

STATISTICAL DATA ON HEALTH CARE SYSTEMS IN THE EUROPEAN UNION (1980-1993)

In spite of many differences in the way their health systems are organised and financed, increasing expenditure on health care, both in absolute terms and as a proportion of gross domestic product (GDP), was a common characteristic in a majority of the Member States between 1980 and 1993. In addition, there was a tendency to shift part of the financing of health care from public authorities to households.

An increase in the number of physicians, dentists and pharmacists per head of population, as well as a reduction in the number of hospital beds per capita was observed virtually everywhere over the period 1980-1993.

Even though admission rates increased in almost all countries, a substantial reduction in the average length of hospitalisation resulted in a fall in the total number of days spent in hospital.

All Member States have a social protection system that covers a very large proportion of the population for health care costs.

The patterns of health service organisation adopted in different countries are the result of the interaction between political, historical, cultural and socio-economic factors. The data systems of the Member States are based on the specific structural features of their health care financing and delivery systems, such as the types of services on offer, medical practices or the means of paying medical care providers.

The boundaries of health systems are difficult to draw. Health expenditure statistics vary depending on the extent to which they include such areas as social welfare services, school health services or services for the chronically ill.

Compounding this problem is the lack of internationally accepted definitions for many of the components of health care expenditures, such as hospitals, nursing homes and home health care. For example, there is no universal agreement on whether external services should be included in the definition of a hospital, nor on the definition of a hospital bed.

A third problem in making international comparisons stems from the difficulty to measure the performance of health systems. Most comparisons tend therefore to be focused on inputs such as numbers of physicians and hospital beds, or intermediate outputs such as physician visits and admission rates.

Health expenditure: Concepts and technical notes

Two expenditure concepts are used: total health expenditure and public expenditure on health.

Total health expenditure includes:

- the full range of services availed of by households (ranging from hospitals and physicians to ambulance services and pharmaceutical products) and associated health expenses, including cost-sharing and medicines purchased on household's own initiative;
- government-supplied health services (e.g. schools, vaccination campaigns);
- investment in clinics, laboratories, etc.;
- administration costs;
- research and development;
- industrial medicine;
- outlays of voluntary organisations, caring institutions and non-governmental health plans.

Public expenditure on health is the portion of total expenditure on health financed by the central and local authorities, public health centres and social insurance bodies. It covers:

- direct outlays;
- reimbursements to households (transfers);
- payments made to producers with the object of lowering costs (subsidies);
- direct investments in facilities together with capital transfers to private investors in the health domain;
- tax deductions and credits granted to households in respect of health care;

Eurostat produces and regularly publishes data related to health expenditure within the framework of the European System of integrated Social Protection Statistics (ESSPROS). There is only partial overlap between OECD's concept of health expenditure and ESSPROS social protection expenditure (ESSPROS also includes private expenditure).

In the ESSPROS methodology (currently being revised) medical care is broken down by function, i.e. by the risk, contingency or need from which it originates. Medical care is thus attributed to the Sickness function, but also to other functions such as Disability, Maternity or Occupational accidents. The revised methodology will assemble all medical care under the benefits in kind of the Sickness function.

Notes

Building upon and complementing what already exists at the European level on health data and indicators, including those held by Member States, international organisations, and European networks, the Commission intends to establish a health monitoring system through a 5-years action programme.

On the implementation of this proposed Community programme, which envisages actions on the establishment of a series of health indicators, the establishment of a network (for the collection and dissemination of data) and dissemination of the results, the Commission services competent for health and Eurostat will play a central role.

The figures given reflect the situation as determined at the time the document was drawn up. Refinements and improvements are made each year. Eurostat has issued a questionnaire (together with its annual request for data) with a view to obtaining a better understanding of the national definitions of manpower which are used.

The figures used in this publication come from the Eurostat collection of data on health and from the Eco-Santé Database from the OECD.

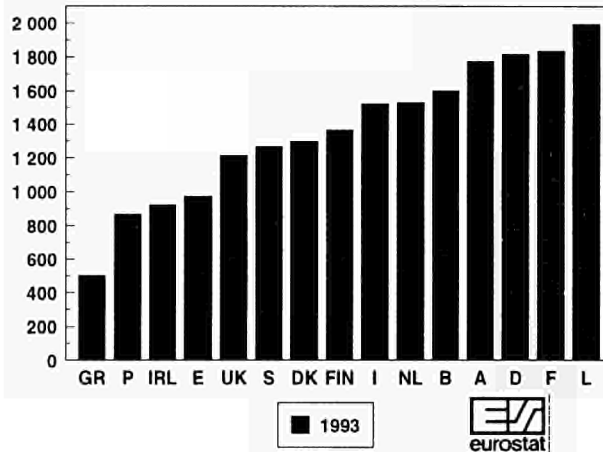
1. Health expenditure

Substantial differences between Member States in expenditure per head of population in 1993

Major differences in health care expenditure are evident between Member States of the European Union. In 1993, Luxembourg (1937 PPS), Germany (1695 PPS) and France (1688 PPS) spent almost

1.5 times more per capita than the European Union average, over twice as much as Spain (892 PPS), Ireland (835 PPS) or Portugal (783 PPS), and almost four times more than Greece (456 PPS) (fig. 1). The expenditure data are expressed in purchasing power standards (PPS) which reflect the real purchasing power of a currency within the country concerned.

Fig. 1: Health expenditure per head of population in PPS, 1993



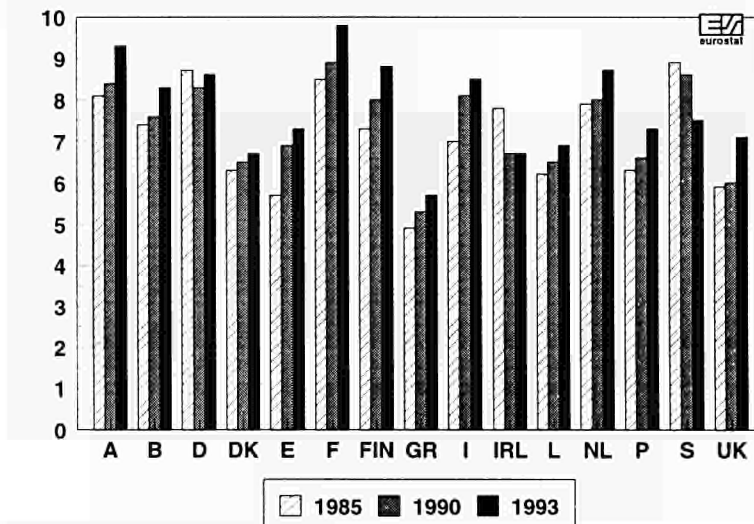
Source: OECD Health Data, 1995; PPS: Purchasing Power Standards which reflect the real purchasing power of a currency within the country concerned.

In 1993 the Member States of the European Union spent between 6% and 10% of their GDP on health care

Expenditure by EU nations on health care in the period 1985-1993, as a share of their gross

domestic product (GDP), is shown in Figure 2 below. France and Austria spent more than 9% of GDP on health care in 1993, while for Greece and Denmark, this proportion was under 7%.

Fig. 2: Total health care expenditure as a proportion of GDP



Source: OECD Health Data, 1995

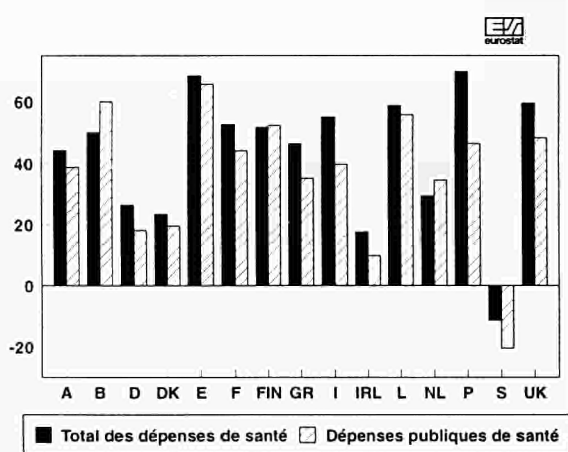
The proportion of GDP spent on health care increased between 1980-1993

Furthermore, between 1985 and 1993, 11 Member States devoted an increasing proportion of GDP to health care. In Denmark and Germany, the proportion of GDP allocated to health care remained more or less constant. In Sweden and Ireland, this proportion decreased (figure 2).

These variations are caused by the combined action of the underlying GDP growth rates and trends in total health expenditures. Between 1980 and 1993, the average annual growth rate of total health expenses exceeded the growth rate of GDP in almost the entire European Union. The evolution of health expenditure as a proportion of GDP was not uniform over this period, the average annual growth rate being higher in the years of 1990-1993 in most Member States than in the previous 10 years.

The expenditure changes may be attributable to either 'price effects' of medical goods and services or to 'volume effects'. Besides (medical) price inflation, various other factors have contributed to the increase in medical expenditure. The increased demand for health care by older populations with higher levels of disability and chronic diseases, the constant development of new and expensive medical techniques and the increased access to such services all serve to increase health expenditure as do consumers' expectations of a healthy life.

Fig. 3: Change (%) of total health expenditure and public expenditure on health (1980-1993) in constant 1990 prices



Source: OECD Health Data, 1995. These expenditure data have been calculated in constant 1990 prices, removing the influence of the general inflation between 1980 and 1993. Prices of these health care expenditures may differ from the general consumer price index

The increase in public expenditure on health care was generally lower than the increase in total health expenditure between 1980 - 1993

In 1993, public expenditure on average accounted for 3/4 of total expenditure on health care.

Between 1980 and 1993, the rate of increase of public expenditure on health care was slower than the rate of increase of total expenditure in all countries apart from Belgium, the Netherlands and Finland (fig. 3, in real terms). Total expenditure also includes the portion paid by the patients themselves, either directly or indirectly through private insurance schemes. The European Union witnessed a shift in health care financing from public authorities to households.

2. Manpower and hospital beds

The number of health care personnel per 100 000 inhabitants varies widely from one Member State of the Union to another, but is increasing in almost all the countries.

In 1993, there were between 164 and 408 physicians per 100 000 inhabitants in the European Union. The lowest proportion was in the United Kingdom and Ireland (with 164 and 167 per 100 000 inhabitants respectively) and the highest in Belgium, Greece and Spain with 366, 388 and 408 for 100 000 inhabitants respectively. In this field, the fact that definitions are not perfectly harmonised may explain some of the differences.

The Member States of the European Union base their health care manpower statistics on different concepts. Thus, in eight of the Member States (A, B, DK, D, GR, F, UK, S), the number of physicians refers to the number of active practitioners, i.e. both practitioners with a medical practice and those working in industry, research or administration. In Ireland and Luxembourg, the figure includes only practitioners with a medical practice. In the other five Member States (E, I, NL, P, FIN) the figures include practitioners "entitled to practice", (including practitioners who are unemployed or who do not directly practice medicine) as well as those who actually have a medical practice. In the United Kingdom and Ireland, only the public sector is covered. Similar methodological differences can be observed in the case of dentists and pharmacists.

The figures for distribution of dentists do not follow the same pattern as that of physicians. There are very few dentists in Portugal and Spain (21 and 31 per 100 000 inhabitants respectively). The proportion is three to four times higher in Belgium (69), Germany (72), Denmark (89), Greece (104) and Sweden (104) per 100 000 inhabitants.

Table 1: Number of physicians, dentists and pharmacists per 100 000 inhabitants in 1993 (*)



	Physicians	Dentists	Pharmacists
A	328	44	49
B	366	69	133
D	321	72	52
DK	<i>284</i>	<i>89</i>	<i>39</i>
E	408	31	99
F	281	69	47
FIN	264	91	138
GR	388	104	77
I	<u>(535)</u>	n.a.	n.a.
IRL	167	40	28
L	215	51	n.a.
NL	252	53	16
P	292	21	61
S	300	104	63
UK	164	39	37

(*)The figures in italics relate to 1992, those underlined to 1991 and those in bold to 1990; the figures for Greece show the number of pharmacies not pharmacists; the figure for Italy on physicians includes dentists; n.a. = not available

Table 2: Number of beds per 100 000 inhabitants in 1980 and 1993 (*)



	1980	1993
A	1 118	949
B	n.a.	594
D	n.a.	776
DK	n.a.	<i>518</i>
E	540	407
F	n.a.	927
FIN	n.a.	1 007
GR	627	497
I	973	<i>686</i>
IRL	962	626
L	1 284	1 154
NL	1 231	1 131
P	n.a.	416
S	n.a.	610
UK	n.a.	532

(*) The figures in italics refer to 1992 and those in bold to 1990; n.a. = not available

The differences are even greater for pharmacists, the distribution varying from 16 per 100 000 inhabitants in the Netherlands to over 130 in Finland and Belgium (138 and 133 respectively).

Between 1980 and 1993, the number of physicians, dentists and pharmacists available increased in all the Member States of the European Union, except for dentists in Austria and Denmark and pharmacists in Ireland.

Reduction in the number of hospital beds per inhabitant

The number of hospital beds per head of population, also varied widely from one Member State to another. In Luxembourg, the Netherlands and Finland, there are over 1 000 hospital beds for 100 000 inhabitants - almost double the number available in Spain, Portugal and Greece (table 2). Over the period 1980-1993, there was a slight reduction in the number of hospital beds per inhabitant in seven countries of the European Union for which data are available (table 2). This reduction may be explained by a combination of developments in medical technologies which have made it possible to reduce the average length of hospitalisation for a given disorder and by the financial constraints of the 1980s which led to rationalisation of the health infrastructure.

3. Utilisation

Uniform developments in hospital activity in the European Union in terms of number of days, admission rates and average length of hospitalisation

The average number of days spent in hospital per inhabitant in 1980 varied between 1.2 in Portugal and 4.1 in the Netherlands. In 1993, the equivalent range had fallen to between 1.1 days in Spain and 3.7 days in the Netherlands.

The high figure for the Netherlands is due to the inclusion of long-term care centres and establishments for the mentally handicapped.

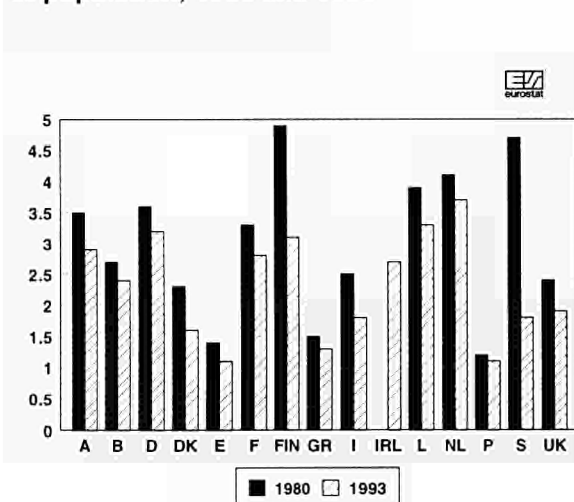
Admission rates, [defined as the number of admissions to hospitals (or discharges) divided by the population and multiplied by 100], provide a measure of hospital turnover. Even though the admission rates increased in almost all countries, the lower number of days spent by patients in hospital came about by way of a substantial reduction in the average length of hospitalisation (table 3). The average length of stay is defined as the number of bed days in hospitals divided by the number of admissions or discharges.

Table 3: Hospital admission rates and average length of stay, 1980 and 1993 (*)

	Admission rate (% of population)		Average length of stay (number of days)	
	1980	1993	1980	1993
A	19.5	26.1	17.9	10.6
B	13.6	19.7	19.5	12.0
D	18.8	21.3	19.7	15.8
DK	18.3	20.5	12.7	7.6
E	9.3	10.0	14.8	11.5
F	19.5	23.4	16.7	11.7
FIN	21.0	24.4	21.6	14.8
GR	11.8	13.1	13.3	9.8
I	18.1	15.5	13.5	11.2
IRL	17.2	15.5	9.7	7.7
L	16.6	20.3	23.2	16.5
NL	11.7	11.0	34.7	33.3
P	8.9	11.4	14.4	9.9
S	18.3	19.5	24.4	9.4
UK	13.6	20.9	19.1	12.3

(*) The figures in italics refer to 1992 and those underlined to 1991. Source: OECD Health Data, 1995; n.a. = not available

Fig.4: Number of days spent in hospital per head of population, 1980 and 1993



Source: OECD Health Data, 1995

Number of consultations and visits

These activities are understood to mean visits to a patient's home and consultations at physicians offices. No data on the number of consultations and visits are available for several Member States. Simply as a guide, the following countries may be classified in increasing order of annual visits or consultations per head of population: Sweden (3), Portugal, (3.1), Finland (3.3), Denmark (4.4), Austria (5.1), Netherlands (5.7), United Kingdom (5.8), France (6.3), Belgium (8) and Germany (12.8).

4. Organisation of the health systems

To interpret the basic empirical information on health systems, an understanding of the underlying structures, modes of provision (such as reimbursements, benefits, etc), public versus private insurance, financing methods, etc. is necessary. A few aspects are highlighted here. Health systems could be categorised according to one of three basic models:

■ **National Health Service (Beveridge) model**, characterised by universal coverage, tax financing, and public providers;

■ **Social Insurance (Bismarck) model**, characterised by compulsory universal coverage (generally within the framework of Social Security), financed by employer and individual contributions through non-profit insurance funds, and public and/or private providers;

■ **Private Insurance model**, characterised by employer-based or individual purchase of private health insurance coverage financed by individual and/or employer contributions, and private providers.

The United States is a typical example of countries utilising the third model. In all Member States of the EU, coverage is provided by public institutions for most or all of the costs incurred in treatment.

In nine Member States (DK, E, FIN, GR, I, IRL, P, S, UK,) their entire population is covered by a national health service. The southern European countries (E, GR, I, P), have adopted this type of universal cover over the past eighteen years. The national health systems involve the direct provision of services by the State, and access to the majority of health services is generally free for the entire population.

Health care is financed mainly out of taxation, which includes both direct taxes (such as income tax), and indirect taxes (such as VAT). In Italy, Greece and Spain however, financing is mixed, being based on both taxation and sickness insurance contributions.

In Ireland, the main source of finance is taxation, but in contrast to the UK, many hospitals are in private hands. Only people with low incomes are covered for primary care in Ireland: those not covered have

to pay for care received privately and a modest amount per day for hospital care received publicly.

In Greece, the universal right to health care entails access to public hospitals including out-patient departments.

In the other six Member States (A, B, D, F, L, NL) medical coverage is guaranteed through social insurance. Except in the Netherlands and Germany, social insurance covers almost the entire population.

In the Netherlands, almost the entire population is insured against the risk of serious or long-term illness. At present, around 70% of the population has compulsory coverage against the risks of acute illnesses, while the remaining 30% - persons with income over a certain ceiling and self-employed persons - have (voluntary) private insurance.

In Germany, 92.5% of the population is covered by social insurance against the risk of sickness (85% on a compulsory basis and 15% on a voluntary basis) and the remainder (mainly civil servants, self-employed persons and the high-income group) are covered by private sickness insurance schemes.

In Belgium, the self-employed and employers are covered only against serious risks, in-patient care, and against certain diseases such as cancer and tuberculosis.

In all Member States, private insurance also plays a role, albeit a varied one. In some countries (e.g. the Netherlands) voluntary private insurance fills most of the gaps left by statutory insurance. In others (e.g. Austria) private insurance also provides supplement-

tary cover to persons who already have comprehensive public cover. In still other countries (e.g. France) private insurance takes charge of the part of the cost of medical care not covered by the social protection system. In Ireland, private insurance serves all three functions.

Hospital beds are over 90% publicly owned in Denmark, Finland, Sweden and the UK. Between 80 and 90% are publicly owned in Italy and Portugal, and the majority are publicly owned in France, Greece, Italy and Spain. About half are publicly owned in Austria and Germany. In Belgium, Luxembourg and the Netherlands, most acute hospital beds are private.

In Belgium, France, Germany and Luxembourg, patients can go directly to a specialist. In the other Member States access is normally by way of referral from a general practitioner (gatekeeper-mechanism).

The method of paying primary care doctors in public sector is indicated in table 4. Doctors can be faced with changing incentives by altering the method of payment. In six countries, they are paid on a capitation basis. This is a fixed payment for each listed or enrolled person served per period of time. Payments will vary according to the number of patients enrolled but not with the number of services rendered per patient. In five countries, mainly those with a national health service, doctors are paid salaries. This payment does not vary either with the number of individuals served or with the number of services rendered. In eight countries, a fee is paid for each service rendered.

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Table 4: Organisation of the health systems

	Main type of coverage	Main type of providers	Type of payment of primary health care doctors
A	social insurance	ambulatory mainly private; hospitals mainly public	fee-for-service, capitation
B	social insurance + government subsidies	ambulatory private; hospitals partly public	fee-for-service
D	social insurance	ambulatory private; hospitals partly public	fee-for-service
DK	national health service	mainly public	28% capitation, 63% fee-for-service, 9% others
E	mixed: national health service with contributions	mainly public	salary, capitation
F	social insurance	ambulatory private; hospitals mainly public	fee-for-service
FIN	national health service	mainly public	salary, some capitation
GR	mixed: national health service with contributions	mainly public	salary
I	mixed: national health service with contributions	mainly public	capitation
IRL	public financed health system	mainly private	fee-for-service if higher income, capitation if lower income
L	social insurance	mainly private	fee-for-service
NL	social insurance	mainly private	fee-for-service if higher income, capitation if lower income
P	national health service	mainly public	salary
S	national health service	mainly public	salary
UK	national health service	mainly public	capitation

Sources: Schneider et al, *Gesundheitssysteme im internationalen Vergleich*, Basys, 1994; OECD, *The reform of health care systems, a review of seventeen OECD countries*.



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