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USE OF HEALTH AND NURSING CARE BY THE ELDERLY

ERIKA SCHULZ

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Contents

1. Background and tasks of Work Package 2 (WP2)	1
2. Requested data, provided data and data sources	4
3. Use of health care	7
3.1 Hospital care	9
3.2 Outpatient care	34
4. Supply of hospital and outpatient care services	54
5. Long-term care	55
5.1 Long-term care in institutions	58
5.2 Long-term care at home	64
5.3 Severely hampered persons.....	67
5.4 Informal care-giving	78
6. Care-giving and employment	89
7. Concluding remarks	99
Bibliography	102
Appendix I	107
Appendix II: Working Hours and Employment Status – Changes between 1996 and 2001	112

List of Tables

1	Results of data collection.....	5
2	Data sources of hospital utilisation.....	5
3	Data sources of outpatient care.....	6
4	Data sources for long-term care in institutions and at home.....	6
5	Data sources of population by marital status, family structure and household composition.....	7
6	Data sources of labour force participation rates.....	7
7	Health expenditures (million NCU).....	8
8	Total expenditure on health (% of GDP).....	8
9	Number of hospital admissions/discharges in 1000.....	9
10	Admissions to a hospital per 1000 inhabitants.....	10
11	Hospital discharges per 1000 inhabitants.....	10
12	Average length of hospital stay of inpatients for acute care.....	16
13	Hospitalised persons by age groups in participating countries 1994–2001.....	24
14	Hospitalised persons by age groups and gender in participating countries 2001....	25
15	Mean value of hospital days of inpatients in participating countries 1994–2001.....	26
16	Mean value of hospital days of inpatients by gender in participating countries 2001.....	27
17	Share of hospitalised persons within one year by age groups and health status in EU countries, 1994 and 2001 (%).....	28
18	Share of hospitalised persons within one year in selected EU countries 2000–01 by health status (%).....	29
19	Mean value of hospital days of inpatients in EU countries.....	30
20	Mean value of hospital days of inpatients within one year in selected EU countries 2001.....	31
21	Pearsons' two-way correlation in EU countries, 2000 and 2001.....	32
22	Regression of hospital days in EU countries, 2000 and 2001.....	33
23	Doctors' consultations per capita.....	36
24	Mean value of contacts with a general practitioner in participating countries 1995–2001.....	41
25	Mean value of contacts with a general practitioner by gender in participating countries 2001.....	42
26	Mean value of contacts with a specialist in participating countries 1995–2001.....	43
27	Mean value of contacts with a specialist by gender in participating countries 2001.....	44

28	Mean value of contacts with a dentist in participating countries 1995–2001.....	45
29	Mean value of contacts with a dentist by gender in participating countries 2001	46
30	Number of times a person consulted a doctor in EU countries, 1999–2000.....	47
31	Number of times a person consulted a doctor by gender in EU countries, 2000.....	48
32	Number of times the person has been to a doctor 1999–2000 in selected EU countries.....	50
33	Number of times the person has been to a doctor 1994–95 in selected EU countries.....	50
33	Number of times the person has been to a doctor 1994–95 in selected EU countries.....	51
34	Pearsons’ two-way correlation of contacts with a doctor in EU countries	52
35	Regression of contacts with a doctor in EU countries	53
36	Inpatient acute care occupancy rate	54
37	Number of persons employed (headcounts) in the health care sector.....	54
38	Long-term care beds	59
39	Hampered persons with chronic illness by age groups and health status in EU countries, 2001	68
40	Severely hampered persons by age groups in participating countries 1994– 2001	69
41	Age-structure of hampered persons with chronic illness by age groups and health status in EU countries, 2001	71
42	Hampered persons with chronic illness by health status in participating countries 2001	72
43	Severely hampered persons with chronic illness who had to cut down things.....	73
44	Population, severely hampered persons and severely hampered persons who had to cut down things they usually do by age groups, gender and marital status in EU countries, 2001	74
45	Age-structure of population, severely hampered persons and severely hampered persons who had to cut down things they usually do by age groups, gender and marital status	75
46	Population, severely hampered persons and severely hampered persons who had to cut down things by age groups, gender and employment status in EU countries, 2001	76
47	Severely hampered persons with chronic illness not employed by age groups, gender and reasons stopping previous job in EU countries, 2001	77
48	Persons looking after other persons by age groups and gender in EU countries, 2001	79
49	Population and people looking after old persons by age groups, gender and marital status in EU countries, 2001	80

50	Daily activities includes looking after persons who need special help by age groups, gender and health status in EU countries, 2001	81
51	Age-structure of people looking after old persons and total population by gender and health status in EU countries, 2001	81
52	Share of women among caregivers and among population by gender and health status in EU countries, 2001	82
53	Proportion of people looking after old persons by age groups in participating countries 2001	83
54	Mean value of hours per week looking after persons who need special help because of old age, illness and disability in participating countries, 2001	84
55	Men by marital status – United Kingdom.....	85
56	Men by marital status – Belgium.....	86
57	Men by marital status – Germany.....	86
58	Men by marital status – France.....	87
59	Men by marital status – Spain.....	87
60	Proportion of caregivers among population by age groups, gender and marital status in EU countries, 2001	88
61	Proportion of caregivers on population by employment status, gender and age groups in EU countries, 2001	90
62	People looking after old by employment status in EU countries, 2001 (%).....	91
63	Daily activities includes looking after persons live in the same household or elsewhere by age groups and employment status in EU countries, 2001	92
64	Working people looking after other persons by age groups, gender and working time in EU countries, 2001	93
65	People by age groups, main activity status and looking after other persons in EU countries, 2001	95
66	Persons looking after old people by reasons stopping previous job in EU countries, 2001	96
67	Mean value of hours per week looking after persons who need special help because of old age, illness and disability in EU countries, 2001	97
68	Pearsons two-way correlation in EU countries, 2000 and 2001	98
69	Regression of hours looking after old persons in EU countries, 2000 and 2001	98

List of Figures

1	Public expenditure on health per head.....	1
2	Determinants of health expenditure.....	2
3	Hospitalised persons per 1000 inhabitants for both genders	11
4	Hospitalised persons per 1000 inhabitants for men	11
5	Hospitalised persons per 1000 inhabitants for women	12
6	Hospital discharges per 1000 inhabitants in the Netherlands.....	12
7	Hospital admissions per 1000 inhabitants in Belgium.....	13
8	Hospital discharges per 1000 inhabitants in Spain	13
9	Hospital discharges per 1000 inhabitants in Germany	14
10	Hospital admissions per 1000 inhabitants in Denmark.....	14
11	Hospital admissions per 1000 inhabitants in the UK.....	15
12	Discharges (hospital and health care centres) per 1000 inhabitants in Finland.....	15
13	Persons admitted to a hospital in the last three months per 1000 inhabitants in France.....	16
14	Length of hospital stay 1999.....	17
15	Length of hospital stay in Belgium.....	17
16	Length of hospital stay in Denmark.....	18
17	Length of hospital stay in Germany.....	18
18	Length of hospital stay in the Netherlands	19
19	Length of hospital stay in Spain	19
20	Length of hospital stay in the UK.....	20
21	Length of hospital stay in Finland	20
22	Changes in hospital utilisation and life expectancy in Germany for men	21
23	Changes in hospital utilisation and life expectancy in the Netherlands for men.....	22
24	Changes in hospital utilisation and life expectancy in Belgium for men	22
25	Changes in hospital utilisation and life expectancy in Denmark for men	23
26	Days spent in a hospital within one year by decedents and survivors in Germany.....	34
27	Average costs in Denmark for primary and hospital inpatient care services.....	35
28	Average number of contacts with a doctor within one year in selected countries for men	36
29	Average number of contacts with a general practitioner in the UK	37
30	Average number of contacts with a general practitioner in Belgium for men.....	37
31	Average number of contacts with a doctor in Spain.....	38

32	Average number of contacts with a general practitioner in the Netherlands	38
33	Average number of contacts with a doctor in Finland	39
34	Share of people using outpatient service in the last four weeks in Germany	39
35	Share of people in bad/very bad health with 10+ contacts with doctors within one year 1999–2000	52
36	Share of people in bad/very bad health with 10+ contacts with doctors within one year 1994–95	52
37	People receiving long-term care in institutions per 1000 inhabitants in 2001	60
38	People receiving long-term care in institutions per 1000 inhabitants in France 1998	61
39	People receiving long-term care in institutions per 1000 inhabitants in the Netherlands	61
40	Long-term care recipients in institutions per 1000 inhabitants in Denmark	62
41	People receiving long-term care in institutions per 1000 inhabitants in Belgium	62
42	People receiving long-term care in institutions per 1000 inhabitants in Finland	63
43	People receiving long-term care in institutions per 1000 inhabitants 1997 to 2002 in Germany	63
44	People receiving long-term care at home per 1000 inhabitants in 2001	64
45	People receiving long-term care at home per 1000 inhabitants in France 1999	65
46	People receiving long-term care at home per 1000 inhabitants in Belgium	66
47	People receiving long-term care at home per 1000 inhabitants in Finland	66
48	People receiving long-term care at home per 1000 inhabitants 1997 to 2002 in Germany	67
49	Labour force participation rates – women aged 45 to 49	98

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ABSTRACT

If the hypothesis that people live longer and in better health is true, it could be expected that the changes in the health of the elderly have important consequences for the further demand for health services, the need for long-term care and also for the development of health expenditures. But other trends could also be essential to determining the extent and structure of the demand for health care and health expenditures. In the case of long-term care, there are other important effects that concern the structure of health care and institutional settings. Most long-term care recipients currently live in households and their caregivers are predominantly members of the family – especially daughters, daughters-in-law and spouses. The increasing labour force participation of women may affect the future supply of informal family care-giving and may increase the demand for professional home care and institutional care. In all EU countries family structures are changing: the proportion of elderly persons living with their children has fallen.

Projections on the use of health care and the need for long-term care require an analysis of the current situation in each EU country and a study of the determinants for using both (especially the influence of health). This paper, produced as part of the ENEPRI AGIR project, presents the results of data collection and analyses for EU countries that participated in the study – Belgium, France, Finland, the Netherlands, Spain, the UK and Germany. Additionally, data are provided for Denmark. Along with analysing the data provided, DIW has investigated the relationships between health care utilisation, health status and age respectively with long-term care-giving at home, based on the European Community Household Panel (ECHP). Further, long-time series data from the OECD Health Data 2002 and 2003 are used to show the changes in the utilisation and supply of health care services over time.

USE OF HEALTH AND NURSING CARE BY THE ELDERLY

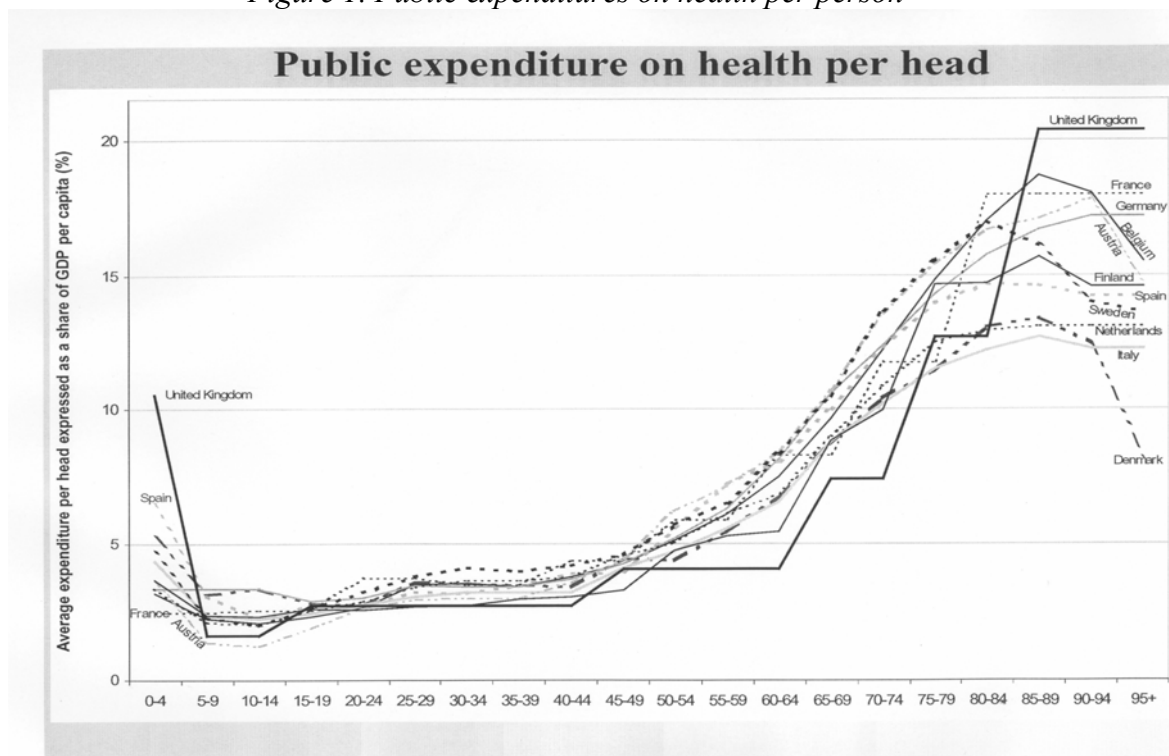
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1. Background and tasks of Work Package 2 (WP2)

Population ageing may have an important effect on all areas of society, particularly on social security systems. The consequences for pension schemes are broadly discussed in literature (see for example, Roseveare et al., 1996). But in the field of health care and long-term care great challenges are also expected. Cross-sectional data show a strong positive correlation between age and health expenditure (European Commission, 2001). In all EU countries the picture is nearly the same: a strong increase in population age (Figure 1). Therefore, it is expected that the population ageing process could affect the sustainability of health care systems.

Figure 1. Public expenditures on health per person

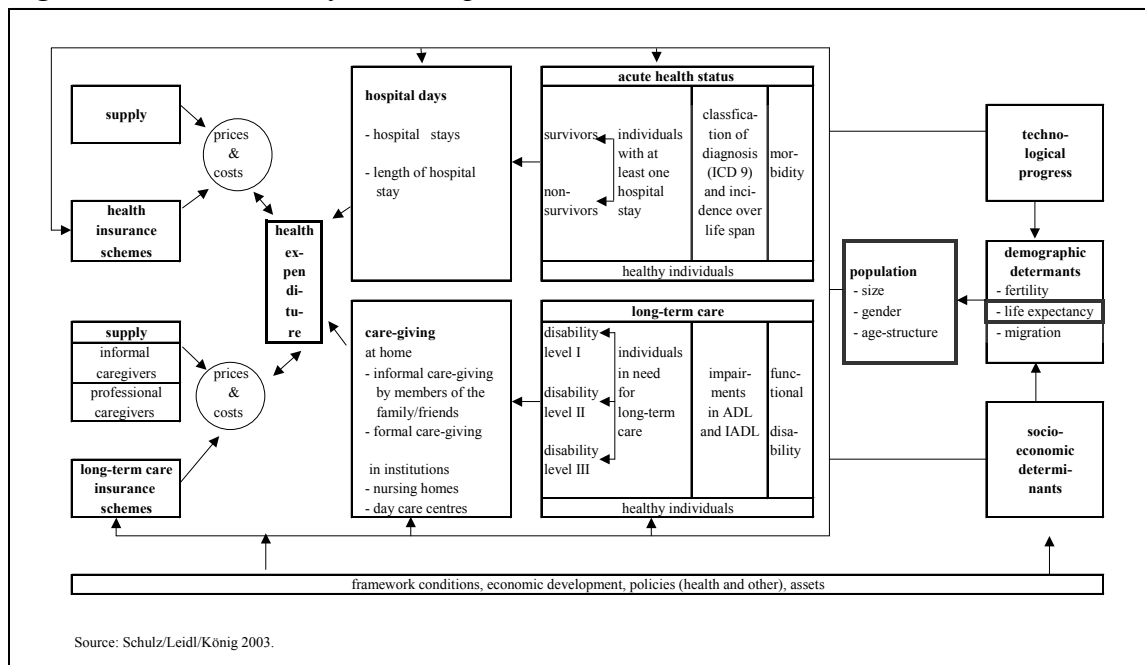


But health expenditures are not directly related to age and the ageing process. Besides demography, other important factors influence health expenditures, especially medical and technological progress, political decisions and economic framework conditions. A study for Germany showed that health expenditures were mostly influenced by technological progress and not by the ageing process (Breyer, 1999). The same results were observed for health care expenditures in the US (Okunade & Murthy, 2002).

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Generally, the level of health expenditure is the result of demand and supply factors, political decisions (as well as those by health care insurance schemes) and the overall economic conditions (see Figure 2). Ageing could be an important factor on the demand side. A relevant intermediate step is the current health status. Health status deteriorates with age and is the main factor in the demand for health care services. In the case of long-term care, functional disability and mental illness (especially among the oldest old) play an important role. The connections between age, disability and the need for long-term care are stronger than in the case of acute health care. Therefore, besides the ageing process, the developments in population health status and disability influences further demand for health and long-term care services. Thus, the AGIR project focuses on both the ageing process and health status.

Figure 2. Determinants of health expenditure



The ageing of populations is determined by an increasing life expectancy accompanied by fertility rates that are too low to ensure a natural replacement of the population. In the EU the total fertility rate was on average 1.5 in 2000. Meanwhile, life expectancy at birth in the member states has increased in the last 40 years, accumulating an extra 7.5 years for men and 8.3 years for women; for the elderly (aged 60 or more) the increase was 3.5 years (men) and 4.8 years (women). The AGIR project has centred on the latter and poses the question of whether the increasing life expectancy goes in line with better health. This question has been dealt with in the first work package (WP1).

If the hypothesis that people live longer and in better health is true, it could be expected that the changes in the health of the elderly have important consequences for the further demand for health services, the need for long-term care and also for the development of health expenditures. Better health suggests that the demand for health services and long-term care by the elderly could decrease. Therefore, the development of health

expenditures could be more moderate than in the case of a static projection with constant age-specific morbidity rates.

But other trends could also be essential to determining the extent and structure of the demand for health care and health expenditures. The spectrum of diseases of the elderly is different from that of the younger population and the intensity at which health care services are called upon may be related to the kind of disease. Therefore, the shift towards chronic diseases and degenerative conditions could have an increasing effect on health care utilisation. Furthermore, within the elderly population, multi-morbidity, functional disability and mental illness are common. It is not clear to what extent improvements in general health could reduce these kinds of impairments.

In the case of long-term care, there are two other important effects that concern the structure of health care and institutional settings. First, most long-term care recipients live in households and their caregivers are predominantly members of the family – especially daughters, daughters-in-law and spouses. In Germany, for example, most of these caregivers are middle-aged (40 to 64) and two-thirds of them are not employed (Schneeklodt & Müller, 2000). The share of informal care-giving within total care-giving tends to be affected by gender-specific roles in various cultures. Nevertheless, in all EU countries the labour force participation of women is adversely related to care-giving in families (Spiess & Schneider, 2002). The increasing labour force participation of women may affect the future supply of informal family care-giving and may increase the demand for professional home care and institutional care.

Second, changes in family structure and household composition also affect the need for professional home care or institutional care. In all EU countries family structures are changing: the proportion of elderly persons living with their children has fallen. In the northern European countries, only one person out of 10 lives with their children and in Norway, the Netherlands and Denmark only one person out of 25 does (Jacobzone, 1999). Living alone does not necessarily imply a reduced supply of care by the family. The distance between the parents' household and that of their children plays an important role. The share of married people is decreasing, especially in the younger age groups, while the divorce rate is increasing. So the share of single households in the younger and middle-aged groups is growing, owing to changes in marital behaviour. These changes may have significant effects on the future number of caregivers in families, because of the absence of spouses. While better health could have a decreasing impact on the need for long-term care, the declining potential source of informal caregivers may have an increasing effect on the demand for professional home care and institutional care.

One aim of the AGIR project is to investigate whether living longer goes in line with better health (WP1) and to show the impact of living longer and in better health on the need for health and long-term care by the elderly and the consequences for health expenditures. Projections on the use of health care and the need for long-term care require an analysis of the current situation in each EU country and a study of the determinants for using both (especially the influence of health). The latter task is the subject of WP2. The results of WP2 (together with the results of WP1) will be used to make predictions about the future use of health and long-term care, along with health care expenditures based on alternative forecast scenarios (WP4).

The other tasks of WP2 are to:

- show the current use of health care services by the elderly;
- analyse the determinants of the demand for health care services;
- show the extent to which the elderly receive care and nursing by their families/friends/neighbours (informal care) or charitable institutions (formal home care/institutional care) or both;
- analyse the connection between informal care-giving and changes in the labour force participation of women over time;
- analyse the contribution of the elderly to the care and nursing of the oldest old; and
- provide data on the rules and regulations concerning the work of women, notably with respect to part-time work and temporary contracts.

This paper presents the results of data collection and analyses for the participating EU countries – Belgium, France, Finland, the Netherlands, Spain, the UK and Germany. Additionally, data are provided for Denmark. Along with analysing the data provided, DIW has investigated the relationships between health care utilisation, health status and age respectively with long-term care-giving at home, based on the European Community Household Panel (ECHP). To show the changes in the utilisation and supply of health care services over time, long-time series data from the OECD Health Data 2002 and 2003 have been used.

2. Requested data, provided data and data sources

To meet the tasks of WP2 and assure the greatest possible comparability between the collected data of each country, templates for tables were created and the participating institutes were asked to fill these in. The basic definitions, for example of disability, were discussed in the initial workshop. The participating institutes were asked to collect data – subdivided by gender and age groups – of hospital admissions or discharges, length of hospital stay, contacts with doctors, long-term care-giving in institutions and at home by professional and informal caregivers, family status of the population, household composition and the development of female labour force participation.

Table 1 gives an overview of the data provided. All participating institutes provided data about admissions or discharges into/from hospitals and the length of hospital stay of inpatients. Data about the frequency of contacts with a doctor are not available for Denmark. Information about long-term care-giving in institutions and at home could not be collected for Spain or in the case of care at home for the UK. In some of the other countries information about care-giving is limited. Data about population by marital status are available for all participating countries, whereas information about family structure and household composition (single households, two-person households, etc.) could not be collected for some countries or the provided information is limited.

Table 1. Results of data collection

Countries	Hospital admissions	Length of hospital stay	Contact with a doctor	Long-term care in institutions	Long-term care at home	Population marital status	Population family structure	Household composition	Labour force participation
Belgium	X	X	X	X	X	X	(X)	(X)	X
Denmark	X	X	O	(X)	X	X	O	X	(X)
Finland	X	X	X	X	X	(X)	O	(X)	X
France	X	X	X	X	X	X	X	X	X
Germany	X	X	X	X	X	X	X	X	X
Netherlands	X	X	X	X	(X)	X	X	(X)	X
Spain	X	X	X	O	O	X	(X)	O	(X)
United Kingdom	X	X	X	(X)	O	X	O	X	X

X = full information, (X) = limited information, O = no information.

Data about hospital utilisation stem mainly from administrative sources describing the hospitalised population during one year (Table 2). Most hospitals are covered. The data source for France is the SPS survey (a national survey on health and health insurance), carried out in 1998 and 2000. People were asked if they were admitted to a hospital within the last three months. Data on hospital utilisation in Spain stem from their Hospital Morbidity Survey, which covers more than 50% of all hospitals.

Table 2. Data sources of hospital utilisation

Countries	Hospital admissions (a)/discharges (d)		Length of stay		Source	Sample
	Time	Years	Group	Years		
Belgium	1 year (a)	1991-98	inpatients	1991-98	Ministry of Public Health (RCM)	all hospitals
Denmark	1 year (a)	1991-2001	inpatients	1991-2001	Statistics Denmark (M of Health)	all hospitals (somatic hospitals incl.)
Finland	1 year (d)	1995-2001	inpatients	1996-2001	Social Welfare Register	all hospitals + health care centres
France	last 3 months (a)	1998, 2000	inpatients	2000	SPS survey	23.036 people (1998), 20.045 people (2000)
Germany	1 year (d)	1993-2000	inpatients	1993-99	FSOG - Hospital diagnosis statistics	all hospitals
Netherlands	within 1 year (d)	1993-2000	clinical treatments	1993-2000	Prismant	all hospitals
Spain	1 year (d)	77,80,85,90,95,99	inpatients	77,80,85,90,95,99	Hospital Morbidity Survey	>50% of hospitals
United Kingdom	1 year (a)	1989/90-2001/2	inpatients	1989/90-2001/2	Hospital Episode Statistics	all hospitals (only England, no private hospitals)

Data about contacts with a doctor stem from health or household surveys (Table 3). These surveys were carried out in different years. Moreover, information about outpatient utilisation is only available for different time-spans. In Belgium, Finland, France and the Netherlands information about contacts with a doctor are available for contacts within one year, in Germany for contacts within the last four weeks, in Spain and in the UK for contacts in the last 14 days. Therefore, the data provided are not fully comparable among countries.

Table 3. Data sources of outpatient care

Countries	Average number of contacts with a doctor			
	Time	Year	Source	Sample
Belgium	1 year	1997, 2001	National Interview Health Survey	around 10.000 persons
Denmark	n.a.	n.a.	n.a.	n.a.
Finland	1 year	1987, 1995/6	Finnish Health Care Survey	in 1995/6 5181 households with 10.478 adults and 2.458 children
France	1 year	1999	Survey of living conditions' in households	10.987 individuals in private households
Germany	last 4 weeks	1992,95,99	General Household Survey (Microcensus)	every 3 (until 1995), 4 years 0,5 % of private households in Germany
Netherlands	1 year	1981-2000	CBS Permanent Onderzoek Leefsituatie (POLS) survey	in 1997 10.898 persons
Spain	last 14 days	87,93,95,97	Spanish National Health Survey	in 1987 40.000, in 1993 26.000, in 1995 and 1997 8.400 persons
United Kingdom	last 14 days	1982, 90, 2000	General Household Survey	9.000 households with around 25.000 persons

In the case of long-term care, information is hard to collect, particularly for long-term care-giving within families. In the Netherlands and Germany, data exist about the recipients of benefits for long-term care-giving in institutions and at home from the long-term care insurance schemes (Table 4). In Germany, informal care-giving by members of the family or friends is included, if they receive benefits from the long-term care insurance schemes. The institutional care data for Finland include all institutional care and residences with 24-hour surveillance and the home care data include all care-giving by regular home care services (formal home care). In France special surveys of care-giving in institutions and at home were carried out in 1998 and 1999 respectively. In the UK, only the total number of people receiving residential care exists and no information about long-term care-giving at home was provided. For Spain there is no information about people receiving long-term care.

Table 4. Data sources for long-term care in institutions and at home

Countries	Long-term care				
	in institutions		at home		
	Kind	Year	Kind	Year	Source
Belgium	homes for elderly and nursing homes	1995-1999, 2001	people receiving nursing care (formal)	1998-2001	Federal Service for Social Security and Health Insurance + R.I.Z.I.V.
Denmark	persons receiving social pensions in nursing homes	1990-2001	home care of ?	1999-2003	Statistic Denmark
Finland	nursing homes	1995-2001	home care	1995-2001	Register for Social Care Report
France	"at the moment, do you ..."	1998	"at the moment, ..."	1999	HID Survey, 15.000 persons in institutions, 17.000 at home
Germany	recipients of long-term care insurance schemes	1997-2002	recipients of long-term care insurance schemes	1996-2002	Ministry of Health; Association of private LTC insurer
Netherlands	nursing homes homes for elderly with care giving	1996, 2000 90, 97, 98, 99	formal home care	1995/96	CBS, LTC recipients financed by Exceptional Medical Expenses Act
Spain	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	Residential care (total numbers)	1990-2003	n.a.	n.a.	Bebbington, only England and Wales

Data about the population by marital status, family structure and household composition stem mainly from administrative sources. In France the labour force survey was used to produce the relevant data and in Germany and the UK the household surveys were used (Table 5). The labour force participation rates come mainly from labour force surveys or administrative data (Table 6).

In general, for trends, data were used that allowed for the longest time interval; for levels, the most precise and consistent data were selected in the most recent year.

Table 5. Data sources of population by marital status, family structure and household composition

Countries	Population by					
	marital status		family structure		household composition	
	Year	Source	Year	Source	Year	Source
Belgium	61, 70, 81, 89-01	National Institute of Statistics	61,70,81,90,98-01	National Institute of Statistics no age-groups	61, 70, 81, 90-01	National Institute of Statistics
Denmark	1985, 2000	Statistics Denmark	n.a.	n.a.	1985, 2000	Statistics Denmark
Finland	1950-2001	Statistics Finland, no age-groups	n.a.	n.a.	1960-2000	Statistics Finland age: head of household
France	90, 95, 99-01	Enquete Emploi (135.000 persons)	90, 95, 99-01	Enquete Emploi	90, 95, 99-01	Enquete Emploi
Germany	1985-2000	Microcensus (1 % of households)	1985-2000	Microcensus	1985-2000	Microcensus
Netherlands	1950-2001	Statline, CBS	1995-2001	Statline, CBS	1995-2001	Statline, CBS
Spain	50, 70, 81, 91	Census	1991-2000	Labour force Survey no age-groups	n.a.	n.a.
United Kingdom	82, 90, 2000	General Household Survey	n.a.	n.a.	82, 90, 2000	General Household Survey

Table 6. Data sources of labour force participation rates

Countries	Labour force participation rates		
	Definition	Years	Source
Belgium	Employed and unemployed + unempl. 50+ and not looking for work + early retirees	1947-2001	National Insitute of Statistics
Denmark	Labour force (in persons)	1991-2001	Statistics Denmark
Finland	Employed + unemployed	1970-2000	Statistics Finland
France	Activity rate, (empoyed and unemployed)	1975-2000	Employment Survey
Germany	Activity rate (employed + unemployed)	1962-2000	Microcensus (HH survey)
Netherlands	Employed + unemployed	1987-2001	Afdeling Arbeit, CPB
Spain	Activity rate (employed and unemployed)	1976-2002	Labour Force Statistics (INE)
United Kingdom	Active people (employed and unemployed)	82, 90, 2000	General Household Survey

3. Use of health care

The aim of this section is to analyse the current use of health care services by the elderly and the determinants of this utilisation. Indicators for the use of health care are the admissions into or discharges from a hospital, the length of hospital stay of inpatients, the frequency of contacts with a doctor (general practitioner or medical specialist) and consultations of a dentist. The partition of inpatient care and outpatient care depends on the institutional arrangements within the health care system (for example the ability to obtain professional home care after discharge from a hospital) and the availability of resources. This depends on the health policy. In several EU countries a shift from inpatient care to outpatient care can be observed (de-institutionalisation strategy). Further, in some EU countries surgical waiting lists exist, for example in Denmark, Finland, the UK, the Netherlands and Spain (Osterkamp, 2002). Therefore, the analysis of hospital admissions/discharges and contacts with doctors shows the utilisation and not the demand for these services.

Hospital care and outpatient care are important sectors of the health care systems in the participating countries (Table 7). The share of health expenditures for inpatient care is highest in Denmark (around 51% in 2001) and in the Netherlands (around 42% in 2001), and lowest in Germany (30% in 2001). The share of health expenditures for outpatient care is highest in Finland (around 28% in 2001) and lowest in the Netherlands (12%).

Table 7. Health expenditures (million NCU)

Countries	Total health expenditures	Total expenditures for			Share of (in %)		
		in-patient care	out-patient care	physician services	in-patient care	out-patient care	physician services
1995							
Belgium	17 524	5 874	6 033	-	33,52	34,43	-
Denmark	82 841	45 554	19 370	13 252	54,99	23,38	16,00
Finland	7 149	3 007	2 203	1 771	42,06	30,82	24,77
France	112 473	51 615	26 145	14 591	45,89	23,25	12,97
Germany	190 389	57 104	40 187	18 683	29,99	21,11	9,81
Netherlands	25 420	12 477	3 866	2 184	49,08	15,21	8,59
Spain	33 293	14 757	9 275	-	44,32	27,86	-
United Kingdom	50 086	-	-	7 000	-	-	13,98
2001							
Belgium	-	-	-	-	-	-	-
Denmark	113 492	57 732	27 178	16 384	50,87	23,95	14,44
Finland	9 456	3 471	2 650	2 110	36,71	28,02	22,31
France	139 485	56 821	29 852	16 641	40,74	21,40	11,93
Germany	222 003	66 798	42 552	21 174	30,09	19,17	9,54
Netherlands	38 346	16 013	4 791	2 682	41,76	12,49	6,99
Spain	48 973	18 352	11 568	-	37,47	23,62	-
United Kingdom	75 014	-	-	-	-	-	-

Source: OECD Health Data 2003.

Another frequently used indicator is the proportion of health expenditures of GDP. Table 8 shows the development of this indicator in the last 30 years. During this period Germany spent the highest proportion of GDP on health services – 10.7% in 2001. The UK and Spain tended to spend the lowest proportion of GDP on health expenditures.

Table 8. Total expenditure on health (% of GDP)

Countries	1960	1970	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001
Belgium	-	4,0	6,4	7,2	7,4	8,7	8,9	8,5	8,5	8,7	8,7	-
Denmark	-	-	9,1	8,7	8,5	8,2	8,3	8,2	8,4	8,5	8,3	8,6
Finland	-	5,6	6,4	7,1	7,8	7,5	7,6	7,3	6,9	6,9	6,7	7,0
France	-	-	-	-	8,6	9,5	9,5	9,4	9,3	9,3	9,3	9,5
Germany	-	6,2	8,7	9,0	8,5	10,6	10,9	10,7	10,6	10,6	10,6	10,7
Netherlands	-	-	7,5	7,3	8,0	8,4	8,3	8,2	8,6	8,7	8,6	8,9
Spain	1,5	3,6	5,4	5,5	6,7	7,6	7,6	7,5	7,5	7,5	7,5	7,5
United Kingdom	-	4,5	5,6	5,9	6,0	7,0	7,0	6,8	6,9	7,2	7,3	7,6

Source: OECD Health Data 2003.

3.1 Hospital care

Data about hospital utilisation were collected for hospital admissions (Belgium, Denmark, France and the UK) and for hospital discharges (Finland, Germany, the Netherlands and Spain). OECD data show that in a given year the number of admissions is different from the number of discharges (Table 9). The number of admissions during one year is usually higher than the number of discharges (with the exception of Denmark). In most cases discharges exclude persons who were in a hospital only a few hours prior to mortality. The OECD Health Data obtain the admissions to a hospital per 1000 inhabitants for each country as a long-time series (Table 10). Generally, the hospital admissions per 1000 inhabitants have increased since 1970, with the exception of the Netherlands. In the UK the trend since 1995 is not clear. These figures can be the result of two contrary trends: first, the ageing of the population, which leads to more admissions, and second, a de-institutionalisation strategy, which leads to fewer admissions. The same trend can be shown for hospital discharges per 1000 inhabitants (Table 11).

Table 9. Number of hospital admissions/discharges in 1000

Countries	1995	1996	1997	1998	1999	2000
	Number of admissions					
Belgium	-	-	-	-	-	-
Denmark	1 033	1 041	1 048	1 059	1 081	-
Finland	1 298	1 377	1 373	1 372	1 370	1 380
France	-	-	-	-	-	-
Germany	1 298	1 377	1 373	1 372	1 370	1 380
Netherlands	1 298	1 377	1 373	1 372	1 370	1 380
Spain	4 267	4 470	4 523	-	-	-
United Kingdom	9 012	8 782	8 902	8 964	-	-
	Number of discharges					
Belgium	1 610	1 604	1 574	1 588	-	1 582
Denmark	1 037	1 045	1 053	1 061	1 091	-
Finland	1 298	1 377	1 373	1 372	1 370	1 380
France	-	-	14 208	14 396	14 603	-
Germany	1 483	15 196	15 458	15 939	16 198	-
Netherlands	1 298	1 377	1 373	1 372	1 370	1 380
Spain	4 196	4 406	4 422	4 437	4 503	-
United Kingdom	-	-	-	-	-	-

Source: OECD Health Data 2002.

Table 10. Admissions to a hospital per 1000 inhabitants

Countries	1960	1970	1980	1985	1990	1995	1996	1997	1998	1999	2000
Belgium	-	93	136	149	186	196	200	-	-	-	-
Denmark	-	144	183	189	200	198	198	199	200	203	-
Finland	131	182	210	226	224	254	269	267	266	265	267
France	-	-	-	-	-	-	-	-	-	-	-
Germany	133	154	188	199	200	218	220	219	227	231	235
Netherlands	-	100	117	114	109	111	111	110	108	104	102
Spain	-	-	93	93	97	109	114	115	-	-	-
United Kingdom	93	112	125	139	145	154	149	151	151	-	-

Source: OECD Health Data 2002.

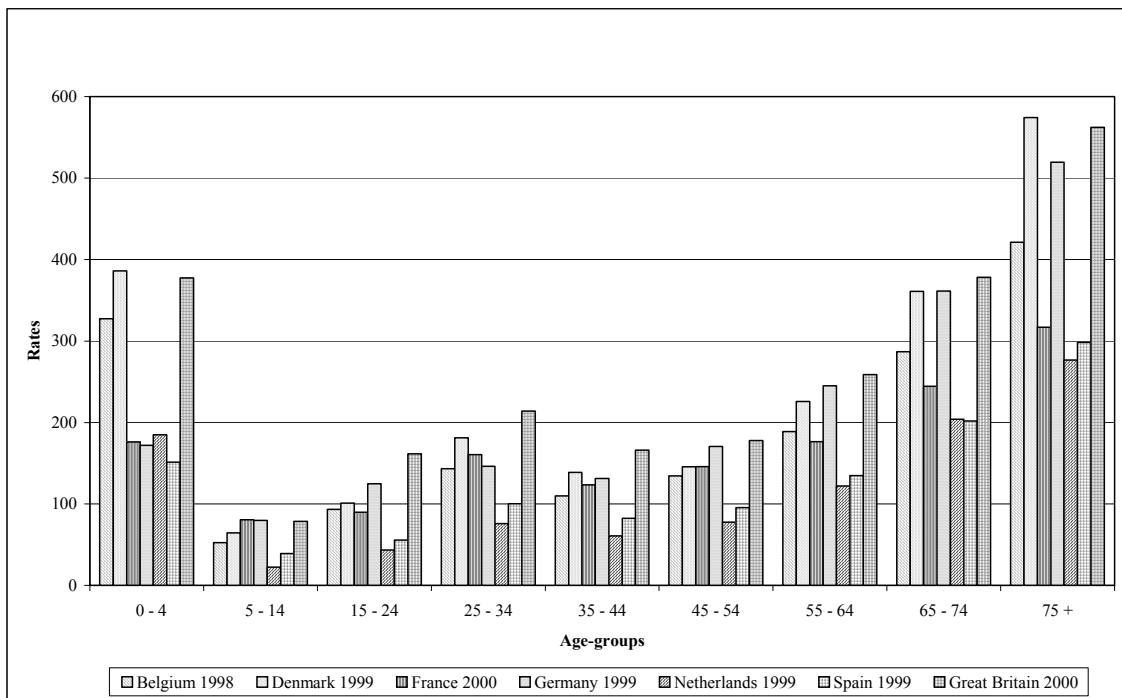
Table 11. Hospital discharges per 1000 inhabitants

Countries	1995	1996	1997	1998	1999	2000
Belgium	159	158	155	156	-	154
Denmark	198	199	199	200	205	-
Finland	246	260	258	259	257	256
France	-	-	244	247	249	-
Germany	182	186	188	194	197	-
Netherlands	102	102	101	98	96	93
Spain	107	112	112	113	114	-
United Kingdom	-	-	-	-	-	-

Source: OECD Health Data 2002.

Figure 3 shows the hospitalised persons (within one year) per 1000 inhabitants by age groups for several participating countries based on the national data provided by the research participants (prevalence rates). The share of hospitalised persons increased with age in all countries. At a given age large differences in prevalence rates can be observed among the countries. The prevalence rates in the youngest (aged 0 to 4 years) and oldest (75+) age groups are highest for Denmark and England. This is also true for persons aged 25 to 34 and 35 to 44. The lowest prevalence rates in the youngest and oldest age groups can be observed for Spain. In general, the prevalence rates for Denmark, Germany and England are higher than for Belgium, the Netherlands and Spain.

Figure 3. Hospitalised persons per 1000 inhabitants for both genders



The proportion of hospitalised persons is different between men and women (Figures 4 and 5). There is a higher proportion of women among hospitalised persons in the groups aged 15 to 44, mostly related to giving birth, whereas men represent a higher proportion of hospital patients in the older ages (65+).

Figure 4. Hospitalised persons per 1000 inhabitants for men

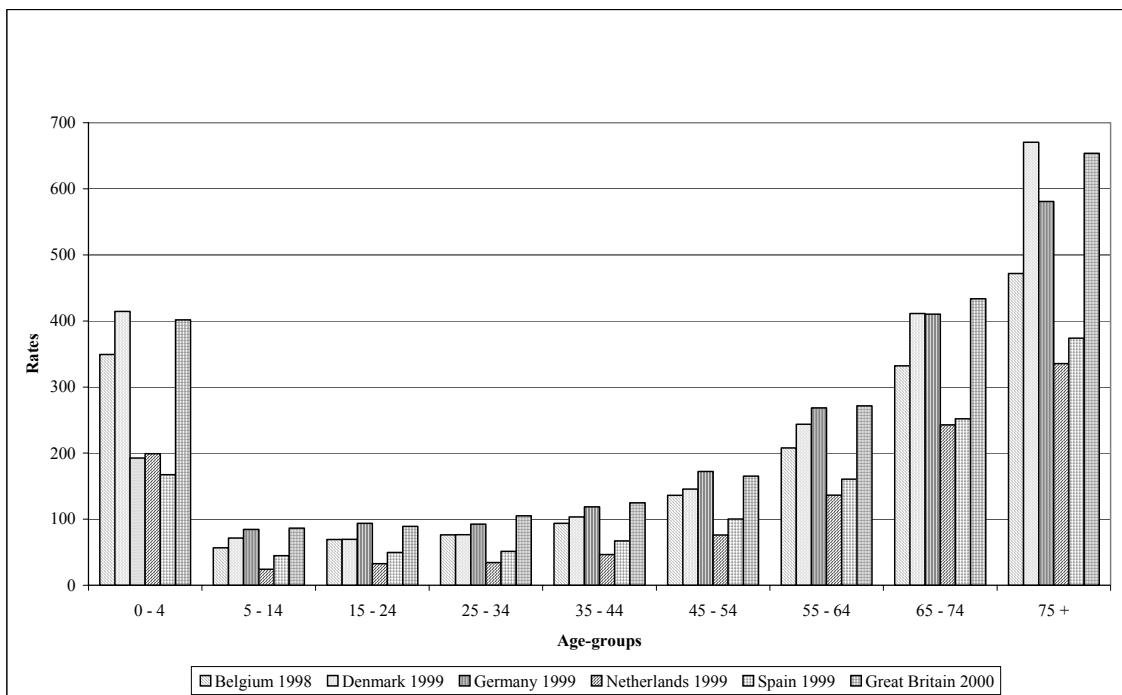
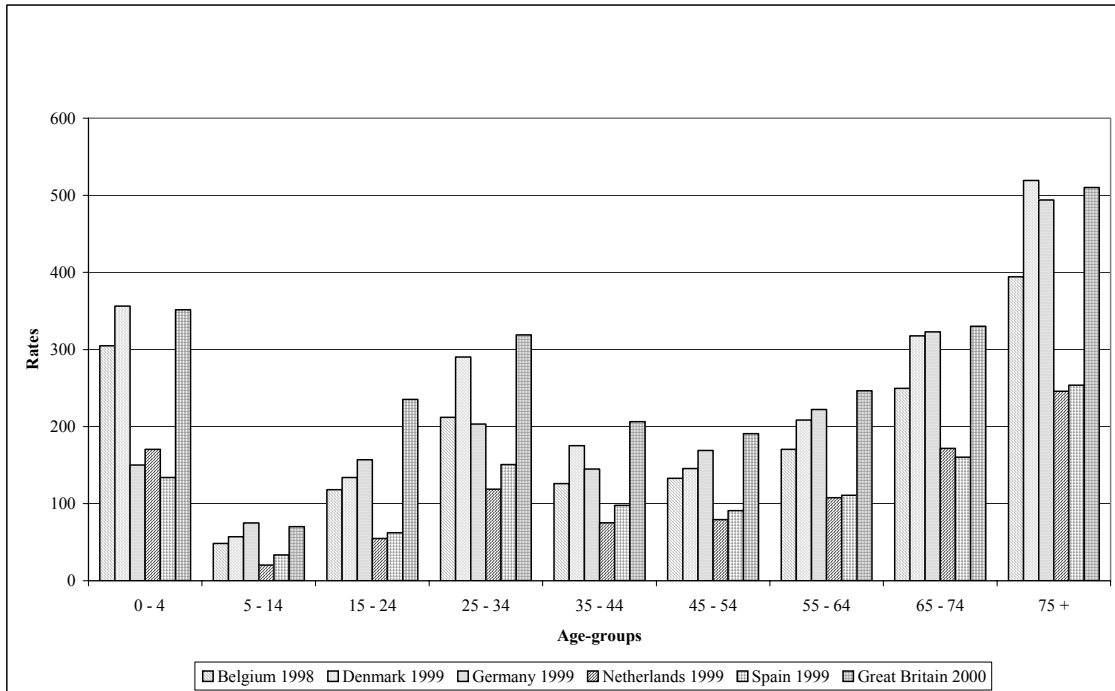


Figure 5. Hospitalised persons per 1000 inhabitants for women



Figures 6 to 13 show the changes in age-specific hospitalisation over time for each participating country based on the data provided by the participants. The share of hospitalised persons has increased in all countries (especially among the elderly) with the exception of the Netherlands. The prevalence rates of hospitalisation for Spain and the UK reveal a strong dynamic: in the UK the hospitalised people per 1000 inhabitants aged 75+ increased in the last 10 years by 1.5 times; in Spain the number increased by more than two times in the last 20 years. In Denmark, Belgium and Spain the prevalence rates for people aged 5 to 44 decreased, which could be caused by an increase of outpatient treatments.

Figure 6. Hospital discharges per 1000 inhabitants in the Netherlands

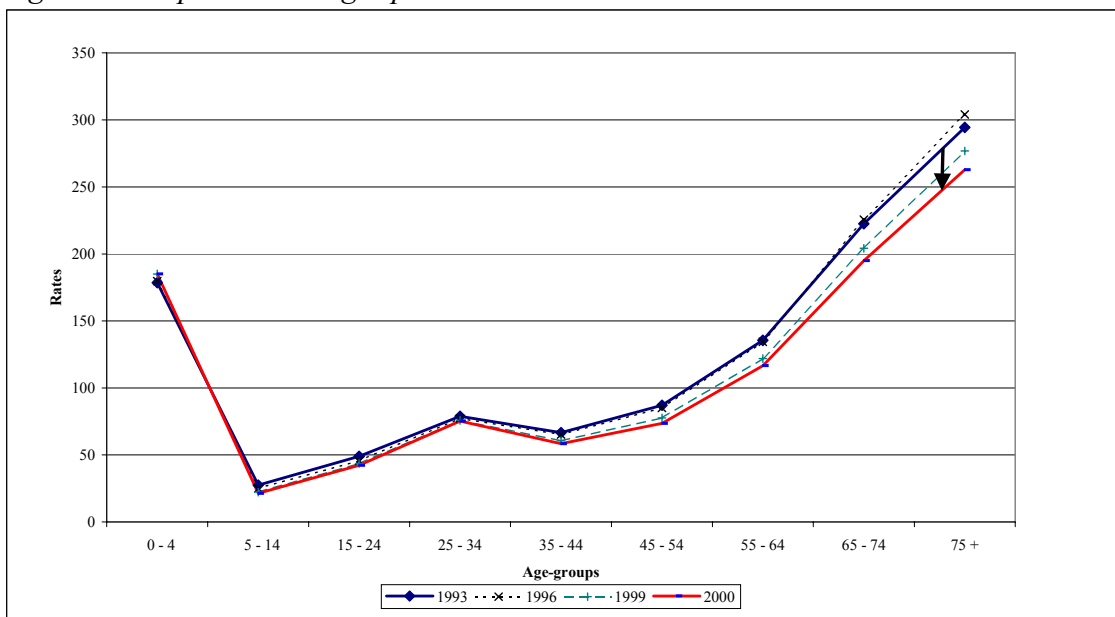


Figure 7. Hospital admissions per 1000 inhabitants in Belgium

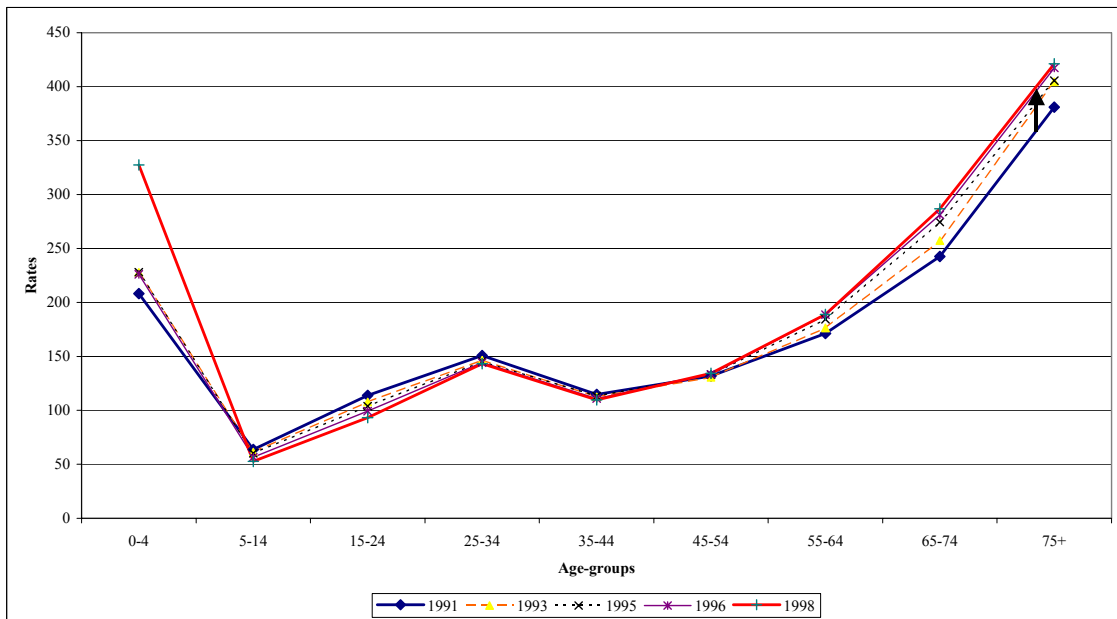


Figure 8. Hospital discharges per 1000 inhabitants in Spain

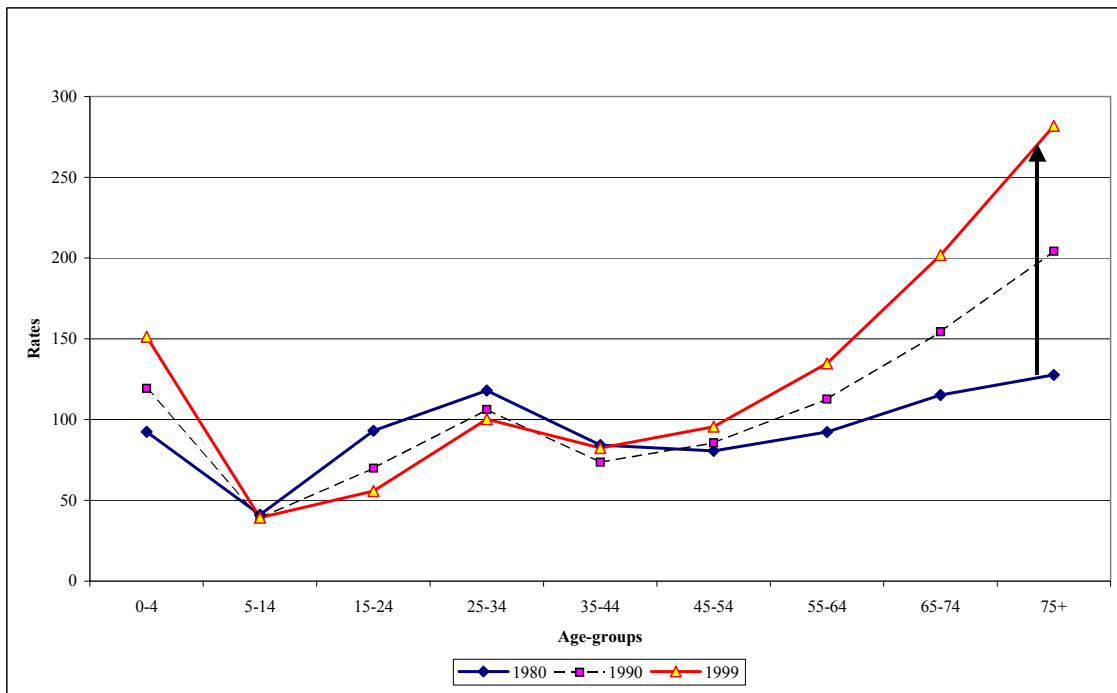


Figure 9. Hospital discharges per 1000 inhabitants in Germany

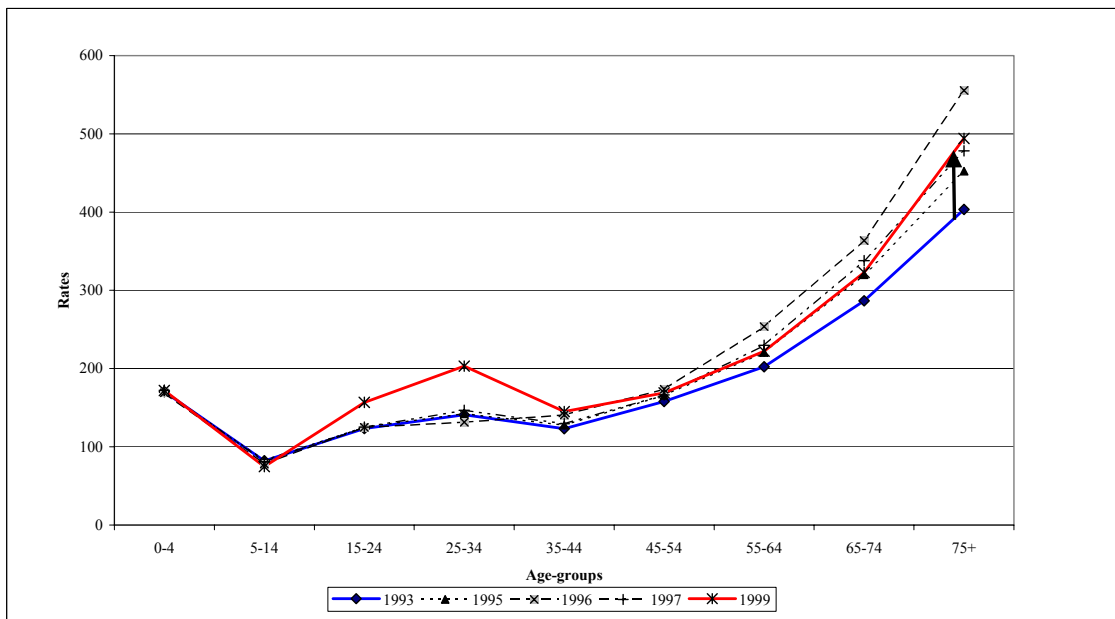


Figure 10. Hospital admissions per 1000 inhabitants in Denmark

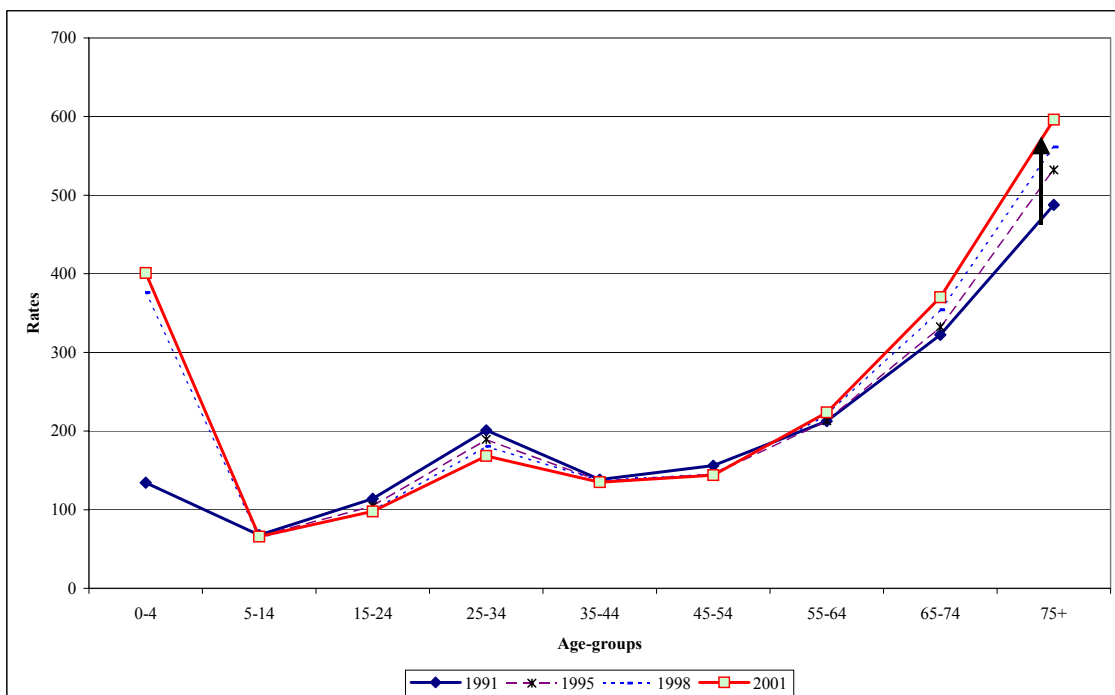


Figure 11. Hospital admissions per 1000 inhabitants in the UK

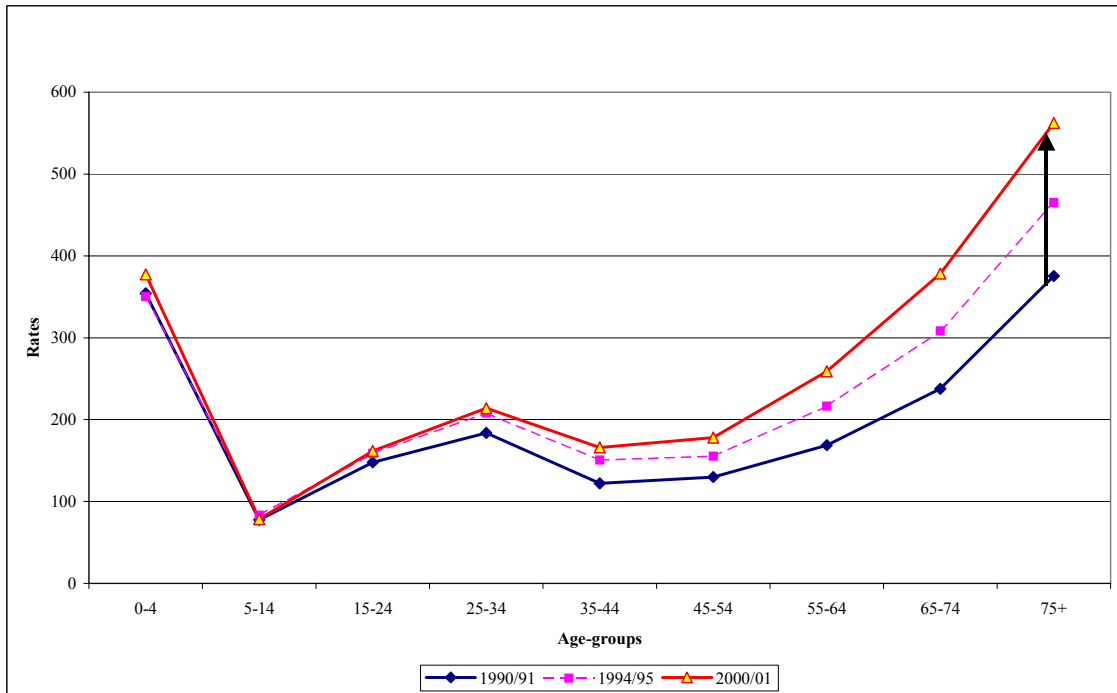


Figure 12. Discharges (hospital and health care centres) per 1000 inhabitants in Finland

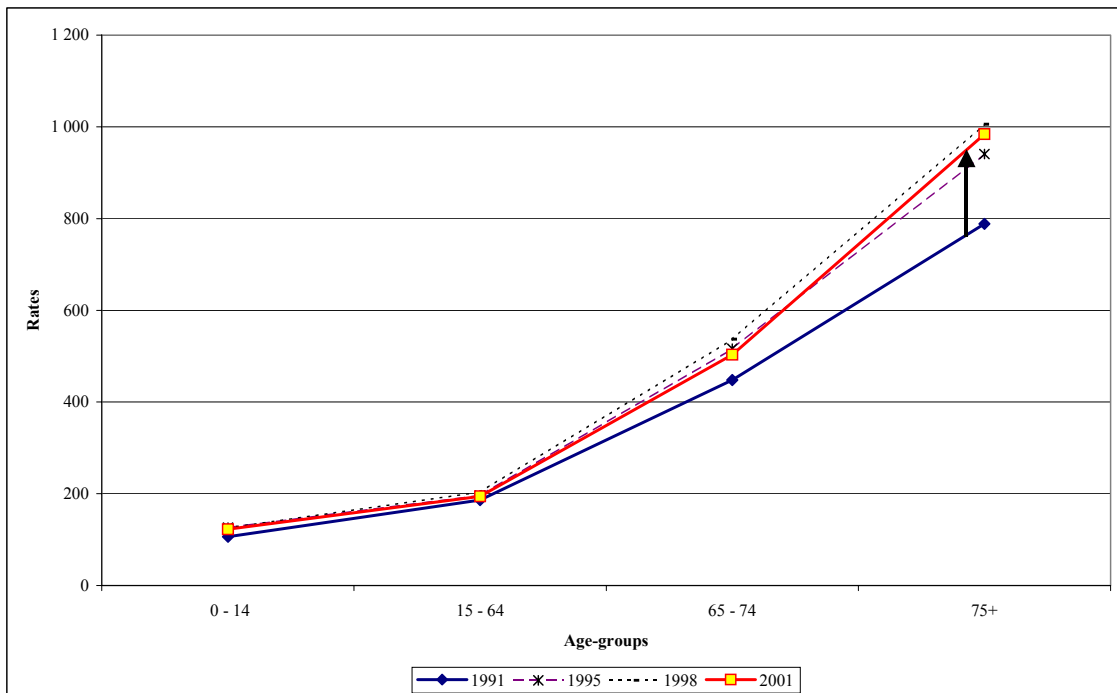
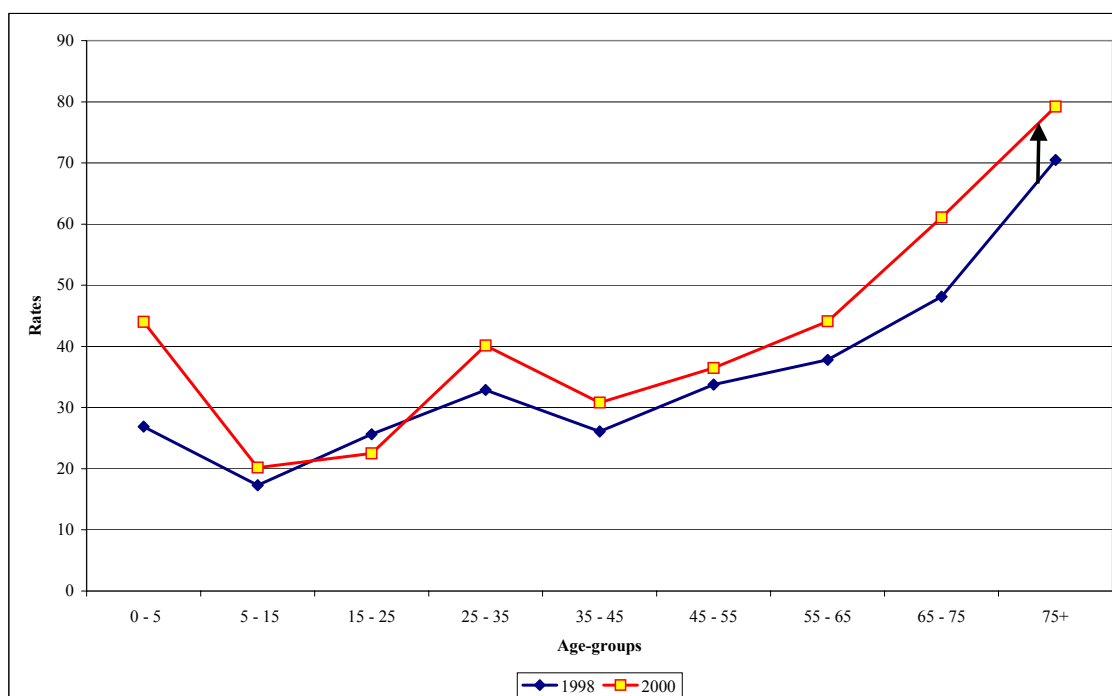


Figure 13. Persons admitted to a hospital in the last three months per 1000 inhabitants in France



Hospital utilisation and the expenditure for hospital care depend on the number of hospitalised persons as well as on the length of hospital stays. The OECD data provide the average length of hospital stay for the acute care of inpatients for each country as a long-time series (Table 12). Since 1960 (1970) the length of hospital stays decreased in all participating countries. The length of stay was lowest in Denmark (around four days in 2001) and highest in Germany (around nine days in 2001).

Table 12. Average length of hospital stay of inpatients for acute care

Countries	1960	1970	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001
	days											
Belgium	-	-	-	-	-	9,4	9,2	8,8	8,7	8,0	-	-
Denmark	-	12,5	8,5	7,8	6,4	4,1	4,1	4,0	3,9	3,9	3,8	3,8
Finland	12,5	12,8	8,8	8,0	7,0	5,5	5,3	5,0	4,7	4,5	4,4	4,4
France	-	-	15,9	13,2	10,6	9,4	9,2	8,9	8,8	8,5	8,5	-
Germany	20,6	17,7	14,5	13,5	14,1	11,4	10,8	10,5	10,2	9,9	9,6	9,3
Netherlands	20,1	18,8	14,0	12,5	11,2	9,9	9,8	9,6	9,5	9,2	9,0	8,6
Spain	-	-	-	10,1	9,6	8,8	8,0	7,6	7,5	-	-	-
United Kingdom	-	-	8,5	8,0	5,7	7,0	7,0	7,1	6,9	6,9	6,9	7,0

Source: OECD Health Data 2003.

Figure 14 shows the length of hospital stay by age groups in participating countries (with the exception of Finland, which provided other descriptions of the age groups). The length of hospital stay increases with age in all countries. On average the length of hospital stay in nearly each age group is highest for Germany and lowest for the UK.

The length of hospital stays in the other countries are between these two levels. The length of hospital stay has decreased in all age groups (Figures 15 to 21). But this is not mainly the result of a better health status of the population. This trend is caused by new medical treatments, for example the increased use of minimal invasive surgery and the de-institutionalisation strategy of national health policies. Full inpatient care is being substituted by outpatient care or by day care. This means that not only the health expenditures but also the health care utilisation was influenced by other factors besides demography and health status.

Figure 14. Length of hospital stay, 1999

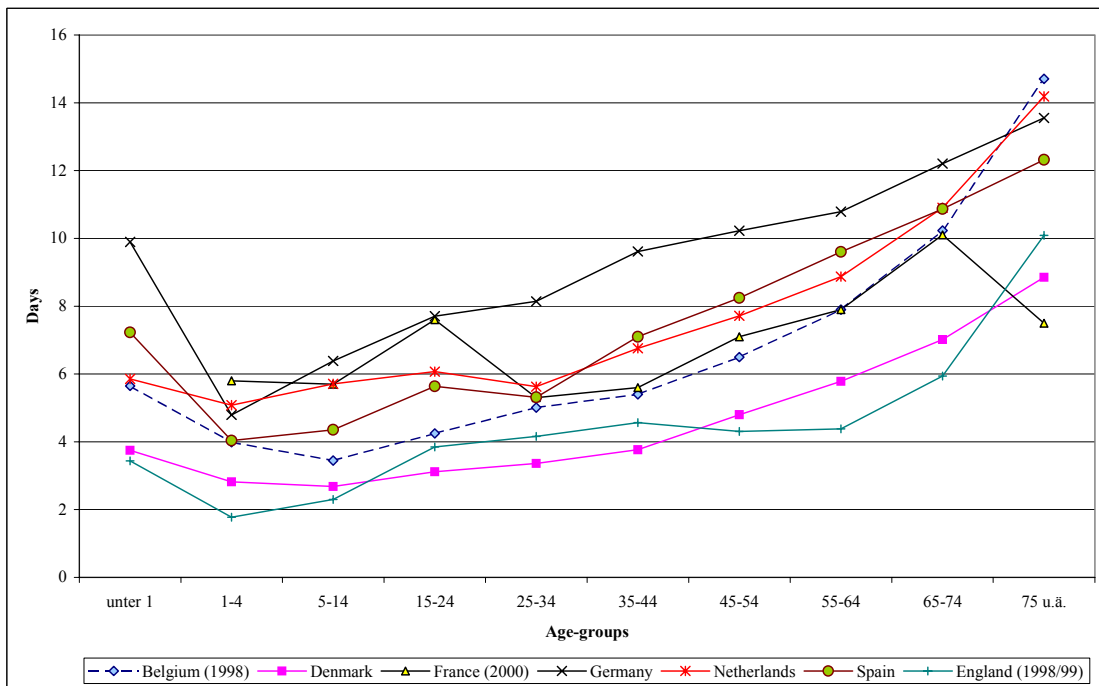


Figure 15. Length of hospital stay in Belgium

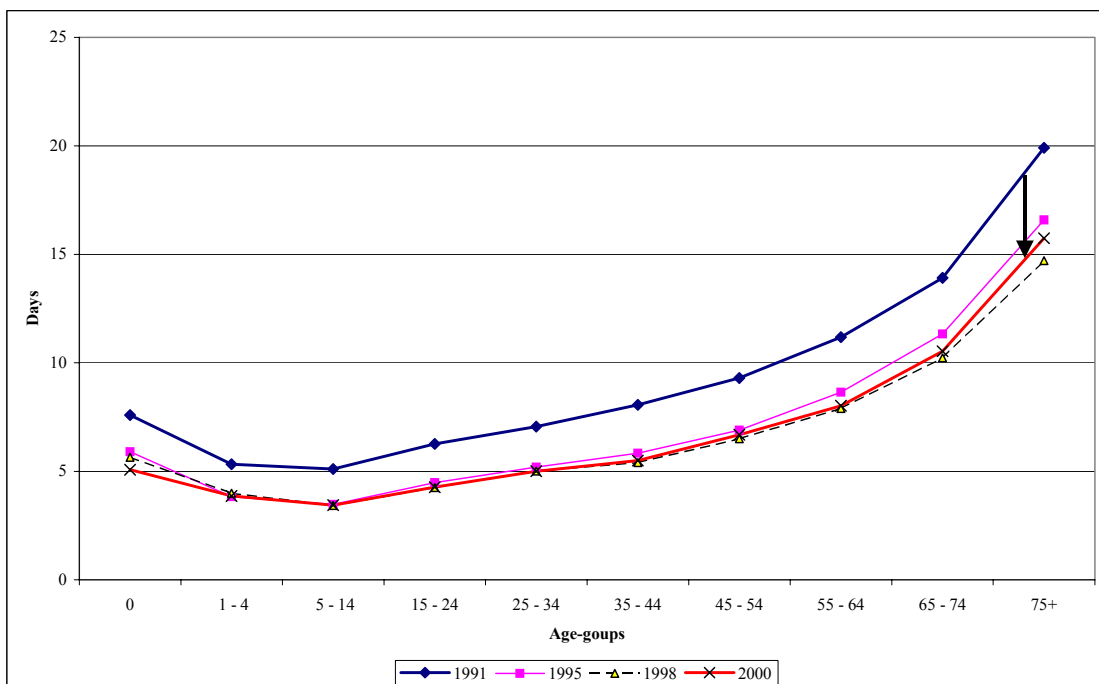


Figure 16. Length of hospital stay in Denmark

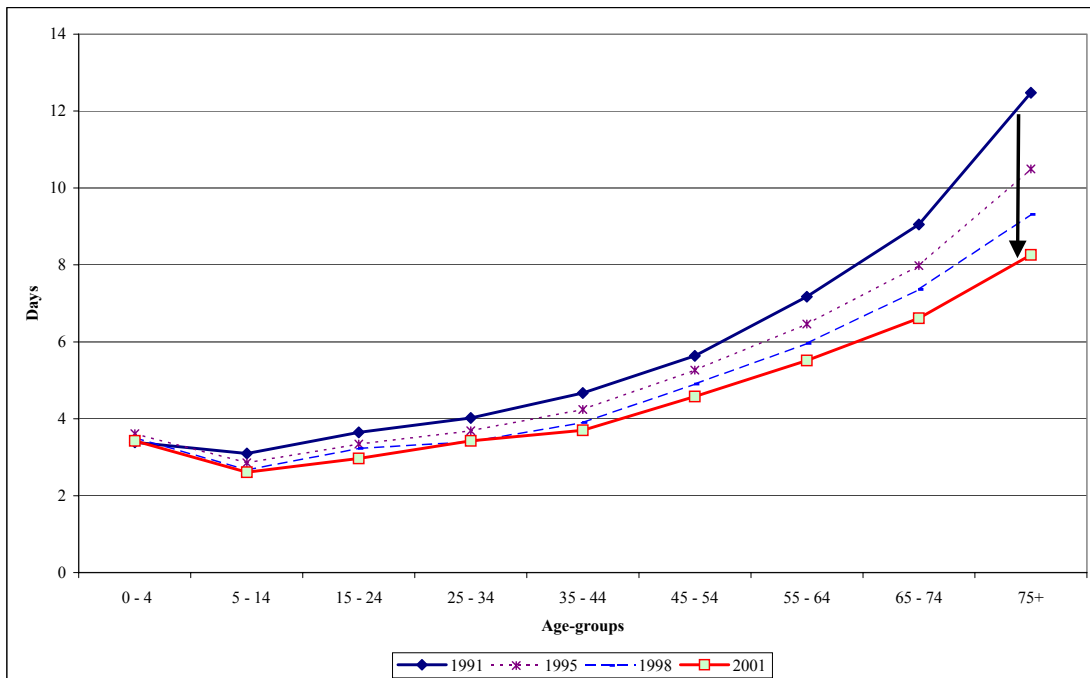


Figure 17. Length of hospital stay in Germany

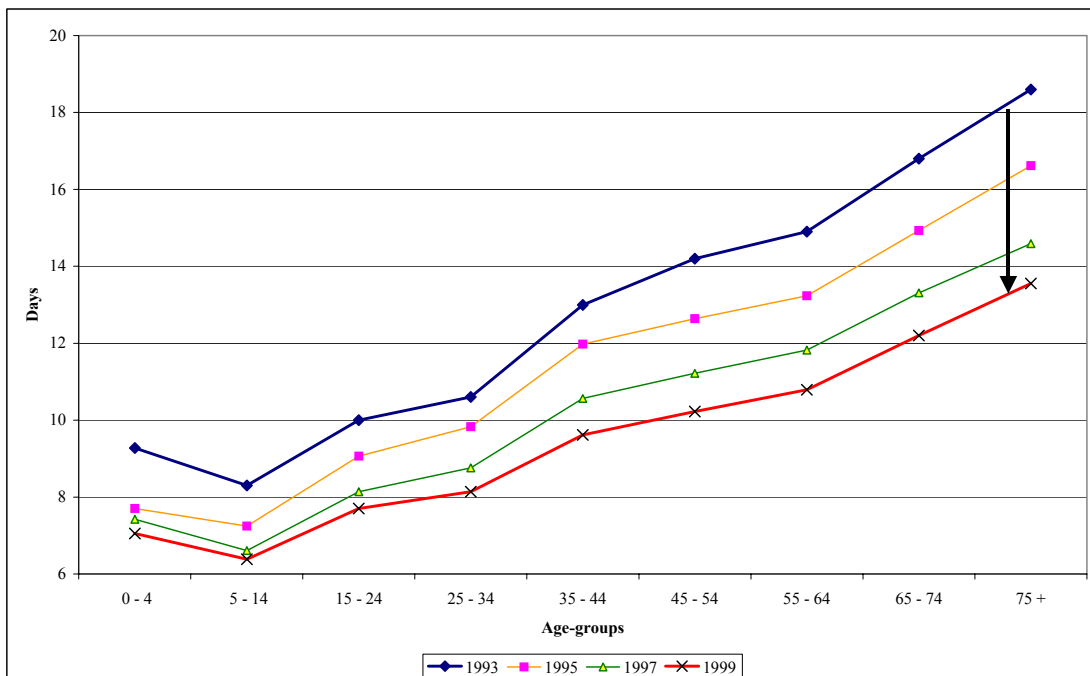


Figure 18. Length of hospital stay in the Netherlands

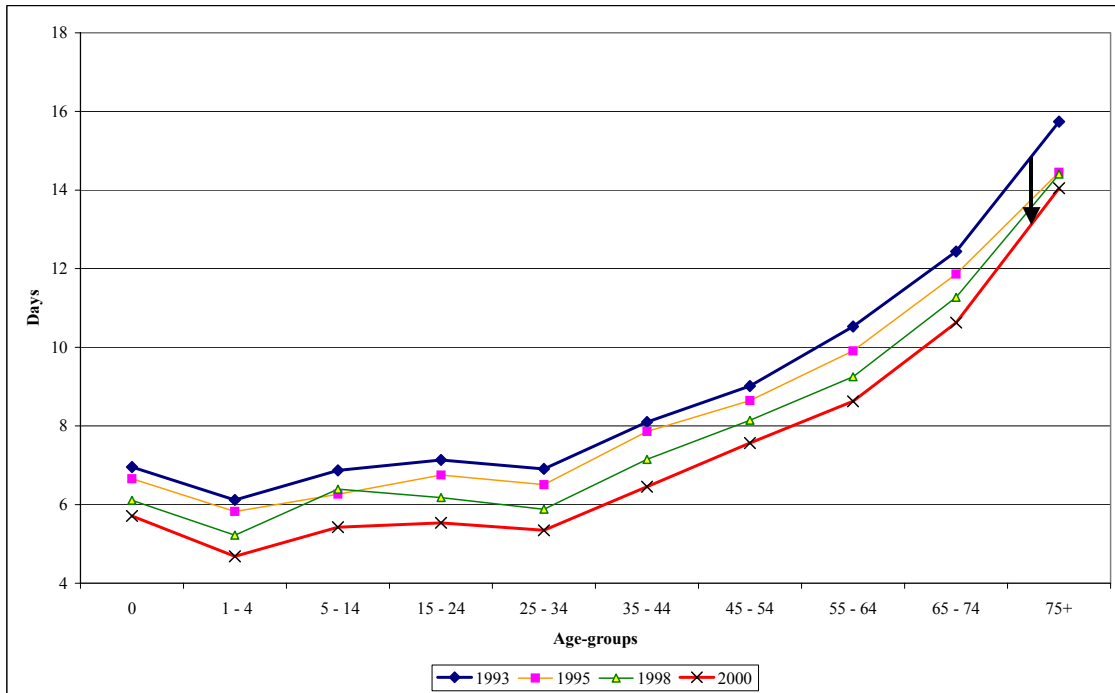


Figure 19. Length of hospital stay in Spain

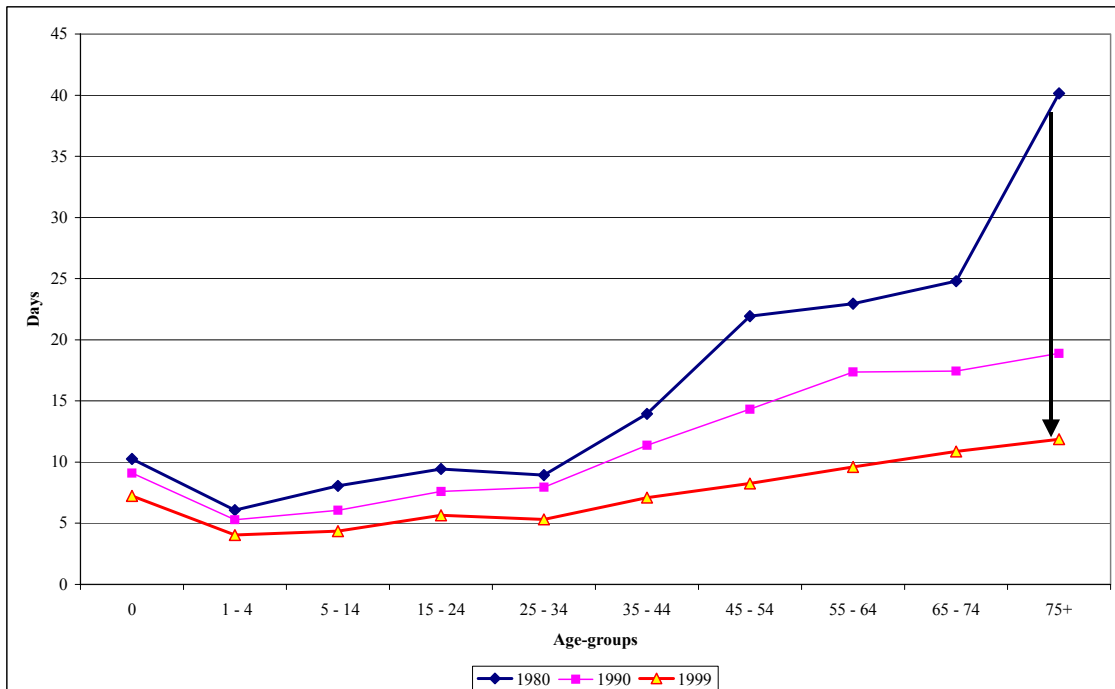


Figure 20. Length of hospital stay in the UK

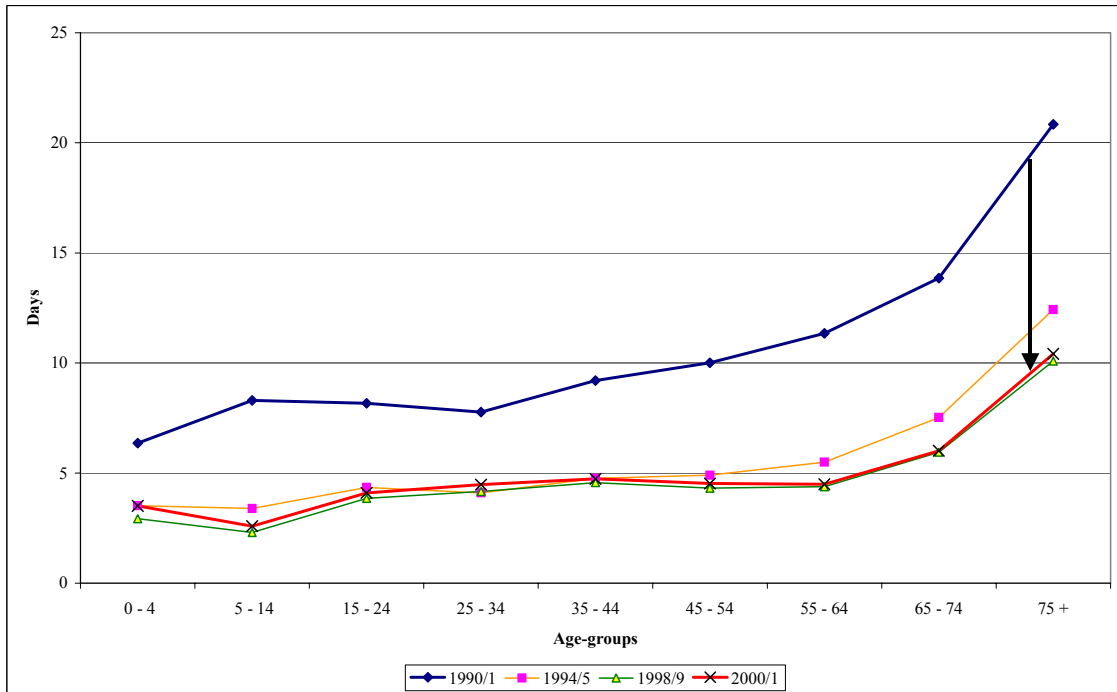
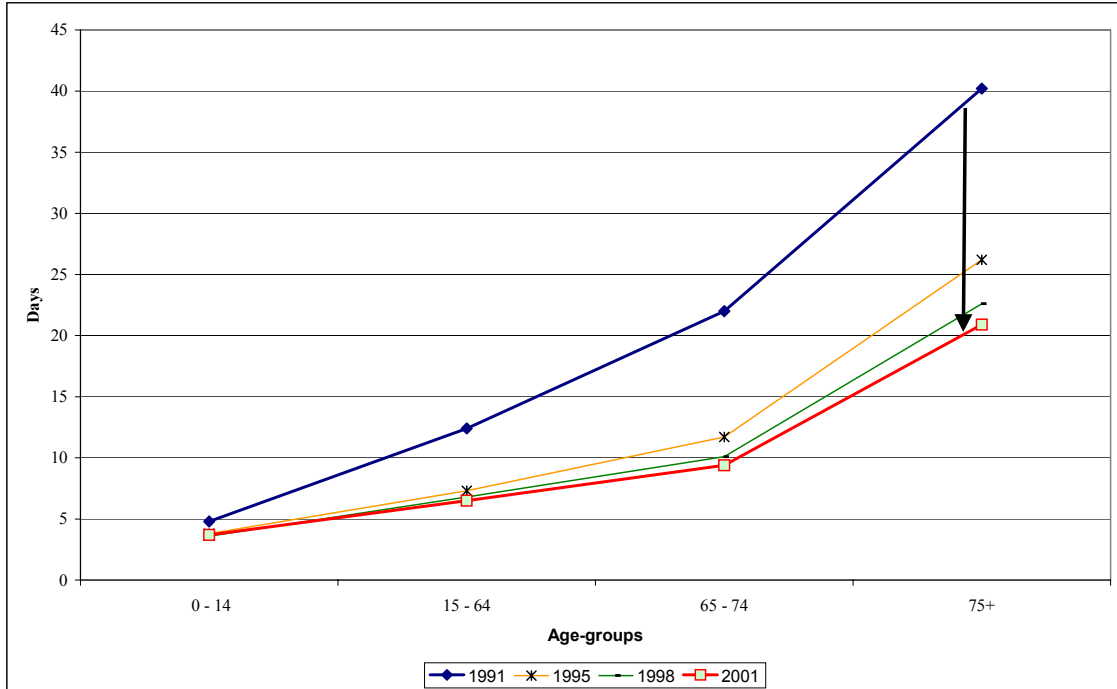


Figure 21. Length of hospital stay in Finland



The changes in the length of hospital stay are generally the same in all participating countries, but among age groups large differences can be observed. In Belgium and the Netherlands the decrease in the length of hospital stay is nearly the same in all age groups; in Germany and the UK a higher decrease in the older age groups can be

observed, but in Denmark, Spain and Finland the decrease in the older age groups are in a much higher gear. Especially in Spain, the high reduction of the length of hospital stay of the elderly is connected with a much higher admission rate into hospitals. The funding of hospitals in Spain is based on the Diagnosis Related Groups. Perhaps a 'revolving door effect' leads to this figure, particularly in the older age groups.

In all participating countries life expectancy has increased. But these improvements were mostly not connected with a decrease in hospital utilisation. Figures 22 to 25 show the changes in life expectancy, hospital admissions/discharges and length of hospital stay for men in selected countries. Changes above the zero line stand for positive changes (increases) and changes below the zero line stand for negative changes (decreases). Only in the Netherlands is the increasing life expectancy connected with decreasing hospital admissions and a decreasing length of hospital stay. In Germany, Belgium and Denmark the increasing life expectancy is connected with increasing hospital admissions/discharges, but a decreasing length of hospital stay. This finding could mean that improvements in life expectancy could only be realised by increasing hospital utilisation. Thus mortality could be prevented by new or additional hospital treatments (or both).

Figure 22. Changes in hospital utilisation and life expectancy in Germany for men

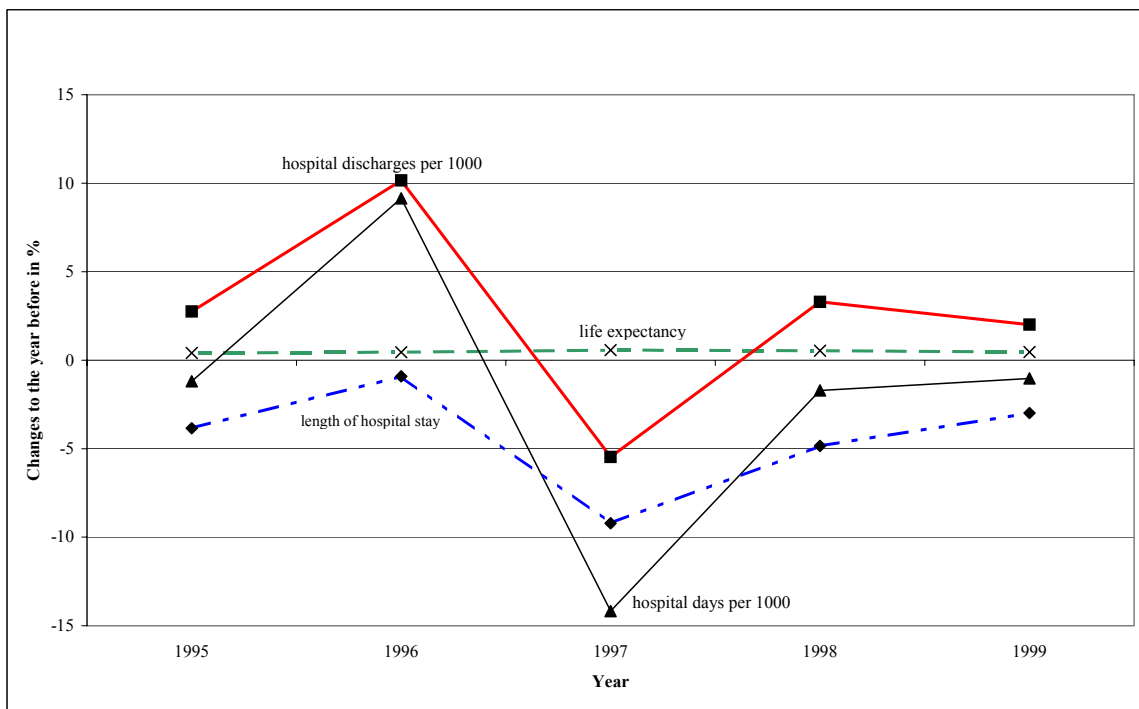


Figure 23. Changes in hospital utilisation and life expectancy in the Netherlands for men

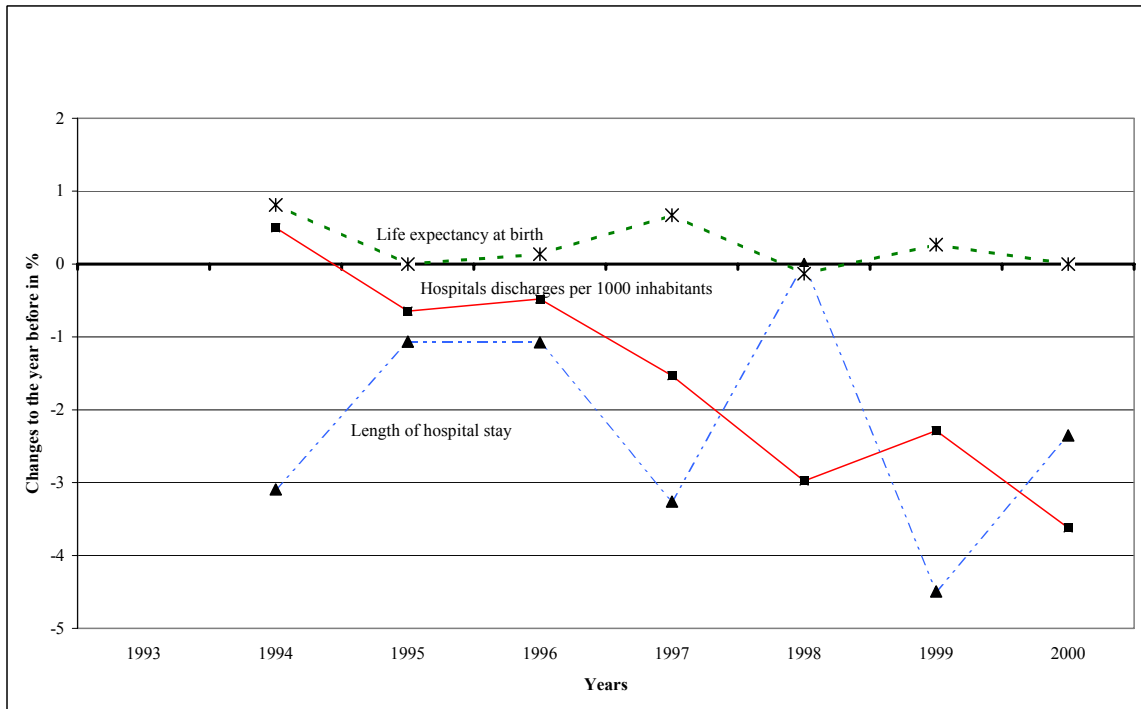


Figure 24. Changes in hospital utilisation and life expectancy in Belgium for men

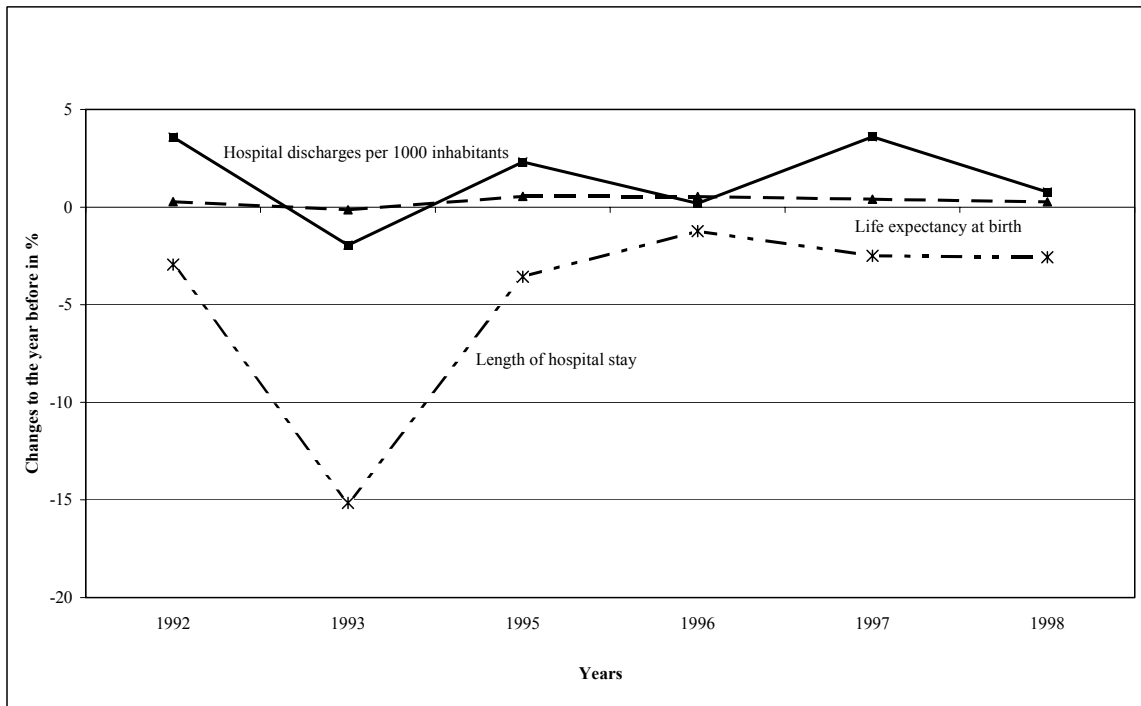
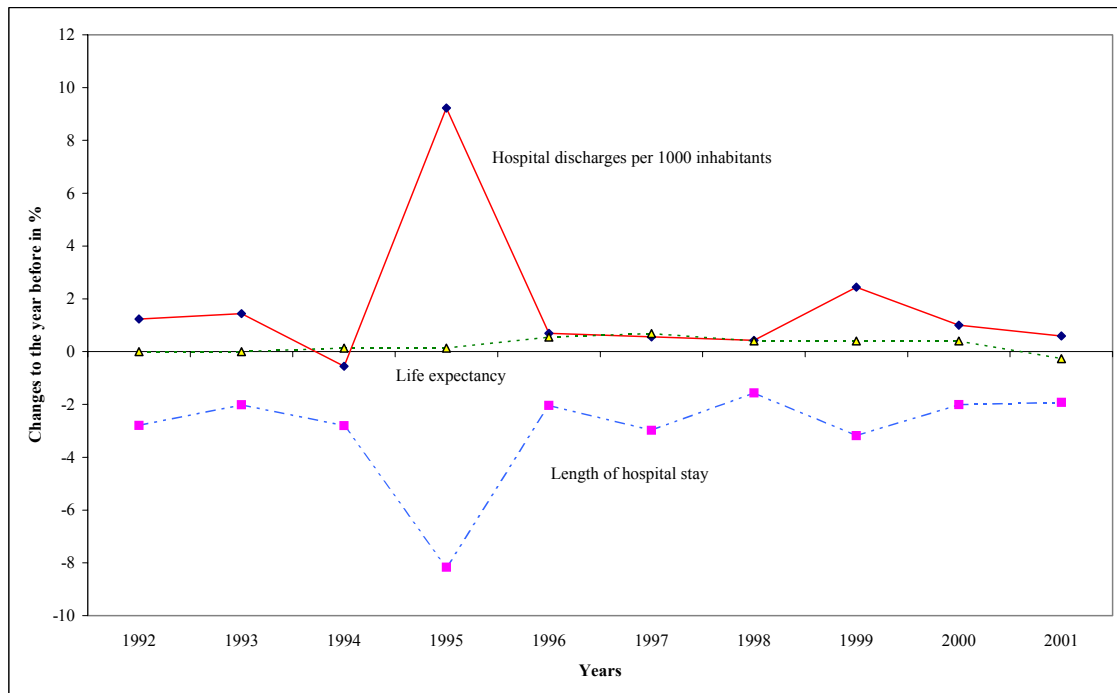


Figure 25. Changes in hospital utilisation and life expectancy in Denmark for men



Life expectancy is only a rough indicator of health status. To analyse the influence of health status on hospital utilisation additional information is needed. One data source is the ECHP. The questionnaire includes items about self-reported health status, admission to a hospital and length of hospital stay. Data are available from 1994 to 2001.

The questions were:

1. "How is your health in general?" (very good, good, fair, bad, very bad).
2. "During the last 12 months, have you been admitted to a hospital as an in-patient?" (yes/no).
3. "About how many nights have you spent in a hospital during the past 12 months?" (1-365).

Problems of self-assessed health status and the comparability across countries were discussed in the final paper of the AGIR WP1 (Ahn et al., 2003).

Before analysing the connection between health status and hospital utilisation, tables with a general overview of the proportion of hospitalised persons and the number of hospital days in the last year were calculated. These allow a comparison of the results of the national sources with the results from the ECHP, and the trends revealed by the ECHP between 1994 and 2001.

Table 13 gives an overview of the changes in the proportion of hospitalised persons by age groups in the participating countries between 1994 and 2001. In general the results of the ECHP reveal lower hospitalisation rates than the national sources, in particular for the older ages. This can be traced back to a well-known bias of household panels: the elderly are under-represented, particularly if they have health problems and if they have to stay for a longer period in hospitals. Household panels do not include

inhabitants in nursing homes or homes for the elderly. These differences between the national sources and the ECHP have to be kept in mind when the interpreting the following analyses.

Table 13. Hospitalised persons by age groups in participating countries 1994–2001

Age-groups	Hospitalised persons per 1000 inhabitants															
	1994	1995	1996	1997	1998	1999	2000	2001	1994	1995	1996	1997	1998	1999	2000	2001
	Belgium								Germany							
15 - 24	99	81	85	96	104	90	80	79	95	96	88	93	103	89	81	97
25 - 34	92	80	79	98	92	92	83	74	109	113	114	115	111	105	125	125
35 - 44	99	94	99	81	80	76	81	77	86	90	104	94	94	95	80	99
45 - 54	115	96	106	110	109	111	130	117	98	112	107	107	108	112	106	104
55 - 64	160	128	135	133	106	114	116	113	126	125	135	134	138	151	139	138
65 - 74	173	191	185	197	193	177	155	192	189	165	183	179	173	171	174	183
75 +	227	195	224	200	203	227	254	237	254	233	217	207	218	224	249	263
Total	125	112	118	119	115	115	117	115	116	117	121	120	121	121	120	128
	Denmark								Netherlands							
15 - 24	80	74	82	110	89	67	66	74	52	52	32	37	48	37	48	38
25 - 34	107	93	89	72	87	90	86	89	89	90	73	73	78	80	75	75
35 - 44	77	83	61	70	78	71	77	79	67	66	56	60	50	59	53	63
45 - 54	95	78	77	90	80	75	79	74	60	69	63	52	67	47	44	55
55 - 64	103	116	116	88	116	91	104	125	106	94	85	82	81	94	85	72
65 - 74	169	170	173	175	176	164	162	153	130	152	138	130	142	126	133	130
75 +	203	202	189	208	223	208	203	233	163	172	168	180	160	147	160	142
Total	110	104	99	102	105	96	98	104	85	87	76	75	78	75	74	74
	Finland								Spain							
15 - 24			108	92	69	87	79	90	45	39	37	36	42	32	28	35
25 - 34			92	81	88	73	82	79	53	55	45	57	57	51	47	53
35 - 44			92	94	99	93	85	102	59	60	61	77	59	61	59	55
45 - 54			116	116	114	109	115	102	79	69	73	68	69	64	69	72
55 - 64			154	148	163	148	146	146	107	104	101	101	101	94	92	94
65 - 74			212	210	188	217	187	150	134	130	121	127	134	135	140	162
75 +			343	331	354	313	277	296	171	160	148	157	176	174	180	198
Total			128	122	122	120	115	115	83	79	75	80	82	79	79	87
	France								UK							
15 - 24	62	82	73	77	75	61	78	64	80	102	93	82	94	94	92	78
25 - 34	91	88	90	73	73	61	68	65	139	115	109	108	112	113	106	106
35 - 44	78	90	78	80	71	69	79	67	80	83	79	81	87	83	81	85
45 - 54	93	105	109	90	100	101	97	98	72	74	79	82	73	70	63	68
55 - 64	115	124	109	127	110	116	120	118	98	92	98	100	101	111	95	92
65 - 74	124	175	182	161	169	168	174	155	142	125	115	119	136	134	141	113
75 +	206	204	235	233	230	196	222	216	199	216	172	180	197	197	189	207
Total	99	112	110	105	104	99	107	101	108	106	100	100	106	106	101	99

Source: ECHP wave 1 to 8.

Table 14 shows the differences in hospitalisation rates between men and women in the participating countries. In general women are hospitalised more often than men, but in the older ages (65+) the hospitalisation rates are higher for men. The ECHP shows the same figure as the national sources (see Figures 4 and 5).

Table 14. Hospitalised persons by age groups and gender in participating countries 2001

Age-groups	Hospitalised persons per 1000 inhabitants							
	Bel	Dk	Fi	Fr	Ger	NL	Sp	UK
	Men							
15 - 24	61	70	89	55	88	38	39	48
25 - 34	67	76	69	55	55	28	34	45
35 - 44	68	63	82	56	78	51	54	62
45 - 54	96	76	107	97	95	47	81	58
55 - 64	112	128	154	118	140	68	103	84
65 - 74	205	155	174	170	168	141	187	115
75 +	227	250	316	250	291	163	213	222
Total	104	98	114	98	105	63	86	76
	Women							
15 - 24	95	77	91	74	105	38	33	103
25 - 34	80	102	89	75	190	112	71	162
35 - 44	87	95	123	77	119	73	56	107
45 - 54	137	72	98	98	111	62	63	76
55 - 64	120	122	139	117	136	76	86	99
65 - 74	190	152	122	143	195	121	141	111
75 +	256	221	282	191	247	126	189	197
Total	128	110	117	104	148	83	88	120

Source: ECHP waves 1 to 8.

Table 15 shows the development of the mean value of days spent in a hospital in the last 12 months between 1994 and 2001. This figure, as with the length of hospital stay provided by the participating countries shows the number of days for one hospital stay, not for the whole of the year. In general, the number of days spent in a hospital decreased in most countries between 1994 and 2001. A high reduction of hospital days among the elderly can be observed especially in Belgium and Germany.

Table 15. Mean value of hospital days of inpatients in participating countries 1994–2001

Age-groups	Mean value in days during the last 12 month															
	1994	1995	1996	1997	1998	1999	2000	2001	1994	1995	1996	1997	1998	1999	2000	2001
	Belgium								Germany							
15 - 24	5,8	7,6	4,8	5,6	4,1	11,8	3,3	4,1	12,7	11,2	10,1	13,0	11,0	9,8	11,6	7,6
25 - 34	8,3	8,7	8,0	6,9	11,8	4,8	4,7	6,9	10,9	11,6	10,3	9,5	8,7	9,4	9,8	9,0
35 - 44	15,9	8,7	6,4	7,7	13,6	12,0	11,7	9,2	14,5	13,2	14,2	12,6	12,9	11,5	12,3	11,9
45 - 54	10,9	13,0	9,7	13,2	11,8	10,3	10,6	13,1	18,3	18,4	18,0	15,8	15,5	16,6	14,7	17,3
55 - 64	12,7	13,4	11,4	13,7	12,3	12,1	8,1	7,1	21,4	23,2	21,2	18,4	17,8	18,6	18,8	16,1
65 - 74	24,9	18,4	17,0	19,4	16,6	17,0	16,2	14,5	27,8	24,5	21,1	20,8	21,6	19,8	17,9	19,0
75 +	21,6	23,8	25,6	19,0	21,6	21,4	15,2	16,6	24,1	28,6	26,1	21,3	25,1	24,0	22,0	19,2
Total	14,7	13,6	12,3	12,7	13,6	13,2	11,1	11,5	17,9	17,6	16,5	15,2	15,2	15,3	15,0	14,2
	Denmark								Netherlands							
15 - 24	5,7	5,6	6,9	6,0	18,0	5,2	7,1	6,0	4,4	7,6	4,9	10,3	5,8	17,4	6,5	9,8
25 - 34	6,3	3,8	5,8	4,8	8,5	6,2	8,7	4,6	8,2	7,4	8,8	5,4	8,8	3,6	5,7	5,2
35 - 44	9,4	13,0	8,5	6,8	17,0	12,0	6,2	7,6	10,6	9,0	5,9	10,8	5,7	7,3	6,8	5,2
45 - 54	10,4	9,6	8,1	11,4	12,1	18,0	12,1	5,7	8,4	9,7	10,7	12,0	9,0	9,6	10,5	7,4
55 - 64	17,7	16,1	14,7	16,3	15,1	16,2	14,3	18,0	12,6	14,0	14,5	10,4	8,1	8,1	13,6	12,9
65 - 74	16,2	19,4	14,4	17,9	18,7	21,7	9,6	14,1	15,5	13,9	15,3	14,5	14,8	12,1	13,4	13,6
75 +	19,3	17,5	13,9	17,0	18,1	16,0	16,9	14,1	17,7	16,1	14,8	14,9	15,6	14,5	13,3	17,9
Total	12,2	12,3	10,5	11,5	15,2	13,8	10,8	10,5	11,2	11,0	11,1	11,1	10,0	9,3	10,1	9,9
	Finland								Spain							
15 - 24			5,6	4,7	4,4	5,5	6,6	5,6	9,5	9,0	9,8	8,6	7,5	9,7	7,4	6,6
25 - 34			6,7	5,5	5,5	3,4	4,3	7,5	8,9	8,8	6,6	7,3	7,3	8,8	8,4	6,8
35 - 44			6,1	4,8	6,3	7,5	4,4	9,2	10,4	10,4	11,3	10,0	9,8	7,6	8,6	10,5
45 - 54			6,8	8,7	7,2	7,0	5,2	8,2	11,4	11,6	8,9	9,5	8,8	8,3	7,6	10,1
55 - 64			10,2	8,9	10,4	8,2	7,7	12,2	16,0	14,0	12,2	15,0	13,0	12,2	13,0	9,9
65 - 74			11,9	13,8	13,7	13,5	11,9	19,3	18,2	19,9	20,2	19,4	16,8	15,1	14,0	16,4
75 +			23,2	17,6	21,3	19,2	17,6	16,4	19,8	16,7	18,5	16,4	16,8	18,2	17,8	16,1
Total			9,6	9,0	9,6	9,1	7,8	10,9	14,2	13,7	13,4	13,1	12,4	12,4	12,3	12,4
	France								UK							
15 - 24	7,3	7,2	6,7	5,7	7,1	6,0	6,3	9,1	5,3	5,8	7,4	7,1	3,9	4,2	4,8	6,2
25 - 34	7,4	7,7	8,1	6,4	6,7	9,1	6,1	5,3	6,0	5,8	5,5	5,2	4,9	5,6	4,9	4,7
35 - 44	7,7	9,8	8,7	7,3	9,7	7,3	8,2	9,6	7,3	5,4	8,2	5,7	6,5	6,7	6,6	6,0
45 - 54	10,8	10,5	10,9	12,1	12,7	10,2	10,5	9,5	7,9	7,6	8,0	8,0	7,0	7,4	9,4	6,1
55 - 64	12,2	11,6	10,3	11,1	11,2	13,8	12,3	10,6	7,8	9,4	8,1	8,8	9,9	8,7	10,0	6,8
65 - 74	17,1	12,7	16,4	14,8	14,8	13,2	14,4	15,3	12,5	10,5	12,9	11,1	10,7	12,2	13,0	10,9
75 +	19,4	19,1	20,1	20,1	19,0	16,2	15,3	16,2	16,6	19,3	19,0	18,3	18,9	16,1	16,7	14,7
Total	11,7	11,2	12,1	11,4	12,2	11,4	11,0	11,4	8,7	8,9	9,4	8,8	8,6	8,6	9,1	7,9

Source: ECHP wave 1 to 8.

Whereas the length of hospital stay was higher for women than for men, the total number of days spent in a hospital in the last 12 months shows no clear difference between men and women in the participating countries (Table 16). This is also true for the child-bearing ages: in France, Germany and the UK the number of hospital days for women aged 25 to 34 was lower than for men in the same age group in 2001.

Table 16. Mean value of hospital days of inpatients by gender in participating countries 2001

Age-groups	Mean value in days during the last 12 month							
	Bel	Dk	Fi	Fr	Ger	Nl	Sp	UK
Men								
15 - 24	(4,1)	(10,5)	6,5	8,0	8,3	(15,9)	6,4	(9,4)
25 - 34	(6,4)	(5,3)	4,8	6,5	12,1	(7)	6,3	5,7
35 - 44	12,1	(10)	12,2	9,0	12,6	4,7	12,8	8,9
45 - 54	15,5	(6,8)	6,2	9,4	19,1	8,1	11,8	4,6
55 - 64	(8,2)	12,8	11,9	10,9	17,1	13,1	8,3	9,8
65 - 74	14,0	(14,4)	16,5	15,7	18,1	8,7	16,0	11,4
75 +	13,2	(10,9)	10,6	15,7	21,3	10,7	16,7	10,3
Total	11,7	10,2	10,0	11,6	15,9	9,2	12,5	8,8
Women								
15 - 24	(4,1)	(2,3)	4,8	9,9	7,1	(4,1)	(6,9)	4,9
25 - 34	(7,3)	4,2	9,6	4,6	8,2	4,8	7,1	4,4
35 - 44	7,1	6,0	7,2	10,0	11,5	5,6	8,2	4,5
45 - 54	11,5	(4,7)	10,3	9,7	15,9	6,9	8,0	7,0
55 - 64	6,2	22,9	12,5	10,3	15,0	12,7	11,6	4,7
65 - 74	14,9	(13,7)	23,6	14,9	19,7	18,2	16,9	10,5
75 +	18,6	16,5	20,6	16,8	17,9	25,1	16,4	17,7
Total	11,3	10,7	11,7	11,3	13,1	10,4	12,3	7,4

() = Number of observations under 30.
Source: ECHP wave 8.

Table 17 shows the share of persons who were admitted to a hospital in the last 12 months by age group and health status in EU countries for two years, 1994 and 2001. In general, the proportion of hospitalised persons is larger the poorer the health status. Around 5% of people reporting a good or very good health status were hospitalised, but around 27% of people reporting bad or very bad health (1994) experienced a hospital stay. The proportion of hospitalised people decreased between 1994 and 2001 (from 9.4% to 8.9%), but in some age groups an increasing trend can be observed. People reporting fair health aged 60 and older and those reporting a bad or very bad health status aged 15 to 44 and 60 to 79 were more often hospitalised in 2001. The probability of hospitalisation increased with age too. In total around 7% of younger people were hospitalised, whereas around 21% of the oldest (80+) were hospitalised at least one time within the last year in 1994. In 2001 these figures were 6% and 21% respectively. Women reporting good/very good health have higher hospitalisation rates than men, especially in the child-bearing ages, but the hospitalisation rate is lower for women reporting bad/very bad health. The proportion of hospitalised men with a fair and a bad/very bad health status is much higher than for women particularly in the older ages. Therefore, health status, age and also gender are the main drivers of hospital utilisation.

Table 17. Share of hospitalised persons within one year by age groups and health status in EU countries*, 1994 and 2001(%)

Age-groups	Health status											
	Men				Women				Total			
	Very good/ good	Fair	Bad/ very bad	Total	Very good/ good	Fair	Bad/ very bad	Total	Very good/ good	Fair	Bad/ very bad	Total
1994												
15 - 29	4,2	9,5	27,6	5,3	6,2	14,9	28,4	7,8	5,2	12,5	28,1	6,6
30 - 44	4,0	9,4	23,3	5,7	6,6	13,7	26,5	9,1	5,3	11,8	25,1	7,5
45 - 59	4,0	11,2	28,6	8,6	5,0	11,0	23,1	9,4	4,5	11,1	25,4	9,0
60 - 69	6,5	14,0	28,9	13,5	5,4	10,4	22,1	11,3	6,0	12,0	25,0	12,4
70 - 79	9,4	17,3	31,1	17,8	6,2	14,1	26,1	15,4	7,7	15,4	28,0	16,5
80+	14,5	19,2	34,6	23,1	10,5	16,4	28,6	19,8	12,2	17,5	30,7	21,0
Total	4,6	12,3	29,0	8,6	6,1	12,7	24,8	10,2	5,3	12,5	26,5	9,4
2001												
15 - 29	3,5	9,4	26,3	4,5	4,9	12,4	36,5	6,6	4,2	11,1	32,2	5,6
30 - 44	3,1	9,7	24,5	5,1	6,1	11,4	29,2	8,2	4,6	10,6	27,1	6,7
45 - 59	3,7	10,8	28,2	7,7	4,3	10,6	22,3	8,1	4,0	10,7	24,8	7,9
60 - 69	6,0	14,2	28,8	12,6	6,2	10,0	24,2	11,2	6,1	12,0	26,1	11,9
70 - 79	9,6	17,7	35,6	18,9	8,3	15,3	26,8	16,6	9,0	16,3	30,3	17,6
80+	10,5	20,2	30,4	20,5	9,6	16,5	26,9	18,8	10,0	17,9	28,0	19,5
Total	4,0	12,8	29,8	8,2	5,5	12,1	26,0	9,6	4,8	12,4	27,5	8,9

*) EU-countries without Luxembourg and Sweden.
Source: ECHP.

In all participating countries the share of hospitalised people increases if health status deteriorates (Table 18), but the amount of hospitalisation is different among countries. People reporting bad or very bad health are more often hospitalised in Belgium (38%) than in Spain, the Netherlands or Germany (around 27% in 2000–01). The probability of hospitalisation depends on age and on health status. At a given health status the share of hospitalised persons increases with age, but in five countries the share of hospitalised persons reporting bad/very bad health status is lower in the oldest age group (80+) than for people aged 70 to 79.

The length of hospital stay shows the same picture. Table 19 shows the mean value of hospital days of inpatients by age groups, gender and health status for EU countries in 1994 and 2001. Men reporting good/very good health stayed on average seven days in a hospital in 2001 (women stayed six days), whereas men and women reporting bad/very bad health stayed on average 19 days in a hospital. At a given health status the average length of hospital stay increases with age.

The number of days spent in a hospital in the last 12 months decreased between 1994 and 2001 at all health status levels for men and women. This is true for nearly all ages. Exceptions are women reporting fair health status aged 60 to 69 and men reporting very good/good health aged 45 to 59. This goes in line with the results of the national sources, which show decreasing length of hospital stays in all participating countries.

Table 18. Share of hospitalised persons within one year in selected EU countries, 2000–01 by health status (%)

Age-groups	Health status				Health status			
	Very good/ good	Fair	Bad/ very bad	Total	Very good/ good	Fair	Bad/ very bad	Total
	Belgium				Germany			
15 - 29	7,6	(13,0)	(23,1)	8,2	8,2	13,5	30,1	10,3
30 - 44	5,7	(14,0)	39,5	7,8	7,5	11,7	22,9	10,2
45 - 59	7,5	21,0	38,0	12,2	5,9	9,9	23,3	11,3
60 - 69	10,0	(14,8)	(39,6)	13,1	(5,8)	13,7	26,7	15,4
70 - 79	(10,0)	29,9	41,3	22,5	(10,9)	16,8	30,4	20,6
80+	(16,4)	(32)	(33,9)	26,3	(15,8)	(22,3)	37,8	29,2
Total	7,5	20,5	38,4	11,7	7,5	12,6	26,6	12,4
	Denmark				Netherlands			
15 - 29	6,6	(22,1)	(33,3)	8,2	4,0	(10,1)	(27,6)	5,1
30 - 44	6,0	(14,4)	(38,1)	7,9	5,1	12,2	(19,4)	6,6
45 - 59	5,5	(13,8)	(33,6)	8,8	2,9	8,6	22,8	5,4
60 - 69	(6,1)	(20,1)	(34,5)	12,7	5,8	13,8	(32,6)	10,5
70 - 79	(10,9)	(20,5)	(33,7)	17,8	(6,2)	19,7	38,0	15,3
80+	(12,9)	(22,8)	(48,7)	24,8	(7,6)	(14,1)	(29,0)	13,6
Total	6,4	17,5	36,9	10,1	4,5	12,6	27,3	7,4
	Finland				Spain			
15 - 29	6,8	(16,9)	(42,9)	8,1	2,8	(11,8)	(30,5)	3,7
30 - 44	7,7	14,5	(44,2)	9,3	4,2	10,0	(25,2)	5,6
45 - 59	8,0	16,8	(23,1)	12,3	4,3	10,4	20,9	7,4
60 - 69	(10,8)	16,0	(27,6)	15,2	4,8	11,1	26,4	11,8
70 - 79	(13,7)	19,9	(37,2)	21,0	8,6	15,3	33,4	18,4
80+	(27,6)	(29,9)	(22,2)	(27,0)	(10,0)	16,7	25,5	18,2
Total	7,9	17,1	29,0	11,6	4,1	12,3	27,3	8,3
	France				UK			
15 - 29	4,5	12,2	(43,6)	6,8	6,7	12,1	33,3	9,0
30 - 44	4,1	11,6	31,7	7,3	5,8	13,6	33,2	9,3
45 - 59	4,7	13,0	37,4	10,4	3,0	10,7	29,2	7,3
60 - 69	6,0	15,0	36,8	13,7	(5,3)	13,5	29,6	10,4
70 - 79	(8,9)	17,8	39,7	19,6	7,7	19,1	38,5	16,0
80+	(12,3)	20,1	35,3	21,8	(10,6)	(22,0)	46,5	21,2
Total	4,8	14,1	37,2	10,5	5,6	13,9	33,7	10,0

() = Number of observations under 30.

Source: ECHP.

Table 19. Mean value of hospital days of inpatients in EU countries*

Age-groups	Health status											
	Men				Women				Total			
	Very good/ good	Fair	Bad/ very bad	Total	Very good/ good	Fair	Bad/ very bad	Total	Very good/ good	Fair	Bad/ very bad	Total
1994												
15 - 29	6,8	11,8	16,7	8,9	6,1	9,5	18,1	8,0	6,4	10,3	17,5	8,4
30 - 44	7,5	12,4	21,0	11,3	6,4	10,3	18,3	9,4	6,8	11,0	19,4	10,1
45 - 59	7,6	11,5	24,9	15,2	7,1	11,3	19,5	13,0	7,4	11,4	22,0	14,0
60 - 69	9,6	13,5	23,1	16,7	9,8	11,0	21,2	15,7	9,7	12,3	22,1	16,2
70 - 79	14,0	15,7	23,1	18,6	14,4	15,2	25,7	20,4	14,2	15,4	24,6	19,6
80+	13,2	14,6	21,0	17,6	11,1	18,7	25,0	21,3	12,1	17,0	23,4	19,8
Total	8,3	13,1	22,8	14,5	7,1	11,9	21,8	13,2	7,6	12,5	22,2	13,8
2001												
15 - 29	5,6	11,8	18,5	8,3	5,1	7,5	13,4	6,8	5,3	9,1	15,2	7,4
30 - 44	5,9	9,9	21,1	10,0	5,1	7,9	16,3	7,8	5,4	8,8	18,2	8,6
45 - 59	8,4	9,2	19,4	12,1	5,2	9,5	18,3	10,7	6,7	9,3	18,8	11,4
60 - 69	7,0	12,0	17,6	13,5	6,8	14,2	20,0	15,0	6,9	13,0	18,9	14,2
70 - 79	9,9	12,0	18,9	14,6	9,1	12,5	20,4	16,0	9,5	12,3	19,7	15,3
80+	12,3	12,1	18,6	15,0	16,0	14,6	17,6	16,6	14,4	13,6	17,9	16,0
Total	7,2	11,0	18,9	12,3	5,9	10,9	18,5	11,6	6,4	10,9	18,7	11,9

*) EU-countries without Luxembourg and Sweden.
Source: ECHP.

In all participating countries the figure is the same, but at a given health status the mean value of hospital days is different among countries in 2001 (Table 20). Inpatients reporting good/very good health in Finland stayed in a hospital four days and in Germany around eight days and in most other countries between five and seven days. Inpatients with bad/very bad health stayed between 12 (the UK) and 25 (Finland) days in a hospital, but mostly around 20 to 22 days (in the last 12 months). In all countries the average length of hospital stay increases with age at a given health status. That goes in line with the results of the analysis based on national sources.

The data show that the use of health care is related to age and health status, but also to gender. Based on the empirical analyses it could be expected that a high correlation exists between health care utilisation and age, gender, health status. The health status itself is influenced by health behaviour, genetic conditions and living conditions. Health behaviour depends on socio-economic variables, such as education, family status and income. Therefore, the potential growth of the number of elderly and the oldest-old population makes it on the one hand important to show their health and functional characteristics and on the other hand to study the influence of the socio-economic variables. As could be expected, a higher education level leads to a healthier behaviour and therefore to less hospital days. Higher education is mostly connected with a higher personal income and therefore the same effect is expected, but also the possibility to buy healthy food and spend money on training activities and sports increases with a higher income and also have a direct influence on the health status of a person. It is also expected that married persons have a healthier lifestyle than single persons and therefore fewer hospital days. The ECHP questionnaire also includes items about education, family status and personal income. Thus with this information, it is possible to compute the Pearsons' two-way correlation between the number of hospital days per

inhabitant, the number of hospital days per inpatient and health status with the variables age, gender, health status, education, family status and income.

Table 20. Mean value of hospital days of inpatients within one year in selected EU countries 2001

Age-groups	Health status				Health status			
	Very good/ good	Fair	Bad/ very bad	Total	Very good/ good	Fair	Bad/ very bad	Total
	Belgium				Germany			
15 - 29	4,1	(5,2)	(44,0)	5,6	6,9	9,9	14,3	8,8
30 - 44	4,4	(8,3)	(22,9)	8,5	7,6	10,5	16,9	10,4
45 - 59	6,0	10,2	(29,9)	11,9	8,5	12,9	22,3	16,3
60 - 69	(5,8)	(11,2)	(18,3)	9,0	7,8	18,5	20,8	18,6
70 - 79	(8,5)	18,8	(21,4)	16,9	13,8	15,7	19,8	17,5
80+	(12,7)	17,6	(14,6)	16,1	(17,3)	(14,5)	24,2	21,4
Total	5,7	13,4	23,4	11,5	7,8	13,5	20,3	14,2
	Denmark				Netherlands			
15 - 29	2,9	(10,3)	(4,7)	4,5	8,5	(6,1)	(9,0)	8,0
30 - 44	6,6	(7,3)	(9,2)	7,2	3,6	5,7	(15,4)	5,0
45 - 59	4,3	(10,7)	(27,8)	10,6	5,2	7,6	19,2	9,5
60 - 69	(7,1)	(9,4)	(32,0)	15,9	7,6	17,1	(14,5)	13,6
70 - 79	(10,3)	(12,9)	(16,9)	13,5	7,4	9,1	(33,8)	15,0
80+	(30,5)	(8,8)	(15,9)	15,8	12,4	(19,1)	(15,3)	16,9
Total	6,4	9,6	20,2	10,5	5,6	10,1	20,8	9,9
	Finland				Spain			
15 - 29	3,1	(19,8)	(20,8)	6,4	5,4	(9,1)	(15,8)	7,7
30 - 44	4,5	17,8	23,4	9,2	5,2	7,0	21,0	8,3
45 - 59	3,6	5,8	(33,2)	7,9	5,5	13,0	11,5	9,6
60 - 69	(4,5)	12,2	(26,3)	17,4	8,0	11,8	16,4	13,2
70 - 79	(8,4)	7,7	(18,5)	17,2	9,2	13,3	23,5	17,6
80+	(12,8)	(12,4)	(23,8)	20,0	(13,5)	9,2	19,2	14,7
Total	4,1	10,3	25,0	11,1	6,5	11,4	19,1	12,4
	France				UK			
15 - 29	4,6	6,1	(21,4)	7,5	3,4	5,6	9,9	5,4
30 - 44	5,4	5,7	19,1	8,2	2,9	5,6	10,5	5,6
45 - 59	4,4	7,1	18,7	9,9	3,2	5,4	9,7	6,5
60 - 69	4,5	10,9	17,0	11,9	(5,2)	(11,5)	(9,3)	8,6
70 - 79	9,3	11,4	27,5	17,0	6,7	9,5	17,2	11,4
80+	(4,1)	13,3	(23,0)	15,9	(17,6)	(14,9)	19,7	17,5
Total	5,2	8,9	21,2	11,4	4,5	7,8	12,4	7,9

() = Number of observations under 30.

Source: ECHP.

The Pearson's' correlation shows a high significance of each variable with the number of hospital days per inhabitant and per inpatient (Table 21). For all variables (with the exception of marriage) the signs show the expected direction: the number of hospital days increase with age, but are fewer for women (inpatient) and fewer for those in good health, with higher education and higher income levels. But for married people a positive correlation is shown. It could be that married people are more interested in preventive medical check-ups and have therefore a higher chance of preventing mortality with hospital treatment (cancer for example). The positive correlation between good health status and marriage could be a sign of this behaviour. The same results are shown in the regression of hospital days (dependent variable) and age, gender, health status, education, family status and personal income as independent variables (Table 22). Whereas all variables have significant influence on the number of hospital days per inhabitant in 2001, in the case of hospital days per inpatient gender and education have no significant influence in 2001 if the other variables were controlled.

Table 21. Pearson's' two-way correlation in EU countries*, 2000 and 2001

	Hospital days		Hospital days of inpatients		Good health status	
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
	2000					
Age	0,106	0,000	0,159	0,000	-0,326	0,000
Women	0,007	0,029	-0,026	0,011	-0,042	0,000
Good health	-0,116	0,000	-0,162	0,000	-	-
High education	-0,020	0,000	-0,043	0,000	0,067	0,000
Married	0,015	0,000	0,051	0,000	0,080	0,000
Income	-0,019	0,000	-0,011	0,278	0,053	0,000
	2001					
Age	0,110	0,000	0,158	0,000	-0,248	0,000
Women	0,007	0,020	-0,170	0,095	-0,029	0,000
Good health	-0,114	0,000	-0,174	0,000	-	-
High education	-0,016	0,000	-0,023	0,027	0,052	0,000
Married	0,017	0,000	0,050	0,000	0,029	0,000
Income	-0,019	0,000	-0,017	0,108	0,053	0,000
*) Without Luxembourg and Sweden.						
Source: ECHP.						

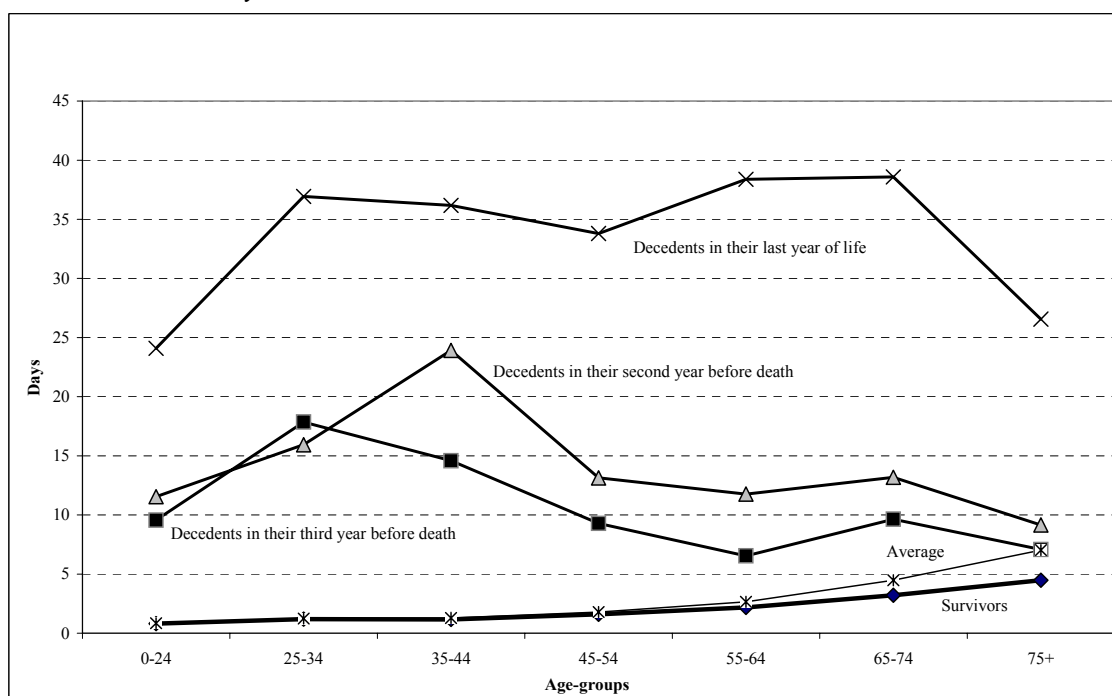
Table 22. Regression of hospital days in EU countries*, 2000 and 2001

	Hospital days per inhabitant			Hospital days per inpatient		
	Coefficient	T	Significance	Coefficient	T	Significance
	2000					
Absolute term	2,853	25,525	0,000	12,995	13,415	0,000
Age	0,013	8,873	0,000	0,061	4,339	0,000
Women	-0,223	-4,681	0,000	-1,350	-2,761	0,006
Good Health	-1,544	-34,379	0,000	-4,961	-11,008	0,000
High education	0,021	0,501	0,616	-0,693	-1,596	0,111
Low education	-0,221	-5,959	0,000	-0,001	-0,002	0,998
Married	1,529	17,432	0,000	3,961	7,251	0,000
Income	0,000	-4,449	0,000	0,000	-1,838	0,066
	2001					
Absolute term	3,011	27,917	0,000	12,682	13,680	0,000
Age	0,015	10,445	0,000	0,064	4,660	0,000
Women	-0,188	-4,074	0,000	-0,333	-0,698	0,485
Good Health	-1,731	-42,126	0,000	-6,270	-17,108	0,000
High education	0,127	2,925	0,003	0,349	0,784	0,433
Low education	-0,292	-7,784	0,000	-0,936	-2,402	0,016
Married	1,643	19,352	0,000	3,443	6,785	0,000
Income	0,000	-4,912	0,000	0,000	-2,049	0,041
*) Without Luxembourg and Sweden.						
Source: ECHP.						

Another intensively discussed question is whether age is the driver of health utilisation and health expenditure or is it those who are on the brink of mortality? Studies have shown that the intensity of health care utilisation is much higher for decedents than for survivors, with the ratio of health expenditures of decedents to survivors being higher in the younger and middle-aged groups than among the elderly (Busse et al., 2002). Several studies have focused on the health care expenditure related to mortality (Lubitz & Riley, 1993). The studies pointed out that the costs of acute care rise with age, but that the proximity to mortality is a more important factor in determining the costs (McGrail et al., 2000; Felder et al., 2000; Scitovsky, 1994; Serup-Hansen, et al., 2002). One study concluded that health care expenditure depends on one's remaining lifetime and not on calendar age (Zweifel et al., 1999; Salas & Raftery, 2001; Zweifel et al., 2001; Getzen, 2001).

For Germany Busse et al. (2002) presented data about the hospital utilisation decomposed by age groups, survivors and decedents in their last, second and third year of life before mortality. Their data source was a 10% random sample of all the insured persons of a German insurance fund with data of about 70,000 survivors and 1,400 decedents between November 1991 and November 1995. Figure 26 shows the data. Decedents in their last year of life spent many more days in a hospital than survivors at a given age group. These data could be a basis for the projections made in AGIR WP4.

Figure 26. Days spent in a hospital within one year by decedents and survivors in Germany



Data on health care expenditure subdivided by survivors and decedents in their last year of life are also available for Denmark (Serup-Hansen et al., 2002). Hospital expenditure is much higher for decedents than for survivors in all age groups, especially in the younger age groups (Figure 27). Expenditure for outpatient care is only a little bit higher for decedents than for survivors in all age groups. These data could also be used to estimate the future health expenditure in AGIR WP4.

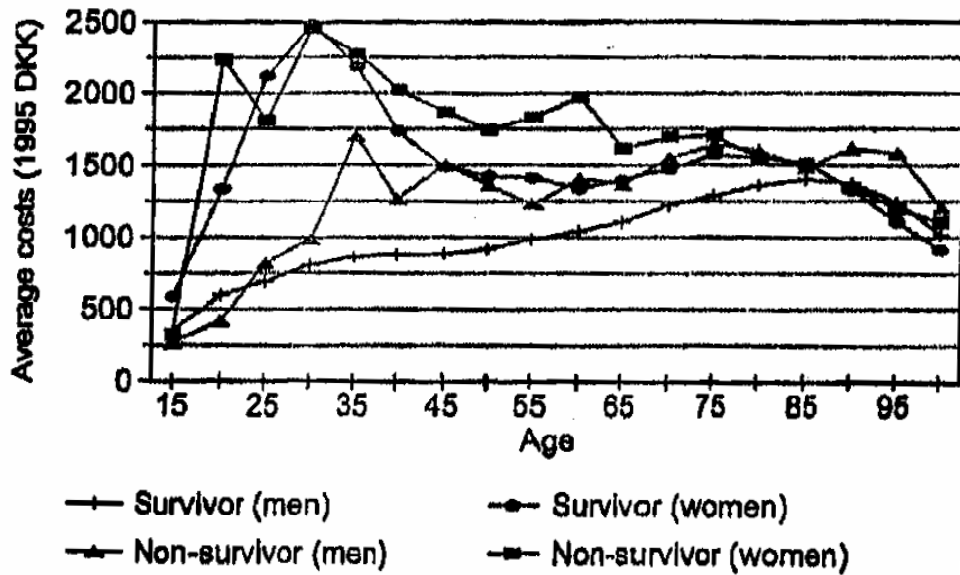
3.2 Outpatient care

The OECD health data provide data about the average number of doctors' consultants per capita for EU countries. In all participating countries the number of contacts with doctors has increased since 1980 with the exception of the UK, where no clear trend exists (Table 23). The highest number of consultations can be observed for Spain (8.7 in 2001) and the lowest for Finland (4.3 in 2001).

National sources for outpatient utilisation are mainly surveys – health surveys as well as general household surveys. The participants provided data about the contact to a general practitioner (GP) or to doctors (GPs and specialists). Comparable age groups were provided for the UK, Belgium and Spain. Figure 28 shows the average number of contacts with a doctor during one year for men. The average number of contacts is highest among the youngest and oldest age groups and lowest for men aged 5 to 24. Generally, the number of contacts is lower in the UK than in the other two countries.

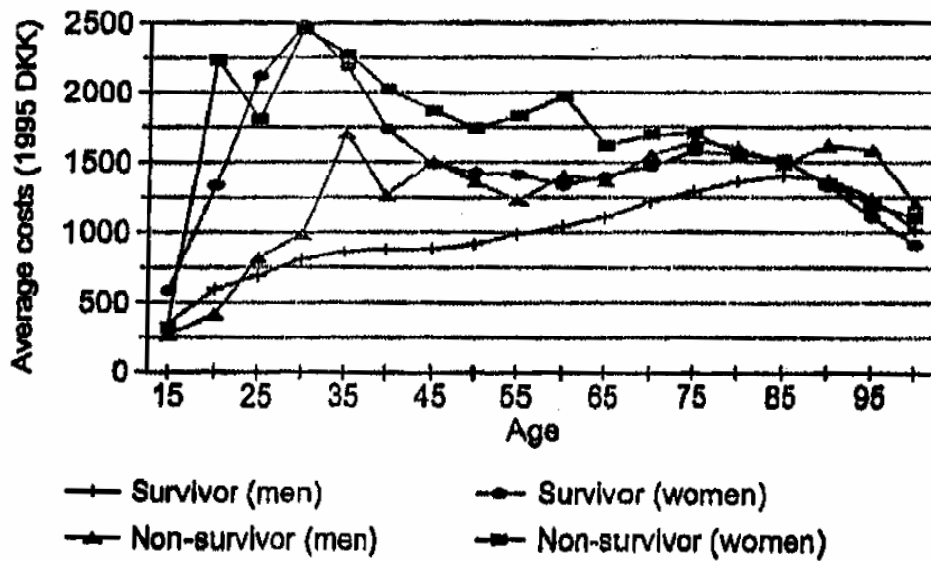
Figure 27. Average costs (1995 DKK) for primary health care services (above) and for hospital inpatient services (below) (excluding nursing homes, home help services and prescription drugs) by age, gender and survivor status.

N. Serup-Hansen et al. / Health Policy 62 (2002) 161-172



Notes: Children under the age of 16 years accounted together with their parents, 15 comprises the age group 15-19 years, 20 comprises the age group 20-14 years, etc.

N. Serup-Hansen et al. / Health Policy 62 (2002) 161-172



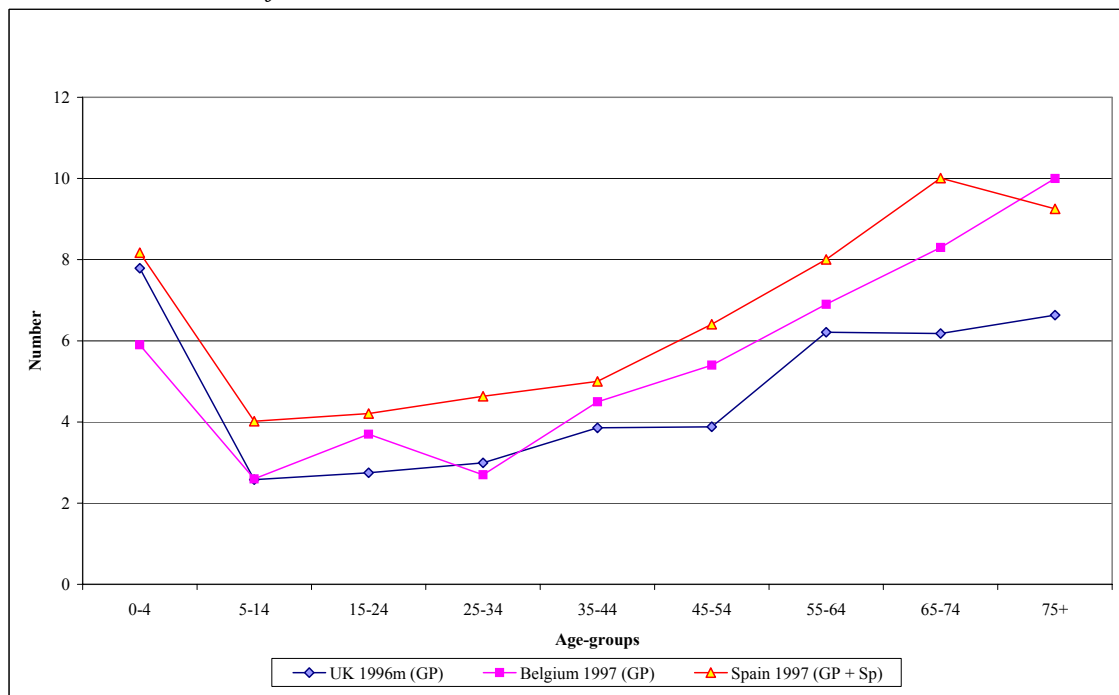
Notes: 0 comprises the age group 0-4 years, 5 comprises the age group 5-9 years, etc.

Table 23. Doctors' consultations per capita

Countries	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001
Belgium	7,1	7,3	7,7	8,0	8,0	7,9	7,9	7,9	7,9	7,4
Denmark	5,0	5,2	5,7	5,7	5,7	5,9	6,0	5,8	6,1	6,2
Finland	3,2	3,6	3,9	4,1	4,3	4,2	4,2	4,3	4,3	4,3
France	4,0	4,9	5,8	6,5	6,4	6,4	6,6	6,6	6,9	-
Germany ^{*)}	11,4	11,5	5,3	6,4	6,5	-	-	-	-	-
Netherlands	4,9	5,2	5,5	5,7	5,4	5,9	5,6	5,8	5,9	5,8
Spain	4,7	4,4	6,2	7,8	-	8,2	-	-	-	8,7
United Kingdom	5,2	5,1	6,1	6,1	6,1	-	5,4	-	4,9	-

*) Until 1990 West-Germany.
Source: OECD Health Data 2003.

Figure 28. Average number of contacts with a doctor within one year in selected countries for men



Figures 29 to 34 show the changes of outpatient consultations by age groups for each participating country with the exception of Denmark. In the UK, Spain, Finland and the Netherlands the number of consultations with doctors increased in all age groups, especially among the older ages. No clear trend can be observed for Belgium, except in the oldest age groups where an increase can be observed. Contrary to the other countries, Germany shows a decrease in outpatient utilisation in all age groups between 1992 and 1999. But the data for Germany are not fully comparable. The figure shows the share of people who used outpatient services in the last four weeks (and not the average number of consultations during one year). France provided data about the

proportion of persons with no contact, one contact, two to three contacts and three or more contacts with a doctor for the year 1999. Therefore, these data are not directly comparable with the data provided by the other participants.

Figure 29. Average number of contacts with a general practitioner in the UK

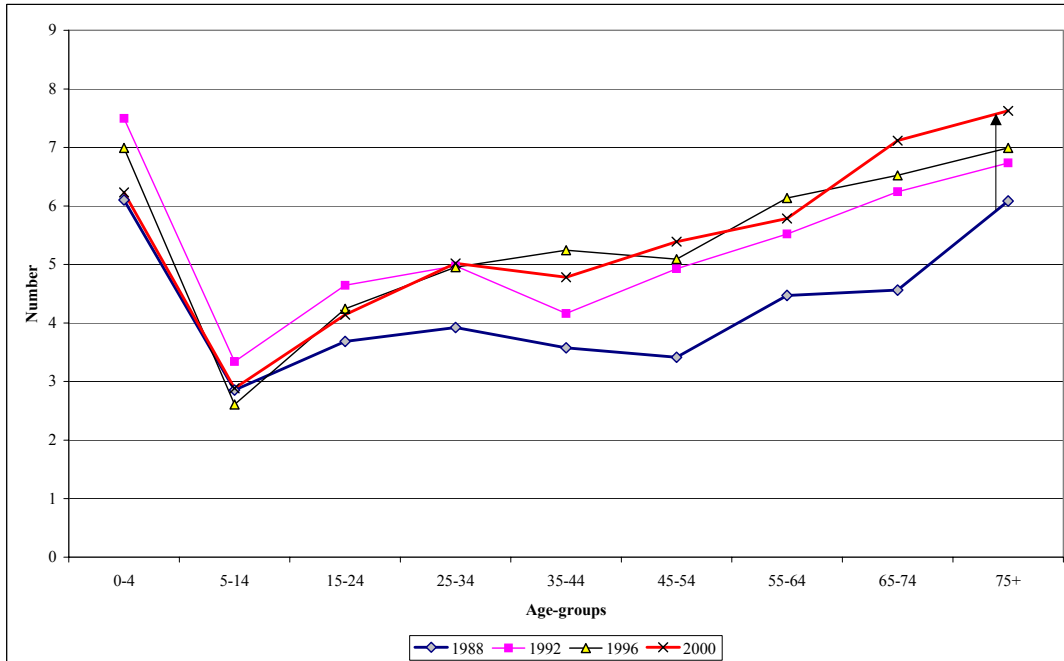


Figure 30. Average number of contacts with a general practitioner in Belgium for men

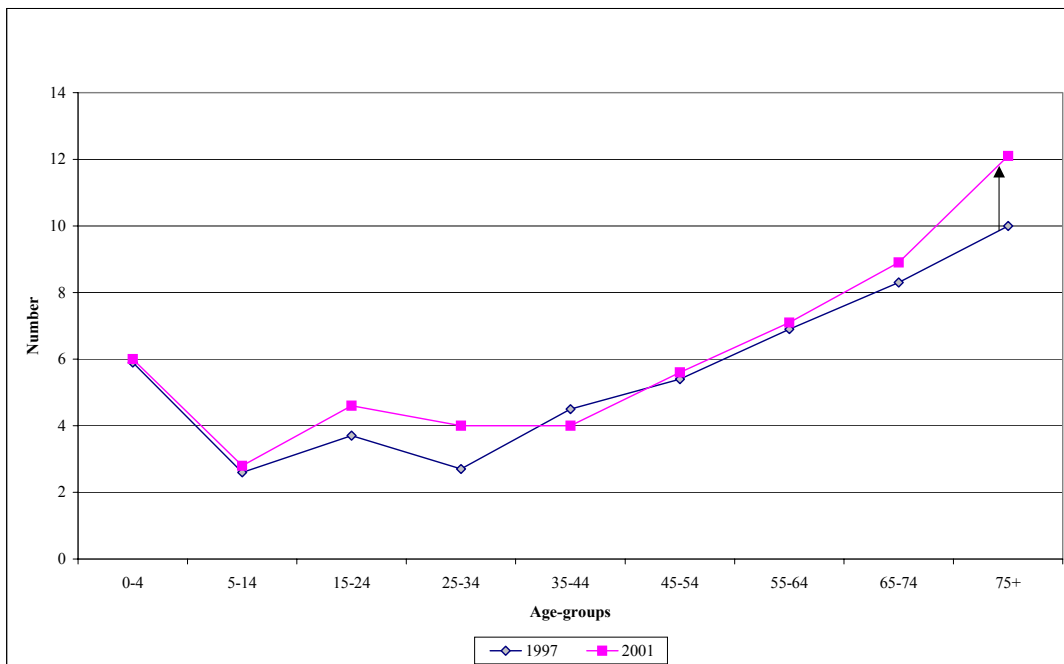


Figure 31. Average number of contacts with a doctor in Spain

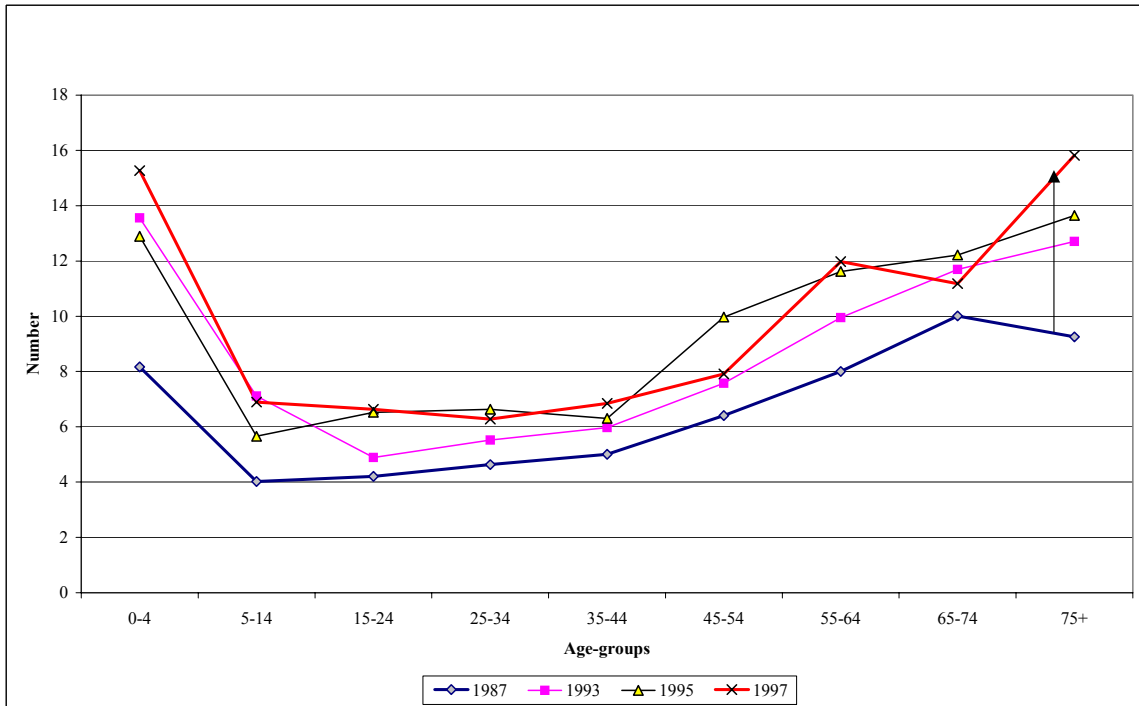


Figure 32. Average number of contacts with a general practitioner in the Netherlands

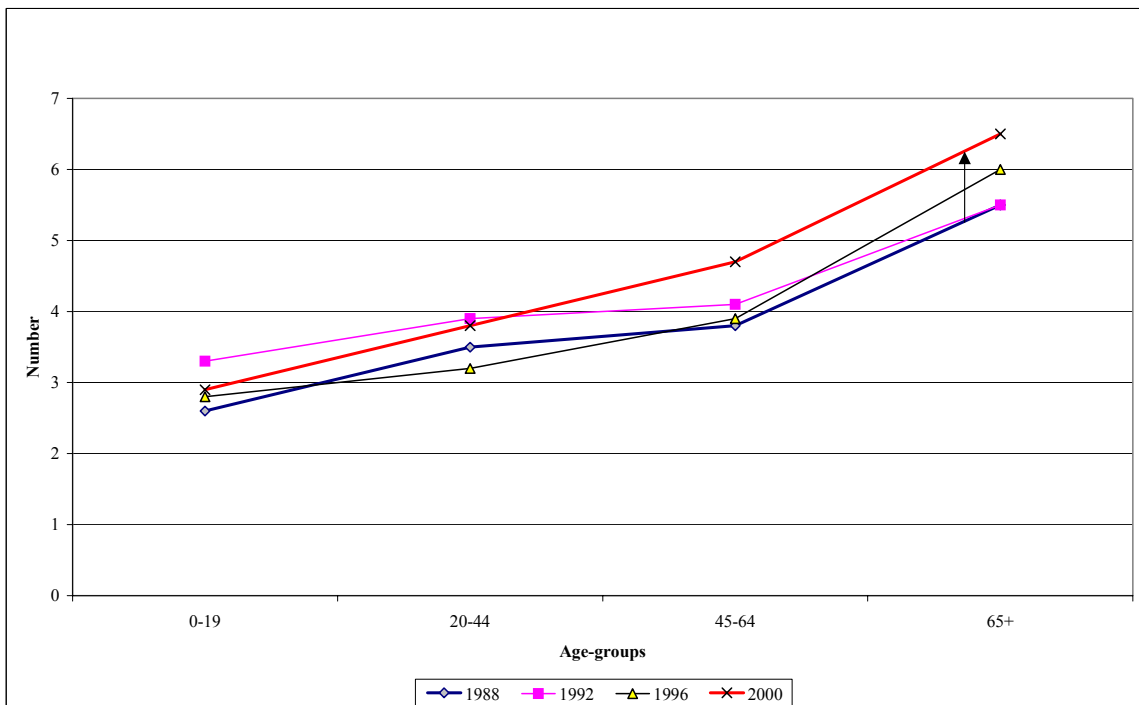


Figure 33. Average number of contacts with a doctor in Finland

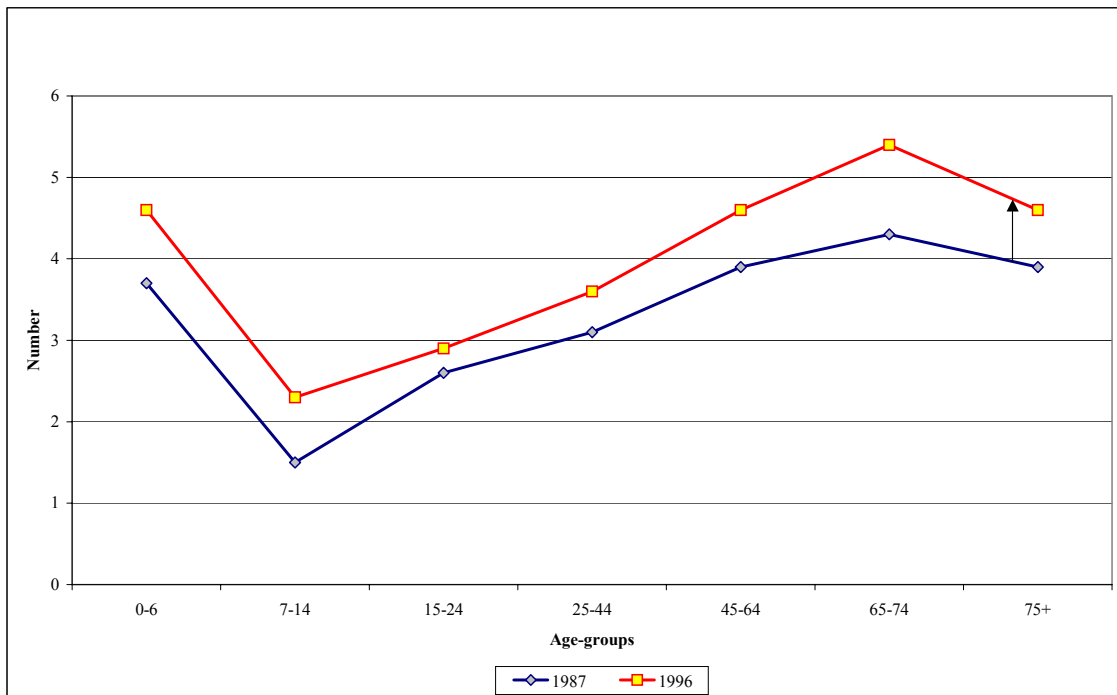
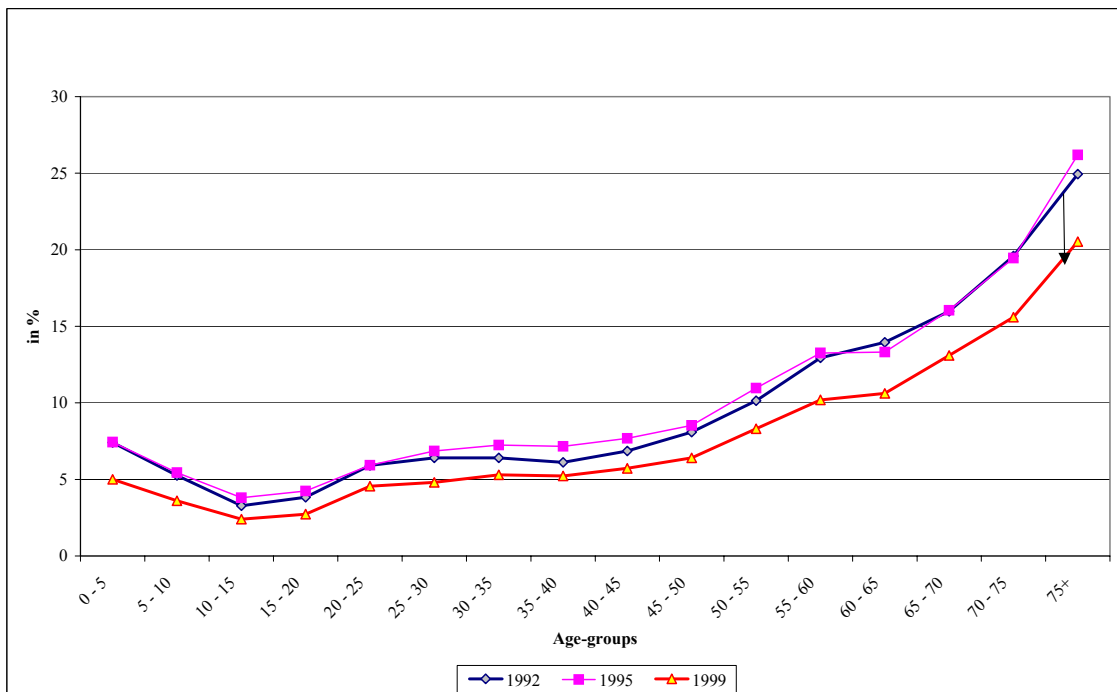


Figure 34. Share of people using outpatient service in the last four weeks in Germany



The European Community Household Panel also includes items about contacts with a doctor. For contacts with a general practitioner, with a specialist and with a dentist the number of visits was separately reported and the information was not grouped. Therefore, for these outpatient services the mean value of contacts can be calculated by age groups for the participating countries (with the exception of Germany and France) and can be compared with the results from the national sources.

On average, people had between two- (Finland) and five-times (Belgium) the number of contacts with a general practitioner in 2001 (Table 24). The number of contacts increases with age, in particular in Belgium and Spain. In most countries the number of contacts with a general practitioner did not increase between 1995 and 2001. The results of the ECHP therefore show another figure than the national sources. On average women contact their general practitioner more often than men (Table 25). This is true for all ages and participating countries with the exception of women aged 65 to 74 in Spain and women aged 75+ in Finland. But this result has to be interpreted with caution, because the number of observations and the differences among them are not high.

People visit a general practitioner more often than a specialist. On average the number of contacts with a specialist is around half the amount for practitioners (Table 26). This could stem from the institutional setting of the different health care systems. In the UK and

the Netherlands, for example, specialists are concentrated in hospitals. In Finland, Belgium and Spain most of the specialist work is in hospital outpatient departments and in Spain and Finland patients need a referral from a general practitioner to visit a specialist. The latter also is true for Denmark. In Belgium there are incentives to first go to a general practitioner before consulting a specialist (the practitioner serves as a gatekeeper to save on contributions to the health insurance schemes). In Germany and France (the two countries that are not included in this theme of the ECHP) ambulatory care by self-employed specialists and a free choice of services exist.

In the UK the number of contacts with a specialist does not increase with age. In Finland only a moderate increase can be observed and in Belgium the increase is much more moderate than in the case of general practitioners. With the exception of the UK, women visit a specialist more often than men (Table 27). A great difference between women and men can be seen in the child-bearing ages; therefore it could be supposed that visits to a gynaecologist lead to this difference.

On average people visit a dentist between 0.9 (Spain) and 1.8 (Denmark) times in 2001 (Table 28). The number of times a person visits a dentist decreases with age, with the exception of the UK. The mean value of contacts with a doctor shows no clear trend in the participating countries between 1995 and 2001. Women visit a dentist a little bit more often than men (Table 29).

Table 24. Mean value of contacts with a general practitioner in participating countries 1995–2001

Age-groups	Mean value of number of contacts in the last 12 months per inhabitant													
	1995	1996	1997	1998	1999	2000	2001	1995	1996	1997	1998	1999	2000	2001
	Belgium							Germany						
15 - 24	3,2	2,9	3,1	3,3	3,1	3,2	3,2	not available						
25 - 34	3,3	3,2	3,0	3,2	3,1	3,0	2,9	not available						
35 - 44	3,4	3,4	3,6	3,5	3,3	3,3	3,4	not available						
45 - 54	4,2	4,1	4,4	4,4	4,4	4,5	4,2	not available						
55 - 64	6,2	5,8	5,8	5,8	6,6	6,0	5,3	not available						
65 - 74	8,8	9,1	8,1	8,5	8,1	8,2	8,6	not available						
75 +	10,7	11,2	10,8	10,9	10,4	10,2	10,0	not available						
Total	4,9	4,9	4,8	5,0	4,9	4,9	4,8	not available						
	Denmark							Netherlands						
15 - 24	3,2	3,0	2,9	3,2	2,6	2,6	2,7	2,2	2,2	2,2	2,2	2,3	2,1	2,1
25 - 34	2,5	2,7	2,7	3,0	2,7	2,5	2,7	2,6	2,3	2,4	2,4	2,3	2,5	2,4
35 - 44	2,2	2,2	2,1	2,2	2,1	2,1	2,6	2,5	2,3	2,3	2,4	2,5	2,4	2,4
45 - 54	2,5	2,5	2,5	2,6	2,2	2,3	2,4	2,5	2,5	2,5	2,7	2,6	2,4	2,4
55 - 64	3,2	2,9	2,9	3,1	3,3	2,9	3,3	3,4	3,3	3,3	3,4	3,2	3,3	2,9
65 - 74	3,6	3,9	4,1	4,6	3,9	3,6	3,7	4,1	4,0	4,0	4,0	3,8	4,2	4,4
75 +	4,1	4,6	4,5	4,8	4,4	4,6	5,3	4,9	4,8	4,8	5,1	4,9	4,9	4,5
Total	2,9	2,9	2,9	3,1	2,8	2,7	3,0	2,9	2,8	2,8	2,9	2,8	2,8	2,8
	Finland							Spain						
15 - 24		2,2	2,1	2,0	2,1	2,0	2,0	1,8	1,8	2,2	2,0	1,8	1,8	2,0
25 - 34		2,1	2,0	2,0	2,0	2,1	2,1	1,9	2,0	2,2	2,2	2,2	2,0	2,1
35 - 44		1,9	1,9	1,8	1,9	2,0	1,9	2,5	2,2	2,8	2,5	2,3	2,4	2,7
45 - 54		2,1	2,1	2,0	2,0	2,2	2,0	3,7	3,3	3,7	3,5	3,2	3,2	3,4
55 - 64		2,3	2,3	2,1	2,1	2,2	2,2	6,2	5,3	6,5	5,4	5,2	5,1	5,6
65 - 74		2,5	2,4	2,4	2,3	2,1	2,1	6,8	6,2	8,1	6,9	6,3	6,2	7,5
75 +		3,0	2,7	2,9	2,8	2,8	2,5	7,5	7,1	8,5	7,2	7,4	6,6	8,1
Total		2,1	2,1	2,0	2,1	2,1	2,0	3,9	3,5	4,3	3,8	3,6	3,5	4,1
	France							UK						
15 - 24								3,1	3,0	2,9	2,9	2,8	2,9	2,8
25 - 34								3,0	2,9	3,0	2,9	2,7	2,8	3,0
35 - 44								2,8	2,8	2,7	2,7	2,6	2,7	2,8
45 - 54								3,0	3,1	3,1	3,1	2,9	2,9	3,0
55 - 64								3,5	3,5	3,5	3,6	3,5	3,4	3,5
65 - 74								3,7	3,6	3,8	3,9	3,8	3,9	4,1
75 +								4,1	4,1	4,2	4,2	4,2	4,2	4,2
Total								3,2	3,2	3,2	3,2	3,0	3,1	3,2

Source: ECHP waves 2 to 8.

Table 25. Mean value of contacts with a general practitioner by gender in participating countries 2001

Age-groups	Mean value of number of contacts per inhabitant					
	Belgium	Denmark	Finland	Netherlands	Spain	UK
	Men					
15 - 24	2,8	1,5	1,6	1,4	1,6	2,0
25 - 34	2,1	1,7	1,7	1,5	1,5	1,9
35 - 44	2,7	1,8	1,6	1,8	2,2	2,1
45 - 54	3,6	1,8	1,9	2,0	2,9	2,4
55 - 64	4,6	2,5	2,1	2,4	4,3	3,0
65 - 74	8,4	3,5	2,0	3,6	6,2	3,9
75 +	9,5	4,8	2,8	4,1	7,8	3,9
Total	4,1	2,2	1,8	2,2	3,3	2,5
	Women					
15 - 24	3,5	3,8	2,3	2,7	2,4	3,6
25 - 34	3,5	3,5	2,5	3,0	2,7	3,9
35 - 44	4,0	3,4	2,2	3,0	3,2	3,3
45 - 54	4,8	3,0	2,0	2,9	4,0	3,5
55 - 64	5,9	4,0	2,3	3,4	6,8	3,9
65 - 74	8,7	3,9	2,2	5,0	4,5	4,2
75 +	10,3	5,6	2,2	4,8	8,2	4,5
Total	5,4	3,7	2,3	3,3	4,8	3,8

Source: ECHP wave 8.

Table 26. Mean value of contacts with a specialist in participating countries 1995–2001

Age-groups	Mean value of number of contacts in the last 12 months per inhabitant													
	1995	1996	1997	1998	1999	2000	2001	1995	1996	1997	1998	1999	2000	2001
	Belgium							Germany						
15 - 24	1,4	1,3	1,2	1,4	1,5	1,4	1,5	not available						
25 - 34	1,9	1,9	1,9	2,3	2,1	1,8	2,1	not available						
35 - 44	1,7	1,8	1,7	1,8	1,6	1,9	1,8	not available						
45 - 54	2,0	1,9	2,0	2,2	2,2	2,1	2,1	not available						
55 - 64	2,0	2,1	2,2	2,1	2,5	2,3	2,5	not available						
65 - 74	2,5	2,6	2,6	2,5	2,3	2,6	2,5	not available						
75 +	2,2	2,5	2,2	2,3	2,5	2,3	2,1	not available						
Total	1,9	1,9	1,9	2,1	2,0	2,0	2,1	not available						
	Denmark							Netherlands						
15 - 24	0,8	1,0	0,8	1,0	0,7	0,6	0,7	1,1	1,3	1,1	1,1	1,1	1,1	1,0
25 - 34	0,8	0,7	0,9	1,0	0,9	1,1	1,0	1,6	1,6	1,4	1,5	1,5	1,6	1,7
35 - 44	0,7	1,1	0,9	1,0	1,1	1,2	1,0	1,6	1,3	1,4	1,4	1,4	1,5	1,4
45 - 54	0,8	0,9	1,1	1,1	1,1	0,9	1,1	1,7	1,5	1,3	1,4	1,5	1,5	1,4
55 - 64	1,1	1,3	1,0	1,0	1,1	0,9	1,1	2,2	2,0	2,0	2,1	2,1	2,0	1,8
65 - 74	1,2	1,2	1,5	1,2	1,3	1,3	1,5	2,6	2,5	2,2	2,4	2,3	2,5	2,4
75 +	1,1	1,4	1,2	1,2	1,2	1,3	1,7	2,6	2,9	2,4	2,6	2,2	2,7	2,7
Total	0,9	1,0	1,0	1,1	1,0	1,0	1,1	1,8	1,7	1,5	1,6	1,6	1,7	1,7
	Finland							Spain						
15 - 24	-	0,6	0,6	0,7	0,8	0,7	0,8	1,0	0,9	1,0	1,0	0,9	0,8	1,0
25 - 34	-	0,8	0,8	1,0	0,9	1,0	1,0	1,4	1,1	1,4	1,4	1,2	1,2	1,4
35 - 44	-	1,0	0,9	0,9	1,0	1,1	0,9	1,5	1,2	1,5	1,3	1,3	1,2	1,4
45 - 54	-	1,1	1,1	1,0	1,1	1,2	1,1	1,8	1,5	1,7	1,7	1,6	1,6	1,7
55 - 64	-	1,1	1,2	1,2	1,1	1,3	1,3	2,2	2,1	2,2	2,1	1,9	2,0	2,2
65 - 74	-	1,1	1,2	1,1	1,1	1,0	1,1	2,3	2,2	2,4	2,3	2,3	2,3	2,4
75 +	-	1,2	1,2	1,2	1,1	1,1	1,1	2,0	2,0	2,2	2,3	2,5	2,4	2,5
Total	-	1,0	1,0	1,0	1,0	1,0	1,0	1,7	1,5	1,7	1,6	1,6	1,6	1,7
	France							UK						
15 - 24	not available							1,5	1,4	1,4	1,4	1,4	1,4	1,4
25 - 34	not available							1,5	1,4	1,4	1,4	1,4	1,4	1,4
35 - 44	not available							1,5	1,4	1,4	1,4	1,4	1,4	1,4
45 - 54	not available							1,4	1,3	1,3	1,3	1,3	1,3	1,3
55 - 64	not available							1,3	1,3	1,3	1,3	1,3	1,2	1,2
65 - 74	not available							1,4	1,3	1,3	1,3	1,3	1,2	1,2
75 +	not available							1,3	1,3	1,3	1,2	1,2	1,2	1,2
Total	not available							1,4	1,4	1,4	1,3	1,3	1,3	1,3

Source: ECHP waves 2 to 8.

Table 27. Mean value of contacts with a specialist by gender in participating countries 2001

Age-groups	Mean value of number of contacts per inhabitant					
	Belgium	Denmark	Finland	Netherlands	Spain	UK
	Men					
15 - 24	1,3	0,6	0,5	0,9	0,9	1,5
25 - 34	1,1	0,8	0,6	0,9	0,8	1,5
35 - 44	1,3	0,7	0,6	1,1	1,2	1,4
45 - 54	1,6	0,9	0,8	1,2	1,3	1,3
55 - 64	1,9	1,2	1,1	1,4	2,1	1,3
65 - 74	2,6	1,4	1,0	2,3	2,3	1,2
75 +	2,3	1,6	1,1	2,5	2,4	1,2
Total	1,6	0,9	0,8	1,3	1,4	1,4
	Women					
15 - 24	1,8	0,9	1,0	1,1	1,2	1,3
25 - 34	3,0	1,2	1,4	2,3	2,0	1,3
35 - 44	2,3	1,4	1,2	1,8	1,7	1,3
45 - 54	2,6	1,3	1,3	1,6	2,0	1,2
55 - 64	3,0	0,9	1,4	2,2	2,2	1,2
65 - 74	2,5	1,6	1,2	2,5	2,5	1,2
75 +	1,9	1,8	1,1	2,8	2,5	1,2
Total	2,5	1,3	1,2	2,0	2,0	1,3

Source: ECHP wave 8.

Another question of the ECHP sought information on the number of visits to general practitioner, specialists and dentists, which will be used to analyse the impact of the health status on outpatient care utilisation. The question was: “About how many times have you been to a doctor, dentist or optician during the last 12 months?”. The possible responses were “not at all/1-2 times/3-5 times/6-9 times/10 times or more”. Table 30 shows the results of the ECHP for 1999 and 2000 for EU countries (no data exists for Germany, France, Luxembourg or Sweden). The frequency of contact with a doctor increases with age and if the health status deteriorates. Around 17% of persons with good or very good health had no contact with a doctor in 1999–2000, another 26% had only one or two visits during one year. Persons with bad or very bad health tended to have (57%) 10 or more contacts to a doctor during one year. In the oldest age group (80+) the number of contacts with a doctor is lower than in the age group of 70 to 79.

Table 28. Mean value of contacts with a dentist in participating countries 1995–2001

Age-groups	Mean value of number of contacts in the last 12 months per inhabitant													
	1995	1996	1997	1998	1999	2000	2001	1995	1996	1997	1998	1999	2000	2001
	Belgium							Germany						
15 - 24	1,7	1,7	1,6	1,7	1,9	1,6	1,5	not available						
25 - 34	1,8	1,7	1,6	1,7	1,5	1,4	1,5	not available						
35 - 44	1,6	1,7	1,7	1,7	1,7	1,7	1,7	not available						
45 - 54	1,4	1,4	1,4	1,5	1,6	1,3	1,4	not available						
55 - 64	1,3	1,3	1,3	1,2	1,2	1,4	1,4	not available						
65 - 74	0,9	1,1	0,9	1,0	1,1	1,2	1,2	not available						
75 +	0,5	0,6	0,7	0,7	0,6	0,7	0,6	not available						
Total	1,4	1,4	1,4	1,4	1,4	1,4	1,4	not available						
	Denmark							Netherlands						
15 - 24	1,8	1,8	1,9	2,1	1,9	1,8	1,5	1,9	1,8	1,9	1,8	1,9	1,9	1,8
25 - 34	1,7	1,7	1,6	1,8	1,6	1,6	1,6	1,9	1,9	1,9	1,8	1,8	1,8	1,9
35 - 44	1,9	1,9	1,9	1,9	1,8	1,9	1,9	2,0	2,0	2,0	1,9	2,0	2,0	2,0
45 - 54	2,1	2,1	2,0	2,1	2,0	2,1	2,1	1,7	1,7	1,7	1,7	1,8	1,9	1,9
55 - 64	1,8	1,8	1,9	2,2	2,0	2,1	2,3	1,5	1,4	1,5	1,5	1,5	1,6	1,5
65 - 74	1,3	1,4	1,4	1,9	1,6	1,6	1,8	1,0	1,0	1,0	1,1	1,1	1,1	1,3
75 +	0,8	0,9	0,9	1,2	1,1	1,1	1,3	0,5	0,5	0,5	0,7	0,7	0,8	0,7
Total	1,7	1,8	1,7	1,9	1,8	1,8	1,8	1,7	1,6	1,7	1,6	1,7	1,7	1,7
	Finland							Spain						
15 - 24	-	1,4	1,4	1,2	1,1	1,2	1,1	0,9	0,8	1,0	1,1	1,1	0,9	1,1
25 - 34	-	1,6	1,5	1,4	1,4	1,3	1,3	0,9	0,9	0,9	0,9	0,8	0,8	1,0
35 - 44	-	1,7	1,7	1,6	1,6	1,5	1,5	1,0	0,9	1,0	0,9	0,9	0,8	1,0
45 - 54	-	0,7	1,7	1,7	1,5	1,6	1,6	0,9	0,8	0,9	1,0	0,8	0,8	1,0
55 - 64	-	1,5	1,6	1,5	1,5	1,6	1,7	0,8	0,9	0,9	0,8	0,8	0,8	0,9
65 - 74	-	1,1	1,1	1,2	1,2	1,2	1,1	0,7	0,7	0,6	0,7	0,7	0,6	0,7
75 +	-	0,6	0,7	0,7	0,7	0,8	0,6	0,4	0,3	0,4	0,4	0,4	0,3	0,4
Total	-	1,5	1,5	1,4	1,4	1,4	1,4	0,8	0,8	0,9	0,9	0,8	0,7	0,9
	France							UK						
15 - 24	not available							1,4	1,4	1,4	1,4	1,4	1,4	1,4
25 - 34	not available							1,4	1,4	1,4	1,3	1,4	1,3	1,4
35 - 44	not available							1,3	1,3	1,3	1,3	1,3	1,3	1,3
45 - 54	not available							1,3	1,3	1,3	1,3	1,3	1,3	1,3
55 - 64	not available							1,5	1,5	1,4	1,4	1,4	1,4	1,3
65 - 74	not available							1,6	1,5	1,5	1,5	1,5	1,5	1,4
75 +	not available							1,7	1,7	1,7	1,7	1,7	1,6	1,6
Total	not available							1,4	1,4	1,4	1,4	1,4	1,4	1,4

Source: ECHP waves 2 to 8.

Table 29. Mean value of contacts with a dentist by gender in participating countries 2001

Age-groups	Mean value of number of contacts per inhabitant					
	Belgium	Denmark	Finland	Netherlands	Spain	UK
	Men					
15 - 24	1,5	1,4	1,0	1,8	0,9	1,4
25 - 34	1,3	1,4	1,2	1,7	0,9	1,4
35 - 44	1,5	1,7	1,3	1,9	0,9	1,3
45 - 54	1,2	1,9	1,5	1,8	0,9	1,3
55 - 64	1,3	2,1	1,6	1,5	0,9	1,4
65 - 74	1,1	1,7	1,0	1,3	0,6	1,4
75 +	0,6	1,0	0,8	0,7	0,4	1,6
Total	1,3	1,7	1,3	1,6	0,8	1,4
	Women					
15 - 24	1,5	1,6	1,2	1,8	1,4	1,4
25 - 34	1,7	1,8	1,5	2,0	1,1	1,3
35 - 44	1,8	2,0	1,6	2,1	1,1	1,2
45 - 54	1,6	2,4	1,8	2,0	1,1	1,3
55 - 64	1,5	2,5	1,8	1,6	1,0	1,3
65 - 74	1,3	1,9	1,2	1,3	0,8	1,4
75 +	0,6	1,6	0,5	0,6	0,4	1,6
Total	1,5	2,0	1,5	1,8	1,0	1,3
Source: ECHP wave 8.						

Table 30. Number of times a person consulted a doctor in EU countries*, 1999–2000

Age-groups	Number of times																	
	Not at all			1 - 2 times			3 - 5 times			6 - 9 times			10 +			Total		
	Health status																	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1999																		
15 - 29	22,2	8,3	1,5	27,2	12,1	3,8	29,1	32,0	23,2	13,1	23,6	26,9	8,4	24,0	44,6	100	100	100
30 - 44	16,9	7,5	2,7	28,0	14,5	5,3	32,2	31,4	20,4	14,2	22,1	20,5	8,8	24,6	51,1	100	100	100
45 - 59	16,5	7,5	1,8	26,7	14,4	3,7	32,4	29,6	16,3	15,2	23,2	22,3	9,1	25,3	56,0	100	100	100
60 - 69	15,0	6,5	1,6	23,8	12,9	4,9	30,4	27,5	14,2	16,7	22,4	20,8	14,0	30,7	58,6	100	100	100
70 - 79	11,8	4,8	2,1	20,7	11,0	4,8	31,5	25,4	14,4	19,3	24,4	21,2	16,7	34,5	57,4	100	100	100
80 +	10,6	6,0	3,3	17,4	11,9	5,6	30,5	28,0	16,5	20,2	20,0	20,8	21,3	34,1	53,9	100	100	100
Total	18,0	6,9	2,1	26,6	13,2	4,7	31,1	29,0	16,2	14,6	22,9	21,5	9,7	28,0	55,6	100	100	100
2000																		
15 - 29	21,7	10,0	2,5	26,7	14,4	4,2	30,4	26,8	15,8	13,2	22,2	20,2	8,0	26,7	57,3	100	100	100
30 - 44	15,8	7,9	3,1	26,8	16,1	5,7	33,5	27,3	13,3	15,2	22,1	20,0	8,7	26,5	58,0	100	100	100
45 - 59	14,3	7,1	2,3	26,0	15,4	4,3	35,3	26,9	15,4	15,4	23,9	19,8	9,0	26,6	58,2	100	100	100
60 - 69	13,8	5,9	2,0	21,2	13,4	4,5	32,1	25,7	15,8	19,0	23,7	19,3	13,9	31,4	58,6	100	100	100
70 - 79	9,7	5,4	2,1	19,0	11,6	4,9	32,2	24,0	14,8	21,2	23,5	19,7	17,9	35,5	58,6	100	100	100
80 +	9,1	4,6	3,5	17,1	11,3	6,2	31,7	25,4	16,2	21,0	24,4	20,6	21,0	34,3	53,6	100	100	100
Total	16,7	6,8	2,4	25,6	14,1	4,9	32,7	26,1	15,2	15,3	23,3	19,8	9,6	29,6	57,7	100	100	100
1999/2000																		
15 - 29	21,9	9,1	1,9	27,0	13,1	3,9	29,8	29,6	20,0	13,2	23,0	24,0	8,2	25,2	50,1	100	100	100
30 - 44	16,4	7,7	2,9	27,4	15,2	5,5	32,8	29,5	17,3	14,7	22,1	20,3	8,7	25,5	54,1	100	100	100
45 - 59	15,5	7,3	2,0	26,3	14,9	4,0	33,8	28,4	15,9	15,3	23,5	21,1	9,1	25,9	57,0	100	100	100
60 - 69	14,4	6,2	1,7	22,5	13,1	4,7	31,3	26,6	14,9	17,9	23,0	20,0	13,9	31,0	58,6	100	100	100
70 - 79	10,8	5,1	2,1	19,8	11,3	4,8	31,9	24,7	14,6	20,2	24,0	20,4	17,3	35,0	58,0	100	100	100
80 +	9,8	5,3	3,4	17,3	11,6	5,9	31,2	26,7	16,3	20,6	22,3	20,7	21,1	34,2	53,8	100	100	100
Total	17,4	6,8	2,2	26,1	13,6	4,8	31,9	27,7	15,7	15,0	23,1	20,7	9,6	28,8	56,6	100	100	100

*) Without Germany, France, Luxembourg, Sweden.
Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health.
Source: ECHP.

Table 31. Number of times a person consulted a doctor by gender in EU countries*, 2000

Age-groups	Number of times																	
	Not at all			1 - 2 times			3 - 5 times			6 - 9 times			10 +			Total		
	Health status																	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Men																		
15 - 29	27,4	15,1	1,7	30,1	16,5	1,7	28,1	31,8	6,7	9,7	20,6	6,1	4,7	16,1	16,2	100	100	100
30 - 44	21,0	12,2	1,9	31,1	20,7	2,9	31,9	29,2	6,2	11,1	19,9	6,7	4,9	18,0	16,5	100	100	100
45 - 59	18,2	9,8	3,6	29,0	19,8	5,3	33,8	27,6	18,6	12,4	21,2	20,3	6,6	21,6	52,3	100	100	100
60 - 69	17,0	7,6	2,1	21,9	14,9	6,3	31,7	25,5	17,3	17,0	23,2	20,6	12,4	28,7	53,7	100	100	100
70 - 79	11,4	6,8	2,5	20,5	12,7	5,7	32,3	25,1	14,3	19,7	23,8	18,4	16,1	31,7	59,0	100	100	100
80 +	10,2	3,9	3,5	17,5	12,6	6,7	29,9	28,0	16,7	19,7	25,1	19,7	22,6	30,4	53,5	100	100	100
Total	21,4	9,5	3,2	28,9	17,0	6,1	31,2	27,5	16,9	12,0	22,0	19,7	6,6	24,1	54,1	100	100	100
Women																		
15 - 29	16,0	5,9	0,5	23,3	12,7	3,4	32,6	22,8	12,1	16,7	23,4	21,3	11,3	35,1	62,8	100	100	100
30 - 44	10,7	4,5	1,2	22,5	12,5	3,5	35,1	25,8	9,8	19,2	23,9	20,2	12,5	33,4	65,3	100	100	100
45 - 59	10,4	5,0	1,4	22,9	12,1	3,6	36,7	26,4	13,2	18,5	26,0	19,5	11,4	30,5	62,3	100	100	100
60 - 69	10,5	4,3	1,9	20,4	12,0	3,3	32,6	25,9	14,7	21,1	24,0	18,3	15,4	33,7	61,9	100	100	100
70 - 79	8,1	4,3	1,8	17,4	10,9	4,3	32,2	23,2	15,1	22,6	23,3	20,5	19,7	38,4	58,3	100	100	100
80 +	8,3	4,9	3,5	16,8	10,4	5,9	33,1	23,9	15,9	22,0	24,0	21,0	19,8	36,6	53,7	100	100	100
Total	12,1	4,7	1,9	22,3	11,9	4,1	34,3	25,1	14,1	18,7	24,4	19,9	12,6	33,9	60,1	100	100	100
Total																		
15 - 29	21,7	10,0	2,5	26,7	14,4	4,2	30,4	26,8	15,8	13,2	22,2	20,2	8,0	26,7	57,3	100	100	100
30 - 44	15,8	7,9	3,1	26,8	16,1	5,7	33,5	27,3	13,3	15,2	22,1	20,0	8,7	26,5	58,0	100	100	100
45 - 59	14,3	7,1	2,3	26,0	15,4	4,3	35,3	26,9	15,4	15,4	23,9	19,8	9,0	26,6	58,2	100	100	100
60 - 69	13,8	5,9	2,0	21,2	13,4	4,5	32,1	25,7	15,8	19,0	23,7	19,3	13,9	31,4	58,6	100	100	100
70 - 79	9,7	5,4	2,1	19,0	11,6	4,9	32,2	24,0	14,8	21,2	23,5	19,7	17,9	35,5	58,6	100	100	100
80 +	9,1	4,6	3,5	17,1	11,3	6,2	31,7	25,4	16,2	21,0	24,4	20,6	21,0	34,3	53,6	100	100	100
Total	16,7	6,8	2,4	25,6	14,1	4,9	32,7	26,1	15,2	15,3	23,3	19,8	9,6	29,6	57,7	100	100	100

*) Without Germany, France, Luxembourg, Sweden.
Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health.
Source: ECHP.

Great differences in outpatient utilisation exist between men and women reporting fair, good or very good health respectively. Around 21% of men in good health had no contact with doctors, compared with only 12% of women (Table 31). Another 29% of men had only one or two visits to a doctor, compared with 22% of women in good health. The results for 10+ contacts with doctors were that 13% of women and 7% of men reported such frequency.

Table 32 shows the number of contacts with doctors for selected participating countries in 1999–2000. Among the countries great differences in outpatient utilisation could be observed. In Spain, for example, around 23% of people reporting good/very good health had no doctor visits and around 10% had 10+ visits to a doctor. In Belgium the relation was the converse: 6% of people in good/very good health had no contact with a doctor and 19% had 10 and more contacts with a doctor. But generally, in all countries the number of contacts with doctors increases if the health status deteriorates. Compared to 1994-95, the share of people with 10+ doctor visits decreased, with the exception of people reporting bad/very bad health in the Netherlands and Denmark (Table 33).

Figure 35 shows the share of people in bad/very bad health with 10+ doctor visits in 1999–2000. The spread of outpatient utilisation among the countries increases with age. In the oldest age group (80+) the share of people with 10+ doctor visits are four-times higher in Belgium than in Finland. In 1994-95 the spread of outpatient utilisation was smaller than in 1999–2000 (Figure 36).

As in the case of inpatient utilisation, the use of outpatient services depends on age and health status. Further, age, health status, education, family status and income have a highly significant influence on the number of contacts with doctors (Table 34): increasing age leads to more contacts with doctors. A higher education level leads to fewer visits as well as a better health status. Women have more contacts with a doctor along with married persons (Pearsons' correlation – two-way).

The influence of age and health status on doctor visits is much higher than the influence of education, family status or personal income. Table 35 shows the result of a regression with the number of contacts with doctors as a dependent variable and age, gender, health status, education, family status and personal income as independent variables. All variables have a highly significant influence on contacts with a doctor and show the expected signs.

Table 32. Number of times the person has been to a doctor 1999–2000 in selected EU countries

Age-groups	Number of times																	
	Not at all			1 - 2 times			3 - 5 times			6 - 9 times			10 +			Total		
	Health status																	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
UK																		
15 - 29	0,0	0,0	0,0	7,8	6,2	2,8	59,1	43,7	24,8	24,8	32,8	29,2	8,2	17,3	43,1	100	100	100
30 - 44	0,0	0,0	0,0	11,4	5,8	3,5	63,8	47,9	25,6	18,6	28,2	23,9	6,2	18,2	47,1	100	100	100
45 - 59	0,0	0,0	0,0	12,4	6,1	1,4	64,6	43,7	20,3	18,0	30,3	26,5	5,0	19,8	51,8	100	100	100
60 - 69	0,0	0,0	0,0	9,9	3,7	1,5	55,5	35,1	14,0	25,1	32,7	32,5	9,4	28,4	52,0	100	100	100
70 - 79	0,0	0,0	0,0	5,6	2,8	0,8	52,9	31,9	18,9	31,4	37,1	29,0	10,1	28,3	51,3	100	100	100
80 +	0,0	0,0	0,0	4,6	0,9	1,0	48,3	35,7	24,9	32,0	34,5	31,8	15,1	28,9	42,3	100	100	100
Total	0,0	0,0	0,0	10,0	5,2	1,9	60,9	42,2	21,4	21,9	31,5	27,9	7,2	21,2	48,8	100	100	100
Netherlands																		
15 - 29	3,5	1,8	0,0	35,2	8,8	3,3	38,4	20,9	13,1	14,2	28,8	29,5	8,7	39,7	54,1	100	100	100
30 - 44	4,0	1,4	0,6	32,5	9,7	4,2	37,4	23,5	12,0	16,6	27,4	12,7	9,5	38,0	70,5	100	100	100
45 - 59	7,2	3,3	0,4	31,8	11,4	3,5	36,5	23,9	9,0	16,9	27,4	27,5	7,6	34,2	59,6	100	100	100
60 - 69	11,2	3,7	1,6	26,4	10,0	2,4	31,6	23,8	4,0	20,4	25,1	19,4	10,4	37,5	72,6	100	100	100
70 - 79	10,0	3,8	2,1	26,1	10,6	6,8	32,1	21,0	8,2	21,3	27,8	13,7	10,6	36,7	69,2	100	100	100
80 +	12,4	3,6	1,4	19,7	7,9	5,4	35,8	25,4	10,8	18,1	26,2	21,6	14,0	36,9	60,8	100	100	100
Total	5,8	2,9	1,0	31,8	10,2	4,2	36,6	23,2	9,2	16,8	27,1	20,5	9,0	36,7	65,1	100	100	100
Spain																		
15 - 29	25,4	9,9	6,8	30,1	16,0	4,1	26,3	25,1	9,5	10,7	15,0	18,9	7,5	34,0	60,8	100	100	100
30 - 44	23,9	9,9	4,8	30,7	18,6	6,3	25,9	24,1	11,5	11,5	20,2	16,8	7,9	27,2	60,6	100	100	100
45 - 59	22,0	9,8	4,1	26,4	15,5	3,7	28,7	24,3	16,4	12,7	21,0	15,5	10,1	29,4	60,2	100	100	100
60 - 69	17,9	6,6	2,6	25,1	12,8	4,3	26,5	24,4	13,2	14,8	21,6	19,7	15,7	34,7	60,3	100	100	100
70 - 79	18,3	5,6	3,2	20,7	11,9	4,6	25,4	22,0	15,0	16,4	22,2	17,4	19,1	38,3	59,8	100	100	100
80 +	14,1	6,0	5,5	25,6	13,1	7,8	18,4	24,3	15,1	19,7	21,4	21,1	22,3	35,1	50,6	100	100	100
Total	23,2	7,9	3,8	28,7	14,4	5,0	26,5	23,9	14,4	12,1	20,8	18,2	9,6	33,0	58,6	100	100	100
Denmark																		
15 - 29	4,7	3,4	0,0	30,8	8,5	7,7	38,8	18,6	15,4	16,1	28,0	15,4	9,6	41,5	61,5	100	100	100
30 - 44	4,6	1,6	1,7	36,1	15,1	1,7	38,0	31,0	13,8	13,5	20,2	31,0	7,9	32,1	51,7	100	100	100
45 - 59	3,6	5,4	3,8	31,0	10,2	6,8	41,3	31,6	15,2	18,0	27,6	22,0	6,2	25,3	52,3	100	100	100
60 - 69	8,3	4,1	4,5	21,3	12,2	4,5	38,3	28,2	19,4	22,6	28,2	22,4	9,4	27,3	49,3	100	100	100
70 - 79	7,4	7,2	2,1	21,9	12,0	11,6	32,2	25,9	17,9	25,4	25,9	31,6	13,1	28,9	36,8	100	100	100
80 +	11,4	6,3	5,2	22,9	19,6	6,9	25,7	27,7	27,6	26,4	21,4	24,1	13,6	25,0	36,2	100	100	100
Total	5,0	4,5	3,2	31,2	12,5	6,9	38,5	28,6	17,9	16,9	25,5	25,2	8,4	28,9	46,8	100	100	100
Belgium																		
15 - 29	6,0	3,5	0,0	20,0	5,6	8,3	34,0	23,2	8,3	22,7	29,6	41,7	17,3	38,0	41,7	100	100	100
30 - 44	6,0	3,5	1,4	21,7	11,4	2,7	35,5	20,0	4,1	21,7	21,8	23,3	15,1	43,4	68,5	100	100	100
45 - 59	7,2	2,5	1,7	19,3	7,5	0,0	32,7	19,3	4,2	24,3	22,9	11,0	16,6	47,8	83,1	100	100	100
60 - 69	5,9	0,8	0,0	14,3	5,6	1,4	28,1	13,3	7,0	25,7	17,6	2,8	26,1	62,7	88,7	100	100	100
70 - 79	6,7	2,5	0,0	10,5	3,3	0,0	20,9	7,8	0,0	23,2	20,3	6,7	38,7	66,1	93,3	100	100	100
80 +	4,8	1,8	0,0	6,1	3,1	0,0	21,8	11,0	5,2	19,7	18,4	6,9	47,6	65,6	87,9	100	100	100
Total	6,3	2,4	0,6	19,1	6,8	0,9	32,7	15,8	3,6	23,0	21,3	10,7	19,0	53,6	84,1	100	100	100
Finland																		
15 - 29	13,1	9,6	5,0	32,1	14,5	5,0	33,3	26,8	20,0	13,1	21,5	25,0	8,4	27,6	45,0	100	100	100
30 - 44	10,4	6,3	3,3	31,0	20,5	13,1	35,3	28,6	18,0	16,7	25,2	16,4	6,7	19,4	49,2	100	100	100
45 - 59	11,2	8,0	3,8	32,3	20,2	7,7	34,2	31,3	20,1	15,9	24,3	26,3	6,3	16,2	42,1	100	100	100
60 - 69	12,6	9,5	3,9	31,9	26,2	16,8	35,7	33,2	25,8	13,6	19,8	25,2	6,2	11,3	28,4	100	100	100
70 - 79	18,1	8,6	3,5	39,6	27,4	10,4	26,4	31,6	32,2	11,0	20,1	33,0	4,9	12,3	20,9	100	100	100
80 +	21,7	6,5	7,8	39,1	42,1	15,6	30,4	29,9	34,4	4,3	11,2	21,9	4,3	10,3	20,3	100	100	100
Total	11,8	8,2	4,2	32,0	22,7	11,7	34,2	30,9	25,0	15,0	22,3	25,8	7,0	15,8	33,3	100	100	100

*) Without Germany, France, Luxembourg, Sweden.

Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health.

Source: ECHP.

Table 33. Number of times the person has been to a doctor 1994–95 in selected EU countries

Age-groups	Number of times																	
	Not at all			1 - 2 times			3 - 5 times			6 - 9 times			10 +			Total		
	Health status																	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
UK																		
15 - 29	15,0	7,3	2,4	25,1	16,2	5,2	35,8	29,9	19,0	17,7	26,3	20,5	6,4	20,3	52,9	100	100	100
30 - 44	17,8	7,3	0,3	24,1	16,7	7,0	39,4	29,3	16,2	13,4	26,2	19,4	5,3	20,6	57,1	100	100	100
45 - 59	17,2	6,4	1,0	27,6	13,2	3,2	37,9	30,6	14,4	12,9	27,0	21,1	4,4	22,9	60,3	100	100	100
60 - 69	15,3	4,5	0,5	25,0	12,7	5,2	37,2	26,7	17,1	17,3	29,2	22,3	5,3	26,9	54,9	100	100	100
70 - 79	9,9	3,9	0,5	24,7	14,5	6,5	37,0	23,2	15,9	20,1	32,3	23,4	8,3	26,1	53,7	100	100	100
80 +	7,9	5,2	3,1	21,8	14,7	7,0	36,8	26,1	24,2	24,1	28,4	24,2	9,4	25,6	41,4	100	100	100
Total	15,9	6,2	1,1	25,2	14,9	5,4	37,6	28,4	16,9	15,6	27,7	21,4	5,7	22,9	55,2	100	100	100
Netherlands																		
15 - 29	10,2	2,9	3,4	32,5	7,7	3,4	36,7	30,1	15,5	12,0	25,3	17,2	8,6	34,0	60,3	100	100	100
30 - 44	11,4	3,4	0,5	32,6	12,1	5,2	35,7	26,0	10,4	12,3	23,0	15,1	8,0	35,6	68,8	100	100	100
45 - 59	17,5	5,5	2,2	32,8	13,7	1,8	30,7	27,7	12,1	12,3	23,7	18,4	6,8	29,4	65,5	100	100	100
60 - 69	18,2	8,5	3,3	28,3	11,6	4,6	29,1	27,7	17,0	15,3	20,7	16,3	9,1	31,6	58,8	100	100	100
70 - 79	19,4	4,8	1,4	26,3	13,2	4,2	28,2	26,2	18,3	15,2	21,9	17,6	11,0	34,0	58,5	100	100	100
80 +	18,7	5,9	1,5	24,7	9,8	5,9	26,3	25,4	16,2	14,6	24,4	22,1	15,7	34,6	54,4	100	100	100
Total	13,5	5,2	1,9	31,8	12,0	3,9	33,8	27,1	14,2	12,6	22,8	17,3	8,2	32,7	62,6	100	100	100
Spain																		
15 - 29	25,7	13,1	10,0	36,6	23,0	11,7	22,7	22,2	16,7	8,2	14,8	12,5	6,8	26,9	49,2	100	100	100
30 - 44	28,1	15,1	5,0	35,2	24,5	11,3	22,1	24,1	15,2	7,6	13,9	17,9	7,1	22,4	50,7	100	100	100
45 - 59	28,2	11,9	3,5	33,5	19,8	8,2	21,2	24,9	12,7	8,5	15,2	11,7	8,5	28,2	63,8	100	100	100
60 - 69	22,1	7,7	3,4	28,7	17,1	6,7	24,1	20,7	12,4	11,3	16,2	12,1	13,8	38,3	65,5	100	100	100
70 - 79	21,4	6,5	2,5	26,0	15,9	6,7	22,7	21,9	13,7	10,2	17,2	13,8	19,6	38,5	63,3	100	100	100
80 +	20,6	7,8	5,3	22,0	14,3	8,8	20,0	24,7	14,2	10,7	17,1	13,5	26,7	36,1	58,3	100	100	100
Total	26,4	10,7	3,8	34,3	19,6	7,8	22,3	23,1	13,4	8,4	15,5	13,0	8,5	31,1	62,0	100	100	100
Denmark																		
15 - 29	3,7	0,7	0,0	32,1	9,2	3,3	39,2	35,2	10,0	15,0	19,7	23,3	10,0	35,2	63,3	100	100	100
30 - 44	3,6	4,2	2,5	35,6	16,5	8,6	40,9	33,8	14,8	12,6	24,6	12,3	7,2	21,0	61,7	100	100	100
45 - 59	5,7	3,8	2,2	34,8	16,0	2,2	39,4	36,4	18,1	14,0	21,1	18,7	6,0	22,7	58,8	100	100	100
60 - 69	11,0	8,8	2,6	33,2	17,6	7,8	35,2	27,0	20,3	13,9	20,9	20,9	6,8	25,6	48,4	100	100	100
70 - 79	13,9	6,1	0,6	29,9	21,8	10,3	35,3	28,2	21,8	12,9	20,0	17,9	7,9	23,9	49,4	100	100	100
80 +	14,4	7,3	8,6	32,6	23,2	14,0	31,2	32,3	24,7	14,0	18,9	19,4	7,9	18,3	33,3	100	100	100
Total	5,6	5,4	2,7	33,9	17,6	7,6	39,0	32,1	19,6	13,8	21,2	18,6	7,7	23,8	51,5	100	100	100
Belgium																		
15 - 29	7,9	2,0	2,6	27,2	10,7	5,1	34,8	26,5	12,8	16,6	20,9	12,8	13,5	39,9	66,7	100	100	100
30 - 44	9,3	3,6	2,5	29,2	11,7	5,7	34,5	27,4	6,6	15,8	20,1	10,7	11,1	37,3	74,6	100	100	100
45 - 59	9,3	3,1	1,7	29,0	9,9	2,3	32,7	21,5	5,7	16,9	20,9	9,8	12,1	44,6	80,5	100	100	100
60 - 69	9,8	2,4	2,2	19,7	6,3	2,2	28,0	14,0	2,9	21,6	20,5	6,5	20,9	56,7	86,3	100	100	100
70 - 79	11,2	3,3	0,0	18,2	4,9	1,3	25,0	12,9	1,9	15,4	17,8	8,8	30,2	61,1	88,1	100	100	100
80 +	7,2	1,1	2,4	11,4	3,2	2,4	15,6	11,1	2,4	19,8	13,7	3,5	46,1	71,1	89,4	100	100	100
Total	9,1	2,8	1,7	26,8	8,3	2,8	32,8	19,6	4,5	16,8	19,6	8,5	14,5	49,6	82,6	100	100	100

*) Without Germany, France, Luxembourg, Sweden.
Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health.
Source: ECHP.

Figure 35. Share of people in bad/very bad health with 10+ contacts with doctors within one year 1999–2000

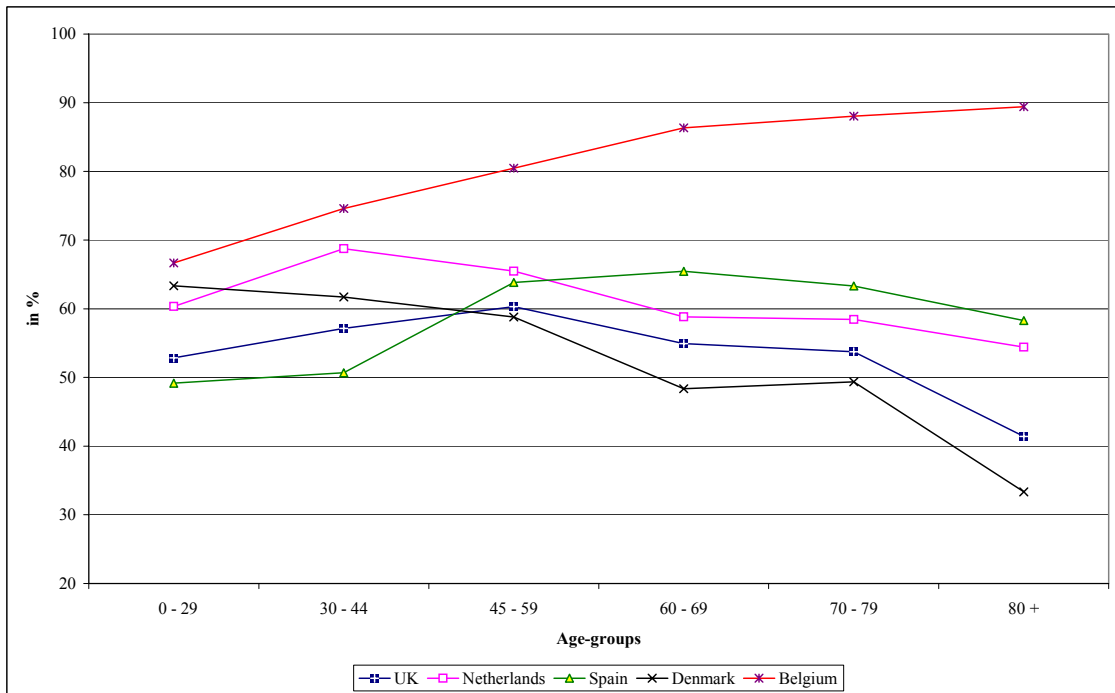


Figure 36. Share of people in bad/very bad health with 10+ contacts with doctors within one year 1994–95

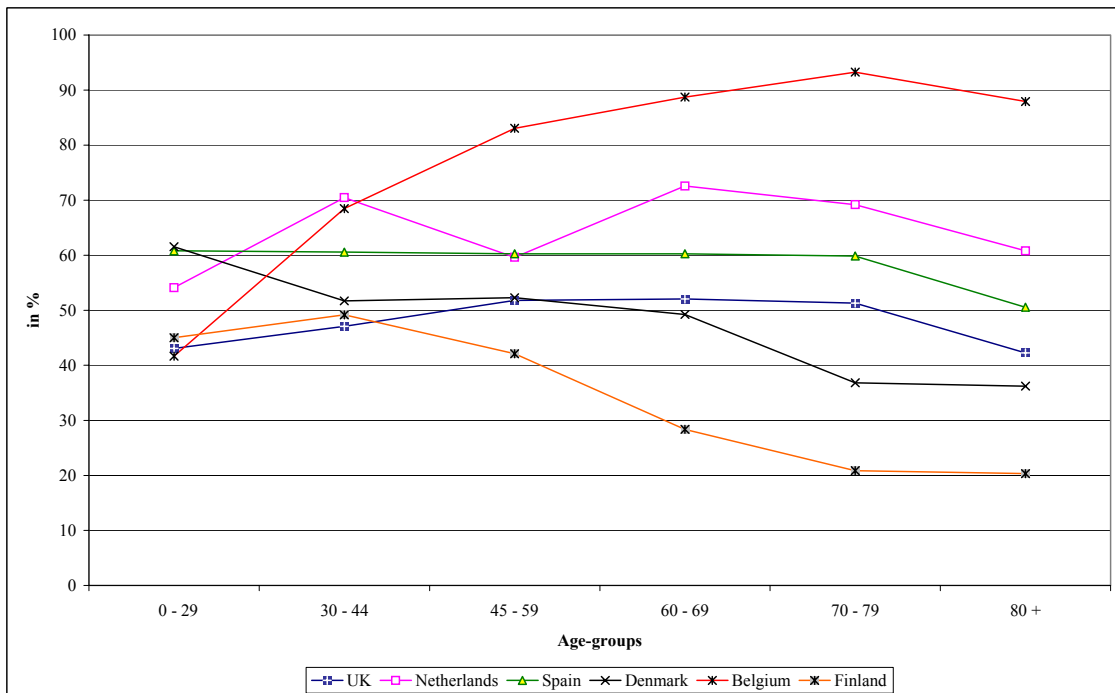


Table 34. Pearsons' two-way correlation of contacts with a doctor in EU countries*

	Number of contacts with a doctor	
	Coefficient	Significance
	2000	
Age	0,264	0,000
Women	0,181	0,000
Good health	-0,325	0,000
High education	-0,024	0,000
Married	0,030	0,000
Income	-0,101	0,000
	2001	
Age	0,264	0,000
Women	0,183	0,000
Good health	-0,219	0,000
High education	-0,022	0,000
Married	0,021	0,000
Income	-0,100	0,000
*) Without Luxembourg, Sweden, Germany and France. Source: ECHP.		

Table 35. Regression of contacts with a doctor in EU countries*

	Coefficient	T	Significance
	2000		
Absolute term	3,019	145,928	0,000
Age	0,010	38,177	0,000
Women	0,375	44,027	0,000
Good Health	-0,603	-65,909	0,000
High education	0,055	6,161	0,000
Low education	-0,125	-17,221	0,000
Married	0,213	13,262	0,000
Income	0,000	-19,715	0,000
	2001		
Absolute term	3,038	143,954	0,000
Age	0,010	39,441	0,000
Women	0,379	43,876	0,000
Good Health	-0,619	-79,695	0,000
High education	0,046	3,550	0,000
Low education	-0,170	-18,072	0,000
Married	0,164	9,956	0,000
Income	0,000	-18,827	0,000
*) Without Luxembourg, Sweden, Germany and France. Source: ECHP.			

4. Supply of hospital and outpatient care services

The OECD health data provided data about inpatient care occupancy rates and the number of employees in the health care sector, but no data about the number of hospitals or beds in hospitals.

Table 36. *Inpatient acute care occupancy rate*

Countries	1960	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001
	% of available beds												
Belgium	-	-	76,7	77,7	-	81,9	79,7	79,5	77,7	79,9	-	-	-
Denmark	-	-	-	75,3	78,9	78,5	78,6	80,9	80,7	81,2	-	-	-
Finland	-	-	-	-	76,9	74,2	74,0	-	-	-	-	-	-
France	-	-	82,9	80,4	80,0	78,2	77,9	78,0	78,7	78,8	77,5	78,5	-
Germany	91,9	86,8	81,8	83,3	85,0	86,4	81,3	79,8	80,4	81,6	81,4	81,1	80,1
Netherlands	-	89,8	85,1	83,5	79,1	73,3	73,3	73,0	71,4	70,1	66,7	65,7	66,0
Spain	-	-	-	-	72,2	73,5	76,4	77,3	76,2	76,1	-	-	-
United Kingdom	-	-	-	75,1	76,1	-	79,0	80,0	80,0	81,0	82,0	83,0	84,0

Source: OECD Health Data 2003.

Table 37. *Number of persons employed (headcounts) in the health care sector*

Countries	1970	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002
	Total health employment											
Belgium	91 200	158 800	178 000	204 000	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-	-	-	-
Finland	80 000	114 000	137 000	161 000	197 000	206 000	216 000	225 300	241 363	240 328	243 465	-
France	-	-	-	-	1 803 000	1 865 000	1 849 000	1 838 000	1 849 000	1 839 000	1 829 000	1 839 000
Germany ^{*)}	-	-	-	-	-	-	2 345 338	2 382 723	2 415 228	2 458 434	2 503 675	-
Netherlands	205 000	306 000	306 000	332 000	368 000	-	-	396 100	411 600	429 000	449 800	-
Spain	-	-	-	-	571 600	609 700	619 200	618 300	644 600	680 200	689 100	-
United Kingdom	741 000	1 174 000	1 223 000	1 355 000	1 708 000	1 786 000	1 790 000	1 813 000	1 821 000	1 794 000	1 888 000	1 891 000
	Total hospital employment											
Belgium	-	97 956	103 500	114 577	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-	-
France	-	-	954 673	1 020 459	1 070 440	1 080 372	1 084 037	1 092 920	1 098 909	-	-	-
Germany ^{*)}	547 283	765 641	814 938	-	1 278 202	1 296 221	1 240 116	1 232 661	1 226 287	1 225 478	1 229 129	-
Netherlands	-	177 097	188 957	210 190	233 036	236 952	242 962	272 046	271 598	271 971	-	-
Spain	-	272 117	289 260	348 189	370 244	386 858	390 285	395 022	-	-	-	-
United Kingdom	698 946	962 554	1 009 695	995 000	1 235 000	1 307 000	1 299 000	1 310 000	1 325 000	1 306 000	1 363 000	1 365 000
	Practising physicians											
Belgium	-	22 759	27 989	32 547	35 870	36 644	37 451	38 109	38 769	39 519	-	-
Denmark	6 925	11 143	12 957	15 978	17 026	17 306	17 511	17 755	18 043	18 255	18 330	19 600
Finland	4 320	8 330	10 193	12 091	14 141	14 579	15 192	15 436	15 794	15 905	16 110	-
France	-	-	146 800	173 100	186 700	188 500	190 100	191 700	193 200	194 000	196 000	198 700
Germany ^{*)}	-	-	-	-	250 314	254 901	256 627	260 461	263 447	267 965	272 296	-
Netherlands	16 292	26 987	32 193	37 461	-	-	-	46 101	48 987	50 856	52 602	49 366
Spain	-	-	-	-	98 100	112 900	114 400	112 500	120 100	130 100	125 400	-
United Kingdom	52 516	74 209	80 763	83 260	104 256	106 358	109 964	112 889	115 089	117 579	-	-
	General practitioners											
Belgium	-	10 968	13 947	14 580	15 372	-	13 926	14 017	-	-	-	-
Denmark	2 108	2 746	2 915	3 183	3 317	3 335	3 366	3 398	3 430	3 494	3 541	3 582
Finland	-	-	5 694	6 422	7 353	7 624	8 209	8 335	8 448	8 638	8 670	-
France	-	-	83 327	91 741	94 556	94 945	95 162	95 021	95 229	94 746	96 222	97 329
Germany ^{*)}	-	-	-	-	99 307	94 032	89 964	88 570	87 387	87 694	87 532	-
Netherlands	4 470	5 688	6 179	6 465	6 814	6 916	6 997	7 091	7 217	7 270	7 317	-
Spain	-	-	-	-	-	-	-	26 876	-	28 460	-	-
United Kingdom	25 236	29 220	32 405	34 052	35 659	35 922	36 298	36 710	37 061	37 343	37 837	-

^{*)} Until 1990 West-Germany.

Source: OECD Health Data 2003.

The occupancy rate of hospital beds for acute care decreased since the early 1970s in Finland, France and the Netherlands, whereas in Belgium, Denmark and the UK the occupation rate increased (Table 36). In Germany, the decreasing trend could have been arrested by the reduction of the number of hospital beds in recent years.

The health care sector in all participating countries is a dynamic sector with an increase in employment since 1970 (Table 37). In Finland, for example, the total number of people employed in health services increased from 80,000 in 1970 to 244,000 in 2001, in the Netherlands from 205,000 up to 450,000 and in the UK from 741,000 to 1,888,000. The number of employees increased in hospitals as well as in outpatient services. Changes in the health care system led to changes in the partition between hospital treatments and outpatient services. Therefore in some countries the level of employment in outpatient services shows higher growth than hospital employment.

5. Long-term care

The need for long-term care can be separated from the need for acute health care. Those in need of long-term care and those in need of acute health care are dependent on personal help, and their possibilities of living independently are dissipated. But contrary to the need for acute health care, the physical and functional impairments of people in need of long-term care are not reversible. The need for long-term care implies the need for permanent personal help and nursing care in the long term (in extreme cases until mortality). The need for long-term care is a multidimensional phenomenon and the causes can be very different (prenatal impairments, genetic dispositions, diseases, accidents, functional handicaps, mental illness, etc.). Therefore, it is not astonishing that no general, internationally comparable definition of the need for long-term care exists. In Germany, for example, the social dependency insurance act includes a definition of people in need of long-term care: “persons with a physical or mental disability, who need assistance in normally and regularly recurring activities of daily living on a long-term basis, prospectively for at least 6 months, to a substantial or exceeding degree”.

With respect to this definition severe disability is a reasonable proxy for the need of long-term care. Therefore, defining and measuring disability is an important step in this area. In previous research two major approaches have been used to determine the number of disabled persons: a) a strategy that estimates disability based on the presence of an illness or disease that could result in chronic impairments, and b) a strategy that concentrates on the individual’s ability or disability to perform functional activities of daily living, without regard to clinical diagnosis (Kunkel & Applebaum, 1992).

The primary method used to measure disability has been to examine functional ability because, although the presence of a chronic disease such as arthritis indicates that an individual may have a need for long-term care, the presence of the disease does not necessarily imply anything about the level of need. One of the primary scales that measures basic functional ability is the activities of daily living (ADL) scale proposed by Katz et al. (1963). These ADL instruments originally aimed at assessing the severe disablement commonly found among institutionalised patients and the elderly population (measuring, for example, independence in bathing, dressing, moving around the house and eating) (see Table A1 in the Appendix). Lawton & Brody (1969) introduced the notion of Instrumental Activities of Daily Living (IADL) to cover a

broader range of activities, including activities required to live independently (such as the ability to manage personal finances, do housework and shopping). One of the disadvantages of IADLs for the purpose of international comparisons is that the performance of these activities is affected by cultural backgrounds, particularly the role of women.

Since the late 1960s a number of other instruments have been developed to measure similar types of ADLs and IADLs. The new ones are more generic health measurement instruments that contain disability-related components along with items on physical and psychological health, for example, SF-36, EuroQol-5D and McMaster's Health Utilities Index HUI-3 (see Table A2 in the Appendix).

For international comparability, the search for some standardised disability measures was undertaken. One of the first was produced by the OECD in the late 1970s, as part of the broad programme to develop social indicators. This effort led to the OECD long-term disability list (McWhinnie, 1982), which was based on an ADL scale covering mobility, self-care and communication items. Two more recent standardised disability measures were developed by WHO-Europe in collaboration with Statistics Netherlands and by the Euro-REVES Network. The WHO-Europe long-term disability list is similar to the OECD list. The current WHO-Europe project EUROHIS proposes common instruments related to the measurement of chronic physical conditions and mental disability as well as overall measures of quality of life. The "Euro-REVES" has proposed to break down the WHO-Europe long-term disability list into two components: some of the questions would be used to measure 'physical and sensory functional limitations', while the other questions would be used to measure 'ADL restrictions'" (Gudex & Lafortune, 2000, p. 16). Euro-REVES also propose to include four severity levels in functional and ADL limitations and want to integrate a question on disability in usual activities to measure the general prevalence of disability.

In Germany the statutory long-term care insurance scheme, which was implemented for home care in April 1995 and for institutional care in July 1996, is using the following ADL and IADL indexes: ADL – washing, bathing, brushing the teeth, combing, shaving, toileting, eating, getting in and out of bed, dressing, walking, standing, using stairs and walking outdoors; IADL – shopping, preparing meals, cleaning, dishwashing, laundering and heating the apartment. The law distinguishes three levels of disability – substantial, severe and very severe – based on the frequency with which assistance is needed in personal care and housekeeping. For this definition to apply at all levels people must need assistance in two or more ADLs and assistance in housekeeping for at least 6 months. Therefore, severe disability is the condition to receive benefits for long-term care in Germany.

To ensure the greatest comparability among the collected data of each country, the participating countries were asked to collect similar data, i.e. data about people with a severe disability in need of long-term care. But the discussion about this issue leads to the result that this criterion will be hard to meet.

Eisen & Mager (1999) have analysed the social policies and social security systems – especially the long-term care insurance schemes – in selected EU countries (Germany, Denmark, France, Ireland, Luxembourg, the Netherlands, Austria, Portugal, Spain and the UK). Their topics included the principals of designing social security systems, long-

term care laws, providers, eligibility, benefits, finance and coverage. One main result was that the institutional settings and the extent of supply of long-term care services in the community and in institutions are strongly correlated to the long-term care policy. In most countries long-term care-giving is deemed to be the task of the family. Therefore, informal long-term care-giving by members of the family is dominant. Often institutional care-giving is reserved for disabled persons with the worst health and if adequate informal care-giving is not available. The number of beds in nursing homes is often not large enough to cover the demand. Waiting lists are the consequence.

In most countries no special long-term care insurance system or long-term care law exists. The need for long-term care is often governed by selected paragraphs in several laws (social assistance, health security, etc.) and belongs to the tasks of a single community respective of local government. Eisen & Mager pointed out that in several EU countries it is difficult to obtain an overview about the number of people in need of long-term care. Often informal care-giving is not documented and information about institutionalised persons and those who provide community care is difficult to collect.

For our participating countries it was also not easy to collect data about long-term care-giving in institutions or (especially) at home. That is because – as mentioned above – social care for the elderly is generally the responsibility of the municipalities and different organisations (private/public) or political institutions that provide care services (or both). In most countries ‘care in the community’ is favoured as an alternative to long-term institutional care. Therefore, places in nursing homes have often been reduced in recent years and public monies have been shifted from institutional care to home care. In Denmark, for example, the number of people in nursing homes has fallen dramatically, from 50,000 in 1987 to 36,500 in 1996. This was accompanied by a large increase in the number of home nurses and home-help assistants employed by municipalities (European Observatory of Health Care Systems, 2001). In the UK between 1960 and 1980 around 100,000 people in need of long-term care have been discharged into the community (European Observatory of Health Care Systems, 1999). Another trend could be observed in Belgium, where there are plans to increase the places in combined rest and nursing homes, which provide a high level of nursing care (European Observatory of Health Care Systems, 2000a).

Providers of home care services supply a broad spectrum of assistance, and obtaining an overview about people receiving long-term care services is hard. Provision of social care for the elderly – namely long-term care – is different among EU countries and also among the participating countries. But for the most part institutional care and home care services exist in all of them. Data about institutional care by age groups have been provided for Belgium, Denmark, Finland, France, Germany and the Netherlands. The UK could only provide data about residential care for people aged 65+ (not subdivided into age groups). Information about care-giving at home is in most participating countries related to formal care-giving by professionals. In Germany informal care-giving is included, if people receive benefits from the long-term care insurance scheme.

For Spain no data could be collected. A report from the European Observatory on Health Care Systems (2000b, p. 84) for Spain pointed out that in Spain “most of the responsibilities within the field of social affairs have been transferred to the Autonomous Communities, which gradually enacted legislation in the 1980s to govern

social services provision within their area of responsibility...The key area of overlap between health and social services is in the provision of care for the elderly. There is a national plan for the elderly aimed to improving older people's standard of living. This plan includes a component on health care which focuses on health promotion, the prevention of illness and accidents, and healthy lifestyle. Social services are responsible for elderly residential care." The total number of places amounted to 188,913 in 3,689 elderly homes in 1998. Additionally, more places are purchased through contracts with private institutions. For every 1000 people over 65 there were 2.8 places in 1998. The issue of the elderly requiring continuing medical care has not been resolved satisfactorily and there is no uniform, national/cross-sectional approach. Home care is being expanded and within most municipalities an infrastructure exists to deliver basic support to those being cared for or caring for others at home. Yet, accessibility to these services is severely restricted and coordination with medical care is still lacking in many aspects (EOHCS, 2000b, p. 85). The report can be summarised as follows: long-term care for the elderly and handicapped is still considerably underdeveloped and managed by different organisational structures. In addition, long-term care places for palliative care of the chronically and terminally ill only absorb a marginal share of the total (p. 127). In view of the different organisational structures there is no global national database for long-term care services and no analyses can be carried out in this case. But it can be observed that the supply of long-term care services in nursing homes or by home care are far away from meeting the need of long-term care in Spain.

5.1 Long-term care in institutions

According to surveys, the elderly want to live independently as long as possible in their own home. If they need help in housekeeping or personal care the first choice is a person within the family (BMFSFJ, 2001). Cantor (1979) has argued, for example, that older persons have hierarchical preferences for primary caregivers, with spouses preferred over other types of kin. Even if it is not possible to obtain the necessary care within the family, most of the elderly prefer formal home care. Nursing homes are the last choice for receiving long-term care.

Klein (1996) analysed the *determinants of institutionalisation* in old age based on longitudinal data for Germany (source: German Socio-Economic Panel Survey). Among the main results, age, family status and life expectancy are of major significance for institutionalisation, while education, housing conditions, recent stays in a hospital and chronic diseases per se have no significant effect on institutionalisation. Only the distance to public transport affects the institutionalisation rate significantly. Furthermore, chronic diseases become important in interaction with age, i.e. the higher the age, the stronger the effect of chronic diseases on the rate of institutionalisation. Compared to married persons, the institutionalisation rate of single persons was almost 600% higher, while the rate of divorced individuals was almost 500% above the rate of married persons, and widowhood increased the institutionalisation rate by about 170%. The observed gender difference is to a considerable extent owing to the fact that women experience widowhood far more often than men. The results of Klein are in line with the results of Freedman (1996), who models the effect of family structure on the risk of nursing home admission for a cohort of older persons living in New Haven, Connecticut.

We have little information about the total number of people receiving long-term care in institutions and at home. Therefore, we can not calculate the share of long-term care recipients who were institutionalised and the share of recipients who receive care at home. Information exists only for Germany. In Germany around one-third of the recipients of long-term care benefits live in institutions.

The OECD Health Data provide data about the number of long-term care beds per 1000 inhabitants and per 1000 inhabitants aged 65+. There is no data for Finland or Spain and the other participating countries show large differences in the provision of long-term care beds (Table 38). In 1996, Belgium had 6.6 beds per 1000 inhabitants aged 65+, France had 9, Germany, the Netherlands and the UK had around 28 and Denmark had 45. Denmark has reduced the number of beds since 1996 dramatically, so that in 2001 around 35 beds per inhabitant aged 65+ can be observed. The differences among the countries are the expression of the different social care policies.

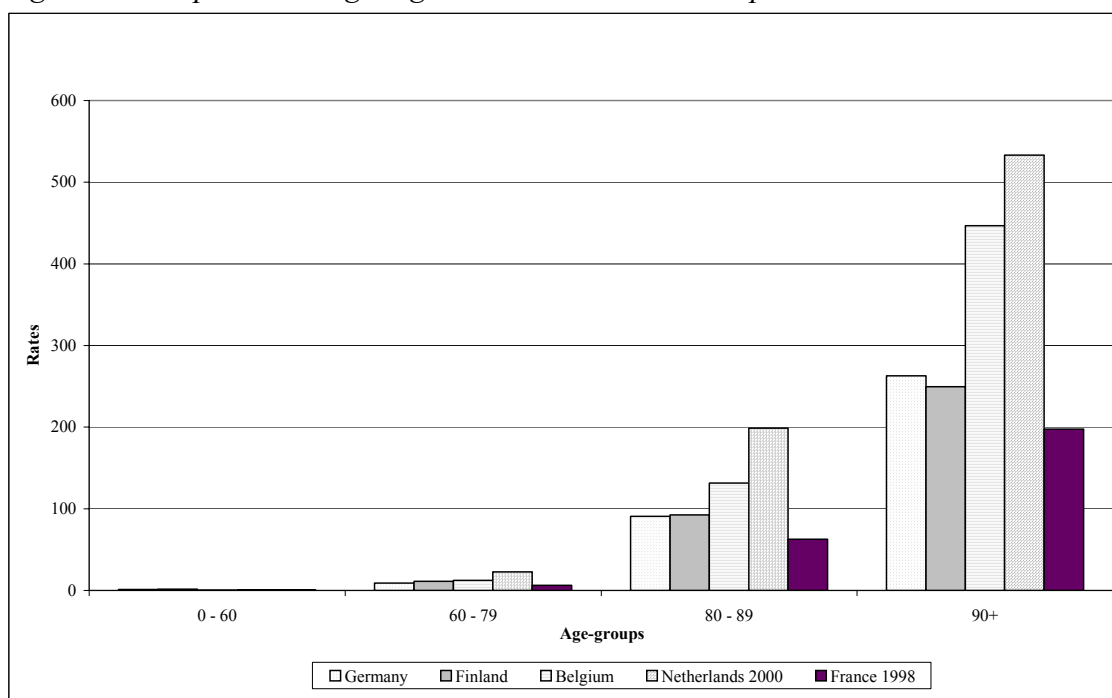
Table 38. Long-term care beds

Countries	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001
	Long-term care beds per 1000 population										
Belgium	-	-	-	1,2	1,1	1,1	1,1	-	-	-	-
Denmark	9,0	9,6	9,7	8,7	7,0	6,9	6,7	6,6	5,9	5,6	5,2
Finland	-	-	-	-	-	-	-	-	-	-	-
France	-	0,7	1,0	1,2	1,4	1,4	1,4	1,4	1,4	1,4	-
Germany ^{*)}	-	1,7	2,2	3,5	3,7	4,2	4,4	-	-	-	-
Netherlands	2,9	3,3	3,4	3,5	3,6	3,6	3,6	3,7	3,6	3,7	3,7
Spain	-	-	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	3,5	4,2	4,4	4,4	4,3	4,1	3,9	3,7
	Long-term care beds per 1000 population aged 65+										
Belgium	-	-	-	8,2	6,9	6,7	6,6	-	-	-	-
Denmark	67,2	66,6	64,5	56,0	45,8	45,9	44,7	44,0	39,5	37,5	34,8
Finland	-	-	-	-	-	-	-	-	-	-	-
France	-	5,1	7,7	8,6	9,1	9,0	9,0	8,9	8,9	8,8	-
Germany ^{*)}	-	-	-	-	23,9	26,9	28,2	-	-	-	-
Netherlands	27,1	28,6	28,2	26,9	27,1	27,2	27,2	27,1	26,8	26,9	27,3
Spain	-	-	-	-	-	-	-	-	-	-	-
United Kingdom	-	-	-	22,2	26,7	27,7	27,6	27,0	25,9	24,7	23,5
*) Until 1990 West-Germany. Source: OECD Health Data 2003.											

The data provided from the participating countries allow computations of the prevalence rates of institutionalisation, i.e. the number people receiving long-term care in institutions per 1000 inhabitants by age groups. Figure 37 shows the prevalence rates for Germany, Finland, Belgium, the Netherlands and France. In all countries the prevalence rates increase with age. The highest prevalence rates can be observed for the Netherlands and the second highest for Belgium. The figure clearly shows that long-

term care-giving is related to the oldest old. Until the age of 60, long-term care is seldom required, but for people aged 60 to 79 the prevalence rate is low. After the age 80 the possibility of receiving long-term care in institutions rises dramatically. In the oldest age group (90+) the prevalence rates are between 20% for France and more than 50% in the Netherlands.

Figure 37. People receiving long-term care in institutions per 1000 inhabitants in 2001



The institutionalisation rate is higher for women than for men. That is caused by the higher life expectancy of women and the higher rate of widowhood (especially in Germany, as a result of World War II). The share of very old men married is higher than that of women. The absence of spouses leads to a higher institutionalisation rate (see for example Figure 38).

The results of a study for Germany underline the influence of family status on the probability of receiving care in institutions. A special report on the living conditions of long-term care beneficiaries based on the micro-census for Germany for 1999 was carried out (FSOG, 2002b). The report included data about the family status, the type of household and the intensity of help needed. In 1999, 438,000 women and 116,000 men received long-term care in institutions. On average three out of four women, but only 45% of men were widowed. In the oldest age group (90+) 85% of women and two out of three men were widowed. Therefore, the share of widowed people receiving institutional care is greater than within the total population. These results for Germany could also be expected to be true for the other EU countries.

Life expectancy has increased in all EU countries. The question is whether the improvements in life expectancy lead to a lower prevalence of long-term care. Decreasing prevalence rates for long-term care-giving in institutions can only be

observed in the Netherlands and Denmark (Figures 39 and 40). In Belgium, Finland and Germany the prevalence rates increased in the past (Figures 41 to 43). Especially in Belgium a high increase in the older age groups can be observed, but also in Finland and Germany the changes were greater in the older age groups. It can be summarised that increasing life expectancy is not clearly (not in all countries) connected with decreasing long-term care in institutions.

Figure 38. People receiving long-term care in institutions per 1000 inhabitants in France 1998

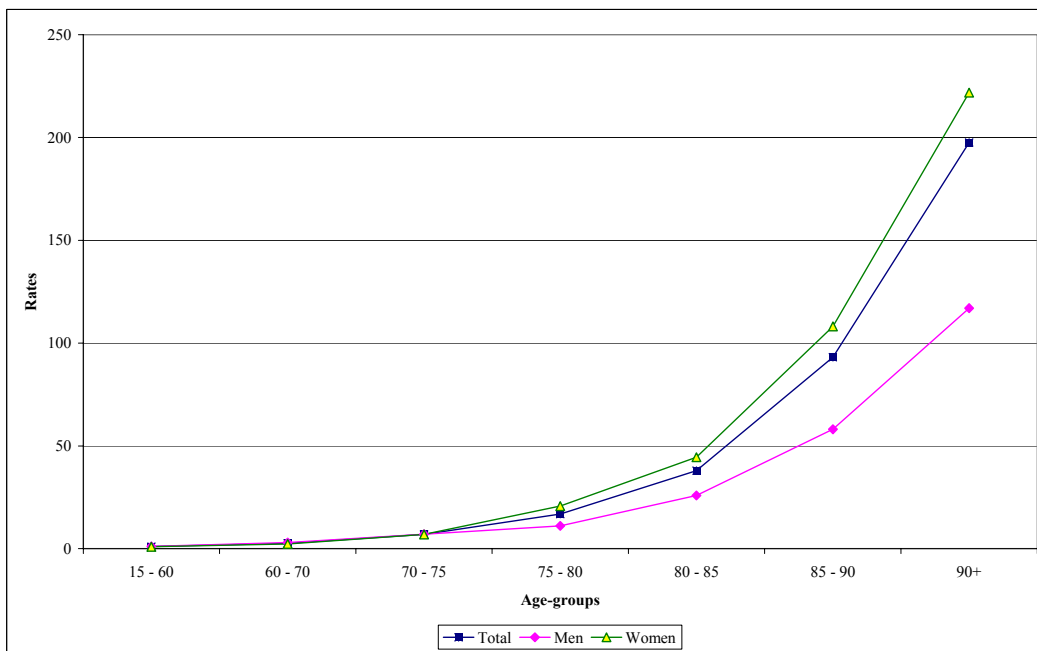


Figure 39. People receiving long-term care in institutions per 1000 inhabitants in the Netherlands

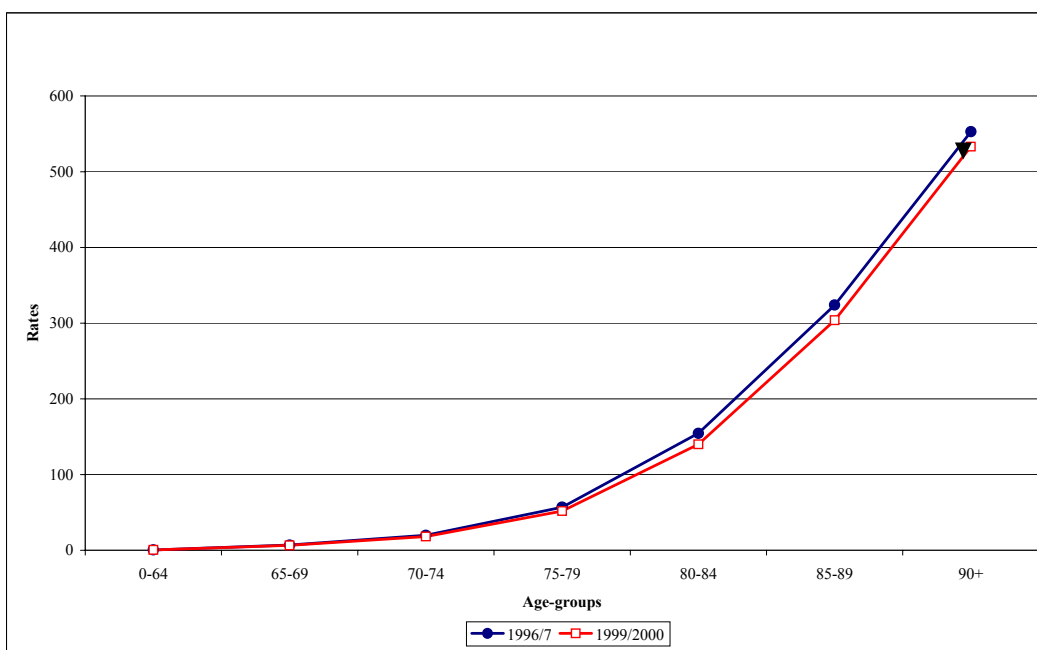


Figure 40. Long-term care recipients in institutions per 1000 inhabitants in Denmark

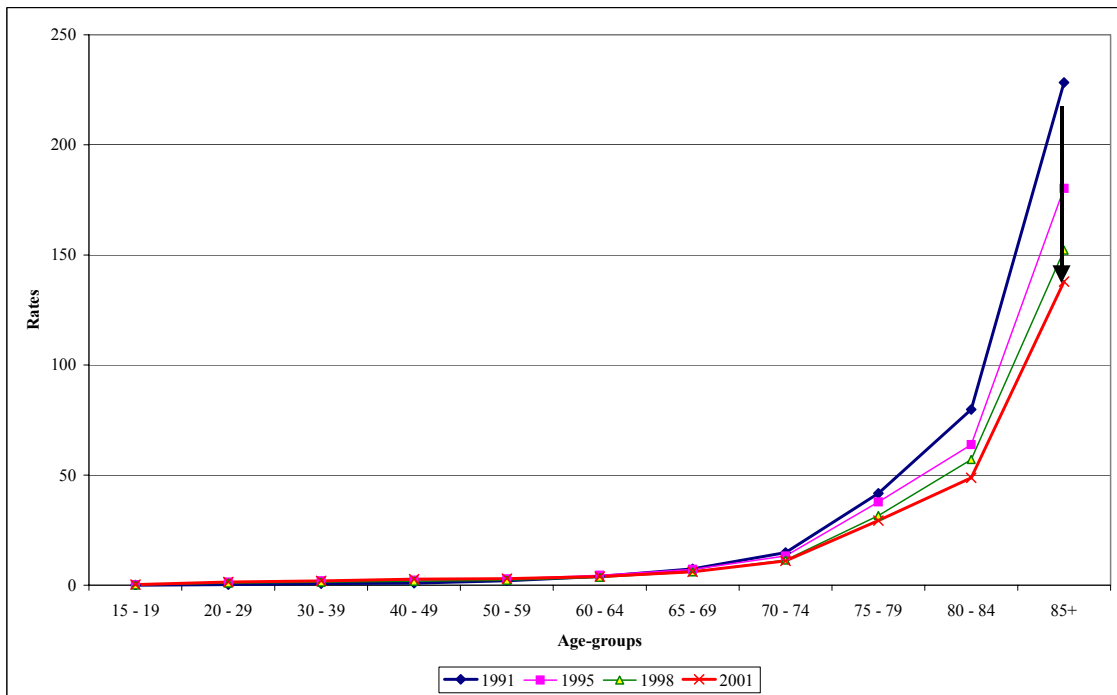


Figure 41. People receiving long-term care in institutions per 1000 inhabitants in Belgium

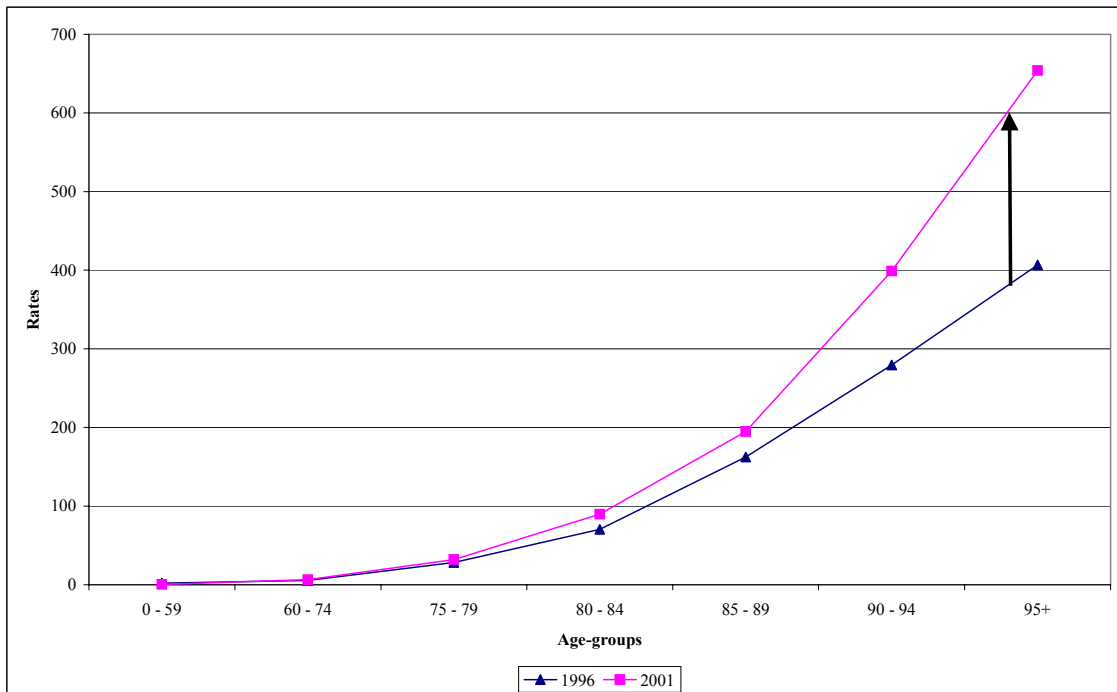


Figure 42. People receiving long-term care in institutions per 1000 inhabitants in Finland

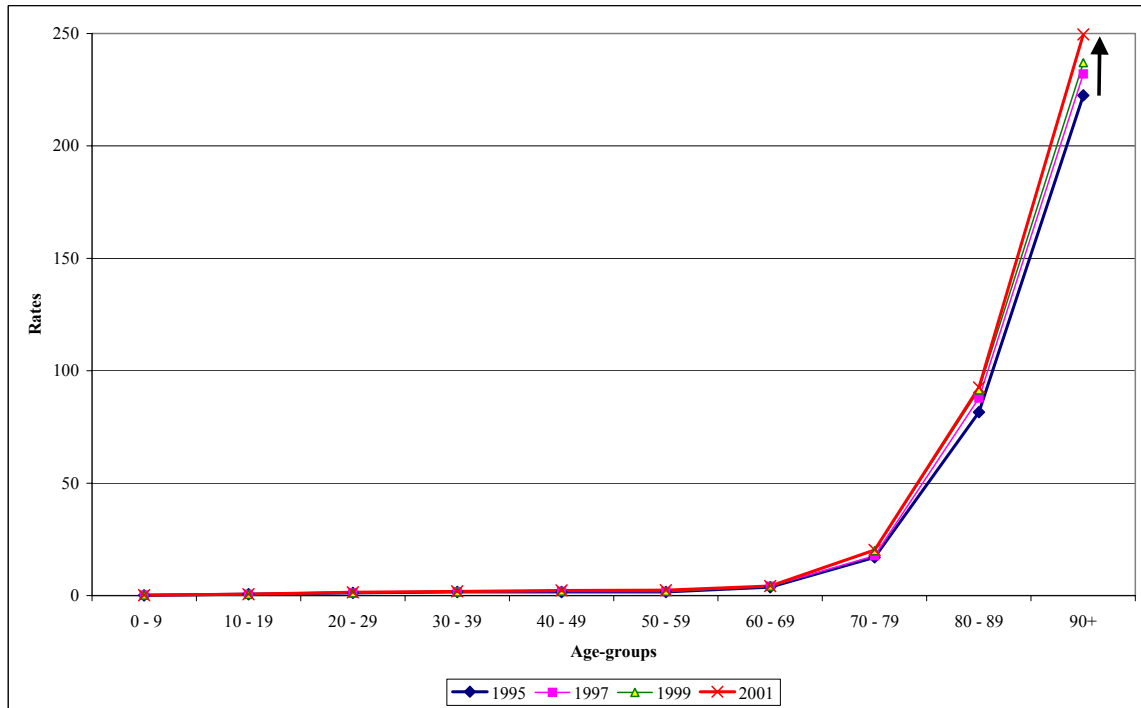
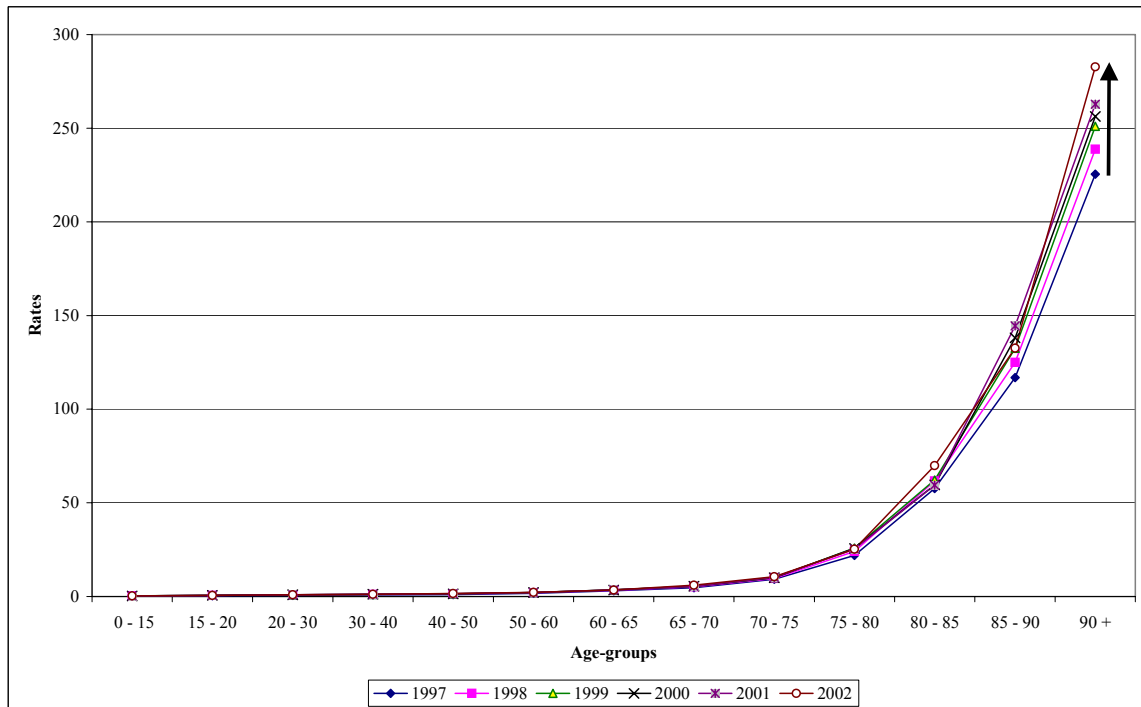


Figure 43. People receiving long-term care in institutions per 1000 inhabitants 1997 to 2002 in Germany

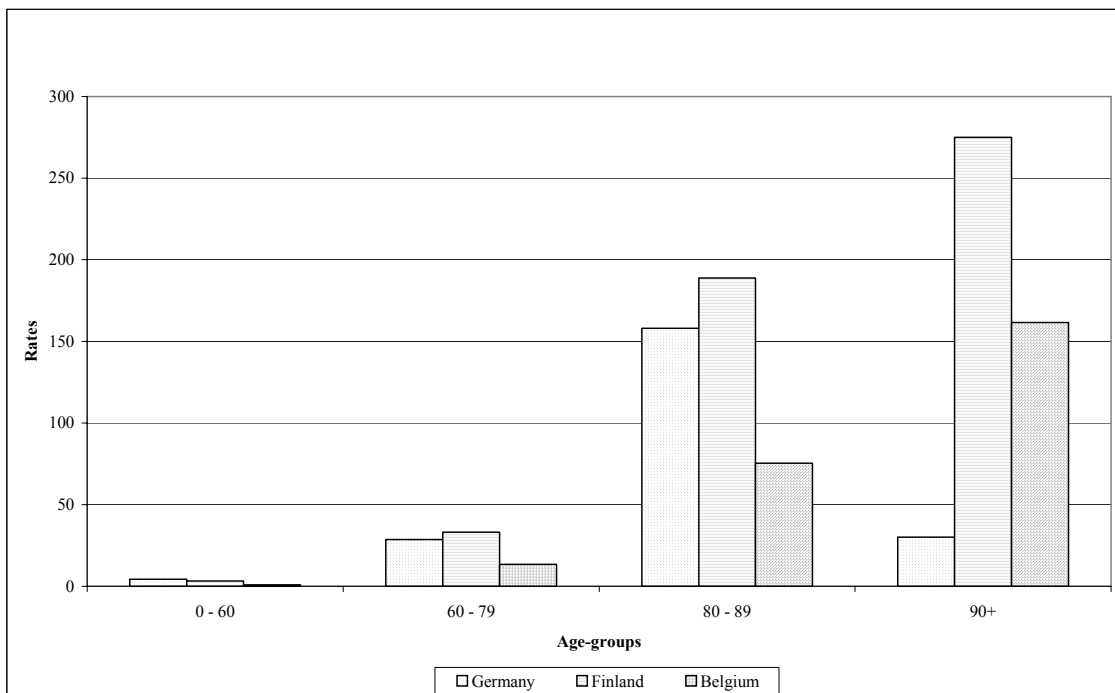


5.2 Long-term care at home

In Germany, for example, half of the people receiving long-term care in institutions need personal care and help in activities of daily living day and night, another quarter need such help three times a day. All need permanent help with ADLs and IADLs. Therefore, the intensity of care-giving in institutions is high. But the intensity of care-giving at home is also markedly high. In Germany around 40% of people receiving long-term care at home needed personal care and help with ADLs day and night and another quarter needed help three times a day in 1999. Nearly all beneficiaries needed help permanently. Long-term care-giving is deemed to be a task of the family, but long-term care-giving at home is a hard job. Often members of the family are not able to take care of these tasks alone, especially if the caregiver is also aged. They need help from professional caregivers.

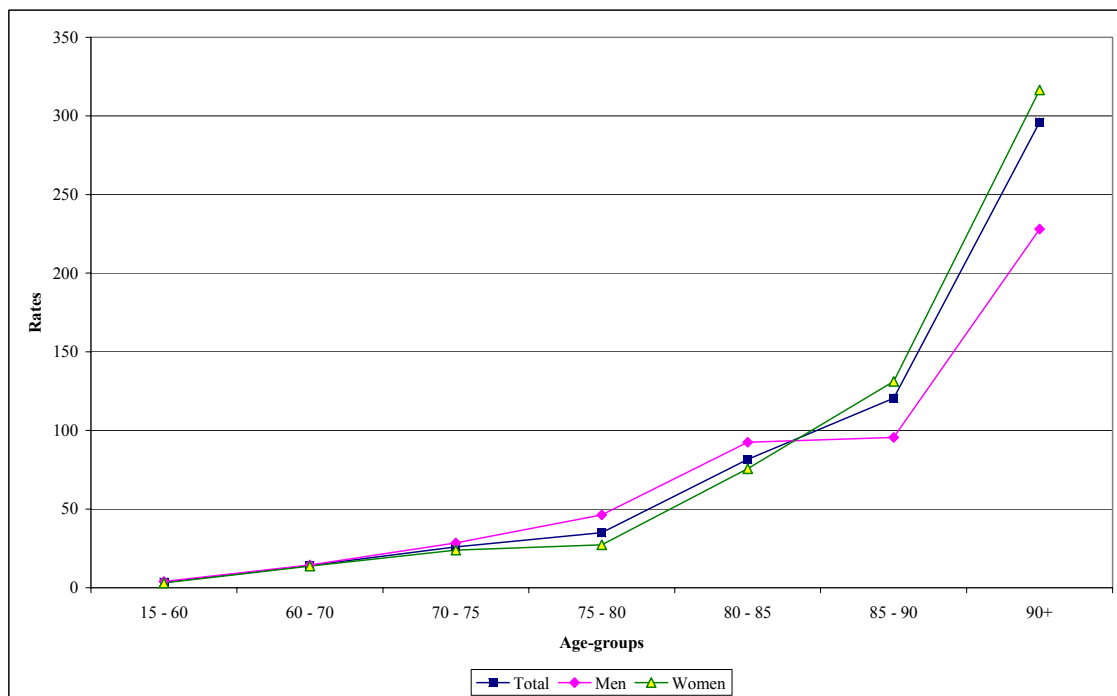
Several countries provided data about care-giving at home by professional caregivers. Figure 44 shows the people receiving long-term care at home per 1000 inhabitants in 2001 for Germany, Finland and Belgium. The prevalence rates are highest for Germany, because the data for Germany included formal and a part of informal care-giving at home (informal care-giving if they receive benefits from the long-term care insurance schemes). But also in Finland a high share of the elderly receive formal care-giving at home. Care-giving at home is also related to the oldest old, but on average the people receiving formal care at home are younger than institutionalised people. Around 3% of people in Finland and Germany and around 1.3% in Belgium aged 60 to 79 receive formal home care, but only a maximum of 0.15% were institutionalised.

Figure 44. People receiving long-term care at home per 1000 inhabitants in 2001



As in the case of institutional care, more women than men receive formal home care (see for example the difference in France in Figure 45). This could be also explained by the differences in family status: women experienced widowhood more often and the absence of spouses leads to more formal home care.

Figure 45. People receiving long-term care at home per 1000 inhabitants in France 1999



The prevalence rates of care-giving at home show no clear trend in Germany, Finland or Belgium (Figures 46 to 48). The prevalence rates seem to be relatively stable, only in the oldest age group are slight increases recognisable. Formal care-giving at home depends not only on the need for care-giving, but also on political decisions and the availability of resources. Therefore, trends in disability do not lead directly to a change in formal care-giving.

Data about care-giving by relatives or friends and neighbours are only available for Germany. In Germany around 1 million people receive cash allowances for informal care and around 200,000 receive a combination of cash allowances and in-kind services (2002). That means that around 1 million persons provide home care without any additional help from professional home care services. One-third of informal carers are spouses, 13% are parents, 38% are children or children-in-law, 10% are other kin and 7% are neighbours or friends (Schneekloth & Müller, 2000).

Figure 46. People receiving long-term care at home per 1000 inhabitants in Belgium

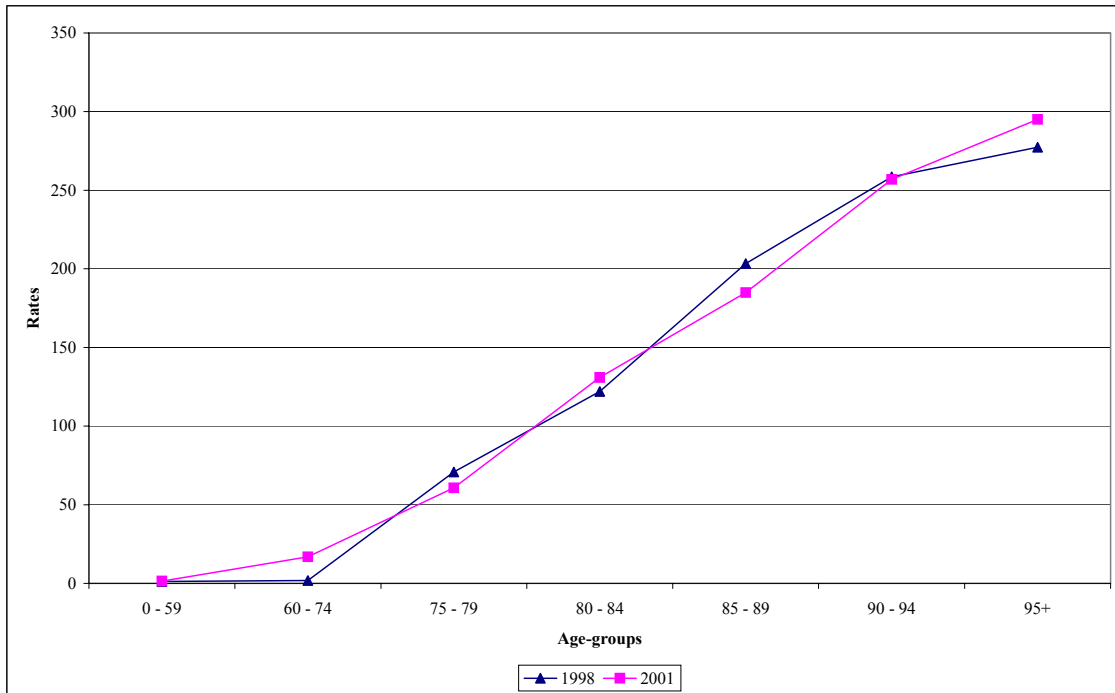


Figure 47. People receiving long-term care at home per 1000 inhabitants in Finland

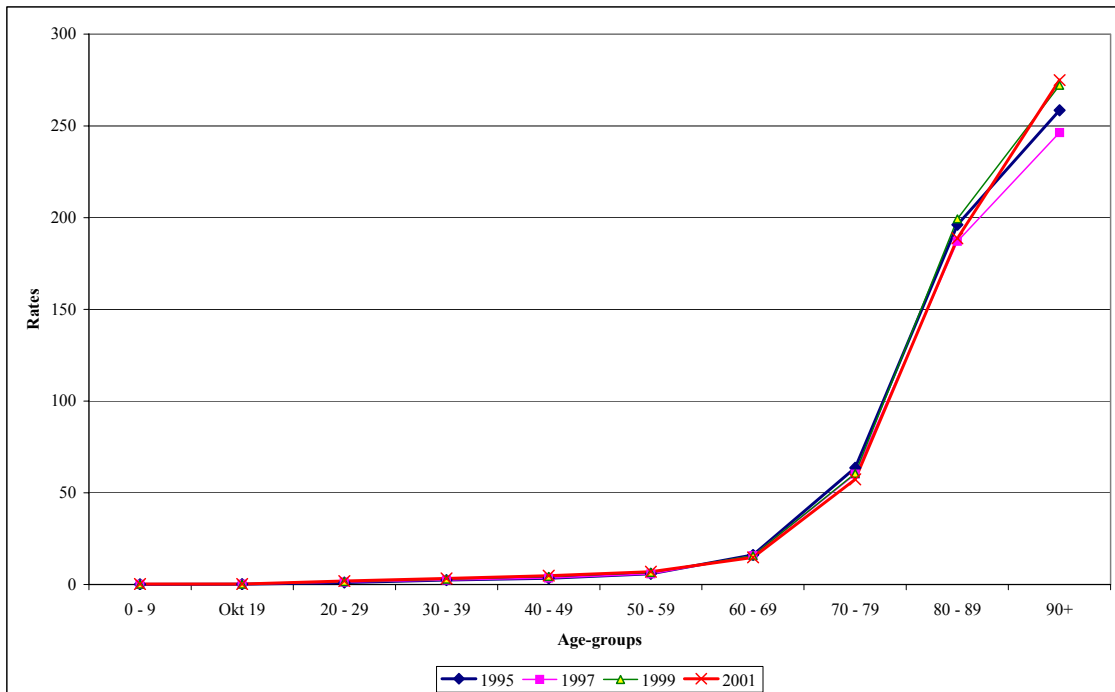
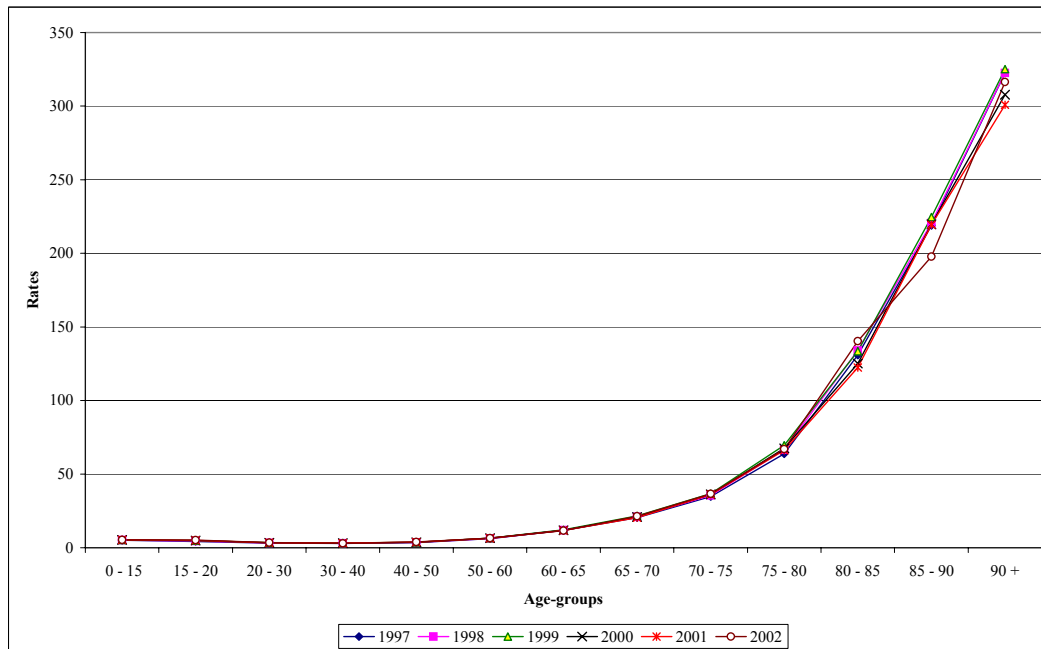


Figure 48. People receiving long-term care at home per 1000 inhabitants 1997 to 2002 in Germany



5.3 Severely hampered persons

To obtain an idea about the size of the need for long-term care at home the ECHP was evaluated. The questionnaire of the ECHP included items of disability. Three questions are directly relevant: “Person has any chronic physical or mental health problem, illness or disability?” (yes/no/missing); “Person is hampered in daily activities by this physical or mental health problem, illness or disability?” (yes, severely/yes, to some extent, no/missing/not applicable); and “Has the person had to cut down things he/she usually does about house, at work or in free time?” (yes/no/missing). Jacobzone et al. (1998) pointed out that severe disability is a good proxy for the need of long-term care. Therefore, we used the ‘severely’ response in daily activities by chronically ill, hampered persons as a ‘soft’ proxy for the number of persons with a potential need for long-term care at home. In total, 8% of total population reported that they are severely hampered in daily activities in 2001 (EU countries without Luxembourg). The share of severely hampered persons increased with age (Table 39). Around 13% of persons aged 60 to 69, 20% of people aged 70 to 79 and 31% of people aged 80+ were reported to be severely hampered.

Around 13% of the total population were reported to have a chronic illness and to be hampered in daily activities to some extent, another 6% were reported to have a chronic illness, but are not hampered in daily activities. Around 73% of the population have no chronic illness and is not hampered in daily activities. The proportion of hampered persons is higher for women than men: 7% of men were reported to be severely hampered, compared with around 9% of women. The differences between men and women increase with age.

Table 39. *Hampered persons with chronic illness by age groups and health status in EU countries*, 2001*

Age-groups	Hampered in daily activities												No chronic illness				Total			
	Severely				To some extent				No				Not hampered in daily activities							
	Health status																			
	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total
Men																				
15 - 29	0,4	5,6	44,9	1,7	2,0	18,5	29,3	4,1	3,4	6,6	4,4	3,7	94,2	69,3	21,3	90,5	100	100	100	100
30 - 44	0,6	6,2	47,2	3,3	2,8	21,6	34,4	7,1	4,9	8,6	5,1	5,5	91,7	63,6	13,3	84,1	100	100	100	100
45 - 59	1,0	8,5	54,0	7,4	4,6	26,4	31,1	12,7	7,3	9,2	3,7	7,5	87,0	55,8	11,1	72,4	100	100	100	100
60 - 69	1,5	9,5	51,0	12,0	6,6	31,3	33,7	19,9	10,6	8,8	3,1	8,8	81,2	50,4	12,1	59,3	100	100	100	100
70 - 79	3,3	12,1	53,7	18,1	8,9	32,2	31,4	23,5	14,6	8,6	2,8	9,5	73,2	47,0	12,1	48,9	100	100	100	100
80 +	6,8	17,6	60,0	26,9	9,6	31,3	26,0	23,5	15,7	7,8	1,7	8,3	67,9	43,3	12,3	41,3	100	100	100	100
Total	0,9	9,0	52,6	7,1	3,7	26,8	31,6	11,3	6,1	8,6	3,4	6,4	89,3	55,5	12,5	75,1	100	100	100	100
Women																				
15 - 29	0,4	4,7	35,0	1,7	2,7	19,9	27,1	5,4	3,7	8,1	7,5	4,3	93,3	67,3	30,4	88,5	100	100	100	100
30 - 44	0,5	6,0	45,4	3,7	3,1	23,9	31,2	8,5	4,5	7,5	4,7	5,1	91,8	62,6	18,7	82,7	100	100	100	100
45 - 59	1,1	9,7	49,2	8,7	4,6	28,3	33,5	14,7	7,2	7,9	3,2	7,0	87,0	54,1	14,0	69,6	100	100	100	100
60 - 69	2,1	10,2	46,4	13,7	7,6	31,3	36,1	22,4	11,0	7,6	2,6	8,0	79,3	50,9	14,9	55,9	100	100	100	100
70 - 79	3,5	12,6	51,3	20,5	9,4	32,5	32,6	25,6	14,8	8,1	2,1	8,5	72,2	46,8	13,9	45,3	100	100	100	100
80 +	8,1	21,2	61,5	32,8	10,8	32,3	24,4	24,7	16,9	6,0	1,7	6,9	64,1	40,4	12,5	35,6	100	100	100	100
Total	1,0	9,9	50,0	8,8	4,1	28,1	31,9	13,6	6,1	7,7	2,9	6,2	88,7	54,3	15,3	71,4	100	100	100	100
Total																				
15 - 29	0,4	5,1	39,2	1,7	2,3	19,3	28,1	4,8	3,5	7,5	6,2	4,0	93,8	68,1	26,6	89,5	100	100	100	100
30 - 44	0,6	6,1	46,2	3,5	2,9	22,8	32,6	7,8	4,7	8,0	4,9	5,3	91,8	63,0	16,4	83,4	100	100	100	100
45 - 59	1,1	9,2	51,3	8,0	4,6	27,5	32,5	13,7	7,3	8,5	3,4	7,3	87,0	54,9	12,8	70,9	100	100	100	100
60 - 69	1,8	9,9	48,4	12,9	7,1	31,3	35,1	21,2	10,8	8,1	2,8	8,4	80,3	50,7	13,7	57,5	100	100	100	100
70 - 79	3,4	12,4	52,2	19,4	9,2	32,4	32,1	24,7	14,7	8,3	2,4	8,9	72,7	46,9	13,2	46,9	100	100	100	100
80 +	7,6	19,9	61,0	30,6	10,3	32,0	24,9	24,3	16,4	6,7	1,7	7,4	65,8	41,5	12,4	37,7	100	100	100	100
Total	1,0	9,5	51,0	8,0	3,9	27,6	31,7	12,5	6,1	8,1	3,1	6,3	89,0	54,9	14,2	73,2	100	100	100	100

*) Luxembourg no information.
Health status: 1 = good/very good, 2 = fair, 3 = bad/very bad.
Source: ECHP.

The proportion of severely hampered persons is different among the participating countries as well (Table 40). The share of severely hampered persons was lowest in Belgium (around 5%) and highest in France (10%) in 2001. The data for the UK are not fully comparable, because in waves 1 to 5 (years 1994 to 1998) and in waves 7 and 8 (years 2000 and 2001) the response item of “to some extent hampered” was combined with the item “severely hampered”. Only in 1999 are the data for the UK fully comparable, and show that around 6% were severely hampered.

Table 40. Severely hampered persons by age groups in participating countries 1994–2001

Age-groups	Share of in daily activities severely hampered persons by chronic illness															
	1994	1995	1996	1997	1998	1999	2000	2001	1994	1995	1996	1997	1998	1999	2000	2001
	Belgium								Germany							
0 - 29	1,4	1,0	1,3	0,8	1,3	0,7	0,6	0,5	1,8	2,0	1,7	1,5	1,6	1,7	1,4	
30 - 44	3,0	2,5	2,4	2,0	2,5	2,2	2,2	2,7	3,4	3,5	2,9	3,5	2,8	2,7	3,0	
45 - 59	6,6	6,7	6,1	5,5	6,2	5,0	4,6	4,6	9,9	10,2	10,7	10,2	10,9	9,7	10,6	
60 - 69	11,8	10,4	10,7	7,3	8,1	6,9	7,0	6,9	15,0	15,7	14,5	14,9	15,0	14,9	14,2	
70 - 79	15,7	15,5	15,9	14,4	20,1	15,8	14,3	14,9	25,6	24,0	23,5	25,1	23,8	21,2	23,3	
80 +	30,4	27,3	27,6	21,1	23,1	18,9	17,6	21,6	38,4	41,0	33,2	41,3	44,2	37,9	41,0	
Total	6,6	6,1	6,1	4,9	6,1	5,1	4,8	5,3	7,9	8,2	7,8	8,2	8,3	7,8	8,5	
	Denmark								Netherlands							
0 - 29	1,5	1,3	1,2	1,4	1,1	2,0	1,6	1,8	1,7	2,2	2,1	2,1	2,0	2,8	3,0	3,3
30 - 44	1,6	2,7	2,1	1,9	2,6	2,5	2,8	2,6	3,8	4,7	4,1	4,6	4,4	4,4	4,5	4,7
45 - 59	5,4	5,8	6,0	5,9	5,6	5,0	5,6	5,6	6,8	8,2	8,2	8,0	7,9	8,3	9,2	9,4
60 - 69	8,9	12,7	10,9	10,0	10,4	8,9	9,4	10,8	12,1	10,4	12,1	11,4	12,7	10,3	11,6	11,7
70 - 79	15,3	14,1	18,2	18,0	18,2	17,9	20,5	13,8	17,6	15,8	15,9	18,5	17,7	16,7	17,2	16,1
80 +	20,8	21,6	24,9	22,9	24,5	23,3	27,8	29,6	25,5	21,9	26,7	21,1	25,1	20,3	26,2	27,4
Total	5,4	5,9	6,0	5,8	5,9	5,6	6,3	6,1	6,6	6,9	7,0	7,2	7,3	7,3	8,0	8,2
	Finland								Spain							
0 - 29			1,6	1,5	1,9	1,4	1,5	0,9	1,0	0,8	0,8	0,9	1,1	1,0	0,9	1,1
30 - 44			2,3	2,3	2,2	2,8	3,1	2,6	2,4	2,2	2,2	2,1	2,2	2,1	2,4	2,2
45 - 59			8,9	8,3	7,7	7,4	7,8	7,4	6,9	6,7	5,2	6,4	5,3	4,9	5,2	4,9
60 - 69			18,4	15,6	15,2	14,8	14,4	14,8	12,2	12,7	10,5	11,8	10,3	9,6	10,1	11,0
70 - 79			31,1	27,2	23,8	22,7	20,8	21,8	15,4	16,0	13,5	12,9	15,1	13,2	12,8	14,4
80 +			54,4	48,7	40,8	43,9	46,1	45,0	30,1	27,8	24,5	24,5	27,8	23,8	24,7	24,8
Total			8,4	7,6	7,1	7,2	7,2	7,0	6,6	6,5	5,6	5,9	6,0	5,5	5,7	6,1
	France								UK *							
0 - 29	3,2	2,2	2,1	2,3	2,3	2,4	3,0	2,7	4,8	3,6	3,8	4,1	3,5	0,7	4,0	4,6
30 - 44	4,9	4,4	4,7	4,6	4,7	4,7	4,1	4,2	8,5	6,8	7,1	7,6	7,4	2,0	8,4	9,2
45 - 59	10,4	9,2	9,2	10,2	10,5	9,6	9,8	10,1	15,9	14,5	15,3	16,5	15,3	5,2	15,2	16,0
60 - 69	19,4	17,2	17,7	17,3	18,4	16,5	15,8	15,7	24,5	20,4	19,5	22,4	21,1	8,7	23,1	22,8
70 - 79	23,5	25,4	23,1	25,7	27,5	27,1	28,6	27,9	29,6	24,6	25,9	27,6	27,4	16,9	29,2	30,9
80 +	36,2	40,7	38,8	42,7	41,2	40,3	33,4	34,5	44,0	41,2	40,8	44,0	44,1	35,7	42,9	43,9
Total	10,2	9,5	9,3	9,9	10,6	10,2	10,1	10,2	14,1	12,1	12,4	13,5	12,9	5,8	13,8	14,6

*) Response category severely together with to some extent in wave 1-5 and wave 7-8.

Source: ECHP; calculations by DIW.

In all countries the share of severely hampered persons increased with age. The highest percentage of severely hampered persons is shown in Finland for persons aged 80+ (45%). Belgium shows once again the lowest share of severely hampered persons in all age groups, where within the oldest age group only 22% were reported to be severely hampered. Between 1994 and 2001 there is no clear trend in most countries in the share of severely hampered persons. The share changes from one year to another, but a trend could only be observed for the Netherlands: the share of severely hampered persons increased.

The analyses of hospitalisation and use of outpatient services have shown that health status had an important influence on utilisation. Therefore, it can also be expected that the health status influences the share of severely hampered persons at a given age. Table 39 shows that the share of severely hampered persons increases if the health status deteriorates. Only around 1% of persons reporting good/very good health were severely hampered, but 51% of people reporting bad/very bad health (EU countries without Luxembourg) fell into this category. Some 95% (6% with a chronic illness and 89% without a chronic illness) of people in good/very good health were not hampered in daily activities, compared with only 17% of people in bad/very bad health.

Around one-quarter of severely hampered people in bad/very bad health were aged 70 to 79, another 16% were aged 80+ (Table 41). Severely hampered men reporting a bad/very bad health status are on average younger than women. Severely hampered persons are on average younger than people receiving long-term care in institutions, but also younger than people receiving long-term care at home by professional caregivers. ‘Younger’ people in need of long-term care receive mostly care by members of the family. The results of the ECHP are in line with the age-structure of long-term care recipients at home in Germany, where formal and informal care-giving is covered.

Table 42 shows the share of hampered persons by health status in participating countries in 2001. In all countries the proportion of severely hampered persons increased if health status deteriorated. But great differences could be observed among the countries. In the Netherlands 77% of people in bad/very bad health were severely hampered, whereas in Spain only 42% were. The proportion of severely hampered persons among women in bad/very bad health is in most participating countries lower than the proportion of severely hampered persons among men in bad/very bad health. Only in Denmark and the Netherlands is the proportion of severely hampered among women higher. Despite the observed differences, in all countries severely hampered persons are a significant group among the elderly population living in households.

It can be assumed that not all severely hampered persons need personal help or help with housework. To narrow the severely hampered persons down to the group with a potential need for care, the question, “Have you had to cut down things you usually do?” was analysed. A great proportion of severely hampered persons with chronic illness had had to cut down things they usually do (Table 43). The lowest share of severely hampered persons who had had to cut down things can be observed in France with around one-third, and the highest share in Finland with around two-thirds. In France around 10% were reported to be severely hampered, but only one-third had had to cut down things. Therefore, it could be expected that 3% of the French population need help with housework or personal help (or both).

Table 41. Age-structure of hampered persons with chronic illness by age groups and health status in EU countries*, 2001

Age-groups	Hampered in daily activities												No chronic illness				Total			
	Severely				To some extent				No				Not hampered in daily activities							
	1				2				3				3							
	Health status																			
	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total
Men																				
15 - 29	13,0	6,0	4,4	5,6	16,1	6,7	4,8	8,3	16,3	7,4	6,8	13,2	31,2	12,1	8,7	27,7	29,6	9,7	5,1	23,0
30 - 44	22,3	14,2	11,5	13,3	24,7	16,6	14,0	17,8	26,3	20,7	19,6	24,3	33,8	23,6	13,6	31,8	32,9	20,6	12,8	28,4
45 - 59	24,3	26,1	24,4	24,9	28,5	27,4	23,4	26,7	27,3	29,8	26,4	28,0	22,1	28,0	21,1	23,1	22,6	27,8	23,8	23,9
60 - 69	14,2	21,0	22,5	21,3	15,6	23,4	24,7	22,0	15,2	20,6	21,6	17,1	7,9	18,2	22,4	9,9	8,7	20,1	23,2	12,5
70 - 79	16,8	21,7	24,7	23,1	11,7	19,4	24,0	18,8	11,6	16,3	20,3	13,4	4,0	13,7	23,5	5,9	4,8	16,2	24,2	9,1
80 +	9,3	11,0	12,5	11,8	3,3	6,6	9,0	6,4	3,3	5,1	5,4	4,0	1,0	4,4	10,7	1,7	1,3	5,7	10,9	3,1
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Women																				
15 - 29	10,7	4,9	3,3	4,3	19,2	7,3	4,0	8,7	17,7	11,0	12,0	15,2	31,3	12,8	9,4	27,0	29,7	10,3	4,7	21,8
30 - 44	17,6	12,2	10,3	11,4	24,9	17,1	11,1	17,0	24,3	19,6	18,3	22,4	34,1	23,2	13,9	31,4	32,9	20,1	11,4	27,1
45 - 59	24,5	26,3	21,4	23,1	24,9	27,0	22,9	25,5	26,5	27,5	23,6	26,7	22,0	26,7	20,0	22,9	22,4	26,8	21,7	23,5
60 - 69	16,8	19,4	19,8	19,5	15,4	20,9	24,2	20,7	15,0	18,5	18,8	16,3	7,5	17,6	20,9	9,8	8,3	18,8	21,4	12,6
70 - 79	16,8	20,9	25,9	23,8	11,1	19,0	25,8	19,3	11,8	17,4	18,3	14,0	4,0	14,1	23,0	6,5	4,9	16,4	25,2	10,2
80 +	13,6	16,2	19,3	17,9	4,5	8,7	12,0	8,8	4,7	6,0	8,9	5,4	1,2	5,6	12,8	2,4	1,7	7,6	15,7	4,8
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total																				
15 - 29	11,8	5,4	3,7	4,9	17,7	7,0	4,3	8,6	17,0	9,3	9,7	14,2	31,3	12,5	9,1	27,3	29,7	10,1	4,9	22,4
30 - 44	19,9	13,1	10,8	12,2	24,8	16,9	12,3	17,3	25,3	20,1	18,9	23,3	33,9	23,4	13,8	31,6	32,9	20,3	12,0	27,7
45 - 59	24,4	26,2	22,7	23,9	26,6	27,2	23,1	26,0	26,9	28,6	24,8	27,3	22,0	27,3	20,4	23,0	22,5	27,2	22,5	23,7
60 - 69	15,6	20,1	20,9	20,2	15,5	22,0	24,4	21,3	15,1	19,5	20,1	16,7	7,7	17,9	21,4	9,8	8,5	19,3	22,1	12,5
70 - 79	16,8	21,2	25,4	23,5	11,4	19,2	25,1	19,1	11,7	16,8	19,2	13,7	4,0	13,9	23,2	6,2	4,9	16,3	24,8	9,7
80 +	11,5	14,0	16,4	15,3	4,0	7,8	10,8	7,8	4,0	5,6	7,4	4,7	1,1	5,1	12,1	2,1	1,5	6,7	13,7	4,0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

*) Luxembourg no information.

Health status: 1 = good/very good, 2 = fair, 3 = bad/very bad.

Source: ECHP.

Table 42. *Hampered persons with chronic illness by health status in participating countries 2001*

Participating countries	Chronic illness and hampered in daily activities												No chronic illness				Total			
	Severely				To some extent				No				Not hampered							
	Health status																			
	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total				
	Men																			
Belgium	0,5	11,1	64,3	5,0	4,0	26,6	23,8	8,6	4,0	7,1	2,4	4,4	91,5	55,1	9,5	82,0	100	100	100	100
Denmark	0,8	9,9	55,8	4,7	7,3	44,7	32,6	14,1	15,0	14,7	0,0	14,2	76,8	30,8	11,6	66,9	100	100	100	100
Finland	0,3	10,0	71,4	6,1	8,1	39,8	21,9	17,6	12,3	16,9	3,8	13,2	79,4	33,3	2,9	63,1	100	100	100	100
France**	1,5	12,4	69,7	9,5	5,3	25,6	18,9	12,7	-	-	-	-	93,1	62,0	11,4	77,9	100	100	100	100
Germany	0,2	3,9	43,9	8,1	7,2	46,7	48,2	26,6	1,6	2,2	1,2	1,8	91,0	47,1	6,7	63,5	100	100	100	100
Netherlands	1,1	14,0	72,7	6,3	6,4	42,7	18,8	13,8	4,3	9,9	1,9	5,3	88,1	33,4	6,5	74,6	100	100	100	100
Spain	0,8	6,2	44,7	5,4	1,9	21,4	32,9	8,5	4,7	15,7	7,5	7,2	92,6	56,6	14,9	78,9	100	100	100	100
UK*	3,8	22,7	65,7	12,3	-	-	-	-	24,6	34,0	15,2	25,8	71,6	43,3	19,2	62,0	100	100	100	100
	Women																			
Belgium	1,2	9,8	46,7	5,6	4,2	25,0	23,3	10,2	3,1	6,0	1,7	3,8	91,5	59,2	28,3	80,5	100	100	100	100
Denmark	0,5	11,8	65,0	7,4	9,3	50,1	23,4	18,8	14,0	15,2	0,0	13,3	76,2	22,9	11,7	60,6	100	100	100	100
Finland	0,2	10,7	65,3	6,7	9,7	47,7	28,5	21,6	13,7	14,1	1,4	13,2	76,3	27,5	4,9	58,5	100	100	100	100
France**	0,9	12,5	67,0	10,8	4,5	27,8	18,9	14,1	-	-	-	-	94,6	59,8	14,1	75,1	100	100	100	100
Germany	0,4	3,0	41,5	8,9	8,7	49,7	49,7	30,2	0,6	1,4	0,6	0,9	90,3	45,9	8,2	60,0	100	100	100	100
Netherlands	1,3	18,2	80,1	9,9	7,7	46,0	14,8	17,7	3,2	6,1	0,8	3,8	87,8	29,7	4,3	68,5	100	100	100	100
Spain	0,4	5,5	40,2	6,7	2,1	24,6	37,1	11,7	4,3	12,3	6,1	6,3	93,3	57,6	16,6	75,3	100	100	100	100
UK*	4,5	30,4	65,1	16,6	-	-	-	-	25,8	33,8	16,1	26,6	69,7	35,8	18,8	56,8	100	100	100	100
	Total																			
Belgium	0,9	10,3	53,9	5,3	4,1	25,6	23,5	9,4	3,6	6,4	2,0	4,1	91,5	57,7	20,6	81,1	100	100	100	100
Denmark	0,7	11,0	61,4	6,1	8,3	47,9	26,9	16,5	14,5	15,0	0,0	13,7	76,5	26,0	11,7	63,6	100	100	100	100
Finland	0,2	10,4	67,9	6,4	9,0	44,1	25,7	19,7	13,1	15,4	2,4	13,2	77,8	30,2	4,0	60,7	100	100	100	100
France**	1,2	12,4	68,1	10,2	4,9	26,8	18,9	13,4	-	-	-	-	93,9	60,7	13,0	76,4	100	100	100	100
Germany	0,3	3,4	42,6	8,5	7,9	48,3	49,0	28,5	1,1	1,8	0,8	1,3	90,6	46,5	7,6	61,7	100	100	100	100
Netherlands	1,2	16,5	77,3	8,2	7,1	44,7	16,3	15,9	3,8	7,6	1,2	4,5	88,0	31,2	5,1	71,4	100	100	100	100
Spain	0,6	5,9	41,9	6,1	2,0	23,1	35,6	10,1	4,5	13,9	6,6	6,7	92,9	57,1	16,0	77,0	100	100	100	100
UK*	4,2	27,1	65,3	14,6	-	-	-	-	25,3	33,9	15,7	26,2	70,6	39,0	18,9	59,2	100	100	100	100

Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health.- *) Severely and to some extent.- **) To some extent and No.
Source: ECHP.

The proportion of people with potential need for care is between 2.6% (Belgium) and 5.1% (Finland and the Netherlands). The figure for the UK is not fully comparable due to the fact that the item “to some extent” is included.

Table 43. Severely hampered persons with chronic illness who had to cut down things

Participating Countries	Proportion of people who had to cut down things they usually do on severely hampered persons in %													
	Age-groups													
	0 - 29	30 - 44	45 - 59	60 - 69	70 - 79	80 +	Total	0 - 29	30 - 44	45 - 59	60 - 69	70 - 79	80 +	Total
	1999							2001						
Belgium	42,9	52,8	46,6	41,5	48,7	45,7	47,1	25,0	59,5	56,3	51,5	42,9	45,2	49,8
Denmark	58,8	73,3	73,1	60,5	66,7	67,6	67,6	71,4	70,0	73,2	61,7	55,9	68,0	66,7
Finland	52,2	72,7	79,2	79,0	80,4	74,1	76,9	76,9	86,8	78,6	81,2	71,2	90,7	80,3
France	26,3	22,3	34,8	34,5	34,0	31,3	32,1	21,0	30,1	29,9	35,3	36,7	37,4	33,2
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	68,9	62,8	56,1	62,6	56,7	50,9	59,0	49,0	76,2	63,7	61,8	58,3	52,1	62,6
Spain	47,2	43,1	52,3	47,5	56,6	50,3	50,7	31,3	38,6	47,4	52,8	53,2	51,0	49,3
UK*	57,1	81,1	84,1	84,0	85,8	78,2	82,1	31,0	45,8	58,5	64,1	75,0	80,5	61,0

*) In 2001 severely and to some extent.

Source: ECHP; calculations by DIW.

The ECHP provides no information about the degree to which help is needed. Therefore, it could be assumed that these figures for the countries are the upper limit of ‘need for care’. Particularly in the younger and middle-aged groups, the degree to which help is needed will be low. In these age groups help is mostly provided by members of the family or friends. The potential of receiving informal care depends on the family structure. Table 44 shows that the share of married people among the severely hampered persons who had had to cut down things is nearly the same as in the total population on average, but among the share of widowed people it is far higher: around 58% were married, 8% were separated or divorced, 22% were widowed and 12% were never married. Widowhood increases with age and the proportion of the elderly is higher among hampered persons than among the total population. Thus around 48% of widowed severely hampered persons who had had to cut down things were aged 80+, compared with only 30% of the total widowed people (Table 45).

It can also be assumed that severely hampered persons, in particular those who have to cut down things, are to a great extent unable to work or to work full-time. On average 54% of people aged 15 to 29, 80% of people aged 30 to 44 and 69% of people aged 45 to 59 were normally working in 2001 (Table 46). The proportion of working people among severely hampered people who had had to cut down things is substantially lower: 33% in the age group 15 to 29, 43% of the age group 30 to 44 and 30% of the age group 45 to 59. Their constrained economic activity could lead to dependency on social benefits.

Severely hampered persons who are not normally working were asked for the reasons of stopping their previous job. Around 60% had never worked before and another 13% had had to stop a previous job because of his or her own illness (Table 47). The proportion of people who had never worked before is greater among women than men, whereas the share of stopping the job as a result of own illness is higher for men.

Table 44. Population, severely hampered persons and severely hampered persons who had to cut down things they usually do by age groups, gender and marital status in EU countries*, 2001

Age-groups	Total population						Severely hampered persons						Severely hampered and had to cut down things					
	Marital status in %																	
	Married	Separated	Divorced	Widowed	Never married	Total	Married	Separated	Divorced	Widowed	Never married	Total	Married	Separated	Divorced	Widowed	Never married	Total
15 - 29	17	0	0	0	82	100	14	1	1	0	84	100	19	1	2	0	78	100
30 - 44	69	2	5	1	24	100	50	2	13	1	34	100	60	1	13	1	26	100
45 - 59	80	1	8	3	8	100	71	1	11	4	12	100	73	1	12	4	10	100
60 - 69	77	1	5	12	5	100	71	0	8	12	8	100	70	1	8	14	8	100
70 - 79	62	0	3	28	6	100	59	0	4	30	7	100	58	1	3	31	7	100
80 +	36	0	2	55	7	100	32	0	3	59	6	100	31	0	2	61	6	100
Total	59	1	4	7	28	100	57	1	7	20	16	100	58	1	7	22	12	100

*) Without Luxembourg, Sweden.
Source: ECHP.

Table 45. Age-structure of population, severely hampered persons and severely hampered persons who had to cut down things they usually do by age groups, gender and marital status

Age-groups	Total population						Severely hampered persons						Severely hampered and had to cut down things					
	Age-structure by marital status in %																	
	Married	Separated	Divorced	Widowed	Never married	Total	Married	Separated	Divorced	Widowed	Never married	Total	Married	Separated	Divorced	Widowed	Never married	Total
15 - 29	7	8	2	0	65	23	1	4	0	0	27	5	1	3	1	0	23	4
30 - 44	32	43	34	2	23	28	11	29	22	1	27	12	12	17	21	0	24	12
45 - 59	32	35	42	11	6	24	30	37	38	5	19	24	29	37	41	4	19	23
60 - 69	16	9	14	20	2	12	25	11	22	13	11	20	24	13	22	13	13	20
70 - 79	10	4	6	37	2	10	24	14	12	36	11	23	25	23	10	35	14	25
80 +	2	1	2	30	1	4	9	5	6	46	6	15	9	7	5	48	8	17
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

*) Without Luxembourg, Sweden.

Source: ECHP.

Table 46. Population, severely hampered persons and severely hampered persons who had to cut down things by age groups, gender and employment status in EU countries*, 2001

Age-groups	Total Population				Severely hampered persons				Severely hampered and had to cut down things			
	Employment status in %											
	Normally working	Unemployed	In-active	Total	Normally working	Unemployed	In-active	Total	Normally working	Unemployed	In-active	Total
15 - 29	54	8	37	100	35	12	53	100	33	16	51	100
30 - 44	80	5	15	100	43	9	48	100	43	7	50	100
45 - 59	69	5	26	100	33	7	60	100	30	6	65	100
60 - 69	17	2	82	100	7	2	91	100	6	1	93	100
70 - 79	2	0	97	100	1	0	99	100	1	0	99	100
80 +	1	0	99	100	0	0	100	100	0	0	100	100
Total	53	5	42	100	17	4	80	100	15	3	83	100

*) Without Luxembourg.
Source: ECHP.

Table 47. Severely hampered persons with chronic illness not employed by age groups, gender and reasons stopping previous job in EU countries*, 2001

Age-groups	Men					Women					Total				
	Reasons stopping previous job - structure in %														
	Own illness	Wanted retire	Other	Not stopping	Total	Own illness	Wanted retire	Other	Not stopping	Total	Own illness	Wanted retire	Other	Not stopping	Total
15 - 29	15	0	17	69	100	12	0	21	67	100	13	0	19	68	100
30 - 44	22	1	26	51	100	19	3	33	45	100	21	2	30	47	100
45 - 59	33	1	32	34	100	19	1	29	51	100	24	1	30	44	100
60 - 69	24	2	40	34	100	13	1	24	62	100	18	1	31	50	100
70 - 79	11	1	43	45	100	5	1	17	77	100	8	1	28	64	100
80 +	5	2	24	70	100	2	0	8	90	100	3	1	13	83	100
Total	19	1	35	46	100	10	1	20	69	100	13	1	26	60	100

*) Without Luxembourg, Sweden.
Source: ECHP.

5.4 Informal care-giving

The ECHP also provided data about care-giving at home: The question is: “Do your present daily activities include, without pay, looking after children or other persons who need special help because of old age, illness or disability?”. The responses are “yes, looking after children”; “yes, looking after a person other than a child”; “yes, looking after a child and a person other than a child”; and “not looking after any person”. Additionally a question about the number of hours spent looking after a person other than a child is posed.

Table 48 shows the proportion of persons looking after children, persons who need special help because of old age, illness or disability, looking after both (adults and children) and persons who do not look after any other person in EU countries (without Luxembourg and Sweden) in 2001. Around 4% of persons in households looked after old or disabled persons and another 1.5% looked after old persons and a child. The share of people who looked after old or after old persons and children is greatest in the age group 45 to 59 (9%), followed by persons aged 60 to 69 (8.4%). The share of caregivers among women is on average twice as much as the share of care-giving men. In the age group 45 to 59 around 9% of women looked after old persons and another 3.5% looked after old persons and children. Only in the oldest age group (80+) is the share of care-giving men higher than the share of care-giving women. Care-giving in this age group is mainly care-giving to spouses. Table 49 shows that 90% of care-giving men aged 80+ are married, compared with only 45% of care-giving women aged 80+. The proportion of married men among caregivers aged 80+ is higher than the proportion among the population.

Table 50 shows the share of caregivers by health status. The share of caregivers is highest among people reporting fair health, on average 7%. The highest share of caregivers can be observed as women aged 45 to 59 in good/very good health (12.3%) and in fair health (12.2%). But also 6.4% of people reporting bad/very bad health are caregivers. The proportion of caregivers is higher for women than for men in all health status.

Care-giving women are on average younger than care-giving men (Table 51). About 60% of female caregivers are aged 30 to 59. The proportion of this age group in the population is only 50%. That is an indicator that care-giving is provided by spouses, but also by daughters and daughters-in-law, who are mostly middle-aged. In fact, as care-giving women are middle-aged, the connection between care-giving at home and employment plays a dominant role in the analysis of the development of the potential of informal care-giving. Thus a detailed analysis of care-giving and employment has been carried out and the results are debated separately in the next section.

But care-giving provided by elderly is also important. Around 18% of care-giving men and 14% of care-giving women are aged 70 and older. While midlife care-giving and employment are broadly discussed, the caregivers at retirement age are ignored in most studies. The increasing life expectancy for men and women leads to an increasing number of older persons living together (as spouses or partners). With respect to the expected health improvements in these age groups the potential source of informal caregivers will increase.

Table 48. Persons looking after other persons by age groups and gender in EU countries*, 2001

Age-groups	Men					Women					Total				
	Share of persons looking after ...														
	Child	Old persons	Both	Not looking	Total	Child	Old persons	Both	Not looking	Total	Child	Old persons	Both	Not looking	Total
15 - 29	6,2	1,0	0,2	92,6	100	19,6	1,6	0,6	78,2	100	13,0	1,3	0,4	85,3	100
30 - 44	32,9	1,4	0,9	64,7	100	57,7	2,1	3,6	36,6	100	45,6	1,8	2,3	50,3	100
45 - 59	13,2	4,5	1,1	81,2	100	21,5	8,6	3,5	66,3	100	17,5	6,6	2,4	73,5	100
60 - 69	5,7	5,7	0,9	87,7	100	13,1	8,2	1,9	76,9	100	9,6	7,0	1,4	82,0	100
70 - 79	4,0	5,0	0,3	90,7	100	6,2	7,1	0,5	86,1	100	5,2	6,2	0,4	88,2	100
80 +	0,9	5,4	0,1	93,6	100	1,8	4,6	0,2	93,4	100	1,5	4,9	0,2	93,5	100
Total	15,0	3,0	0,7	81,2	100	27,3	4,9	2,2	65,5	100	21,5	4,0	1,5	73,0	100

*) Without Luxembourg, Sweden.
Source: ECHP.

Table 49. Population and people looking after old persons by age groups, gender and marital status in EU countries*, 2001

Age-groups	Men						Women						Total					
	Marital status in %																	
	Married	Separated	Divorced	Widowed	Newer married	Total	Married	Separated	Divorced	Widowed	Newer married	Total	Married	Separated	Divorced	Widowed	Newer married	Total
	Population																	
15 - 29	13	0	0	0	87	100	23	1	0	0	76	100	18	0	0	0	81	100
30 - 44	67	1	4	0	27	100	72	2	6	1	19	100	70	2	5	1	23	100
45 - 59	83	2	6	1	8	100	78	2	9	6	6	100	81	2	7	4	7	100
60 - 69	85	1	4	5	5	100	71	1	5	19	5	100	78	1	4	12	5	100
70 - 79	80	0	2	13	5	100	48	0	3	43	6	100	62	0	2	30	5	100
80 +	64	1	1	30	4	100	19	0	2	73	6	100	35	0	2	57	5	100
Total	62	1	3	3	31	100	57	1	5	12	25	100	59	1	4	8	28	100
	People looking after only old persons or old persons and children																	
15 - 29	13	0	0	0	87	100	23	1	1	0	75	100	19	1	1	0	79	100
30 - 44	62	1	7	0	31	100	72	2	8	1	16	100	69	2	8	1	20	100
45 - 59	74	1	9	2	14	100	78	2	7	5	8	100	77	2	7	4	10	100
60 - 69	87	1	3	3	6	100	73	0	6	14	7	100	78	0	5	10	6	100
70 - 79	85	1	1	7	6	100	61	1	3	29	7	100	69	1	2	21	6	100
80 +	90	0	1	7	2	100	45	0	2	47	6	100	63	0	2	31	5	100
Total	73	1	5	3	19	100	69	1	6	9	14	100	70	1	6	7	16	100

*) Without Luxembourg, Sweden.

Source: ECHP.

Table 50. Daily activities includes looking after persons who need special help by age groups, gender and health status in EU countries, 2001*

Age-groups	Share of persons looking after old persons in %											
	Men				Women				Total			
	Health status											
	1	2	3	Total	1	2	3	Total	1	2	3	Total
15 - 29	1,1	1,9	1,4	1,2	2,0	3,3	4,1	2,2	1,5	2,7	2,9	1,7
30 - 44	2,2	3,0	3,0	2,3	5,2	7,0	9,0	5,7	3,7	5,2	6,4	4,1
45 - 59	5,5	5,9	5,6	5,6	12,3	12,2	11,1	12,1	8,9	9,3	8,7	9,0
60 - 69	7,3	7,1	5,1	6,9	10,6	10,7	7,7	10,1	8,9	9,2	6,6	8,6
70 - 79	5,6	5,8	3,9	5,3	9,1	7,4	6,7	7,7	7,3	6,7	5,6	6,6
80 +	7,3	5,3	4,3	5,5	5,1	4,2	5,4	4,8	6,1	4,6	5,0	5,1
Total	3,2	5,0	4,4	3,8	6,4	8,6	7,8	7,2	4,8	7,0	6,4	5,5

*) Without Luxembourg, Sweden.
Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health.
Source: ECHP.

Table 51. Age-structure of people looking after old persons and total population by gender and health status in EU countries, 2001*

Age-groups	Men				Women				Total			
	Health status											
	1	2	3	Total	1	2	3	Total	1	2	3	Total
Persons looking after old people or after old people and children												
15 - 29	9,8	3,8	1,6	7,1	9,2	4,0	2,4	6,7	9,4	3,9	2,2	6,8
30 - 44	22,0	12,4	8,6	17,7	26,6	16,5	12,8	21,6	25,1	15,2	11,7	20,4
45 - 59	37,8	33,0	30,1	35,5	42,6	38,0	30,5	39,6	41,0	36,4	30,4	38,3
60 - 69	19,4	25,9	26,9	22,2	13,6	23,7	21,3	17,8	15,5	24,4	22,9	19,2
70 - 79	8,2	18,9	22,0	12,9	6,6	14,2	22,0	10,9	7,1	15,7	22,0	11,6
80 +	2,9	6,0	10,8	4,6	1,4	3,7	11,0	3,3	1,9	4,4	10,9	3,7
Total	100	100	100	100	100	100	100	100	100	100	100	100
Total population												
15 - 29	29,8	9,8	5,1	23,1	30,1	10,2	4,6	21,9	29,9	10,1	4,8	22,5
30 - 44	33,1	21,1	12,7	28,6	33,1	20,2	11,1	27,1	33,1	20,6	11,7	27,8
45 - 59	22,4	28,4	23,7	23,9	22,2	26,7	21,4	23,3	22,3	27,5	22,3	23,6
60 - 69	8,7	18,3	23,0	12,1	8,2	18,9	21,6	12,6	8,4	18,7	22,1	12,4
70 - 79	4,7	16,5	24,5	9,1	4,7	16,4	25,4	10,2	4,7	16,5	25,0	9,7
80 +	1,3	5,8	11,0	3,1	1,7	7,5	15,8	4,9	1,5	6,8	13,9	4,0
Total	100	100	100	100	100	100	100	100	100	100	100	100

*) Without Luxembourg, Sweden.
Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health.
Source: ECHP.

If the trend of declining prevalence rates of long-term care in the ‘younger old’ age groups continues, then the need for long-term care will shift to higher ages. Therefore, it could be that daughters and daughters-in-law are at retirement ages when the need for

informal care-giving occurs. Therefore, the age-structure of potential caregivers may change and the share of carers at retirement age may increase. In 2001, 8.6% of people aged 60 to 69, 6.6% of people aged 70 to 79 and 5.1% of people aged 80+ were caregivers (see Table 50).

In EU countries most of the informal caregivers are women, but men also take on such responsibilities. Table 52 shows that around 68% of caregivers in EU countries are women and 32% are men. The share of female caregivers is highest in the age group 30 to 59 (around 70%). Nevertheless, a closer look reveals more complex gender patterns behind these general data. Gender differences appear even greater when measuring the responsibilities of care-giving. In most cases women retain primary responsibility and men are more in the role of 'assistant' (Jenson & Jacobzone, 2000). There is also a clear gender pattern in the type of tasks performed by men and women. Care-giving by women covers mainly personal care, emotional support, meal preparation and housekeeping, while care-giving by men mainly includes transportation, bills and banking, shopping and general monitoring. As a result women provide greater amounts of informal caring work than the average gender share represents.

Table 52. Share of women among caregivers and among population by gender and health status in EU countries, 2001*

Age-groups	Share of women in %			
	Health status			
	1	2	3	Total
	Persons looking after old or after old people and children			
15 - 29	65,2	69,9	80,0	66,6
30 - 44	70,6	74,5	79,7	72,1
45 - 59	69,0	71,6	72,8	70,2
60 - 69	58,1	66,7	67,7	62,9
70 - 79	61,6	62,2	72,5	64,3
80 +	48,4	57,3	73,0	60,1
Total	66,4	68,7	72,6	67,9
	Total population			
15 - 29	50,3	57,5	57,5	51,2
30 - 44	50,0	55,3	56,5	51,2
45 - 59	49,8	54,9	57,3	52,0
60 - 69	48,7	57,2	58,2	53,6
70 - 79	50,0	56,2	60,7	55,4
80 +	57,0	62,8	68,1	63,3
Total	50,0	56,4	59,8	52,6
*) Without Luxembourg, Sweden. Health status 1 = good/very good health, 2 = fair, 3 = bad/very bad health. Source: ECHP.				

Among the participating countries there are great differences in the share of people looking after old persons (Table 53). The lowest share of caregivers is revealed in Germany at 2%. The greatest share of caregivers at home can be observed in the UK at around 16%. In Belgium, the Netherlands, France and the UK the share of caregivers is highest among people aged 60 to 69, between 8% and 13% (in the UK 27%); in Denmark, Finland and Spain the highest share is among people aged 45 to 59. An exception is Germany: here the proportion of caregivers increases sharply with age.

Table 53. Proportion of people looking after old persons by age groups in participating countries 2001

Age-groups	Share of persons looking after old persons in %							
	Belgium	Denmark	Finland	France	Germany	Netherlands	Spain	UK
15 - 29	(1,6)	(1,7)	(1,4)	(1,1)	(-)	(1,9)	1,1	6,5
30 - 44	4,2	3,3	3,5	2,4	0,8	4,2	4,1	11,8
45 - 59	9,6	7,2	11,0	4,2	1,7	9,6	10,3	24,9
60 - 69	13,2	(5,7)	10,3	8,1	3,2	10,6	8,6	27,3
70 - 79	(4,7)	(7,7)	(8,4)	4,9	6,5	8,9	6,7	20,6
80 +	(-)	(-)	(13,3)	(4,0)	15,8	(8,7)	(2,1)	12,2
Total	6,1	4,6	6,4	3,6	2,0	6,6	5,3	16,1

() = Number of observations under 30.
Source: ECHP.

With the ECHP database it is possible to analyse the intensity of care-giving measured by the “number of hours per week spent looking after a person other than a child”. On average people spent more than 18 hours per week care-giving (see Table 67). Caregivers aged 70 to 79 spent 25 hours per week care-giving and caregivers aged 80+ spent 26 hours, whereas middle-aged caregivers (30-44) spent around 15 hours per week care-giving. This could be caused by a higher level of disability among the people in need of long-term care in the older age groups, whereby spouses especially have to spend a lot of time care-giving.

The intensity of care-giving has a large spread among the participating countries (Table 54). On average in 2001 caregivers in Finland and Denmark spent 13 hours per week looking after old persons are in Spain 41 hours per week. Generally, the intensity of care-giving increased with the age of the caregiver, because the age of caregivers is related to the age of the people receiving long-term care and with age the level of disability grows. In all countries, with the exception of the Netherlands, women spent more time care-giving than the total average of the population – mostly between one and two hours.

Information about the family status of people receiving long-term care at home is only available for Germany. On average around 46% of people receiving long-term care at home were widowed. This was much greater than in the total population and also among the population aged 70+. Especially within the ‘younger old’ group a greater share of beneficiaries are married. Three of four men receiving home care aged 60 to 80 are married, compared with only around 40% of women. Thus, the share of married

long-term care recipients was lower than in the population aged between 60 and 80. It could be expected that this figure will be similar in all EU countries.

Table 54. Mean value of hours per week looking after persons who need special help because of old age, illness and disability in participating countries 2001

Age-groups	Belgium	Denmark	Finland	France	Netherlands	Spain	UK*
	Total population						
15 - 29	(16,9)	(11,8)	(6,2)	(9,1)	(15,3)	27,2	2,4
30 - 44	14,6	13,8	7,4	10,4	15,7	33,1	2,9
45 - 59	15,2	8,6	11,9	11,8	16,2	38,5	2,7
60 - 69	16,1	(9,2)	16,8	17,7	16,2	47,9	3,1
70 - 79	(17,9)	(20,6)	(20,9)	15,9	18,7	51,6	3,4
80 +	(-)	(-)	(33,2)	(29,6)	(26,5)	(51,9)	4,9
Total	15,4	13,1	13,1	14,2	16,7	40,7	2,9
	Women						
15 - 29	(18,4)	(5,5)	(7,3)	(13,0)	(17,5)	(28,2)	2,5
30 - 44	13,9	(16,8)	(9,4)	11,4	15,5	33,2	3,2
45 - 59	17,6	11,4	12,1	13,4	17,1	41,5	2,8
60 - 69	17,5	(4,2)	16,1	18,8	15,4	50,7	3,1
70 - 79	(11,6)	(21,8)	(21,3)	20,6	14,6	54,5	3,3
80 +	(-)	(-)	(-)	(-)	(28,0)	(-)	4,1
Total	16,4	14,3	13,9	15,9	16,5	42,4	3,0
() = Number of observations under 30.- * Per Day							
Source: ECHP.							

Within the population, the share of widowed people decreased in the older age groups in all selected countries (Tables 55 to 59). But in the younger and middle-aged groups the share of single and divorced persons increased. Therefore, two opposite trends could be observed: an increase of the potential source of caregivers in the oldest age groups caused by increasing life expectancy (growing old together), and a decrease of potential of caregivers (spouses) in the younger and middle-aged groups. The latter observation could be relevant for future care-giving in families. The proportion of caregivers among never-married people was half of the proportion of caregivers among married people in 2001 (Table 60). But the proportion of caregivers among divorced people was on average higher than among married people. In particular, in the younger ages divorced women are caregivers to a higher degree than married women. It can be assumed that this is mostly care-giving to parents. Also the high share of caregivers among never-married women aged 45 to 69 may be mostly related to care-giving to parents.

Another point is that informal care-giving is easier if people in need of care live in the same household. Beside family status and family structure, household composition has an important influence on the potential of informal care-giving. In the older population single households are common. Most of these households consist of widowed women. With respect to the increasing life expectancy for men and women, household composition could change with more people growing old together. But changing marital behaviour and increasing divorces could have a contrary effect on this in the future.

Table 55. Men by marital status – United Kingdom

Age-groups	Changes between 1982 and 2000 in %-points				
	Single	Married	Separated	Divorced	Widowed
0-4	0,00	0,00	0,00	0,00	0,00
5-9	0,00	0,00	0,00	0,00	0,00
10-14	0,00	0,00	0,00	0,00	0,00
15-19	3,19	-0,60	0,00	0,00	0,00
20-24	17,72	-16,49	-0,70	-0,43	-0,11
25-29	38,90	-39,35	1,13	-0,68	0,00
30-34	31,96	-34,34	1,40	0,70	0,28
35-39	17,50	-23,40	2,20	3,10	0,60
40-44	9,78	-22,15	2,67	9,45	0,25
45-49	6,94	-16,73	2,47	7,56	-0,23
50-54	0,34	-11,71	2,69	9,59	-0,91
55-59	3,12	-11,76	3,21	6,49	-1,05
60-64	0,44	-7,85	3,16	6,70	-2,45
65-69	3,77	-5,26	1,23	4,73	-4,47
70-74	1,43	2,86	0,46	2,39	-7,15
75-79	0,58	-6,36	0,57	1,19	4,02
80-84	-2,45	14,87	-0,18	0,50	-12,74
85-89	-1,91	-11,24	5,16	6,06	1,93
90-94	-25,00	33,55	0,00	9,37	-17,92
95+	0,00	69,85	0,00	0,00	-69,85

Table 56. Men by marital status – Belgium

Age-groups	Changes between 2000/1981 in %-points			
	Single	Married	Divorced	Widowed
0-14	0,00	0,00	0,00	0,00
15-19	0,60	-0,60	0,00	0,00
20-24	23,88	-23,77	-0,09	-0,02
25-29	38,96	-38,95	0,06	-0,07
30-34	22,75	-25,03	2,40	-0,11
35-39	12,99	-18,02	5,17	-0,14
40-44	6,39	-14,40	8,21	-0,20
45-49	2,31	-11,84	9,78	-0,25
50-54	0,18	-8,77	9,01	-0,42
55-59	-0,37	-6,18	7,37	-0,82
60-64	-0,09	-3,84	5,13	-1,20
65-69	-0,66	-0,30	3,49	-2,54
70-74	-1,19	3,88	2,05	-4,74
75-79	-1,10	8,34	1,32	-8,56
80-84	-0,68	13,27	1,02	-13,60
85-89	0,03	11,06	0,92	-12,02
90-94	0,00	8,46	0,93	-9,40
95-99	-1,11	3,48	0,97	-3,34
100+	-6,46	4,18	-3,24	5,51
Total	2,13	-5,52	3,69	-0,31

Table 57. Men by marital status – Germany

Age-groups	Changes between 2000/1985 in %-points			
	Single	Married	Divorced	Widowed
0-19	0,09	/	/	/
20-24	5,64	-5,35	/	/
25-29	18,15	-17,62	-0,52	/
30-34	20,38	-19,92	-0,47	/
35-39	13,44	-14,11	0,76	-0,11
40-44	8,78	-10,40	1,88	-0,24
45-49	4,38	-8,31	3,75	0,10
50-54	3,07	-6,52	4,02	-0,53
55-59	3,06	-6,27	4,15	-0,89
60-64	2,40	-4,53	3,23	-1,14
65-69	1,82	-1,25	1,33	-1,85
70-74	0,15	0,68	0,73	-1,64
75 +	-0,64	3,29	0,32	-2,92
Total	0,76	-2,08	1,48	-0,16

Table 58. Men by marital status – France

Age-groups	Changes between 2001/1990 in %-points			
	Single	Married	Divorced	Widowed
15-19	0,2	-0,1	-0,1	0,0
20-24	3,2	-3,0	-0,1	-0,1
25-29	18,4	-17,9	0,0	-0,5
30-34	21,5	-20,5	-0,1	-0,9
35-39	16,5	-16,7	0,1	0,1
40-44	11,7	-13,7	0,0	2,0
45-49	5,6	-10,6	0,0	5,0
50-54	1,3	-6,7	-0,3	5,7
55-59	-1,4	-4,2	-0,3	5,9
60-64	-1,2	-1,5	-0,9	3,6
65-69	-0,7	-0,5	-1,0	2,2
70-74	1,3	-3,3	0,1	1,9
75-79	1,1	-1,5	-0,9	1,3
80-84	-1,2	3,6	-3,4	1,0
85-90	-0,4	4,2	-4,5	0,7
90 +	0,1	2,7	-0,6	-2,2
Total	3,7	-5,7	0,1	1,9

Table 59. Men by marital status – Spain

Age-groups	Changes between 1991/1981 in %-points			
	Single	Married	Divorced	Widowed
0-14	0,15	-0,13	-0,01	0,00
15-19	1,06	-0,97	-0,05	-0,04
20-24	9,70	-9,37	-0,10	-0,23
25-29	21,01	-20,92	-0,17	0,09
30-34	8,52	-9,42	-0,18	1,09
35-39	2,64	-4,21	-0,14	1,72
40-44	1,32	-2,56	-0,26	1,50
45-49	0,24	-1,08	-0,31	1,15
50-54	-0,14	-0,29	-0,33	0,75
55-59	0,93	-0,78	-0,55	0,39
60-64	1,37	-0,53	-0,94	0,10
65-69	0,32	1,44	-1,65	-0,11
70-74	-0,65	4,25	-3,43	-0,17
75-79	-0,87	6,56	-5,56	-0,14
80-84	0,15	8,12	-8,06	-0,21
85+	-0,22	5,80	-5,48	-0,09
Total	-1,49	1,09	-0,04	0,44

Table 60. Proportion of caregivers among population by age groups, gender and marital status in EU countries*, 2001

Age-groups	Share of care givers in %																	
	Men						Women						Total					
	Marital status																	
	Married	Separated	Divorced	Widowed	Never married	Total	Married	Separated	Divorced	Widowed	Never married	Total	Married	Separated	Divorced	Widowed	Never married	Total
15 - 29	1,1	0,0	0,0	0,0	1,1	1,1	2,2	4,7	6,6	0,0	2,1	2,2	1,8	3,3	4,7	0,0	1,6	1,7
30 - 44	2,1	1,0	3,9	0,0	2,6	2,3	5,7	5,7	7,2	7,1	5,0	5,7	4,0	3,9	5,9	6,0	3,6	4,0
45 - 59	5,0	5,5	8,1	7,6	9,7	5,6	12,2	14,0	9,5	9,6	16,8	12,1	8,6	10,1	9,0	9,3	12,8	9,0
60 - 69	6,7	6,1	5,6	4,2	7,4	6,6	10,4	3,6	11,6	7,5	14,6	10,1	8,5	4,8	9,2	6,9	11,0	8,4
70 - 79	5,6	10,0	3,3	3,1	6,0	5,3	9,8	11,1	7,5	5,1	9,0	7,7	7,4	10,6	6,0	4,8	7,7	6,6
80 +	7,7	0,0	4,3	1,3	3,2	5,5	11,5	0,0	5,5	3,1	4,6	4,8	9,0	0,0	5,1	2,7	4,2	5,1
Total	4,4	3,5	5,9	3,1	2,3	3,7	8,6	8,3	8,7	5,5	4,0	7,1	6,5	6,3	7,6	5,1	3,1	5,5

*) Without Luxembourg, Sweden.
Source: ECHP.

6. Care-giving and employment

Care-giving can have two contrary effects on the labour force participation of carers:

- a substitution effect, whereby the time required for informal care-giving reduces labour market participation, through either full withdrawal or reduction of hours worked; and
- an income effect, whereby the high costs of providing for a dependent elderly person may induce those responsible to increase their labour market participation so as to earn sufficient income to compensate for the costs.

The effects provide no single *a priori* outcome for caregivers, but the substitution effect may be stronger than the income effect in many cases (Jenson & Jacobzone, 2000). Two additional effects are reported (Carmichael & Charles, 1998):

- Paid work might be seen as a way of obtaining respite from heavy caring work and the associated mental pressure.
- Carers may search for a job that can be combined with care-giving responsibilities. In most cases these jobs are less rewarding.

Spiess & Schneider (2001) analysed the empirical relationship between the changes in care-giving and changes in weekly working hours in a European context. Data stem from the ECHP. Their study shows that starting or increasing care-giving goes in line with a decrease of weekly working hours. Their findings suggest that middle-aged women do not return to employment or resume their former work hours after stopping or reducing the provision of care. They mentioned that the reason for the last pattern could be twofold: “It either could express the loss of human capital which prevents women from returning to the labour market or it could indicate a strong motivation to hold on to jobs that were hard to find in the first place” (p. 20).

Schneider, Drobnic & Blossfeld (2001) analysed the relationship between the employment behaviour of married women and changes in care-giving in Germany. They used data from the German Socio-Economic Panel, a questionnaire circulated to private households in Germany since 1984. The empirical results of their study showed that, if the need of long-term care-giving occurs within the household, married women will have a higher probability giving up their employment. This probability does not depend on the number of hours previously worked. Care-giving to the elderly within the same household leads mostly to a change to non-employment and not only to a reduction of working hours.

Care-giving is in most cases a hard burden and employment and care-giving are often not compatible. Therefore, it can be expected that the proportion of caregivers among employed people is lower than among inactive people. Another question is whether caregivers represent a higher share of part-time workers than average. Additionally, it is interesting to investigate what extent looking after old persons was the reason for stopping a job.

The ECHP provided data about the main activity status, full-time work, part-time work and reasons for stopping the previous job. People who are normally working have a lower probability of becoming a care giver than people who are unemployed or inactive (Table 61). In the middle-aged group (30 to 44) around 3% of normally working people

(both genders) are caregivers, compared with 5.5% of unemployed people and 8.4% of inactive people. The share of caregivers at 13.5% is highest among inactive people aged 45 to 59. The share of caregivers is higher among women than men. This is true for all employment statuses. The share of caregivers among normally working, middle-aged women (30 to 44 years old) amounts to 4.3%; among unemployed women it is 7.6% and among inactive women it is 8.7%. The greatest share of caregivers can be observed among inactive women aged 45 to 59 (14.6%).

Table 61. Proportion of caregivers on population by employment status, gender and age groups in EU countries, 2001*

Age-groups	Share of people looking after old persons in %		
	Main Activity Status		
	Normally working	Unemployed	Inactive
Women			
15 - 29	1,9	3,2	2,2
30 - 44	4,3	7,6	8,7
45 - 59	10,3	11,5	14,6
60 - 69	9	-	10,3
70 - 79	-	-	7,6
80 +	-	-	4,7
Men			
15 - 29	1,2	-	0,4
30 - 44	2,1	-	-
45 - 59	4,9	6,8	9,6
60 - 69	4,3	-	7,2
70 - 79	-	-	5,3
80 +	-	-	5,4
Total			
15 - 29	1,5	2,5	1,8
30 - 44	3,1	5,5	8,4
45 - 59	7,1	9,4	13,5
60 - 69	5,8	-	9,0
70 - 79	-	-	6,6
80 +	-	-	5,0

*) Without Luxembourg, Sweden.
Source: ECHP.

Table 62 shows the employment status of people looking after older persons. The employment status and working hours of caregivers in 1996–2001 is shown in Appendix II. On average, 39% of caregivers were employed, 5% were unemployed and 57% were inactive in EU countries in 2001. The share of employed persons among the

caregivers is lower than in the total population or among people not looking after older persons. Around 61% of caregivers aged 30 to 44 and 54% of caregivers aged 45 to 59 were employed (both genders), but 80% of those not looking after an elderly dependent aged 30 to 44 and 69% aged 45 to 59 are employed (Table 63).

Table 62. People looking after old by employment status in EU countries, 2001 (%)*

Age-groups	Care givers by employment status in %		
	Normally working	Unemployed	Inactive
Women			
15 - 29	41,8	13,1	45,1
30 - 44	50,5	8,1	41,3
45 - 59	46,0	5,0	49,0
60 - 69	8,8	0,8	90,4
70 - 79	1,4	0,0	98,6
80 +	1,5	0,0	98,5
Total	33,7	4,8	61,5
Men			
15 - 29	60,0	11,9	28,1
30 - 44	86,9	4,8	8,3
45 - 59	72,3	5,6	22,0
60 - 69	15,6	2,6	81,8
70 - 79	3,7	0,0	96,3
80 +	2,3	0,0	97,7
Total	49,5	4,3	46,2
Total			
15 - 29	47,9	12,7	39,5
30 - 44	60,7	7,2	32,1
45 - 59	53,9	5,2	40,9
60 - 69	11,3	1,5	87,2
70 - 79	2,2	0,0	97,8
80 +	1,8	0,0	98,2
Total	38,8	4,6	56,6
*) Without Luxembourg, Sweden. Source: ECHP.			

Table 63. Daily activities includes looking after persons live in the same household or elsewhere by age groups and employment status in EU countries*, 2001

Age-groups	Employment status																			
	Normally working					Unemployed					Inactive					Total				
	Looking after persons living in ...																			
	same household	elsewhere	both	not looking ¹⁾	Total	same household	elsewhere	both	not looking ¹⁾	Total	same household	elsewhere	both	not looking ¹⁾	Total	same household	elsewhere	both	not looking ¹⁾	Total
Women																				
15 - 29	34	50	-	47	46	(19)	(7)	-	9	9	47	43	-	44	44	100	100	100	100	100
30 - 44	45	56	-	68	67	(6)	10	-	6	6	49	34	(62)	27	27	100	100	100	100	100
45 - 59	39	51	(46)	54	53	5	5	-	5	5	56	43	(54)	41	42	100	100	100	100	100
60 - 69	(8)	10	-	10	10	-	-	-	1	1	91	89	(91)	89	89	100	100	100	100	100
70 - 79	-	-	-	1	1	-	-	-	-	-	98	99	-	99	99	100	100	100	100	100
80 +	-	-	-	-	-	-	-	-	-	-	97	(100)	-	100	100	100	100	100	100	100
Total	27	41	33	42	42	4	5	3	5	5	69	54	64	53	53	100	100	100	100	100
Men																				
15 - 29	62	58	-	59	59	-	-	-	8	8	(26)	(31)	-	32	32	100	100	100	100	100
30 - 44	84	91	-	92	92	-	-	-	4	4	(11)	(7)	-	3	4	100	100	100	100	100
45 - 59	68	76	-	83	83	(6)	(18)	-	4	4	26	19	-	13	13	100	100	100	100	100
60 - 69	(14)	18	-	24	24	-	-	-	1	1	83	81	-	75	75	100	100	100	100	100
70 - 79	-	-	-	5	5	-	-	-	-	-	94	99	-	95	95	100	100	100	100	100
80 +	-	-	-	(1)	(1)	-	-	-	-	-	98	(100)	-	99	99	100	100	100	100	100
Total	43	59	42	63	63	4	4	3	4	4	53	38	55	33	33	100	100	100	100	100
Total																				
15 - 29	43	52	-	53	53	(17)	(8)	-	9	9	40	39	-	38	38	100	100	100	100	100
30 - 44	57	65	(42)	80	79	(6)	8	-	5	5	37	27	(54)	15	16	100	100	100	100	100
45 - 59	47	59	(45)	69	67	5	5	-	4	4	48	36	(53)	27	28	100	100	100	100	100
60 - 69	10	13	-	17	16	-	-	-	1	1	88	86	(88)	82	82	100	100	100	100	100
70 - 79	(3)	-	-	3	3	-	-	-	-	-	97	99	-	97	97	100	100	100	100	100
80 +	-	-	-	(1)	1	-	-	-	-	-	98	(100)	-	99	99	100	100	100	100	100
Total	32	46	36	53	52	4	5	3	5	5	64	49	61	43	44	100	100	100	100	100

*) Without Luxembourg, Sweden and Germany.
1) not looking after any person other than a child.
Source: ECHP.

Around one-third of female caregivers are normally working in the age group of 30 to 44 51% (Table 62). Female caregivers are generally not employed. On average, 62% of care-giving women are not employed (inactive) and among the middle-aged the share of inactive women who are caregivers (41%) is higher than for women not looking after old persons (27%).

It could be expected that care-giving would be easier if the people in need for care live in the same household. But Table 63 shows that the proportion of employed caregivers is lower if the people in need for care live in the same household. Perhaps the dependency level is higher for people living in the same household than for people receiving care living elsewhere (mostly in their own apartment). A total of 47% of people receiving care live in the same household as their caregiver and 51% elsewhere.

Around 84% of employed women worked full-time, 16% part-time, but nearly all men (98%) worked full-time in 2001 (Table 64). Whereas the share of part-time workers among employed men is the same whether they are looking after an older people or not, the share of part-time workers is higher if employed women are caregivers: 20% worked part-time. Still higher is the share of part-time workers if women have to look after children (26%).

Table 64. Working people looking after other persons by age groups, gender and working time in EU countries*, 2001

Age-groups	Working time											
	Full time				Part time				Total			
	Looking after ...											
	child	old/ old+child	not looking	total	child	old/ old+child	not looking	total	child	old/ old+child	not looking	total
	Total											
15 - 29	87	87	94	93	13	13	6	7	100	100	100	100
30 - 44	85	87	97	92	15	13	3	8	100	100	100	100
45 - 59	86	89	94	92	14	11	6	8	100	100	100	100
60 - 69	77	75	90	89	(23)	(25)	10	11	100	100	100	100
70 - 79	-	-	74	75	-	-	26	25	100	100	100	100
80 +	-	-	-	-	-	-	-	-	-	-	-	-
Total	85	87	95	92	15	13	5	8	100	100	100	100
	Women											
15 - 29	82	82	91	89	18	18	9	11	100	100	100	100
30 - 44	73	79	93	82	27	21	7	18	100	100	100	100
45 - 59	73	83	86	83	27	17	14	17	100	100	100	100
60 - 69	71	57	80	77	29	43	20	23	100	100	100	100
70 - 79	-	-	66	68	-	-	(34)	(32)	100	100	100	100
80 +	-	-	-	-	-	-	-	-	-	-	-	-
Total	74	80	89	84	26	20	11	16	100	100	100	100
	Men											
15 - 29	97	93	96	96	(3)	-	4	4	100	100	100	100
30 - 44	98	99	99	99	2	-	1	1	100	100	100	100
45 - 59	97	97	98	98	3	(3)	2	2	100	100	100	100
60 - 69	84	91	94	94	-	-	6	6	100	100	100	100
70 - 79	-	-	77	77	-	-	23	23	100	100	100	100
80 +	-	-	-	-	-	-	-	-	-	-	-	-
Total	98	97	97	98	2	3	3	2	100	100	100	100

*) Without Luxembourg, Sweden. - () = Number of observations under 30.
Source: ECHP.

Another question of the ECHP provides detailed information about the activity status. In Table 65 the items are grouped. For people looking after old persons it is interesting to observe whether a higher proportion works less than 15 hours per week or if they (only) do housework and look after the elderly. On average around 1% of those surveyed are working less than 15 hours per week, compared with 2.2% of people who look after old persons. Notably, 3.1% of men who look after old persons are working less than 15 hours, but only 1.8% of women. Otherwise, the share of women doing housework is much higher for women looking after old persons (34%) than in the average population (24%), and still higher than the share of 'housemen' looking after old people (3.5%).

The relatively high share of inactive people among caregivers leads to the question of whether care-giving was the main reason for stopping a previous job. On average only 1.2% of caregivers reported that the reason for stopping the job was looking after old persons in 2001 (Table 66). Among currently inactive care-giving people the share (1.7%) was a little bit higher. The majority of care-giving people never worked before (item: not stopping a previous job). That could be a sign that the hypothesis that caregivers are mostly family-oriented women is true.

The intensity of care-giving can be shown by using the mean value of hours per week looking after old persons. Normally working caregivers spent on average around 12 hours per week on care-giving, unemployed persons spent around 19 hours and inactive people spent around 23 hours (Table 67). The number of care-giving hours increases with age independently from the activity status. Inactive people aged 70+ spent the highest amount of hours care-giving – 25 to 26 hours.

Caregivers at home are mostly women, who do not work. They also spend more time care-giving than men. Normally working women spent on average 13.6 hours on care activities, unemployed women spent 19.7 hours and inactive women spent 24.6 hours per week in 2001. The highest amount of care-giving hours were spent by inactive women in the older ages. The level of disability increases with age and therefore the intensity of care-giving.

Family-oriented women are more often caregivers than career-oriented women. But the share of family-oriented women has decreased in all EU countries and it is assumed that this trend will continue in the future. One indicator of changing behaviour is the employment rate of women. In the middle-aged group in particular employment has increased (Figure 49). Together with an increasing share of single and divorced women, the potential source of informal caregivers could decrease.

The strength of the connection between hours looking after old persons and age, gender, health status, employment status, family status and income can be shown using the Pearsons' two-way correlation and a regression analysis. Table 68 shows the results of the Pearsons' correlation. Each variable has the expected sign and a high significance on the hours looking after old persons. The highest influence of a single variable is the employment status.

Table 65. People by age groups, main activity status and looking after other persons in EU countries*, 2001

Age-groups	Main activity status						Total
	Working 15+ hours	Education training	Unemployed	Retired other	Housework looking people	Working less 15 hours	
looking after children							
15 - 29	54,8	6,7	8,8	3,2	25,6	0,9	100
30 - 44	73,4	0,7	4,9	1,8	18,5	0,7	100
45 - 59	61,4	(0,3)	4,8	6,4	26,4	0,6	100
60 - 69	9,0	-	(0,9)	56,6	32,5	(0,9)	100
70 - 79	-	-	-	75,5	22,1	-	100
80 +	-	-	-	74,6	(25,4)	-	100
Total	63,0	1,4	5,1	7,9	21,9	0,7	100
Women	51,6	1,6	5,7	7,8	32,5	0,9	100
Men	85,7	1,1	3,9	8,2	0,7	0,5	100
looking after children and old persons or only old persons							
15 - 29	47,9	18,6	12,7	(3,7)	16,1	-	100
30 - 44	60,7	-	7,2	4,3	25,4	(2,1)	100
45 - 59	53,9	-	5,2	11,4	26,4	2,8	100
60 - 69	11,3	-	(1,5)	59,9	24,6	2,7	100
70 - 79	(2,2)	-	-	76,4	20,5	-	100
80 +	-	-	-	85,3	(11,9)	-	100
Total	38,8	1,4	4,6	29,0	23,9	2,2	100
Women	33,7	1,5	4,8	24,6	33,7	1,8	100
Men	49,5	1,4	4,3	38,2	3,5	3,1	100
not looking after any person							
15 - 29	53,7	33,7	8,3	1,9	1,7	0,6	100
30 - 44	85,9	0,9	5,4	2,6	4,3	0,9	100
45 - 59	71,0	0,2	4,9	10,5	12,1	1,2	100
60 - 69	17,7	(0,1)	1,6	61,8	17,7	1,1	100
70 - 79	2,8	-	-	80,4	16,2	0,5	100
80 +	(0,5)	-	-	85,3	13,9	(0,3)	100
Total	50,2	9,1	4,6	26,0	9,2	0,9	100
Women	39,6	10,1	4,7	25,9	18,7	1,1	100
Men	59,6	8,2	4,6	26,1	0,9	0,6	100
Total							
15 - 29	53,8	29,9	8,5	2,1	5,1	0,7	100
30 - 44	79,2	0,8	5,2	2,3	11,6	0,8	100
45 - 59	67,8	0,2	4,9	9,8	15,9	1,3	100
60 - 69	16,3	(0,1)	1,6	61,1	19,7	1,2	100
70 - 79	2,7	-	(0,1)	79,8	16,8	0,5	100
80 +	(0,6)	-	-	85,1	13,9	(0,3)	100
Total	52,3	7,0	4,7	22,3	12,8	0,9	100
Women	42,4	7,2	4,9	20,9	23,5	1,1	100
Men	63,1	6,9	4,5	23,8	1,0	0,7	100

*) Without Luxembourg, Sweden.- () = Number of observations under 30.

Source: ECHP.

Table 66. Persons looking after old people by reasons stopping previous job in EU countries*, 2001

Age-groups	Persons who are looking after old people							Total
	Reasons stopping previous job in %							
	Marriage	Looking child	Looking old	Own illness	Better job	Other	Not stopping	
	Inacitve people							
15 - 29	0,0	3,4	2,0	2,0	0,0	20,1	72,5	100
30 - 44	1,4	15,6	3,6	3,1	3,9	22,5	50,0	100
45 - 59	0,9	5,3	2,6	7,1	9,4	17,7	57,0	100
60 - 69	0,2	1,7	1,1	7,7	21,2	20,8	47,3	100
70 - 79	0,2	1,7	0,5	6,0	22,8	11,0	57,9	100
80 +	0,0	1,0	0,0	1,0	18,4	3,6	76,0	100
Total	0,5	4,4	1,7	6,0	14,9	17,1	55,4	100
	Total							
15 - 29	0,0	2,1	1,3	1,8	10,4	31,3	53,1	100
30 - 44	2,8	8,9	1,5	2,2	18,1	31,6	34,9	100
45 - 59	3,1	3,8	1,5	4,1	15,3	23,3	49,0	100
60 - 69	0,8	1,7	0,9	6,9	20,4	22,0	47,2	100
70 - 79	0,3	1,7	0,5	5,8	22,2	11,2	58,3	100
80 +	0,0	1,0	0,0	1,5	18,0	3,5	76,0	100
Total	2,0	4,0	1,2	4,2	17,4	23,3	48,0	100

*) Without Luxembourg, Sweden.

Source: ECHP.

The regression shows similar results: all variables are highly significant with the exception of family status in 2000 and 2001, and education in 2001 (Table 69). The highest influences on the amount of care-giving hours are gender followed by employment status and health status (related to age).

Table 67. Mean value of hours per week looking after persons who need special help because of old age, illness and disability in EU countries, 2001*

Age-groups	Main Activity Status			
	Normally working	Unemployed	Inactive	Total
Women				
15 - 29	11,8	24,5	16,2	15,5
30 - 44	12,8	17,4	20,9	16,5
45 - 59	14,1	19,0	25,3	19,8
60 - 69	15,0	-	25,3	24,5
70 - 79	-	-	26,8	26,6
80 +	-	-	29,3	29,5
Total	13,6	19,7	24,6	20,6
Men				
15 - 29	5,2	-	11,7	7,3
30 - 44	9,8	-	-	11,0
45 - 59	8,7	22,7	13,4	10,5
60 - 69	11,9	-	16,8	16,5
70 - 79	-	-	20,8	20,4
80 +	-	-	21,2	21,0
Total	9,0	17,6	17,5	13,2
Total				
15 - 29	8,9	19,2	15,2	12,7
30 - 44	11,7	16,7	20,9	15,0
45 - 59	12,0	20,1	23,4	17,1
60 - 69	13,4	-	22,5	21,6
70 - 79	-	-	24,8	24,5
80 +	-	-	25,8	25,8
Total	11,7	19,1	22,8	18,3
*) Without Germany, Luxembourg, Sweden. Source: ECHP.				

Figure 49. Labour force participation rates for women aged 45 to 49

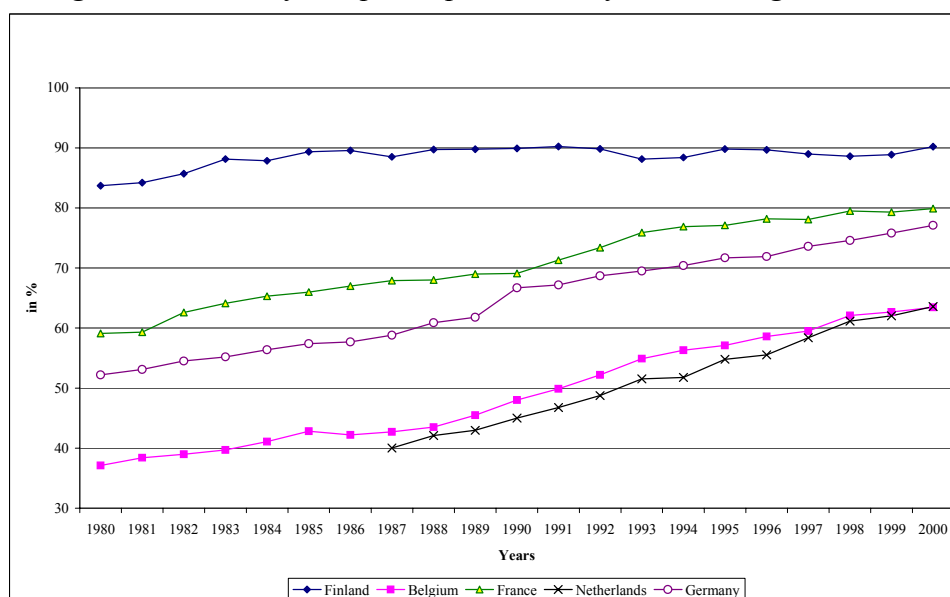


Table 68. Pearsons' two-way correlation in EU countries*, 2000 and 2001

	Hours looking after old persons	
	Coefficient	Significance
2000		
Age	0,167	0,000
Women	0,141	0,000
Good health	-0,147	0,000
High education	-0,096	0,000
Married	0,080	0,000
Employed	-0,180	0,000
Inactive	0,161	0,000
Income	0,088	0,000
2001		
Age	0,167	0,000
Women	0,158	0,000
Good health	-0,129	0,000
High education	-0,085	0,000
Married	0,121	0,000
Employed	-0,225	0,000
Inactive	0,191	0,000
Income	0,103	0,000

*) Without Luxembourg, Sweden and Germany.
Source: ECHP.

Table 69. Regression of hours looking after old persons in EU countries, 2000 and 2001*

	Coefficient	T	Significance
		2000	
Absolute term	16,272	9,604	0,000
Age	0,126	4,862	0,000
Men	-4,663	-6,259	0,000
Good Health	-2,254	-3,526	0,000
High education	-2,450	-3,349	0,001
Low education	1,911	3,290	0,001
Married	0,748	0,722	0,470
Employed	-4,191	-8,144	0,000
Inactive	4,128	8,169	0,000
Income	0,000	3,821	0,000
		2001	
Absolute term	16,298	9,411	0,000
Age	0,121	4,458	0,000
Men	-5,379	-6,943	0,000
Good Health	-3,114	-5,211	0,000
High education	-0,814	-0,862	0,389
Low education	4,264	6,227	0,000
Married	0,322	0,318	0,751
Employed	-5,131	-8,125	0,000
Inactive	3,936	6,261	0,000
Income	0,000	5,032	0,000
*) Without Luxembourg, Sweden and Germany.			
Source: ECHP.			

7. Concluding remarks

In all EU countries people live longer and often in better health. Age and health status are important drivers of health care utilisation, but the improvements in life expectancy do not lead to lower utilisation rates in all countries. It could mostly be assumed that mortality could be prevented by an intensive use of hospital treatments and outpatient services. Medical and technological progress has improved the possibilities of preventing mortality, but at the same time this seems to be closely connected with higher utilisation. This fact could be shown by empirical analyses based on national sources of each single participating country, as well as by analyses based on the ECHP.

Health status depends on, among other things, health behaviour, which is influenced by socio-economic factors such as education, family status and income. It is assumed that a higher education level leads to a healthier lifestyle. This includes more health-related activities and perhaps more preventive doctor visits on the one hand, and a better health status and therefore fewer doctor visits owing to illness on the other. Furthermore, it is assumed that married people have a healthier lifestyle than single or widowed persons, and also that a higher income may be connected with a healthier lifestyle. The regression analysis shows in the case of hospital utilisation that a higher education leads to fewer days spent in a hospital. The analysis reveals that single persons (or widowed or divorced) have a higher number of hospital days and that personal income plays a role. In the case of outpatient utilisation, the regression analysis shows that married people go to a doctor more often, as do people with a lower education. Personal income is a significant indicator, but the influence is marginal.

Inpatient utilisation and outpatient utilisation are well-documented, but information about the number of people in need of long-term care is rare. Long-term care-giving seems to be the task of the family, and caregivers are mostly spouses, daughters and daughters-in-laws respectively. Data could be collected for care-giving in institutions and in some countries for care-giving at home by professional caregivers, but with the exception of Germany, no information exists about informal care-giving at home.

Long-term care-giving in institutions and professional care-giving at home is related to the oldest old. The prevalence rates (the share of long-term care recipients within the population of the same age) increase sharply from the age of 70 onwards. People receiving professional long-term care at home are on average younger than institutionalised persons. Women have a higher probability of needing long-term care than men. This is related to the higher proportion of widowed women in the oldest age groups. The prevalence rates for people receiving long-term care in institutions show no clear trend: in two countries the prevalence rates decreased, in the other three countries the prevalence rates increased, especially among the oldest age groups.

Improvements in life expectancy do not seem to be directly connected with long-term care-giving in institutions. This could be caused by political decisions. In most countries there are waiting lists for nursing homes and there is a de-institutionalisation strategy. Therefore, an improvement in life expectancy is only one of several factors that influence institutionalisation. The prevalence rates for long-term care-giving at home by professional caregivers are stable in most countries. This could be the result of two contrary effects: a de-institutionalisation strategy, which prefers care-giving at home over care-giving in institutions, and improvements in life expectancy.

The ECHP provided data about the severely hampered persons in households. Severe disability is a good proxy for the need for long-term care. Therefore, data about the severely hampered persons were used to obtain an idea about the number of people at home in need of long-term care. Around 3 to 5% of the population (in EU countries) is reportedly severely hampered in their daily activities and have had to cut down on the things they usually do. The share of severely hampered persons increases with age along with the deterioration of health status.

Care-giving at home is in most cases a difficult burden for informal caregivers and on average a full-time job. The share of caregivers is higher among women than men and

among inactive people than employed persons. The highest share of caregivers can be observed among those aged 45 to 59. Regression analysis shows that age, gender, employment status, health status and income have a significant influence on the hours of care-giving at home. The highest influences are gender – women spend many more hours care-giving than men – and employment status. The share of caregivers and the number of hours spent on care-giving are lower among employed persons than among unemployed or inactive persons. Inactive women in the oldest ages spend the largest number of hours care-giving at home.

Employment and care-giving seems to be adversely related. Studies show that if care-giving occurs within the household (or family) a great number of women – especially married women – give up their jobs.

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Appendix I

*Table A1. Reference instruments for measuring functional and ADL disability**

Katz (1963) ¹	OECD (1982) ³ (*Long term disability 10 items minimum core set)	WHO-Euro (1996) ⁴ and Euro-REVES (2000) ⁵
Dressing	Dress and undress*	Dress
Transfer from bed and chair	Get in and out of bed*	Transfer from bed
		Transfer from chair
Bathing	–	Wash hands and face
Toileting	–	Get to and use the toilet
Feeding	Can you cut your own food*	Feed, including cutting up food
Contenance	–	Contenance
Nagi (1976)²		
Standing for long periods	–	–
Lifting or carrying weights	Carry an object of 5 kilos for 10 meters*	–
Going up and down stairs	Walk up and down one flight of stairs without resting*	Stairs (optional)
Walking	Walk 400 meters without resting*	Locomotion
Stooping, bending or kneeling	Bend down (when standing) and pick up shoe	Retrieval (optional)
Using hands and fingers	–	–
Reaching with either/both arms	–	–
–	Move between rooms*	Mobility
–	Speaking*	Speaking (optional)
–	Hear normal conversation with another* Hear normal conversation with 3 or 4 other persons	Hearing
–	Read ordinary newsprint* See the face of someone from 4 metres	Seeing
–	Run 100 meters	–
–	Cut your toenails	–
–	Bite and chew on hard foods	–

Notes: * Adapted from Robine and Jagger (1999).

¹“Do you perform ...” without supervision, direction or personal assistance.

²“Do you have any difficulty...” is coded as no difficulty, some difficulty, great difficulty.

³“Can you ...” is coded as yes without difficulty, with minor difficulty, major difficulty, unable to do.

⁴“Can you ...” is coded as without difficulty, with some difficulty, only with someone to help.

⁵The last seven items relate to the Euro-REVES recommendations to measure “physical and sensory functional limitations” while the first five items relate to their recommendations for measuring “ADL restrictions” (with some adjustments).

Source: Gudex & Lafortune (2000).

Table A2. Overview of three generic health measurement instruments

	EuroQol-5D	SF-36	HUI-3
Number of questions	5	36	31
Skip patterns	No	No	Yes
Reference period	Today	Last four weeks	Usual
Number of dimensions	5	8	8
Dimensions	Mobility (1) Self-care (1)	Mobility (9) & Self-care (1)	Mobility (7) Dexterity (4) Vision 5 Hearing_(5) Speech_(4)
	Anxiety/depression 1)	Emotional well-being (5)	Emotional well-being (1) Cognition (2)
	Pain/Discomfort (1)	Pain (2)	Pain (3)
		Vitality/energy/fatigue (4)	
	Usual activities (1)	Role of limitations due to physical problems (4) Role of limitations due to emotional problems (3) Social functioning due to physical or emotional problems (2)	
		General health perceptions (6)	

Note: Numbers in brackets indicate the number of items related to each dimension.

Source: Gudex & Lafortune (2000).

EuroQol (EQ-5D)

(Brooks et al., 1996)

Respondents are asked to choose one statement from each component below, which best describes their current health state:

Mobility

I have no problems in walking about
I have some problems in walking about
I am confined to bed

Self-care

I have no problems with self-care
I have some problems washing or dressing myself
I am unable to wash or dress myself

Usual activities (e.g. work, study, housework, family or leisure activities)

I have no problems with performing my usual activities

I have some problems with performing my usual activities
 I am unable to perform my usual activities

Pain/discomfort

I have no pain or discomfort
 I have moderate pain or discomfort
 I have extreme pain or discomfort.

Anxiety/depression

I am not anxious or depressed
 I am moderately anxious or depressed
 I am extremely anxious or depressed

MOS 36-item short form general health survey (SF-36): Items from the UK English version¹

(Ware and Sherbourne, 1992, Jenkinson et al., 1993)

Mobility & self-care

Does your health limit you in these activities:

Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports?
 Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling or playing golf?
 Lifting or carrying groceries? Climbing several flights of stairs? Climbing one flight of stairs?
 Bending, kneeling or stooping? Walking more than a mile? Walking half a mile? Walking 100 yards? Bathing or dressing yourself?

Yes, limited a lot/Yes, limited a little/No, not limited at all.

Daily activities

During the past four weeks, have you had any of the following problems with your work or other regular daily activities, as a result of your physical health? Y/N

- a) cut down on the amount of time you spent on work or other activities?
- b) accomplished less than you would like?
- c) were limited in the kind of work or other activities?
- d) had difficulty performing the work or other activities (e.g. it took extra effort)?

During the past four weeks, have you had any of the following problems with your work or other regular daily activities, as a result of any emotional problems (such as feeling depressed or anxious)? Y/N

- a) cut down on the amount of time you spent on work or other activities?
- b) accomplished less than you would like?
- c) didn't do work or other activities as carefully as usual?

During the past four weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

Not at all/Slightly/Moderately/Quite a bit/Extremely

Emotional well-being

How much time during the past month:

Did you feel full of life? Have you been a very nervous person? Have you felt so down in the dumps that nothing could cheer you up? Have you felt calm and peaceful? Did you have a lot of energy? Have you felt downhearted and low? Did you feel worn out? Have you been a happy person? Did you feel tired? Has your health limited your social activities (like visiting with friends or close relatives)? All of the time/Most of the time/A good bit of the time/Some of the time/A little of the time/None of the time.

Pain

How much bodily pain have you had during the past four weeks? None/Very Mild/Mild/Moderate/ Severe/Very Severe

During the past four weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? Not at all/A little bit/Moderately/Quite a lot/Extremely

1. Only includes items related to domains covered in this inventory.

McMaster health utilities index (HUI-3)

(Furlong, Feeny, Torrance, et al., 1998)

Vision

1. Are you *usually* able to see well enough to read ordinary newsprint *without* glasses or contact lenses? Yes (Go to Q4)/No
2. Are you *usually* able to see well enough to read ordinary newsprint *with* glasses or contact lenses? Yes (Go to Q4)/No
3. Are you able to see at all? Yes /No (Go to Q6)
4. Are you able to see well enough to recognize a friend on the other side of the street *without* glasses or contact lenses? Yes (Go to Q6)/No
5. Are you able to see well enough to recognize a friend on the other side of the street *with* glasses or contact lenses? Yes/No

Hearing

6. Are you *usually* able to hear what is said in a group conversation with at least 3 other people *without* a hearing aid? Yes (Go to Q 10)/No
7. Are you *usually* able to hear what is said in a group conversation with at least 3 other people *with* a hearing aid? Yes (go to Q8)/No
8. Are you able to hear at all? Yes/No (Go to Q10)
9. Are you *usually* able to hear what is said in a conversation with one other person in a quiet room *without* a hearing aid? Yes (Go to Q10)/No
10. Are you *usually* able to hear what is said in a conversation with one other person in a quiet room *with* a hearing aid? Yes/No

Speech

11. Are you *usually* able to be understood *completely* when speaking with strangers in your own language? Yes (Go to Q 14)/No
12. Are you able to be understood *partially* when speaking with strangers? Yes/No
13. Are you able to be understood *completely* when speaking with those who know you well? Yes (Go to Q 14)/No
14. Are you able to be understood *partially* when speaking with those who know you well?

Mobility

15. Are you usually able to walk around the neighbourhood without difficulty and without mechanical support such as braces, a cane or crutches? Yes (Go to Q22)/No
16. Are you able to walk at all Yes/No (Go to Q19)
17. Do you require mechanical support such as braces, a cane or crutches to be able to walk around the neighbourhood? Yes/No
18. Do you require the help of another person to be able to walk? Yes/No
19. Do you require a wheelchair to get around? Yes/No (Go to Q22)
20. How often do you use a wheelchair? Always/Often/Sometimes/Never
21. Do you need the help of another person to get around in the wheelchair? Yes/No

Dexterity

22. Are you usually able to grasp and handle small objects such as a pencil or scissors? Yes (Go to Q26)/No
23. Do you require the help of another person because of limitations in the use of hands or fingers? Yes/No (Go to Q25)
24. Do you require the help of another person with: Some tasks/Most tasks/Almost all tasks/All tasks?
25. Do you require special equipment, for example, devices to assist in dressing because of limitations in the use of hands or fingers? Yes/No

Emotional well-being (feelings)

26. Would you describe yourself as being usually: happy and interested in life/Somewhat happy/Somewhat unhappy/Unhappy with little interest in life/So unhappy that life is not worthwhile?

Cognition (memory and thinking)

27. How could you describe your usual ability to remember things? Able to remember most things/Somewhat forgetful/Very forgetful/Unable to remember anything at all
28. How would you describe your usual ability to think and solve day-to-day problems? Able to think clearly and solve problems/Having a little difficulty/Having some difficulty/Having a great deal of difficulty/Unable to think or solve problems

Pain and discomfort

29. Are you usually free of pain or discomfort? Yes (Go to next section)/No
30. How would you describe the usual intensity of your pain or discomfort? Mild/Moderate/Severe
31. How many activities does your pain or discomfort prevent? None/A few/Some/Most

Appendix II: Working Hours and Employment Status Changes between 1996 and 2001*

The analysis here provides descriptive statistics on the impact of informal care-giving to the elderly on the working hours and the employment status of the caregivers. The analysis utilises the longitudinal nature of the ECHP, following the same sample of individuals in each consecutive wave. Owing to the descriptive nature of this analysis, information is provided for mean labour force status rates and hours of work across the sample.

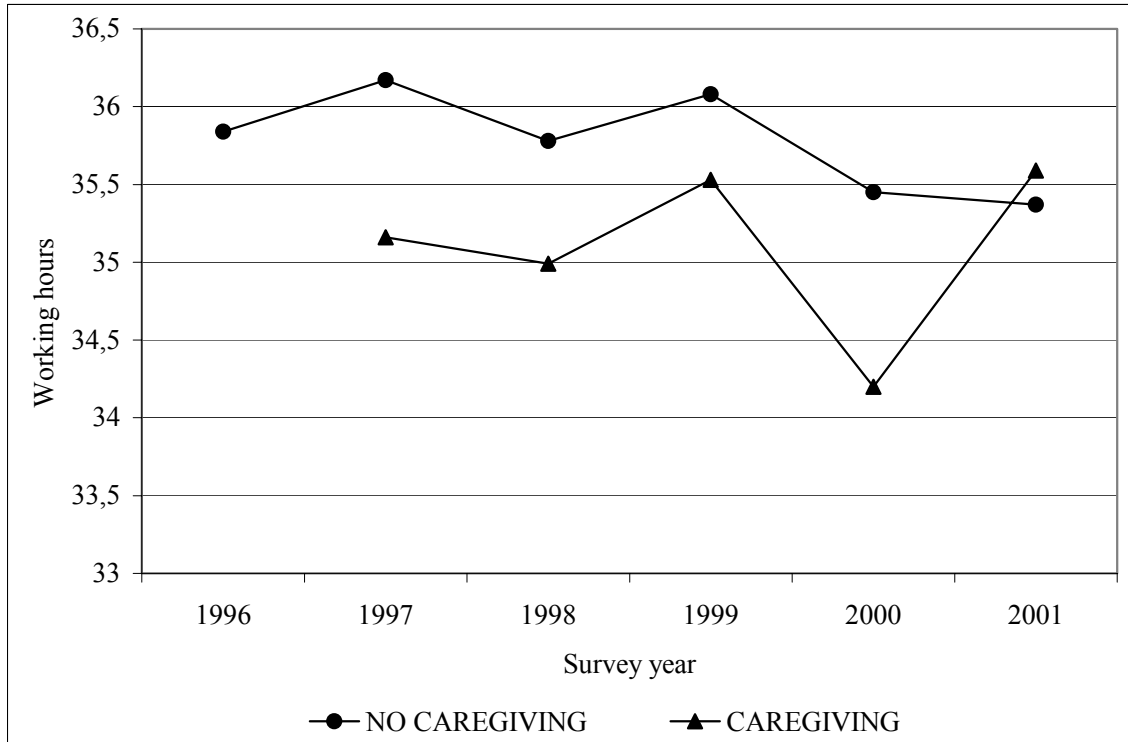
To examine changes in employment behaviour as a result of informal care-giving, the initial sample (in 1996 at wave 3) is selected to consist of women who were employed (full-time or part-time) and who at that point were not providing informal care to the elderly. Although this analysis does not follow individual behaviour per se, it does follow the same group of individuals through time. This descriptive method should thus give the average labour force behaviour effect of the provision of informal care to the elderly.

The sample comprises women aged between 45 and 59, who are surveyed in each wave of the ECHP. The countries included in the analysis are: Denmark, the Netherlands, Belgium, France, Ireland, Italy, Greece, Spain, Portugal, Austria and Finland. Germany, Luxembourg and the UK are excluded from the current analysis because of differences in the survey. Ideally, the analysis would be undertaken separately for each country; however, the sample sizes do not allow this to be done for the following analysis.

The statistically significant mean difference of approximately one hour per week in the overall working hours by the care-giving status is depicted in Figure A1. Although initially in 1996 all the women in the sample were employed with no informal care-giving commitments, by 1997 those women who had started to care for the elderly significantly reduced their working hours. The insignificant difference in the working hours for 2001 by the care-giving status is likely to reflect country-specific effects and will require further detailed econometric analysis.

* Prepared by Tarja Viitanen – member of the REVISER project at DIW Berlin.

Figure A1. Working hours per week by informal care-giving status between 1996 and 2001, women aged 45-59



Source: ECHP waves 3-8 excluding Germany, Luxembourg, and the United Kingdom

Changes in labour force status as a result of care-giving result in a 25 percentage point decrease in the mean full-time employment rates and a similar size increase in the proportion of inactive individuals over the six years (Table A3). Both figures are significantly higher than the changes for the sample of women who do not have any informal care-giving responsibilities. Initially, in 1996, almost 94% of persons in the sample were employed full-time and the rest employed part-time with no care-giving responsibilities owing to the sample selection rules discussed earlier. By 2001, both the women with care-giving responsibilities and those without have significantly decreased their attachment to the labour force, possibly because of early retirement. Nevertheless, the decrease in the labour force attachment is more profound for the group of women with informal care-giving responsibilities.

Table A3. Labour force participation status (ILO definition) between 1996 and 2001 (%)

		1996	1997	1998	1999	2000	2001
No care-giving	Full-time	93,94	87,8	85,2	82,18	79,08	76,06
	Part-time	6,06	4,72	3,74	3,31	3,46	3,16
	Unemployed	–	1,67	2,07	2,02	1,9	2,01
	Discouraged	–	0,22	0,55	0,4	0,41	0,6
	Inactive	–	5,59	8,44	12,09	15,16	18,17
Care-giving	Full-time	–	82,53	76,39	73,6	72,81	69,1
	Part-time	–	7,23	4,17	4,57	3,51	3,86
	Unemployed	–	1,81	2,31	1,02	3,07	2,15
	Discouraged	–	0	0	1,02	0,44	0,43
	Inactive	–	8,43	17,13	19,8	20,18	24,46
<i>Source: ECHP waves 3-8 excluding Germany, Luxembourg and the United Kingdom</i>							

The smallest differences in the labour force participation by care-giving status exist for the Nordic countries, Belgium, France, Ireland and Spain while the largest percentage point difference (of between 10 and 20 percentage points) is found for the Netherlands, Italy, Greece and Portugal (Table A4). The finding for Austria may be an anomaly of the data and hence may not necessarily reflect the true labour force participation rates for the country. Table A4 provides the mean participation rates by the care-giving status averaged over the years 1997 to 2001 to allow bigger sample sizes per country than a year-by-year country analysis. Year 1996 is not included in the analysis due to the initial sample selection regarding labour force status and the informal care-giving status, as explained earlier within the Appendix.

Table A4. Country differences in labour force participation by care-giving status between 1997 and 2001 (%)

	No care-giving	Care-giving	Percentage-point difference
Denmark	93.3	91.4	1.9
Netherlands	91.9	73.0	18.9
Belgium	88.2	82.0	6.2
France	89.3	83.6	5.7
Ireland	86.2	82.5	3.7
Italy	85.8	72.5	13.3
Greece	82.4	71.7	10.7
Spain	85.9	82.2	3.7
Portugal	86.0	69.8	16.2
Austria	85.7	90.1	-4.4
Finland	93.9	87.3	6.6

Source: ECHP (1997-2001), waves 4-8.

Overall, informal care-giving to the elderly results in some reduction in hours of employment for those who remain employed. More importantly, however, the start of informal care-giving increases the likelihood of giving up employment altogether. Large variations exist among the countries with respect to the labour force participation rates between informal caregivers and those without any care-giving commitments.

AGIR – Ageing, Health and Retirement in Europe

AGIR is the title of a major study on the process of population ageing in Europe and its future economic consequences. This project was motivated by an interest in verifying whether people are not only living longer but also in better health. It aims at analysing how the economic impact of population ageing could vary when not only demographic factors, but also health developments are taken into consideration. The project started in January 2002 for a period of three years.

The **principal objectives** of the study are to:

- document developments in the health of the elderly, ideally since 1950, based on a systematic collection of existing national data on the health and morbidity of different cohorts of the population;
- analyse retirement decisions and the demand for health care as a function of age, health and the utility of work and leisure;
- combine these results, and on that basis to elaborate scenarios for the future evolution of expenditure on health care and pensions; and
- analyse the potential macroeconomic consequences of different measures aiming at improving the sustainability of the European pension systems.

The **AGIR** project is carried out by a consortium of **nine European research institutes**, most of which are members of ENEPRI:

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- **CPB** (Netherlands Bureau for Economic Policy Analysis), The Hague
- **DIW** (Deutsches Institut für Wirtschaftsforschung), Berlin
- **ETLA** (the Research Institute of the Finnish Economy), Helsinki
- **FEDEA** (Fundación de Estudios de Economía Aplicada), Madrid
- **FPB** (Belgian Federal Planning Bureau), Brussels
- **NIESR** (National Institute for Economic and Social Research), London
- **LEGOS** (Laboratoire d'Economie et de Gestion des Organisations de Santé, Université de Paris-Dauphine), Paris

It has received finance from the European Commission, under the Quality of Life Programme of the 5th EU Research Framework Programme. The project is coordinated by **Jorgen Mortensen**, Associate Senior Research Fellow at CEPS. For further information, contact him at: jorgen.mortensen@ceps.be.

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The European Network of Economic Policy Research Institutes (**ENEPRI**) is composed of leading socio-economic research institutes in practically all EU member states and candidate countries that are committed to working together to develop and consolidate a European agenda of research. **ENEPRI** was launched in 2000 by the Brussels-based Centre for European Policy Studies (CEPS), which provides overall coordination for the initiative.

While the European construction has made gigantic steps forward in the recent past, the European dimension of research seems to have been overlooked. The provision of economic analysis at the European level, however, is a fundamental prerequisite to the successful understanding of the achievements and challenges that lie ahead. **ENEPRI** aims to fill this gap by pooling the research efforts of its different member institutes in their respective areas of specialisation and to encourage an explicit European-wide approach.

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