly people. Over 50% of the education-mortality association is explained by wealth factors and the remaining by lifestyles and other factors.

Social support and informal relations with the family seem to be important for successful ageing. Several surveys have noted that people living alone report a higher prevalence of activity limitations. There is a growing literature arguing that resources available to individuals through the family and networks constitute a “social capital” which enhances well-being. Policies might affect social capital by a relevant housing policy for elderly people.

The previous analysis reveals that socio-economic factors play an important role in life expectancy, morbidity and mortality of older persons. Also, the general improvement in these indicators must not hide the fact that even in countries with developed social protection systems, relative inequality is present among elderly people and is even increasing.

#### 4. Long-term care

Care dependency implies a need for assistance. Narrow indicators of care dependency refer to the need of assistance for the activities of daily living (ADL). Wider definitions cover ADL and instrumental activities (IADL).

The composition of care dependent people is expected to change. In 2005, dependent elderly people represent 52% to 62%, while in 2050, they will represent 70% to 78% of all dependent people.

**Table 2: Number of care dependent people, EU 25.**

	Narrow definition (ADL)					Wide definition (ADL and/or IADL)				
	2005	2030	2050	Change 2005-30	Change 2030-50	2005	2030	2050	Change 2005-30	Change 2030-50
	Absolute number			%		Absolute number			%	
25-64	3.467.706	3.187.553	2.398.707	-8,1	-24,7	14.872.111	13.839.951	10.853.629	-6,9	-21,6
65+	5.762.455	7.836.499	8.607.444	36,0	9,8	16.412.520	22.914.690	25.647.023	39,6	11,9
<b>Total</b>	<b>9.230.161</b>	<b>11.024.051</b>	<b>11.006.151</b>	<b>19,4</b>	<b>-0,2</b>	<b>31.284.631</b>	<b>36.754.641</b>	<b>36.500.651</b>	<b>17,5</b>	<b>-0,7</b>

Care may be provided by professionals or by informal sources (family and relatives). An important discussion concerns whether formal and informal help are substitutes or complementary. Analysis of different surveys indicates that family and public services are not total substitutes. Some evidence shows that an increase of formal help does not lead to a total crowding out of informal care. In the majority of cases, informal help concern instrumental activities like shopping and household tasks. In the EU, about 5,8% of persons (aged 25 and over) spend more than 20 hours per week caring. Care prevalence increases at 9% at the age of 50.

The big majority of carers are women (60% to 80% of all carers). High levels of caring exert a negative impact on employment of carers compared to non-carers. It is interesting to note that a high number of carers are in the age group of 55-64, where labour participation is low. The prevalence of caring adjusted for the time spent caring varies sharply across countries. UK, Greece and Denmark have the lowest prevalence, while Spain, Ireland and Italy have the highest. Consequently, the latter countries might have a big potential for increased labour participation with the relevant policy concerning the development of services for care dependent people.

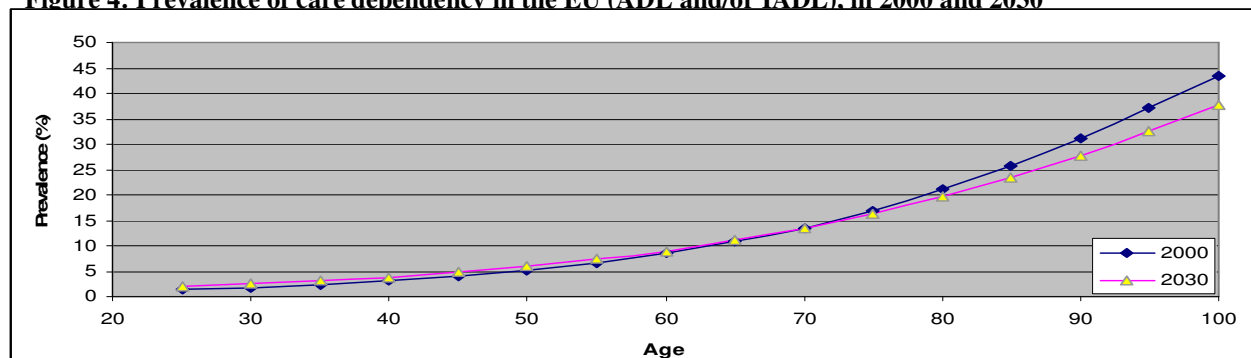
**Table 3: Number of carers, EU 25; 2005 and 2030**

Age groups	Carers providing +20 hrs/week		Carers providing + 35 hrs/week		Carers providing +20 hrs/week		Carers providing + 35 hrs/week	
	Number	%	Number	%	Number	%	Number	%
	<b>2000</b>				<b>2030</b>			
25-49	7.324.479	38	3.622.413	38	6.341.135	29	3.138.452	29
50-64	7.194.221	38	3.650.595	38	8.463.708	39	4.297.119	39
65+	4.531.183	24	2.334.924	24	6.729.865	31	3.469.179	32
<b>Total</b>	<b>19.049.883</b>	<b>100</b>	<b>9.607.932</b>	<b>100</b>	<b>21.534.708</b>	<b>100</b>	<b>10.904.750</b>	<b>100</b>

Source: Own calculations using Eurostat population forecasts (baseline scenario)

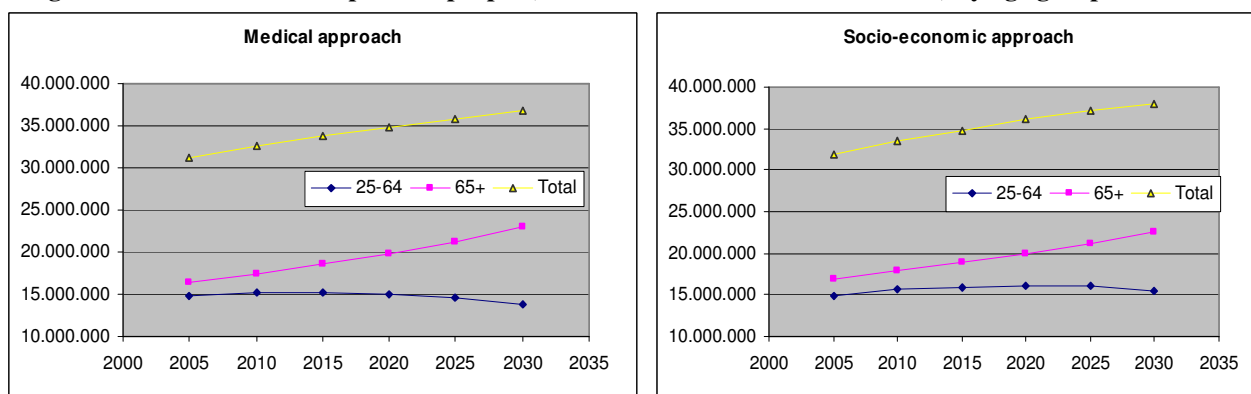
The dominant approach of disability and activity limitations is strongly based on a medical approach. We have departed from the medical approach and tried to identify the factors, which affect the level and progression of activity limitations. We find that GDP, sickness benefits, replacement rates and social capital have a significant impact on the level and progression of activity limitations.

**Figure 4: Prevalence of care dependency in the EU (ADL and/or IADL), in 2000 and 2030**



The medical and the socio-economic approach provide similar results concerning the prevalence of activity limitations among elderly people in 2030. However the socio-economic approach indicates that lower replacement rates and tight labour markets might have an adverse impact on activity limitations of younger generations.

**Figure 5: Number of care dependent people (Wide definition: ADL and/or IADL) by age group**

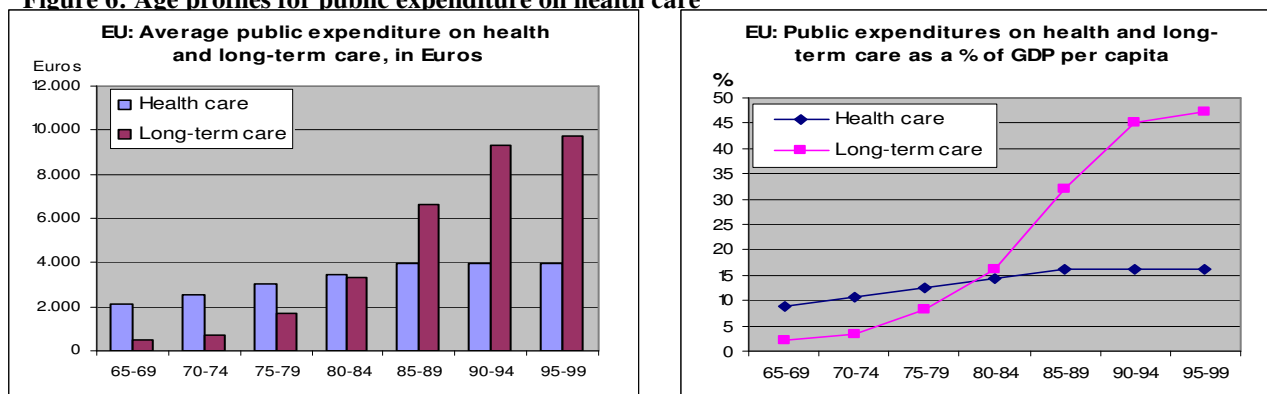


The number of dependent people is expected to increase more compared to the number of carers. A policy of higher labour participation might increase further this gap. One major policy issue in the coming years will be to ensure the compatibility between labour participation and caring activities for elderly people. Current policies aiming to increase labour participation of people aged 55 to 64 ought to be accompanied with the development of care services for elderly people.

Elderly carers will support an increasing share of assistance. This might have an adverse impact on their own health and increase further the gap between needs and potential suppliers of assistance. Also, many potential jobs in this sector are not attractive, as these services require often low-skilled jobs with no career prospects. These developments require an adaptation of care policies in order to find the right balance between self-care, informal care and formal care. The development of formal care ought notably to reinforce the capacity of older people to look after themselves, enable economically active persons to combine work and informal care, and to alleviate the burden of elderly carers.

The measurement of costs related to long-term care poses several problems. However, there is a consensus that expenditures on long term care increase at an exponential rate after the age of 75 years.

**Figure 6: Age profiles for public expenditure on health care**



Source: Adapted from data in “Economic Policy Committee (2001). EU data are simple averages of available countries.

The Economic Policy Committee carried out projections of public expenditures on long-term care. In 2000, public expenditure on long-term care reached around 1,3% of GDP in the EU. They are expected to reach 2,2% of GDP in 2050. A higher life expectancy in 2050 is likely to put additional strain on long-term care expenditures. Higher cost growth may also increase expenditures further.

Studies note that if we assume that one year rise in life expectancy at birth delays dependency by one year too, the share of long term care expenditures as % of GDP falls compared to the central base case assumption. Also, if informal care is replaced by institutionalisation, the impact on long-term care expenditure would be greater, than if they were replaced by home-based care. This has led several countries to anticipate these changes and to favour de-institutionalisation of elderly people.

Several Member States have tackled the financing of autonomy and long-term care in old age. In the “Bismarckian model” (e.g. Germany, Luxembourg, Belgium-VI), long-term care insurance is becoming a pillar of social insurance. However, in order to achieve long-term sustainability, it applies a narrow definition of beneficiaries and fixes a maximum amount of benefits. The system favours long-term sustainability as it fosters “savings” and might be more transparent compared to a “Beveridgian” type support. Questions arise however concerning equity and redistributive effects in the Bismarckian model. A mix of systems seems desirable, notably by encouraging private long-term insurance schemes (through tax incentives) and complementing them with public long-term schemes.

## 5. Health care expenditures

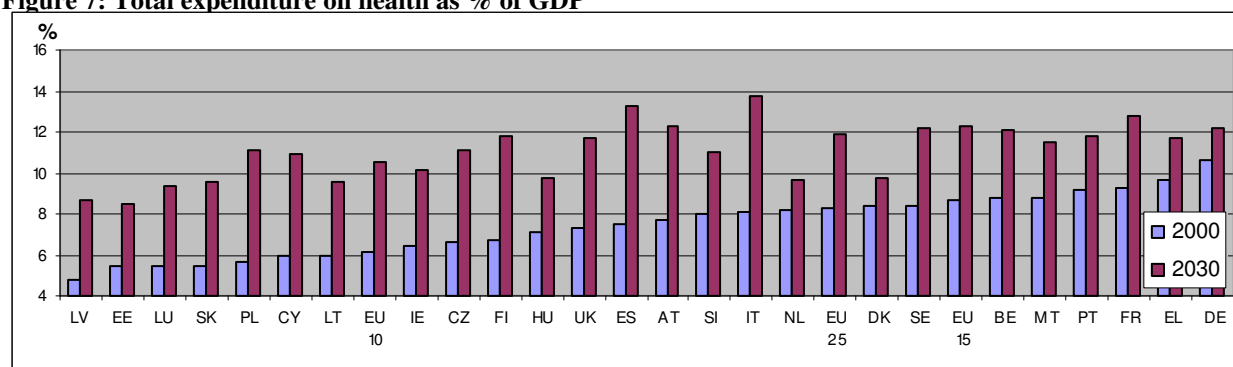
Health care expenditures for the elderly amount to about 30% to 43% of total health care expenditures. In most countries, the rise of health care expenditures has been more rapid than GDP. This has led to a significant increase of the ratio of health care expenditures to GDP, which is used as an indicator for the long-term sustainability of the financing of the health care system.

Different factors have been advanced in order to explain this increase: 1) The income elasticity of health care expenditures is higher than '1'. This means that health care is a "superior good" and its share is expected to increase with income. 2) Technical progress, attitudes and medical practices have pushed medical costs upwards for every age group. Certain argue that technological progress might account for about 75% of the increase in health care expenditure. 3) The age profile of health and long-term care expenditures may play a significant role in the increase of health care expenditures. A high share of elderly people implies a high share of health care expenditures in GDP.

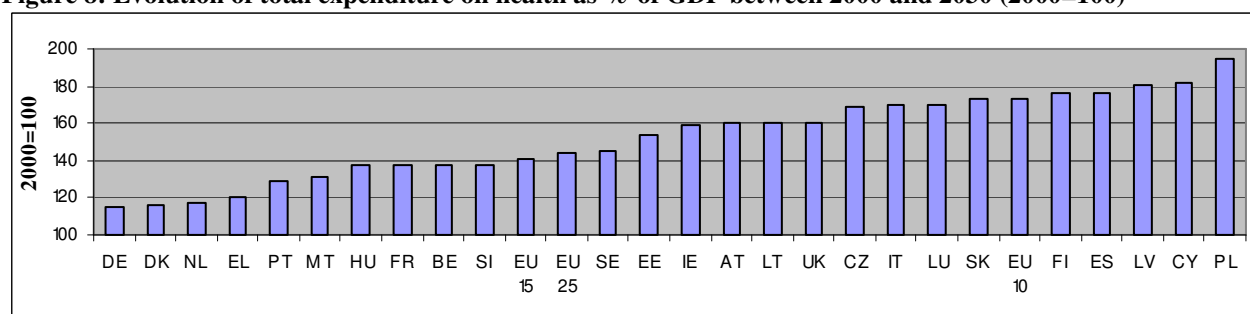
The Economic Policy Committee (2001) predicts that demographic changes would lead to increases in public spending for health care in the range of 0,7 to 2,3 percentage points of GDP over the next fifty years (for EU 15). Estimations presented by OECD are very close to those presented by the EPC.

In order to take into account the different factors affecting health expenditures, we have estimated total health expenditure per capita as a function of GDP per capita, life expectancy and the ratio of people aged 80 and over to persons aged less than 25 years. The definition of total health expenditure is relatively large as it includes investments in health infrastructures but does not include the social assistance element of long-term care. We have retained an equation, which is linear in logarithms. We suppose that GDP increases by 2% each year. Life expectancy and the ratio of very old to very young are taken from the baseline scenario of Eurostat demographic projections.

**Figure 7: Total expenditure on health as % of GDP**



**Figure 8: Evolution of total expenditure on health as % of GDP between 2000 and 2030 (2000=100)**



Note: The estimations for DE, ES, HU, LU, PT have to be treated with caution.

We can distinguish two cases: a) For relatively poor countries, all factors tend to increase the share of health expenditures to GDP. This is notably true for the new Member States. B) For relatively richer countries, the variable elasticity scenario indicates that the income effect tends to reduce the share of



health expenditures to GDP while the other two factors work in the opposite direction. This means that the new Member States and countries like Italy and Spain will face a significant sustainability problem.

Several studies find that a small increase of life expectancy generates a significant increase of total expenditure per capita. This means that health expenditures per capita might grow faster than GDP per capita and thus increase the share of health expenditures to GDP.

The different projections share a certain number of important characteristics for policy elaboration. Applying a “high population” scenario, contributes in the reduction of health share. This is because the effect of higher fertility and migration rates counterbalance the effects of higher life expectancy. Additional years of life in good health lead to a significant reduction of care costs in comparison to the baseline scenario. Improvements in health are expected to reduce acute as well as long-term care expenditures. Additional years of life in good health appear to be a strong restraint to the increase of health care relatively to GDP.

There is an ongoing debate on whether ageing or death is costly. Several studies find that once proximity to death is accounted for, population ageing has either a negligible or even a negative effect on health care demand. It is not ageing which is costly but proximity to death. On this basis, increased life expectancy would not increase health costs per person as high as predicted by traditional methods.

Additional years of life might not increase significantly health care costs. However, the cost of death is just postponed. Several studies find that death costs might be less for very old people compared to younger people. Several studies find that as longevity increases the cost of last year is decreasing. This difference might arise from the following factors: 1) The structure of diseases leading to death varies across ages; 2) Aggressive and multiple treatments might be less supported by elderly people; 3) Life expectancy and life gains might be discriminating factors against elderly people;

Projections taking into account the cost of last year and the difference between decedents and survivors find that under the ‘living in better health scenario’, long term care and acute health care are expected to decline by some 1% for the EU compared with the base case scenario. Improvement in health status is expected to decrease both acute health and long term care expenditures. However, critics argue that the gains from these factors might be smaller.

## **6. Good practice**

The principle of active ageing has been adopted in several countries and ad hoc programmes have been implemented (e.g. Austria, Germany, Finland, Sweden) to promote the empowerment process of older people. The approach of active ageing covers health promotion, personal commitment and social activities. Generally, these initiatives combine community interventions and personalised actions.

One of the interesting aspects of these projects are their capacity to highlight the vulnerability of some groups of older people who are more at risk of social exclusion. The individual approach, through home visits, seems promising in coming up with specific strategies adapted to the individual needs of elderly individuals. These groups see the family doctor very frequently but rarely see a specialist. The physician may thus play an important role in disease prevention and healthy ageing.

There is some evidence according to which preventive home visits may reduce or postpone referral to long-term or permanent institutional care, among those aged less than 75 years. Also mortality was slightly decreased by these visits. The nurses may play an important role here. Home visits have been supplemented in certain cases by local contact centres. They pick up signals at district level about isolated elderly people from social workers, local residents, and organisations.

Several countries, e.g. Sweden, Austria, Finland, Germany and the United Kingdom have promoted independent living and integrated it into specific programmes. The idea is to delay the onset of disease

and the referral to care services. The postponement and prevention of care dependency might have a considerable impact on health care and long-term care costs, as entering a nursing home is the most costly option. Furthermore, socialising activities play an important role for successful ageing and ought to be a component of health promotion programmes.

Training and assignment of nursing staff for health promotion in the framework of preventive home visits for older people (still living independently) has given promising results. Health counselling resulted in a change of lifestyles and attitudes, and the majority of participants reported that they made lasting changes in nutrition and exercise.

Preserving the cognitive capacity of elderly people is an essential component to ensure that they enjoy an independent and active life. The combination of memory training and exercise seems to be a guarantee for healthy and satisfactory ageing. Rehabilitative measures work also for cognitively and functionally disabled people. In the long run, participants keep their autonomy longer and some can even improve their status concerning autonomy. Also, injuries from fall decreased.

The same lifestyle may affect several risk factors and health conditions. Consequently, actions orientated towards single specific health issues might lead to a replication of efforts at national level. Some coordination at national level ought guarantee the integration of the different policies able to modify the same risk factor. The local level ought to favour actions, which aim to decrease health inequalities by reaching disadvantaged groups.

Certain consider that traditional forms of promoting good health, such as public information via the mass media, no longer seem to work sufficiently in promoting healthy lifestyles. They argue that, lifestyle intervention works much better when it reaches people, from within their immediate social environment, notably at home and in the neighbourhoods.

Health promotion interventions, targeted at social groups with the highest prevalence of risk factors, might have a great potential impact in reducing socio-economic inequalities in health. However, targeted programmes risk stigmatising the target group, and this ought to be taken into account during the design process.

Stop Smoking actions were successful even for elderly people. A study finds that, using a single general practitioner visit backed up by a practice nurse, reduced smoking in 14% of the smokers participating in the programme six months after the intervention period.

Public interventions to promote physical activity among older people have proven to be effective in reducing premature deaths and to be cost-effective in terms of additional years lived in good health. Several surveys indicate that exercise is beneficial for people over 65 and there are health benefits to be derived even when starting to exercise late in life, whilst it is harmful to stop exercising. Certain studies concluded that publicly funded program of moderate exercise for elderly people would prevent premature death, reduce inpatient episodes and are cost-effective.

Assessment of the cost-effectiveness of a community based exercise programme for older adults indicates that, despite a low level of adherence to the exercise programme, there were significant gains in health related quality of life. The programme was more cost-effective than many existing medical interventions. Another study on pensioners aged 61 to 81 years old, who took part in an organised programme of regular walks, established that regular low-intensity physical activity in pensioners led to significantly lower mortality. The study showed that this reduced mortality concerned both cardiovascular disease and cancer.

Better nutrition is recommended for all, but particularly in older individuals at increasing risk of developing diseases. In Norway the cost-effectiveness of a population-based promotion campaign of healthier eating habits was compared with dietary and medical treatment of individuals. The cost per life year gained was significant. The HALE project highlighted that individuals aged 70 to 90 years,

who adhere to Mediterranean diet, to moderate alcohol consumption, and who abstain from smoking and are physically active have a 50% lower rate of all-cause and cause-specific mortality.

People from lower socio-economic groups face relatively higher mortality rates, morbidity and activity limitations than those from a higher socio-economic status. Important behavioural risk factors, clustered in lower socio-economic groups include smoking, physical inactivity, excess alcohol consumption, obesity, hypertension and poor diet. Several countries have noted the need to complement national strategies by specific actions aiming at reducing health related inequalities. Such policies are proposed notably in the UK, France, Netherlands and Sweden.

Cardiovascular diseases are the leading cause of burden of disease in Europe. At population level, the interventions to prevent stroke are broadly the same as those for coronary heart disease - increasing levels of physical activity, encouraging healthy eating (particularly reducing salt intake and increasing fruit and vegetable consumption), and supporting smoking cessation as well as identifying and managing high blood pressure.

Effective health prevention here requires changes in certain lifestyles. However, lifestyle changes might also be beneficial to other for prevention of other non-communicable diseases. This is the main argument for an integrated approach of health promotion by WHO. Certain studies conclude that the community approach to CVD prevention has a high degree of replication, cost effectiveness due to the use of mass communication methods, and ability to diffuse information successfully through use of mass communication methods.

The Finnish North Karelia project assumed that the provision of measures to reduce the risk of high-risk people in the health service institutions might have a limited impact. On the contrary, general risk reduction measures and healthy lifestyles might have a huge public health impact. The experiment had a significant success in reducing risk factors and coronary heart disease (CHD) mortality. A decline has taken place in smoking and major changes on dietary habits. As a result serum cholesterol and blood pressure levels had markedly reduced. The ensuing significant reduction in CHD mortality could be explained by changes of the main risk factors, notably dietary changes. However, the Belgian experience provided less strong results.

The cost-effectiveness of the screening tests in older people is still under debate. However, some evidence shows that biennial breast cancer screening after age 65 reduces mortality at reasonable costs for women without significant comorbid conditions. As cancer incidence increases with age, so do other health conditions, reducing the cost-effectiveness of cancer screening programmes, as older women are more likely to die of other life-threatening condition before breast cancer. Over the age of 70-74, individualised decisions may be more appropriate. Opinions converge regarding the lower age limit (50 years).

There is some statistical evidence that a number of countries have recently experienced stabilisation or a slightly declining trend in mortality from breast cancer. This decline might be attributed to the effects of breast cancer screening. For instance, several studies (France and Sweden) find that the recent decline in mortality from breast cancer and participation in screening programmes was most marked in those regions that had a history of breast cancer screening.

Several studies in Sweden and The Netherlands have looked into the effectiveness of a screening programme and concluded that one in three deaths from breast cancer can be prevented if women are screened. Mammography carried out in randomised trials has proven to reduce mortality from breast cancer by 30%. However, mortality rates alone seem insufficient in determining the effectiveness of mammography. Breast cancer mortality in women undergoing a mammography test does not decrease significantly compared to women not exposed to a mammography test. However, when introducing the "time" variable, mortality from breast cancer is reduced by 55% after allowing a delay of minimum 8 years (and even 11 years) in the older women.

Diabetes shortens healthy life by several years, affects quality of life and places a burden on curative care. Encouraging sensible nutrition, healthy exercise and the detection of risk groups is expected to contribute to the prevention of diabetes mellitus. Furthermore, early diagnosis and prevention of complications by proper care could bring about a substantial reduction in disabling illnesses. The Dutch Ministry notes that people with limited education run twice the risk of diabetes than those with higher education. Healthy nutrition, more physical exercise, non-smoking and moderate use of alcohol is expected to reduce the risk of diabetes.

A Finnish study showed that the risk of diabetes could be markedly reduced by lifestyle modification. Each subject of the intervention group received individualized counselling aimed at reducing weight, total intake of fat, and intake of saturated fat and increasing intake of fiber and physical activity. The intervention needs to be individualized and continuing, and performed by skilled professionals in order to be effective. Lifestyle changes do not have to be extreme.

In the coming decades, WHO expects depression in industrialised countries to develop into a number one public illness. Because of the nature of the symptoms and the fact that many older people live alone, mental illness in older people could be largely under detected.

Home-care staff is in a key position to identify depressed subjects. The first results in the Member States indicate that preventive home visits are probably a good strategy for the detection of mental health problems of elderly persons. Furthermore, home-visits may establish the presence of possible links between socio-economic factors and mental health.

A programme aiming at increasing the competence, memory and psychomotor capacities of older people has been successful in decreasing and preventing dementia and depression. After 4 years the specific combination of memory and psychomotor training had by far the best and long-lasting results concerning capacity, health, autonomy and psychopathology.

Because of osteoporosis, falls can result in serious health and psychological complications among elderly people, and affect their autonomy. Targeted falls prevention, notably at very old individuals, is likely to reduce health, psychological and social costs.

A comprehensive programme on falls prevention including exercise, both physical and cognitive, and risk assessment interventions are more likely to reduce fall rates than simple education programmes on falls risk factors targeted at older people. The benefits of physical activity are known to benefit other health areas as well. The prevention programme should be implemented at community level and in institutions. Specific education programmes targeting older people can be used to favour their awareness on risk factors and behaviours and to give them advice on how to prevent or to manage a fall.

In several projects, the incidence of hip fracture among pensioners has dropped largely attributable to information campaigns targeting older people on how to prevent fall accidents. The reductions were higher after several months of intervention, implying the benefits of a long-term approach. Other projects established a clear positive effect of balance training on fall incidence.

Certain argue that exercise interventions alone are not effective in preventing falls in adults aged 60 years or over. Exercise and risk modification seems more efficient, while comprehensive risk assessment intervention studies achieve even better results. A multifactorial fall prevention programme should then be more effective and even cost-effective.