European Observatory on Health Care Systems

Health Care Systems in Transition

Sweden

The European Observatory on Health Care Systems is a partnership between the World Health Organization Regional Office for Europe, the Government of Greece, the Government of Norway, the Government of Spain, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine.

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2001

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RESEARCH AND KNOWLEDGE FOR HEALTH
By the year 2005, all Member States should have health research, information and communication systems that better support the acquisition, effective utilization, and dissemination of knowledge to support health for all.

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Foreword

The Health Care Systems in Transition (HiT) profiles are country-based reports that provide an analytical description of each health care system and of reform initiatives in progress or under development. The HiTs are a key element that underpins the work of the European Observatory on Health Care Systems.

The Observatory is a unique undertaking that brings together WHO Regional Office for Europe, the Governments of Greece, Norway and Spain, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine. This partnership supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health care systems in Europe.

The aim of the HiT initiative is to provide relevant comparative information to support policy-makers and analysts in the development of health care systems and reforms in the countries of Europe and beyond. The HiT profiles are building blocks that can be used to:

- learn in detail about different approaches to the financing, organization and delivery of health care services;
- describe accurately the process and content of health care reform programmes and their implementation;
- highlight common challenges and areas that require more in-depth analysis;
- provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in the different countries of the European Region.

The HiT profiles are produced by country experts in collaboration with the research directors and staff of the European Observatory on Health Care Systems. In order to maximize comparability between countries, a standard template and questionnaire have been used. These provide detailed guidelines

and specific questions, definitions and examples to assist in the process of developing a HiT. Quantitative data on health services are based on a number of different sources in particular the WHO Regional Office for Europe health for all database, Organisation for Economic Cooperation and Development (OECD) Health Data and the World Bank.

Compiling the HiT profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health care system and the impact of reforms. Most of the information in the HiTs is based on material submitted by individual experts in the respective countries, which is externally reviewed by experts in the field. Nonetheless, some statements and judgements may be coloured by personal interpretation. In addition, the absence of a single agreed terminology to cover the wide diversity of systems in the European Region means that variations in understanding and interpretation may occur. A set of common definitions has been developed in an attempt to overcome this, but some discrepancies may persist. These problems are inherent in any attempt to study health care systems on a comparative basis.

The HiT profiles provide a source of descriptive, up-to-date and comparative information on health care systems, which it is hoped will enable policy-makers to learn from key experiences relevant to their own national situation. They also constitute a comprehensive information source on which to base more in-depth comparative analysis of reforms. This series is an ongoing initiative. It is being extended to cover all the countries of Europe and material will be updated at regular intervals, allowing reforms to be monitored in the longer term. HiTs are also available on the Observatory's website at http://www.observatory.dk.

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The current series of Health Care Systems in Transition profiles has been prepared by the research directors and staff of the European Observatory on Health Care Systems.

The European Observatory on Health Care Systems is a partnership between the WHO Regional Office for Europe, the Governments of Greece, Norway and Spain, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine.

The Observatory team working on the HiT profiles is led by Josep Figueras, Head of the Secretariat and the research directors Martin McKee, Elias Mossialos and Richard Saltman. Technical coordination is by Suszy Lessof. The series editors are Reinhard Busse, Anna Dixon, Judith Healy, Laura MacLehose, Ana Rico, Sarah Thomson and Ellie Tragakes.

Administrative support, design and production of the HiTs has been undertaken by a team led by Myriam Andersen, and comprising Anna Maresso, Caroline White, Wendy Wisbaum and Shirley and Johannes Frederiksen.

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Thanks are also due to national statistical offices which have provided national data.

Introduction and historical background

Introductory overview

Political and economic background

Sweden is situated on the Scandinavian peninsula, in the northern part of Europe (see Fig. 1). The country covers an area of 449 964 km^2, of which 54% is covered by forest. The population is 8.9 million (1999) and Stockholm, the capital, is the largest city, with 1.1 million habitants. On average, the country has 22 persons per km^2 but it is unevenly populated, as 84% of the population live in urban areas. There is a high concentration of inhabitants in the coastal regions and in the south. Swedes are the predominant ethnic group (about 90% of the population). Other residents include immigrants from Finland, South America, the Middle East, Asia and the Balkans. Sweden has two minority groups of native inhabitants in the north: the Finnish-speaking people of the northeast and the Sami (Lapp) population. The main language is Swedish and 85% of the population belongs to the Church of Sweden, which is Lutheran. The educational system reaches the entire population and the literacy rate is 99%. In 1999, 24% of the population aged 16–74 years had a university education of at least two years. The corresponding figure among 25–49 year olds was 31%. Female participation in the workforce is also high, constituting 48% of the labour force in 1998. However, part-time work is more frequent among women than men.

Living standards are among the highest in the world and the GDP per capita, measured as purchasing power parity adjusted Euros, amounted to 20 798 in 1999. In the 2000 United Nations Human Development Index Sweden was ranked sixth.

Fig. 1. Map of Sweden[1]

Source: CIA – The World Fact Book, 2001.

[1] The maps presented in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the European Observatory on Health Care Systems or its partners concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitations of its frontiers or boundaries.

Sweden is a monarchy with a parliamentary form of government. The King is the head of state, but his position is only symbolic and the power rests with the parliament (*Riksdag*). The governing process in Sweden works on three democratically elected levels: the Riksdag at national level, the 21 county councils (*landsting*) at regional level, and the 289 municipalities at local level, each with different spheres of responsibility. Elections at all three levels are held every fourth year.

The Riksdag is the legislative assembly and has 349 seats, of which 310 are directly elected and the rest are divided among political parties on the basis of votes received nationally. The Riksdag elects the Prime Minister and the Prime Minister, in turn, appoints the government. At regional level, the state is represented by the County Administrative Board (*Länsstyrelsen*), which can be described as the prolonged arm of the state. The members of the County Administrative Board are appointed by the county council, which is democratically elected at the local level. Their main responsibility is health and medical care, but also dental care, public transport, tourism and cultural life in the region. The municipalities are responsible for local issues in the immediate environment of the citizens, e.g. education, childcare, care of the elderly, roads, water, sewage, energy, etc. Both the county councils and the municipalities levy separate proportional income taxes on their residents to pay for the services that they provide.

Sweden has a mixed state and private economy based on services, heavy industries and international trade. Sweden's natural resources include forests, iron ore, copper, lead zinc, silver, uranium and water power. In 1998, the agriculture, forestry and fishing sectors together accounted for approximately 2% of GDP, whereas the manufacturing sector accounted for 21%. The services sector accounted for 43.5% of GDP this same year, and the fastest growing sector is the electrical and optical equipment industry. Private and public consumption amounted to 54% and 28%, respectively, of the gross domestic final consumption in 1998 (the remainder were investments).

The Swedish economy expanded rapidly during the 1950s and 1960s, with annual GDP growth averaging 3.4 and 4.6%, respectively. This development was broken during the 1970s both due to tight monetary policy and the oil crisis. Sweden reacted to the resulting recession by expansionary economic policy and large wage increases. The results of this economic policy, however, were not positive and Sweden did not enjoy growth in the 1980s at the same level as its neighbours. A series of devaluations were made during the late 1970s and beginning of 1980s in order to boost exports. A deregulation of financial markets also led to growing domestic demand. In spite of this, average GDP growth remained at 2% during the 1980s, while the inflation rate surged.

In 1990, the focus of economic policy shifted from low unemployment to a stable exchange rate and low inflation. A tax reform was also initiated, but for various reasons the policies failed and, in 1992, Sweden had to abandon the fixed exchange rate policy. The Swedish Krona was immediately depreciated by 25%. Exports fell to a low of 22.6% of GNP in 1992 which, in turn, led to high unemployment rates. In particular, registered unemployment as a percentage of the labour force, which departed from very low levels at the start of the decade, jumped to almost 10% in 1993 (see Table 1). The population covered by labour policy measures (training courses, etc.) is not included within official registered unemployment figures. When these additional population groups are taken into account, total unemployment rates increase to approximately 15% in the mid-1990s.

In order to restore the Swedish economy, a programme of fiscal restraint was given high priority in the government's economic policy. Great emphasis was also put on reducing unemployment. After the high levels of interest rates in the first half of the 1990s, interest rates started to fall in 1995. This was partially due to falling inflationary expectations. Since 1999, interest rates have tended to move upwards in response to the growth in the world economy. In 2000, exports of goods and services were equivalent to 47% of GDP.

Table 1. Macro-economic indicators

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
GDP/capita, Euros PPP	16 065	16 150	15 901	15 722	16 388	17 436	18 203	18 901	19 774	20 978
Real GDP growth rate (1995-prices, %)	4.3	-1.0	-3.2	-3.8	2.8	3.3	3.6	3.8	4.0	6.5
Inflation rate (CPI, %)	8.7	10.0	5.2	4.7	1.7	2.5	1.7	-0.4	0.9	-0.3
Unemployment – % of labour force	2.0	3.6	6.3	9.7	9.3	8.9	9.3	9.3	7.6	6.5
Unemployment – % of total pop.	0.9	1.6	2.7	4.1	3.9	3.8	3.9	3.9	3.1	2.7

Source: Statistics Sweden, OECD HealthData2000.

Health status

Like many other industrialized countries, Sweden has a low birth rate, 1.5 per woman in reproductive age. This results in a negative natural population growth, but due to a positive net migration flow, the total population increase per 1000 inhabitants in 1999 reached 0.74. Life expectancy is high, and of the Nordic countries, Sweden has among the longest life expectancy at birth: 77.5 for men and 81.1 for women (2000). Average life expectancy rose during the 1990s, and today Sweden has the world's oldest population, with almost every fifth person aged 65 years or older (see Table 2). This ageing process has important

social and political implications, as fewer persons of productive age will support increasing demands on the health care system.

Table 2. Age structure of the Swedish population, as of % of the total population, 1970–2050[a]

Age	1970	1980	1990	1999	2005[a]	2010[a]	2030[a]	2050[a]
0–14	21	19	18	19	17	16	16	16
15–44	40	42	42	39	39	39	36	35
45–64	25	22	22	25	26	26	24	24
65 +	14	16	18	17	18	19	24	25
	100	100	100	100	100	100	100	100

Source: Statistics Sweden, [a] = Forecast

Furthermore, infant mortality decreased substantially during the 1990s, from 6 to 3.2 deaths per 1000 live births in 1990 and 2000, respectively. Programmes to prevent diseases and injuries have been successful in some cases, e.g. mortality due to cardiovascular diseases (CVD) has declined, although CVD accounted for approximately 50% of all deaths in 1998. The second largest cause of death was tumours, which amounted to 25% for men and 22% for women (1998). Deaths due to mental diseases and diseases in the nervous system, eyes and ears increased between 1987 and 1997 (see Table 3).

Table 3. The main causes of death per 100 000 population, 1987–1997, selected years

	1987	1992	1997	Change 1987–1997
Disease in the circulation organs, men	847	732	639	-25%
Disease in the circulation organs, women	511	453	390	-24%
Tumours, men	310	307	310	0%
Tumours, women	209	205	205	-2%
Disease in respiratory organs, men	127	123,2	105	-17%
Disease in respiratory organs, women	67.5	65.8	60	-11%
Mental diseases, men	23.6	33.4	33	42%
Mental diseases, women	19.8	30.3	29	45%
Endocrinal and metabolism diseases and nutrition disturbances, men	23.5	26.8	26	11%
Endocrinal and metabolism diseases and nutrition disturbances, women	18.2	19.1	19	2%
Disease in nervous system, eye and ear, men	14.1	15.5	21	46%
Disease in nervous system, eye and ear, women	9.6	11.8	18	92%
Total, men	1548	1433	1313	-15%
Total, women	949	900	830	-13%

Source: National Board of Health and Welfare.

During the 1990s, the number of daily smokers decreased substantially, to 15% and 22% for men and women, respectively, in 1999. In 1989, the corresponding figures were 25.5% for men and 26.2% for women. This reduction has been attained partly by non-smoking campaigns and tax increases on tobacco.

Local authorities, county councils and municipalities are responsible for the provision of health care. An advanced and extensive system of social security provides universal benefits for sickness, maternity and unemployment, child care, the elderly and the disabled. The Swedish health care system is a socially responsible system with an explicit public commitment to ensure the health of all citizens, and immigrants and residents qualify for the same health care as citizens. Health care is publicly financed and to a very high degree, publicly provided as well.

Historical background

The present day structure of the Swedish health care system reflects its long history. In the seventeenth century, towns and cities employed physicians to provide publicly-provided care. In rural areas, where the majority of the population was living at the time, the central government employed physicians for the provision of basic medical care. The provision of health care has been a predominantly public responsibility since then, and public provision has accounted for a very high proportion of total health care provision.

Sweden's first hospital, the Serafimerhospital, was set up in Stockholm in 1752. It had eight beds that were supposed to fulfil the need for hospital care of the entire Swedish population, including Finland (at the time ruled by Sweden). In 1765, the "Diet of the four estates" paved the way for the establishment of a number of hospitals by permitting local authorities to spend locally-collected resources on the construction of a hospital. One hundred years later, Sweden had 50 hospitals and approximately 3000 beds. Most of the hospitals were small, with only 10–30 beds, and initially they only had one physician each. As they did not provide any outpatient care, most health care services were provided by physicians outside the hospitals. Public health care provision was initially administered by the Collegium Medicum. In 1813, the Sundhetscollegium took over this responsibility and, in 1878, this body became the Royal Medical Board.

In 1862, the county councils were established, and health care was one of their principal duties. This was the beginning of the structure of today's Swedish

health care system. Responsibilities were gradually transferred from central government to the county councils. Only the acute care somatic hospitals shifted ownership in the 1860s, and it was not until the Hospital Act in 1928 that the county councils became legally responsible for providing hospital care to their residents. This act formed the basis for the present day responsibilities of the county councils. However, the responsibility of providing outpatient care was not included in the act and treatment of some patient groups, e.g. mental and long-term care patients, was excluded from the general rule. In the 1930s, the county councils were gradually given responsibility for various non-hospital health care services, such as maternity and paediatric health care, child dental care, etc. Ambulatory care was offered primarily by private practitioners in their own offices or at the hospital. At the end of the 1930s, less than one physician out of three held a hospital post. This situation drastically changed by the 1960s, at which time roughly 50% of all physicians were employed at hospitals.

After the second world war, the first important step towards universal coverage for physician consultations, prescription drugs, and sickness compensation was taken (1946), when a National Health Insurance Act was voted by the parliament. The plan was for expenditures on physician consultations, prescribed drugs and inpatient care to be reimbursed up to a certain level but, due to financial constraints and to the desire to achieve consensus among all involved parties, especially the physicians, the act was not implemented until 1955.

In the post-war era, a considerable expansion of the Swedish health care sector began, particularly in the hospital sector. New therapeutic and diagnostic procedures created new sub-specialties both among the physicians and hospital structures. As technology improved, so did the health status among the Swedish population and the eradication of some diseases began, e.g tuberculosis. Like most other western European countries during this period, the Swedish health care delivery system became hospital-based and approximately 90% of health care expenditures were consumed by the hospitals. In 1963, the county councils assumed responsibility for the provision of somatic outpatient care in addition to hospital care, which was a means for improving coordination of health care provision.

In 1968, the Royal Medical Board was transformed into the National Board of Health and Welfare, which still today is responsible for the supervision of both health and social services. It is also responsible for health- and social services statistics. The National Corporation of Swedish Pharmacies was founded in 1971 when private retail distribution was nationalized.

In 1970, as part of the "seven-crown reform", outpatient services in public hospitals were taken over by the county councils. The patients paid seven crowns to the county council for each outpatient consultation and the county council was compensated directly by the national health insurance authority for the remainder of the cost. The considerably reduced fee incurred by the patient made health care more accessible for low income groups. The reform also meant that physicians in hospital outpatient departments became salaried employees of the county councils. In addition, physicians were no longer allowed to treat private patients seeking outpatient care in county council facilities.

During the 1980s, responsibility for the health care planning was decentralized from the national level to the county councils. The overall objective of the public health services was stated in the 1982 Health Care Act as providing "good health care on equal terms for the entire population". According to the act: *"Every county council shall offer good health and medical services to persons living within its boundaries.* [...] *In other respects too, the county council shall endeavour to promote the health of all residents.* […]". The Act gave the county councils full responsibility for health care delivery related matters, i.e. they were not only responsible for providing health care, but also health promotion and disease prevention, for their residents. As a consequence, the two university hospitals (the Karolinska Hospital of Stockholm and the Academic Hospital of Uppsala) came under the ownership of the county councils in the early 1980s, as did responsibility for the public vaccination programmes.

In 1985, a reform of the health insurance system, the *Dagmar Reform*, was introduced. Health insurance reimbursement for ambulatory care was no longer transferred to the county council according to the number of outpatient visits. Instead, a capitated reimbursement formula adjusted by needs-related social and medical criteria was adopted. Regarding reimbursement to private providers, previously, social insurance reimbursements were made directly to them on a fee-for-service basis. Through the Dagmar Reform, the county councils were made cost-liable; they had the authority to approve which private practices should be reimbursed by national insurance, as well as the number of patients the practices could see per year. The payments were still made from national insurance to private practitioners, but only to those who had an agreement with the county council. Payments were balanced according to a fixed capitation-based budget for each county council. If the national insurance payments exceeded the fixed capitation budget, the county councils had to balance the expenditures.

Agreements were made every year between central government and the federation of county councils as regards the amount of money to be transferred from central government to the county councils.

The county councils were fully responsible for the financing and provision of health care between 1983 and 1992. In 1992, a major change was introduced through the ÄDEL-reform, whereby the responsibility for long-term inpatient health care and social welfare services to disabled and elderly individuals was transferred from the county councils to the local municipalities. As a result of this reform, one fifth of total county council health care expenditure was transferred to the municipalities. A few years later, the municipalities took over the responsibility of the physically disabled ("Handikapp-reformen," 1994) and of those suffering from long-term mental illnesses ("Psykiatri-reformen," 1995). This development meant that about 30–40% of hospital beds were transformed into nursing home beds for those needing less technologically-advanced care. With this reform, the responsibilities in terms of health care between county councils and municipalities became even clearer.

In an attempt to curb the increasing cost for pharmaceutical products, a "drug reform" was initiated in 1998 when the county councils took over responsibility for drug reimbursement from the state. This was intended to focus the control of the entire health production as well as the costs to the counties, which would facilitate feedback. In addition, the patients' share of the drug costs was increased, due to a reformed Drug Benefit Scheme.

Organizational structure and management

Organizational structure of the health care system

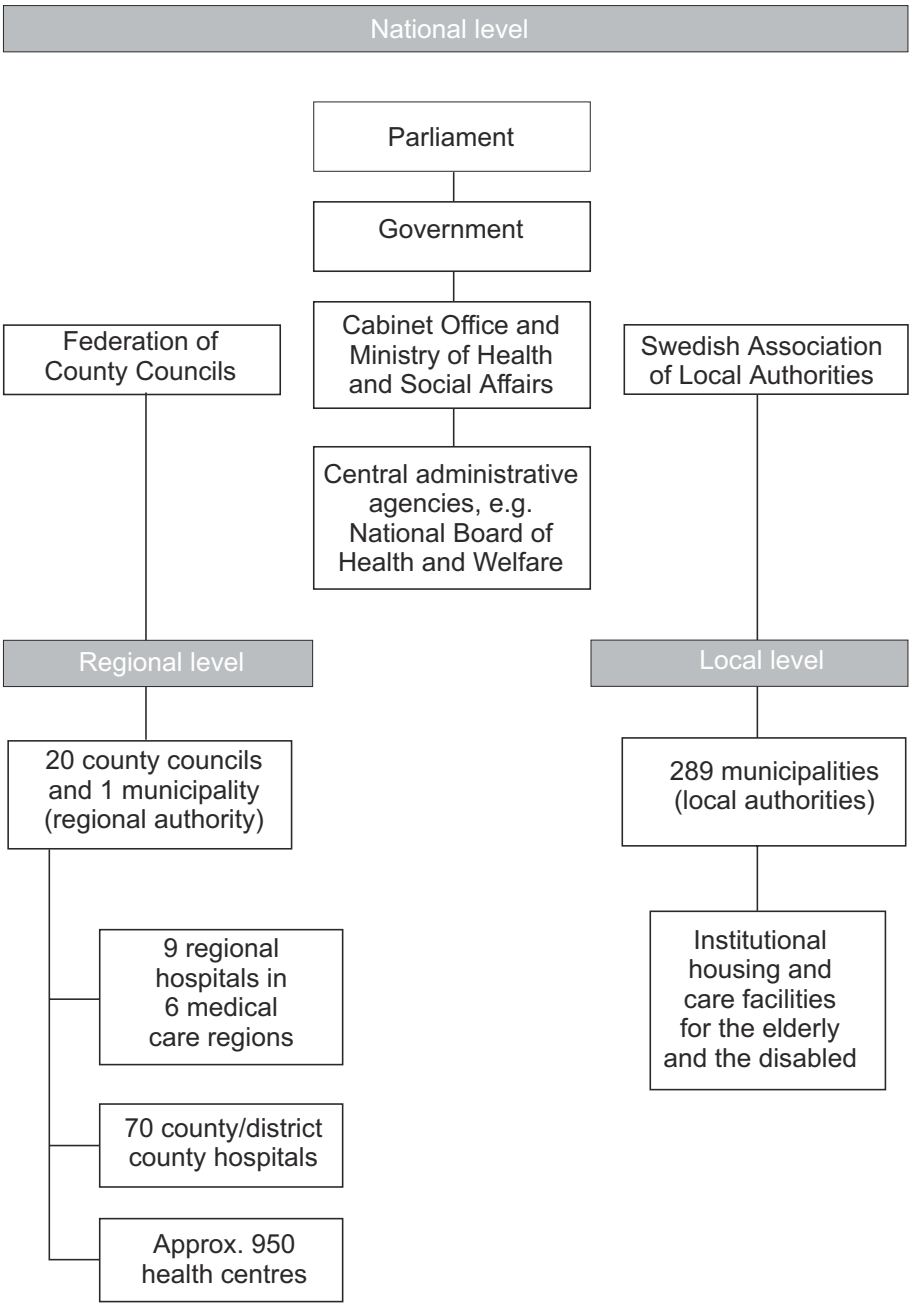
The Swedish health care system is a regionally-based, publicly operated health service. It is organized on three levels: national, regional and local. The regional level, through the county councils, together with central government, form the basis of the health care system. Overall responsibility of the health care sector rests at the national level, with the Ministry of Health and Social Affairs.

National level

The principal responsibility of the *Ministry of Health and Social Affairs* (Socialdepartementet) is to ensure that the health care system runs efficiently and according to its fundamental objectives. It prepares cabinet business and deals with policy matters and legislation in health care, social welfare services and health insurance. It allocates financial assistance directed at very specific treatments, and acts as a supervisor of the activities in the county councils, e.g. the government may legislate for temporary ceilings on county council and local municipality tax rates.

The *National Board of Health and Welfare* (Socialstyrelsen) has a supervisory function over the county councils, acting as the government's central advisory and supervisory agency for health and social services. The board supervises implementation of public policy matters and legislation in health care and social welfare services. Its most important duty is to follow and evaluate the services provided to see if they correspond to the goals laid down by the central government. The board also keeps official statistics on health and health care. It is assisted by the Centre for Epidemiology (Epidemiologiskt Centrum),

Fig. 2. Organization of the health care system



Source: Landstingsförbundet, 1997.

whose objective is to describe, analyse and report on the distribution and development of health and diseases.

All health care personnel come under the supervision of the National Board of Health and Welfare. The board is also the licensing authority for physicians, dentists and other health service staff. In addition, the board is the designated authority under European Community directives for the mutual recognition of diplomas concerning health professions.

The Medical Responsibility Board (Hälso- och Sjukvårdens Ansvarsnämnd), a government agency whose organization is similar to that of a court, decides on disciplinary measures in the event of complaints or possible malpractice. It acts on reports of misconduct in medical services from The National Board of Health and Welfare, the patient or relatives of the patient. The board can enforce disciplinary measures such as an warning, or can limit or even effectively withdraw a health care professional's right to practice. Claim for financial compensation for a patient who has suffered an injury is covered by insurance and not by the board. Every institution providing health services has a legal obligation to provide compensation for injuries that occur in the course of these services. The institutions are insured to meet demands for compensation from patients.

The Ministry of Health and the National Board of Welfare are both associated to other central government bodies. The most important are the *Medical Products Agency* (Läkemedelsverket), the *Swedish Council on Technology Assessment in Health Care* (Statens Beredning för Medicinsk Utvärdering) and the *National Institute of Public Health* (Folkhälsoinstitutet).

The *Medical Products Agency* is a central government agency whose principle task is to control and evaluate the quality, use and cost-effectiveness of pharmaceutical preparations. All drugs sold in Sweden must be approved and registered by the agency. Within the context of mutual recognition in the EU, an approval is also granted if the medicinal product has been approved in some other European country. The activities of the Medical Products Agency are financed through fees, which vary depending on the service provided.

The principal objective of the *Swedish Council on Technology Assessment in Health Care* is to promote the use of cost-effective health care technologies. It reviews and evaluates the impact of both new and existing technology from medical, social and ethical perspectives. Information on results is disseminated to central and local government officials and medical staff to provide basic data for decision-making purposes.

The *National Institute of Public Health* is a state agency under the Ministry of Health and Social Affairs. It is similar to national government health departments in many countries, but operates at "arm's length" from the

government. It reports both to the Minister of Health and Social Affairs and to an independent Board of Directors. The main tasks of the Institute are to promote health and prevent diseases. The strategic vision is to contribute to and facilitate equal opportunities for good health to all.

The *National Corporation of Swedish Pharmacies* (Apoteket AB) is a state monopoly which owns all pharmacies, and thereby maintains a countrywide distribution system. It operates hospital pharmacies under one-year contract with the county councils as well as community pharmacies. In 2000, there were 885 pharmacies, of which 90 were located in hospitals. In remote areas, distribution is covered by approximately 1000 accredited agents. The corporation is responsible for ensuring a good drug supply at uniform prices throughout the country, which means that all approved pharmaceutical products must be available at all pharmacies. In addition, the National Corporation of Swedish Pharmacies is responsible for providing fact sheets and other information about drugs to the public and to physicians. However, the corporation's monopoly has been subject to debate in the context of the EU-legislation, although recently it was decided that it would not be forced to change.

The *National Social Insurance Board* (Riksförsäkringsverket) oversees the local social insurance offices to ensure uniformity and quality in the processing of insurance and benefits. Insurance benefits include sickness insurance, parental insurance (leave), basic retirement pension, supplementary pension, child allowance, income support and housing allowance. In addition, the board's tasks also include work to prevent and reduce ill health by taking positive action with the eventual goal of returning the person to the workforce. The board also negotiates with pharmaceutical companies for drug pricing in order to incorporate them into the list of drugs eligible for the Drug Benefit Scheme. The National Social Insurance Board has a branch in each county council which processes individual cases on regional and local levels. Social insurance offices exist in each municipality to serve local residents.

The *Federation of County Councils* (Landstingsförbundet) is a collaborative national interest organization for the county councils. The federation, directed by a politically-elected board, looks after the mutual interests of its members, assists them in their activities and keeps them informed about matters of concern to the county councils. The federation represents the county councils in all major policy matters in contact with the central government and personnel organizations. It also works as the employers' central association for negotiating wages and terms of employment for the personnel employed by the county councils. The federation is not subordinated to the central government or any of its administrative agencies. The federation finances its activities through member fees.

The corresponding national level body for municipalities is the *Swedish Association of Local Authorities* (Svenska Kommunförbundet), which forms an organization of the 289 municipalities. The tasks of the association are to promote and develop local self-government, to safeguard local government interests, to promote cooperation among local authorities and to provide local authorities with expert assistance. In 1999, 58% of the association's financing came from membership fees paid by the local authorities. Membership fees are determined either as a fixed share of the municipalities' total income or per inhabitant (0.093% or 25.4 SEK, respectively, in 2000). Additional financing comes from charges for services purchased from the local authorities.

Regional level

Health care is considered a public responsibility in Sweden. This responsibility belongs to the county councils, which are independent, regional government bodies and the local independent organ for county services. In administrative terms, county councils have the character of independent secondary level local government. Their authority can not, however, intrude upon the municipalities' constitutional rights and powers. In 2000, there were 21 county councils, (including Region Skåne, Västra Götalandsregionen and municipality of Gotland) which all have representatives in the Federation of County Councils. The population in the counties ranges from approximately 133 000 to 1.8 million. Within each county council, there are usually several health care districts, each with the overall responsibility for the health of the population in its area.

The members of the Council are elected every fourth year, concurrent with national and local municipal elections. The council members mainly represent the same political parties as found in the national parliament. There are no guidelines or instructions regarding the organizational structure of county councils, which means that they are free to choose whatever structure they consider suitable, corresponding to their responsibilities. The county council has the right to levy proportional income tax on its residents and, in 1999, 66% of their total income was generated through county taxes. The remainder consisted of 21% from state grants, 3.3% from user fees and 9.7% from other sources.

The county councils are in charge of the health care delivery system from primary care to hospital care, including public health and preventive care. The county councils have overall authority over the hospital structure and responsibility for all health care services delivered. Usually, the full county council elects a hospital board, which, in turn, decides how to organize management as long as the board fulfils its obligations concerning health care delivery.

In other words, it is the hospital board that chooses its own executive and administrative organization. Executive staff members of the board ensure that health care delivery runs efficiently. This means that hospitals often are managed by a combination of elected public officials and hospital managers, who are civil servants.

The county councils are usually divided into health care districts, each managed by their own board. A district usually consists of one hospital and several primary health care units, where the latter are further separated into primary health care districts. A primary health care district is usually the same geographical area as the local municipality, although larger cities have more than one health care district. In 2000, there were about 370 primary health care districts in Sweden.

The 21 county councils are grouped into six medical care regions (the Stockholm Region, the South-Eastern Region, the Southern Region, the Western Region, the Uppsala-Örebro Region and the Northern Region). These regions were established to facilitate cooperation in tertiary care among the county councils. Each region serves a population averaging more than one million, relying on small offices to deal with matters related to the financing and provision of tertiary care.

According to the 1982 Health Care Act, the county councils are required to provide and promote the health of their residents and to offer equal access to health care. They also need to plan the development and organization of health care according to the needs of the population and the given resources.

The county councils also regulate the private health care market, which is small, due to minimal citizen interest and perceived need. A private health care provider must have an agreement with the country council in order to be reimbursed by social insurance. County councils control the establishment of new private practices and the number of patients private practitioners can see during a year. If the private provider does not have any agreement or if the private provider does not use the regulated fee schedule, the provider does not get reimbursed and a patient will have to pay the full charge to the provider.

Local level

At the local level, Sweden has 289 municipalities with their own areas of responsibility. The population varies from less than 3000 to approximately 740 000 individuals. The traditional organization of the municipalities involves a municipal executive board, a municipal council and several local government committees. The municipal executive board leads and coordinates all the municipality's business and acts as a supervisor for the committees. The board

is responsible to the municipal council for following up matters that can possibly influence the development and economy of the municipality. The municipal council's duty is to make decisions about taxes, goals and budgets for all community-run businesses, as well as the organization and tasks of the committees. Like the county councils, the municipal councils are elected every fourth year and have the right to levy taxes on their population. The average municipal tax rate in 2000 was 21%. In 1998, 56% of the municipalities' total income was generated through taxes, 22% from state grants, 12% from fees and another 10% from other sources.

The responsibilities of a municipality include issues in the immediate environment of the citizens, for example schools, social welfare services, roads, water, sewage, energy, etc. As a result, municipalities employed 738 000 persons in 1998, which was almost 20% of all employees. Apart from financial assistance, social welfare services include child care, school health services, environmental hygiene, and care of the elderly, the disabled and long-term psychiatric patients. Patients who have been fully treated and are discharged from somatic acute care- and geriatric hospitals also fall under the responsibility of the municipalities. As a result, the municipalities operate public nursing homes and home care.

Planning, regulation and management

Planning and management

In the 1970s, health care planning was managed through long-term plans tied to the yearly budgeting process. These plans were made on the basis of normative indicators: for example, the number of beds per 1000 inhabitants. Changes in sickness profiles and illness inequalities between different socioeconomic groups were not considered in the development of the plans. This traditional planning approach, which was based on a command-and-control model with an emphasis on allocative planning and prioritization, was appropriate to serve the needs of the system during a period of growth and expanding infrastructure. However, a growing awareness on both national and county levels that allocative planning may not be adequate resulted in a change of direction as the basis for planning was shifted to the needs of the residents. These needs were to be established through local, regional and national epidemiological studies. Along with the needs-focused orientation to health care planning, the interest for public health issues grew stronger. Cross-sectional strategies were initiated both

nationally and locally. Preventive health services were emphasized and the scope of health planning encompassed not only health services, but also social services.

The 1982 Health Care Act was an important landmark for several reasons. It completed the successive process of transferring responsibility for all health services provision from the national level to the county council level; it formalized the needs-based approach to health care planning; it made county councils responsible for preventive care and health promotion; and it constituted the framework for health planning and health activities. The act requires the county councils to promote the health of their residents and to offer equal access to health care. The county councils should plan the development and organization of health care according to the needs of the residents. Planning responsibility also includes health services supplied by other providers, such as private practitioners and physicians in occupational medicine.

The Dagmar Reform of 1985 reinforced county councils' responsibility over health services provision, as well as the need-based orientation of planning. This reform, intended to consolidate the county councils' planning authority over ambulatory care visits to physicians, changed the way that the social insurance fund reimbursed private ambulatory providers by making the county councils cost-liable. The county councils' planning capacity was thereby strengthened, as they could now plan annual budgets for primary care services (publicly and privately provided).

This empowerment meant that the county councils, apart from being representatives of the residents, health care producers and financiers, were regulators of the private health care market. However, the focus of planning by need did not affect the structure of health care supply. Structural issues were still discussed and planned through the same planning mechanisms as in the 1970s. Furthermore, cost-containment had become an important planning issue by the end of the 1980s, as several controversial reports were issued which argued that costs were too high and productivity too low in the Swedish health care sector compared to other sectors. In addition, the county councils could no longer finance increasing costs through higher county council tax revenues due to a tax cap. Thus, productivity increases and efficiency became important planning factors for the county councils. Furthermore, patients' preferences, considered to have been neglected in the past, were deemed of interest.

Developments in the 1990s were in the direction of planned markets in several county councils. A number of county councils have introduced

management systems in which specific purchaser functions have been established and separated from the provider functions. The purchasers – public administrators of the health care system – represent the patients and purchase health services on their behalf from public and/or private providers. However, the organization and working methods of purchasers vary widely across county councils. Some have focused on promoting public health, and others have concentrated on collaborating with social services and regional social insurance offices. In these cases, the needs of the residents have been an important starting point in their work. On the other hand, others have focused on price and volume negotiations with different providers. Here, the demand for health services has then been a more important starting point than the needs of the residents.

Although purchaser/provider models created incentives for more efficient management, there were serious concerns that market-based mechanisms damaged social equity and, due to high transaction costs, saved little money. In the second half of the 1990s, the word "cooperation" instead of competition started to be used. As a result of increased dialogue between purchasers and providers, there has been a tendency to shift from specifying the number of certain medical interventions to defining broader health programmes that include more than one provider. Thus, after a period of quasi-market focus, a more long-term perspective in Swedish health care has begun.

Not only within the health care institutions have there been considerable changes, but also among them. A combination of new medical technology, changed demographic profile and tighter budgets has led many hospitals to restructure their activities. Approximately 40 hospitals' management was merged between 1995 and 1997. Hospitals, departments and/or wards have begun cooperating a great deal, ranging from concentrating some activities to one hospital to sharing the same medical staff. These changes have led to mergers in geographical locations, due to economies of scale and synergy effects, or centres of interdisciplinary specialists, the result of increasing focus on patient satisfaction and quality issues.

In sum, the planning and management of health services before 1980, during the 1980s and in the 1990s can be summarized as follows. In the period before 1980, the prevailing planning and management ideology focused on judgements and demands made by the medical profession's representatives. In the 1980s, focus shifted towards public health based planning and management including budget allocations according to the needs of the residents. In the 1990s, there was a shift towards planned market solutions to health care planning and management.

Regulation

An important role for central government is to establish basic principles for health services through legislation and recommendations. The most important of these was the Health Care Act of 1982, which has been revised several times since then. Other laws regulate the responsibility and obligations of personnel, confidentiality, the qualifications needed to be able to practice medicine and rules on how to handle patient records.

Regulations produced by the National Board of Health and Welfare state that regular, systematic and documented work should be conducted to ensure the quality of care. Furthermore, all staff is formally obliged to participate in programmes of quality assurance, although the extent of active participation is still modest in practice.

If a patient suffers an injury or disease in connection to medical treatment, or is exposed to risk because of treatment, the provider has to report the incident to the National Board of Health and Welfare. Should faults or negligence in treatment be attributable to members of staff, the incident can be referred to the Medical Responsibility Board. Referrals to this board can also be made by patients or patients' relatives. It cannot, however, act on its own initiative. The board, a separate authority whose organization is similar to that of a court, can decide on disciplinary measures.

The Medical Products Agency is the government agency charged with approving new pharmaceutical products and granting permission for drug production. The activities of this agency are regulated in a law governing medical products, which has been adapted to European Union (EU) regulations. The Drug Act of 1992 constitutes the basis for all activities connected with pharmaceuticals and drug distribution in Sweden. The Act on Retail Trade in Drugs is a special law that gives the state the exclusive right to conduct retail trade in drugs; the government decides by whom, and on what terms, retail trade in drugs may be conducted. The state has assigned this exclusive right to the National Corporation of Swedish Pharmacies. The supply of pharmaceutical products is also the responsibility of The National Corporation of Swedish Pharmacies.

Since the reform of 1997, the county councils are responsible for the overall cost of drugs. In conjunction to this reform, patient fees for drugs are charged according to an escalating scheme (see Table 6). The list of drugs included in the National Drug Benefit Scheme is established by the National Social Insurance Board. For drugs not reimbursed, i.e. not included in the Drug Benefit Scheme, the patients pay the full price. The National Drug Benefit Scheme is administered by the National Corporation of Swedish Pharmacies. Since 1993,

the National Social Insurance Board negotiates the reimbursement price of medical products within the Drug Benefit Scheme with pharmaceutical companies.

The county councils are responsible for the provision and financing of health services. They regulate the private practitioners' market in the sense that by approving establishment, they also approve public reimbursement of the practitioner. Until 1994, this was done by the National Social Insurance Board, and since then the county councils themselves are in charge of directly reimbursing doctors. They cannot prevent a practitioner from establishing a private practice; their regulatory power is restricted to controlling the public financing of private practitioners.

Decentralization of the health care system

Decentralization is a key word when describing the development of the organization and management of the Swedish health care sector. The county councils and local municipalities enjoy a considerable degree of autonomy in relation to central government. Except for some national policy development, legislation and supervision, the responsibility for health care is decentralized to local governments. The political responsibility for financing and providing health services has been decentralized to the county councils. Local municipalities, on the other hand, are responsible for delivering and financing long-term care for the elderly and the disabled and for long-term psychiatric care. The local municipalities are not subordinated or accountable to the county councils. The laws on health care and social services allow the county councils and municipalities to impose taxes to finance their activities.

Decentralization of responsibility within the Swedish health care system not only refers to legislative devolution between central government and local governments, but also to decentralization within each county council. Since the 1970s, the financial responsibility has been decentralized within each county council and the degree of decentralization, organization and management varies substantially among county councils. However, a summarized description of the decentralization of Swedish health care responsibilities since the 1970s will be given.

By the end of the 1970s, it was evident that county council revenues would not increase at the same pace as before, and cost containment became an important issue. The expansion and differentiation of the sector had furthermore made it difficult to plan and manage the provision of health services by detailed

central county long-term plans. Incentives that would increase productivity and efficiency became important elements in the future development of planning and management systems. Generally, several local health care districts within each county council were formed, each with an overall political responsibility for the health of its residents. Perhaps the first decentralization reform was introduced in the 1980s, when, at varying rates, the county councils decentralized financial responsibility for health care activities by introducing global budgets. Districts became responsible for resource allocation within their geographical area. Central county councils managed the districts by allocating the budget among the districts.

Many districts, most of which managed a hospital and several primary health care centres, started to practice the same principles of global budgeting within the district; financial responsibility was decentralized to hospital department and primary health care centre levels. The professional heads of departments were cost liable for their activities. This meant a shift of focus with respect to planning of health services from politicians to professionals. The introduction of global budgeting and cost centres were not, however, considered enough. Although the system performed well with respect to cost containment, productivity was still considered low. In the late 1980s, cost centre management was accordingly substituted for systems of transfer pricing; health service providers were to be reimbursed through prospective per-case payments instead of through activity budgets. The decentralization of revenue responsibility has been a trend since then, even though it varies among county councils and specialities.

Profit centre management was primarily introduced at general ancillary departments, e.g. technical assistance and capital management, and medical ancillary departments followed. By the end of the 1980s, 20 out of 26 county councils planned to reimburse general and ancillary departments with per-case payments, and to establish total cost liability at direct patient care departments. Profit centre management was more common in densely populated regions than in scarcely populated regions, and at large hospitals than at small ones. In the 1990s, profit centre management was also introduced at direct patient care departments, although this was very difficult. Much work in the late 1980s and early 1990s has focused on establishing product systems for direct patient care departments. Thus far, diagnosis related groups (DRG) have been one of the most common product classification systems with respect to inpatient somatic care.

As for privatization of health services, a great deal has happened during the 1990s. Some county councils, like Stockholm, have had the strategy of priva-

tizing as much of the ancillary services as possible. The operations of one hospital (but not the building) were sold to a Swedish investment firm, triggering a debate as to whether private, profit-seeking organizations are able to provide health care that is equal in quality and accessibility as non-for-profits. Several specialized inpatient clinics, e.g. cardiac clinics, also provide treatment on a contract basis for publicly funded patients. In 1998, it was estimated that 3% of the total health care expenditures in Sweden were attributable to private health care.

Generally, however, most health services are provided by facilities owned by the county council. At the municipality level, privately provided care for the elderly is more frequent, even though the service is still paid for by the municipality. In 1999, there were about 240 entrepreneurs, employing 2500 persons, who supplied care and housing for the elderly. Some of these are charitable or religiously-affiliated organizations.

There have been several problems in connection to the decentralization of financial responsibility. Among other things, the lack of experience in managing units through transfer pricing, the difficulties surrounding product descriptions in health services, and an underdeveloped accounting system for supporting a decentralized management system have been impeding factors for financial control. These problems arose due to the transition from an accounting system that was constructed in order to support a central county planning management to a more market-oriented one. An assessment of these two systems is complicated by the lack of pre-decentralization studies as well as the introduction of other reforms in parallel.

Health care finance and expenditure

Main system of finance and coverage

According to OECD data, total expenditure on health as a percentage of GDP in Sweden amounted to 8.4% in 1998, slightly less than the EU average of 8.6% (Fig. 4). Public health care expenditures amounted to 7.4% of GDP in 1998. In 1999, approximately 85% (99 billion SEK or 10.9 billion Euros) of total county council *net* expenditure was spent on health care (excluding dental care and pharmaceuticals), while the remaining 15% was for expenditure on other services, including social welfare, culture and public transportation. Of the *total* expenditures of 127 billion SEK spent on health care by the county councils, 99 billion was financed by taxes and not earmarked state grants (78%). Acute secondary and tertiary health care consumed 62.3% of these revenues, psychiatric care 9.5% and geriatric care 5.8%, while the remainder (22.4%) was spent on primary health care.

Other sources of health care revenue include earmarked state grants, 17.6 billion SEK (14%); patient fees, 2.5 billion SEK (2%); and other revenues, 8.4 billion SEK (7%). The redistribution between the national social insurance system and the county councils is of two types. First, there is a transfer of resources through which the county councils receive grants that are earmarked for a specific use. These grants are based on certain features of the county, such as regional facilities and population characteristics. An example of this type of transfer is the Drug Reimbursement Scheme (15 billion SEK in 1999). Second, the county councils receive general grants that are not earmarked for any specific purpose. In 1999, these grants amounted to 11.1 billion SEK.

Local taxes were on average about 10% in 2000, of which 8.5% was dedicated to medical care, and the remaining 1.5% to dental care, education and

Table 4. Main sources of health care finance, million SEK

	Drug Benefit Scheme	Other earmarked subsidies	Patient fees	Sales of services	Other	Total
External revenues	14 710	2 933	2 519	7 979	392	28 533
Local taxes and state grants						99 139
Total revenues						127 672

Source: The Federation of County Councils.

public transport. Local taxes are proportional. The state grants, which are outside the social insurance system, are financed through national income taxes and indirect taxes. Public financing in 1990 (the latest year for which international comparable data is available) was only slightly progressive, i.e. people with higher income contribute a slightly higher proportion of their income to health financing through taxes and direct payments than people with lower income. Private financing (co-payments) was markedly regressive. Overall, the financing system was slightly regressive. In 1999, 2% of the households' disposable income was spent on health care, and private health care expenditure represented 22% of total health care expenditure (see the section on *Health care expenditures*).

The social insurance system, managed by the National Social Insurance Board, provides financial security in case of sickness and disability. Insurance is mandatory and covers part of individual income losses due to illness and health care services. The insurance also covers individual expenditure for prescribed drugs and outpatient care over a high cost-protection limit.

Compensation for loss of income is an important item covered by insurance. Employers pay income compensation from the 2nd day until the 14th day of sickness, after which point the national health insurance compensates the person. The sick person receives a compensation of 80% percent of his/her income up to a monthly salary of SEK 22 750 (approximately €2503). If a person earns more than that, the compensation is still 80% of SEK 22 750. The insurance also covers drug costs through the Drug Benefit Scheme which assures that the patient never pays more than SEK 1800.

The majority of national health insurance is financed by employers' contributions and the rest by specific transfer payments from central government. Both private and public employers pay a contribution per employee to the health insurance system: 8.5% (in 2000) of the employee's salary. It may be noted that there is an interdependence between the two insurance functions (i.e. against health care costs and income losses). An inadequate or delayed provision of medical care might cause excessive expenditure on income compensation and production losses.

The Swedish system provides coverage for all residents of Sweden regardless of nationality. In addition, emergency coverage is provided to all patients from EU/EEA countries and nine other countries with which Sweden has a bilateral agreement. The services available are highly subsidized and some services are provided free-of-charge.

Health care benefits and rationing

Swedish health care is considered to be accessible and of high quality, and expectations regarding health care are very high among Swedes. An important part of the objective to assure the entire population good health care on equal terms is that the health sector provides care within the limits of its economic resources. Limited resources and strong demands on the health care sector make cooperation important among different levels.

Diagnosing and treating are the principle tasks of medical care, but no basic or essential health care or drug package is defined. Instead, there are some definitions as to what falls within and outside of the domain of health care, and some general guidelines regarding the priorities of the health care sector. For example, one priority is that medical care should be easily accessible, and that everyone who needs medical attention shall be able to receive it. In the event of sickness or injury, the patient is ensured medical attention from institutions that have the competence and resources to handle the patient. Three major principles for priorities govern the Swedish health care:

1. The principle of human rights: all individuals have equal value and equal rights irrespective of their personal attributes and positions in society.
2. The principle of need or solidarity: resources should focus on the individual (or sector) that is in greatest need.
3. The principle of cost-effectiveness: when choosing among different actions, a reasonable relation between costs and effects should be obtained, measured as improved health and higher quality of life.

Deciding among effective interventions is always hard to do and accept. If the starting point for decisions consists of a clear and widely accepted ethical base, it may facilitate the understanding of the public's and health care personnel's understanding of these issues. The three principles above are ranked so that the principle of human rights takes preference over the principle of need and solidarity. The principle of cost-effectiveness is subordinated to the other two. At the political/administrative level, there are four levels of priorities, illustrated in Table 5.

Table 5. Groups of priority for political/administrative prioritization

Group of priority	Description of care needed
1	Care of life-threatening acute diseases and diseases that, without treatment, will lead to a longer disability or a premature death. Care of serious chronic diseases. Palliative care in the final phase of life. Care of people with reduced autonomy.
2	Prevention with a documented benefit. Rehabilitation etc. according to the definition of the Health Care Act.
3	Care of less serious acute and chronic diseases.
4	Care for reasons other than disease or injury

According to the guidelines for prioritization, some hospitals have started to not perform in vitro fertilization more than once and mammography more than once a year, unless the patient pays for the services. The cost for aesthetic surgery is, in most cases, also borne by the patient. For non-acute diseases or less serious conditions, there is a guarantee of care within a reasonable time period.

In spite of the nationally stipulated priorities, there is uncertainty regarding the extent to which these are followed in practice. In the end, it is the health care personnel who make the final decisions. Work has therefore been initiated to add priority guidelines to the national treatment guidelines for patients with chronic diseases.

Complementary sources of finance

The sources of revenue for health care in Sweden are: taxation, including mainly proportional income taxes as well as indirect taxes; the national social insurance system; private expenditure (i.e. out-of-pocket payments and private insurance). Swedish national accounts do not present data for complementary sources of revenues which makes it difficult to get a detailed picture of the financial flows of the Swedish health care system.

Out-of-pocket payments

There are direct small patient fees for medical attention, which are in the form of flat rate payments. Each county council can determine its own fee schedule for outpatient care. However, the national parliament has set ceilings on the total that any one citizen can pay in any 12-month period. In 2000, the fee for consulting a physician in primary health care varied from SEK 100 to SEK 140 (approximately €11–15) among county councils. For consulting a specialist at a hospital in the same year, the fees varied from SEK 150 to SEK 250. For inpatient care, normally a fee of SEK 80 per day is charged, but reductions are

possible for pensioners and low income groups. For children under the age of 18 years, no fee is usually charged. In 1999, the county councils received SEK 2519 million (€277 million) in patient fees.

The central government's ceiling for out-of-pocket payments means that an individual's total charges on health care for a period of a year, i.e. visits to physicians, district nurses, physiotherapists, etc., can be a maximum of SEK 900 (€99) not including inpatient care. After this cost ceiling has been reached, the patient pays no further charges for the remainder of the 12-month period, which is calculated from the patient's first visit to a physician. The exemption scheme is included in national health insurance, is financed by the National Social Insurance Board and is administered by the county councils.

Elderly and disabled patients are normally entitled to subsidized transportation to health care facilities. The transportation fee varies among the county councils, but it is usually SEK 50–60. An annual ceiling also applies to co-payment for this transportation, which was SEK 1000 in 2000.

The ceiling for individual co-payments for prescribed drugs is separated from the other health care services and is administered by the National Corporation of Swedish Pharmacies. Co-payments for prescribed drugs are uniform throughout the country and are determined by central government. The patient has to pay the full cost for prescribed drugs up to SEK 900, after which the subsidy gradually increases in accordance with the cost of drugs (see Table 6), up to a maximum level.

Table 6. The drug benefit scheme for purchases within a 12-month period

Cost of pharmaceuticals (SEK)	Share of patient co-payment in percent
0–900	100%
901–1 700	50%
1 701–3 300	25%
3 301–4 300	10%
4 301–	0%

Within a 12-month period, the patient has co-payments up to a ceiling of SEK 1800 (€198) for outpatient prescribed drugs. The corresponding limit of patient fees for technical devices is SEK 2000. In 1999, the total value of prescribed (and dispersed) drugs amounted to SEK 19 039 million. Due to the Drug Benefit Scheme, patients paid SEK 4329 million (23%). In addition to this, Swedish consumers paid SEK 2112 million for over-the-counter drugs and other health-related items from pharmacies.

At primary care clinics, vaccinations, health examinations and consultations, as well as certain types of treatment, are provided free-of-charge to all children of school age. At the maternity primary care clinics, regular check-ups are

given for free during the entire pregnancy. In addition, dental care is provided free-of-charge to all children and adolescents up to the age of 19 years. For adults between 20 and 29 years, dental examinations are subsidized. For those aged 30 and older, all dental services performed are partly subsidized. This subsidy is paid directly to the provider. If dental services are part of some disease or if the patient is elderly and/or disabled, the same cost ceiling will apply as to that of other health care services. The national health insurance also partly subsidizes dental care expenses for drugs included in the National Drug Benefit Scheme that are prescribed by a physician or a dentist.

Voluntary health insurance

It should be noted that private health care insurance is very limited in Sweden, accounting for less than 1% of total health care revenue, and typically providing only supplementary (elective) coverage to the public health system.

Growing interest in insurance that provided immediate care at private hospitals began in the 1980s. The reason for this was most likely due to waiting time for certain medical treatments within the public health care system. The Swedish insurance company, Skandia, began to offer private health insurance in 1985, and currently the company is the largest in the business, with about 30 000 persons insured. In addition to Skandia, most insurance companies offer private health insurance, and approximately 120 000 persons are insured. In about 90% of cases, it is the employer that pays the fees in order to avoid employees' long-term sick leave. The insured is guaranteed immediate access to proper care. Insurance does not cover acute heath care. The insurance company covers costs related to the planning of the medical service, the medical procedure and recovery, and transportation costs. In 2001, the yearly fees for private health insurance varied between SEK 1010 and SEK 1710 (€111–188) for the age group 20–39 years, SEK 1910–2580 for persons between 40 and 64 years, and SEK 6780–13 510 for those 65 years and older. As of 1988, Swedish law has prohibited the deduction of private insurance premiums on one's personal income taxes.

Health care expenditure

During the 1970s, the health care sector expanded in all western European countries with investments in infrastructure and new technologies. In Sweden, this growth raised demands for controlling the pace of health care expenditures.

During the 1980s, total expenditure on health care as a share of GDP was reduced from 9.6% in 1982 to 8.7% in 1986. As can be seen in Table 7, this share has been fairly constant since then. During the beginning of the 1990s, a combination of recession and cost containment led to decreasing real expenditures in spite of an almost constant GDP share. Furthermore, Table 7 shows that the public share of total health expenditures has continuously decreased. This is mainly due to increasing cost-sharing, as health care with a high degree of patient co-payments (e.g. drugs) has increased, while health care with a low degree of patient co-payments (e.g. inpatient care) has decreased.

Table 7. Trends in health care expenditure, 1980-1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total expenditure on health care (billion ECU)	8.5	12.0	15.9	16.7	16.9	14.2	14.3	14.9	17.3	17.1	16.9[a]
Thousands SEK/capita (1995-GDP prices)	14.7	15.6	17.3	16.8	16.5	15.9	15.6	15.8	16.8	17.1	17.5
Share of GDP (%)	9.4	9	8.8	8.7	8.8	8.9	8.6	8.4	8.7	8.5	8.4
Public share of total expenditure on health (%)	92.5	90.4	89.9	88.2	87.2	85.7	85.2	85.2	84.8	84.3	83.8

Source: OECD Health Data 2000;

[a] Own calculations, exchange rate SEK/ECU=8.9288.

At the start of the 1990s, Sweden's total health care expenditure as a proportion of GDP was above the EU average. As can be seen in Fig. 3, during the 1990s, the gap narrowed, which is a result both of a falling share of health as a proportion of GDP in Sweden and increasing shares in other European countries. As a result, in 1998, Sweden was slightly under the EU average (Fig. 4).

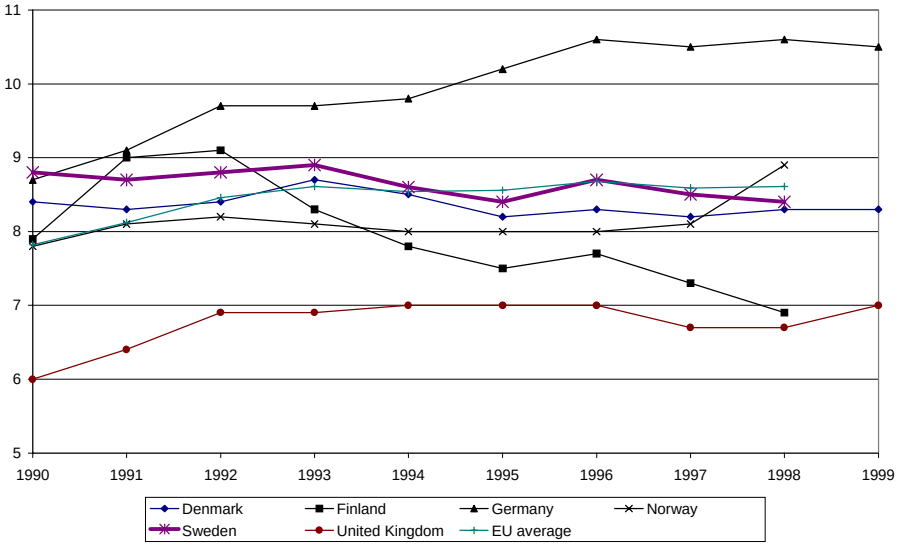
As shown in Fig. 5, Sweden's health care expenditure in US $PPP per capita is 1746, slightly lower than the EU average of 1848 and lower than its Scandinavian neighbours Norway (2425) and Denmark (2186), and higher than Finland (1502).

In Fig. 6, health expenditure from public sources as a percentage of total health expenditure is shown for the WHO European Region. As is illustrated, Sweden has a percentage of 83.8%, a larger public proportion than its Scandinavian neighbours of Norway (82.8%), Denmark (81.6%) and Finland (76.3), respectively.

Structure of health care expenditures

The structure of health care expenditures is illustrated in Table 8. Four trends can be identified. First, as already mentioned, publicly-financed health care decreased during the 1990s, which was mainly explained by increased patient

Fig. 3. Trends in health care expenditure as a % of GDP in Sweden and selected countries, 1990–1999



Source: WHO Regional Office for Europe health for all database.

co-payments. Second, the pharmaceutical expenditure as a share of total health care expenditure increased substantially in recent years. This increase has been subject to some debate and the drug reimbursement scheme has been reformed to curb growth. Third, the pace of investment declined significantly since 1980. Possible explanations for this are that the expansion phase of the 1970s led to a mature health care infrastructure, and cost containment became an important issue in the 1980s. This trend prevailed from 1990 to 1997 with an investment share of around 4%. Finally, inpatient care fell quite dramatically in the first half of the 1990s due to the "Ädel-reform". Patients who are considered fully treated by the hospital doctor are transferred to nursing homes, which are the responsibility of the municipalities.

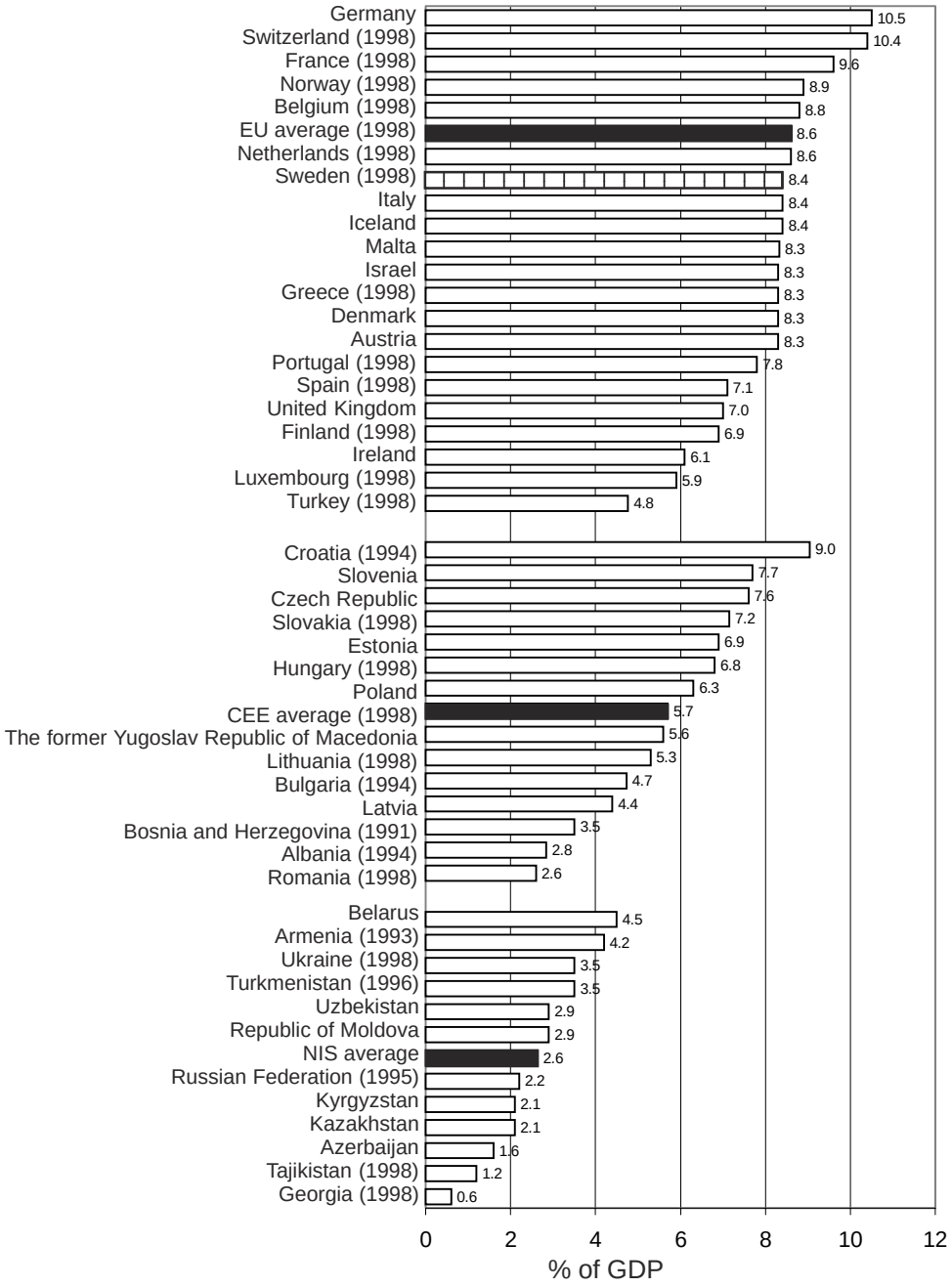
Table 8. Health care expenditure by category, as % of total expenditure on health care, 1980–1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Public expenditure (%)	92.5	90.4	89.9	88.2	87.2	85.7	85.2	85.2	84.8	84.3	83.8
Public expenditures inpatient care (%)[a]	68.5	53.4	49.8	49.0	44.3	43.4	42.4	42.1	–	–	–
Total pharmaceutical expenditure (%)	6.5	7.0	8.0	8.7	9.7	10.7	11.9	12.5	12.9	12.8	–
Total investments (%)[a]	6.7	6.8	4.3	4.1	3.6	3.4	3.7	4.1	3.9	–	–

Source: WHO health for all database 2000,

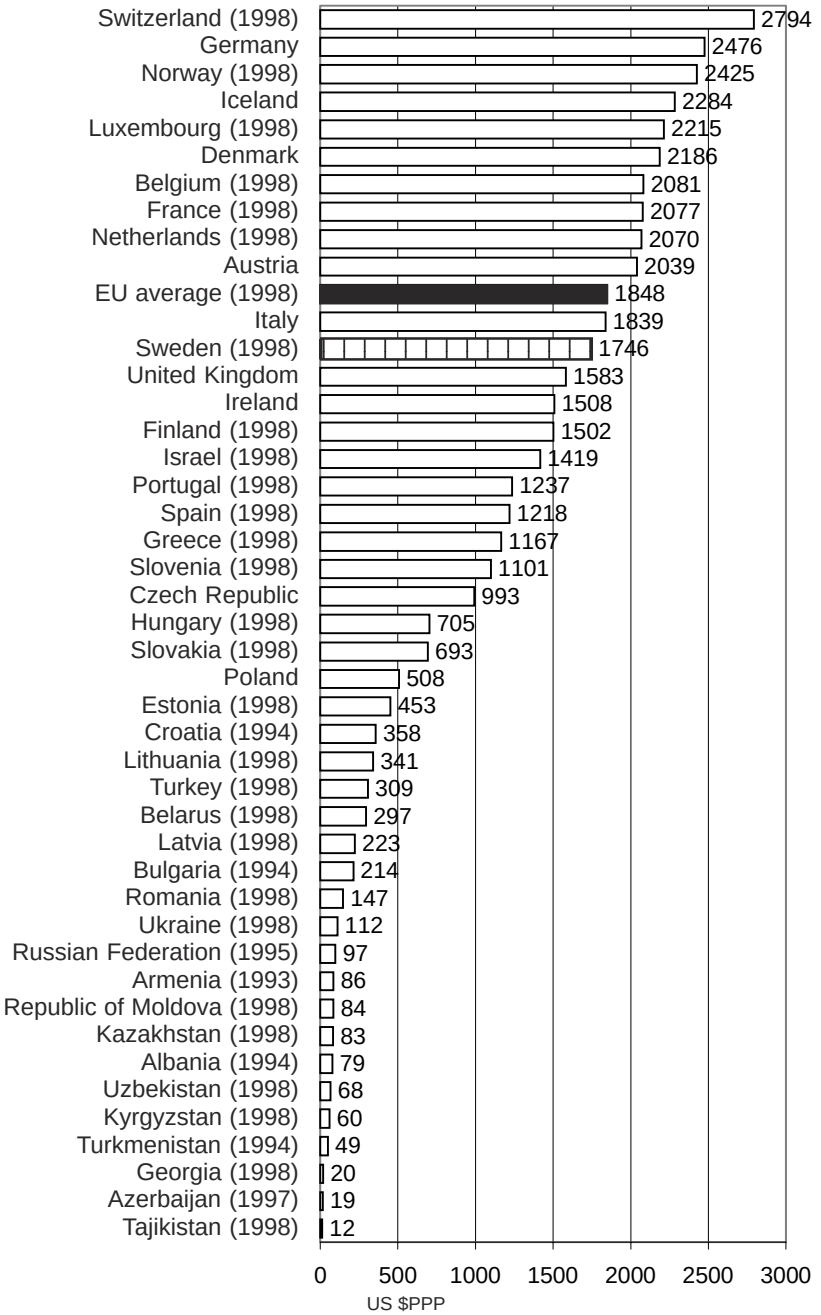
[a] OECD Health Data 2000.

Fig. 4. Total expenditure on health as a % of GDP in the WHO European Region, 1999 (or latest available year)



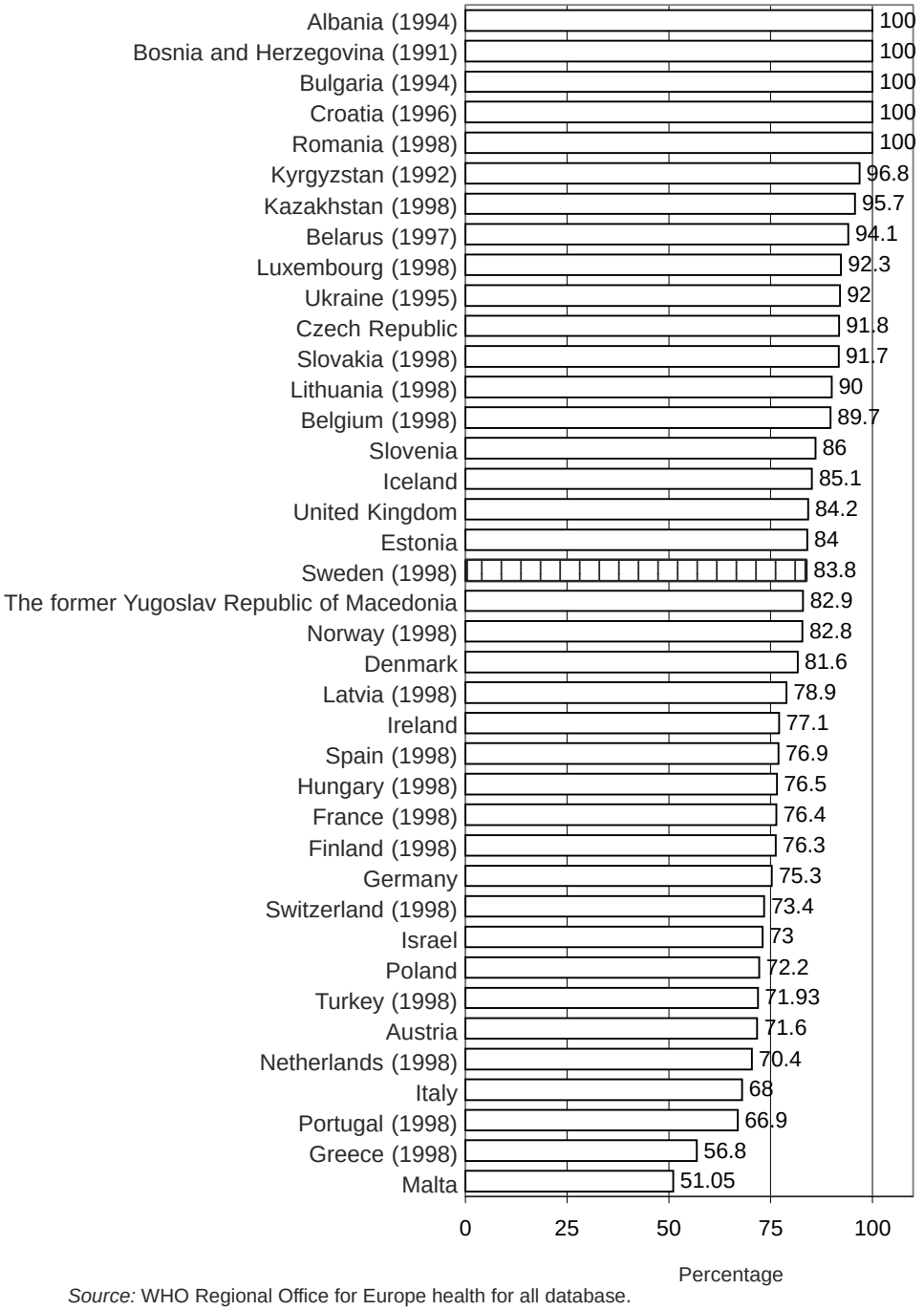
Source: WHO Regional Office for Europe health for all database.

Fig. 5. Health care expenditure in US $PPP per capita in the WHO European Region, 1999 (or latest available year)



Source: WHO Regional Office for Europe health for all database.

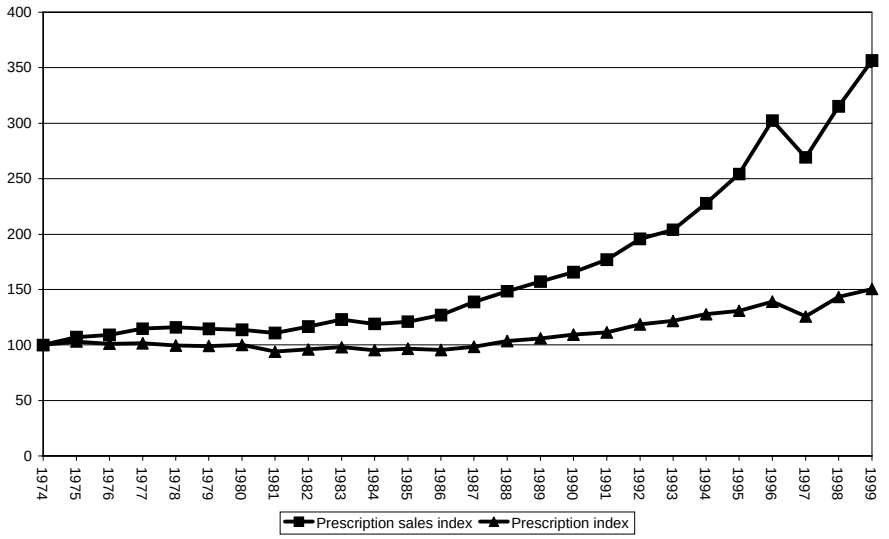
Fig. 6. Health expenditure from public sources as a % of total health expenditure in the WHO European Region, 1999 (or latest available year)



Source: WHO Regional Office for Europe health for all database.

As mentioned above, expenditures on pharmaceuticals have increased substantially during the 1990s. In Fig. 7 this development is depicted as the index of real prescribed drug sales (1974 prices). The development is influenced both by an increase in the number of prescriptions (prescription index) since 1988, and the introduction of new and more expensive pharmaceuticals. The peak in 1996 (and the corresponding dip in 1997) was a result of hoarding, due to the reformed drug benefit scheme that came into effect 1 January 1997.

Fig. 7. Real pharmacy drug sales and prescriptions, index (1974=100)



Source: Apoteket and Statistics Sweden.

Health care delivery system

Primary health care and public health services

The aim of the primary care level is to improve the general health of the population and to treat diseases and injuries which do not require hospitalization. The primary care services deliver both basic curative care and preventive services through local primary health care centres. The main guidelines for the primary level are: comprehensiveness; closeness and accessibility; continuity; quality; and safety. Primary health care shall *without limitations regarding diseases, age or patient-group seek to fulfil the population's need for basic medical treatment, care, preventive services and rehabilitation which do no not require the hospitals' medical and technical resources or other special competence* (1992, and additions made in 1996, HSL 5§).

Patients have the freedom to choose among primary health care providers. Patients can choose between health centre and hospital outpatient departments within the county council. If a patient wishes to receive medical care outside his/her county council, a referral may be required. Certain special rules apply when a patient chooses health care outside the county council boundaries and it is up to each county council to make these rules. One way in which county councils influence the decisions of patients is by charging patients different fees for services in health centres and hospital outpatient departments. Patient fees in primary care also slightly vary among providers. In 2000, the fee for primary care in health centres varied between SEK 60 and SEK 120 (€6.70 to €13.40) and if the patient sought outpatient care at a hospital, the fee varied between SEK 150 and SEK 250 (€16.50 to €27.50). Patients paid out-of-pocket cost recovery up to SEK 900 in the year 2000 and, after that, patients had no further co-payments for the remainder of the 12-month period, calculated from

the date of the first consultation. In almost all county councils, children and young people under 20 years of age are totally exempted from patient fees. In a few county councils, they have to pay fees, although these are highly subsidized. If the patient has to wait more than 30 minutes (or in some counties, 45 minutes) in the waiting room, the fee is returned to the patient. Despite the expansion of primary health care services during the 1980s when the number of health centres doubled within a 5-year period, Sweden has less primary health care compared to other European countries. Forty six per cent (46%) of all outpatient visits in Sweden are made at hospitals instead of health centres. Currently, Sweden has approximately 1200 health centres, each of which provides services to between 10 000 and 50 000 inhabitants. The health centres are administered by the county councils, which are obliged to organize primary health care so that everyone living in the county has access to it.

According to a government decision in 1995, all physicians in primary care must be specialists in general practice. The terms general practitioner, family physician or district physician vary depending on local political and organizational decisions, but all refer to specialists in general medicine within primary health care. Primary health care is responsible for guiding the patient to the right level within the health system. When necessary resources in terms of equipment and knowledge are not enough at health centres, the patient is referred to the county or regional level. The referral process varies. Usually, either the general practitioner makes an appointment with a specialist, a diagnostic centre, a laboratory or a hospital for the patient, or the patient her-/himself makes the appointment with a referral letter. Some general practitioners refer patients for diagnosis and treatment, and others, only for consultation. The general practitioners do not have a monopoly over primary health care, as patients also seek medical attention at private clinics, or go directly to a hospital outpatient department. A prior referral from a general practitioner is not necessary in the latter care, but waiting times are longer. Patients may choose the specialist and the outpatient department that they wish, but not the level of care. Upon entering a hospital, a patient receives treatment from a specialist in an outpatient clinic or in the emergency room, depending on the acuteness of illness. Patients normally see physicians by appointment, although if patients need urgent attention, it is possible for them to see a physician without an appointment at some health centres during certain hours of the day. General practitioners provide treatment, advice and prevention. Others directly employed at this level are nurses, midwives, physiotherapists and gynaecologists, who also form part of the health centre staff. Primary care includes clinics for children, vaccinations, maternity control, health examinations and consultations as well as certain types of treatment. The general practitioner often provides first contact health services to, especially, the adult and elderly population who have mainly physical

health problems. People with mental health problems, particularly relationship or sexual problems, usually go directly to psychiatric services. In many cases, the general practitioner is the first contact for children, although this function is shared with paediatricians or the district nurse. Specific female health problems are mostly covered by obstetricians, gynaecologists or the district nurse within the health centre.

District nurses play a special role, as many first contacts with the health care system are their responsibility. It is the health centre nurses who make a first assessment of patients and, if necessary, direct them to the health centre's general practitioners or refer them to the hospital. Nurses have their own consulting room. They are also very much involved in home care and regularly make home visits, especially to the elderly. Medical treatment, advice and support are given by district nurses both at clinics and when visiting patients in their homes. However, they do not have independent responsibility; they act under the advice of physicians. District nurses also have limited rights for prescribing pharmaceuticals and midwifes for prescribing contraceptives.

Swedish general practitioners working in the public sector are employed by the county councils and receive a monthly salary in relation to their qualifications and work schedule. All health centre physicians are members of the SACO/SR union, which represents them in salary negotiations. Other personnel working at public health centres are also directly employed by the county councils and receive a monthly salary. A full week's work is 40 hours. Swedish general practitioners are assisted by a practising nurse, a receptionist/medical secretary and often also by a laboratory assistant.

Within the overall system, the county councils have many different patterns of care. It is up to each county council to decide how to serve the population with primary care. Even if primary care is mainly publicly provided, there are also private providers at primary level. In addition to local health centres and family physician surgeries, primary care is provided: by private physicians and physiotherapists; at district nurse clinics; and at clinics for child and maternity health care. Private health centres and practitioners are relatively common in major cities and in urban regions. In 2000, 25% of all physician consultations in outpatient care were conducted at private facilities. They are private in the sense that they are privately run, but the majority of them have contracts with the county council and are reimbursed with public funds for seeing patients. Very few private physicians receive direct remuneration from their patients for consultation and treatment. Every physician who intends to offer private health care must report this to the National Board of Health and Welfare. Further, for private health care providers to be publicly funded, an agreement of cooperation (or agreement of health care provision) has to be made with the county council. The private entrepreneur cannot be employed

by the country council, must work full time in private practice and be less than 65 years of age. The county councils can get around these rules by special agreements.

In 1997, there were about 5000 registered general practitioners in Sweden, and 4025 of these worked in primary health care. Eighty six per cent (86%) worked in public primary health care centres, 12% worked in private health centres and 7% were private practitioners (mainly in large cities). There are approximately 2200 inhabitants per primary care physician, although physician density varies among counties.

From an international perspective, Sweden has relatively few physician contacts per person. As can be seen in Fig. 8, Sweden had 2.8 outpatient contacts per person in the WHO European Region in 1997, significantly lower than the 1996 EU average of 6.2. The number of primary health care consultations increased in the mid 1990s; between 1994 and 1997, it grew by 7%. However, as shown in Fig. 9, it is mainly the 60-years and older age group that has increased their number of consultations, i.e. they have increased their number of consultations between 16% and 27%. This is mainly due to the fact that these patients are now covered by primary health care services.

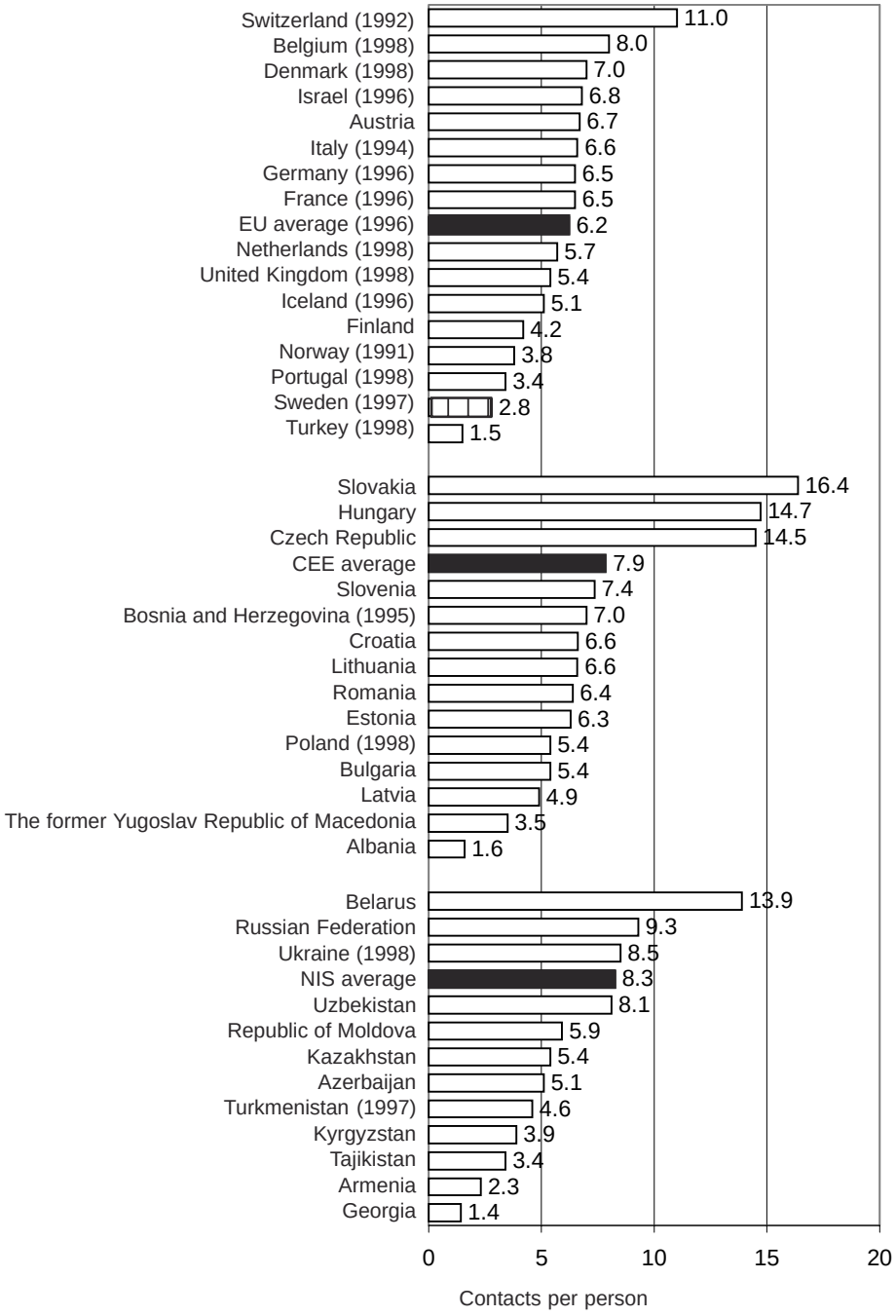
Because of the emphasis on primary care by central government and the county councils in the last few decades, as well as recent discussions on the implementation of the family physician system, research activities are increasing in primary health care. Research in general practice and/or family medicine is carried out by a number of actors in Sweden. Funding for research is often provided by national organizations, for instance the National Board of Health and Welfare. County councils and health centres also allocate funds to research in general practice.

Public health services

By international standards, the health in Sweden is very good. Of the Nordic countries, Sweden has the longest life expectancy, with 76.2 years for men and 81.4 for women in 1998. Average life expectancy has risen during the 1990s and currently, Sweden has the world's oldest population, as almost every fifth person is 65 years of age or older. Infant mortality is low, at 3.5/1000 in 1998.

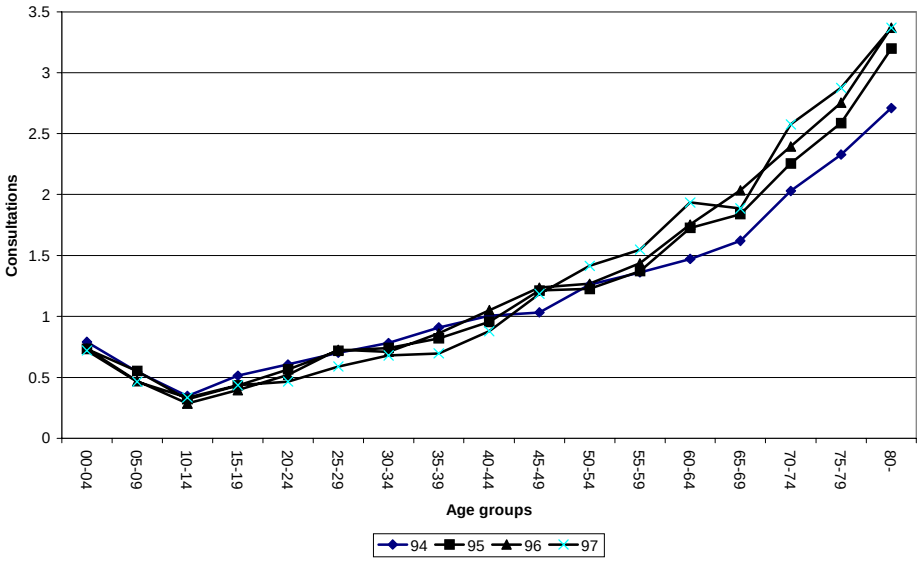
Programmes to prevent disease and injuries have been successful, e.g. mortality due to cardiovascular diseases, alcohol-related diseases and accidental injuries have declined The overwhelming majority of Swedes enjoy good health, but there is a trend showing that certain social groups are falling behind, e.g. more blue collar workers suffer from long-term illnesses compared to middle

Fig. 8. Outpatient contacts per person in the WHO European Region, 1999 (or latest available year)



Source: WHO Regional Office for Europe health for all database.

Fig. 9. Number of consultations with physicians in primary health care, per person by age group, 1994–1997



Source: Apoteket, 1999.

and upper class white-collar workers. The differences are perhaps greater for self-rated health and working capacity, and social disparities in health care even more prominent among women than among men. In 1991, the Public Health Committee published a national strategy for health with guidelines for future work in order to improve the health of the population, particularly in disadvantaged groups. This strategy includes cooperation, an emphasis on activities at the local and regional levels, different activities at national level, and research and training. In 1992, the government established The National Institute of Public Health. This body is responsible for running health promotion and disease prevention programmes at the national level. The Institute is expected to carry out special programmes focusing on alcohol, drugs, tobacco, unintentional injuries, children/youth, and women exposed to particular health risks. In 1994, the government presented a document entitled "Invest in Health – Prioritize Health", where new methods of health promotion and disease prevention were highlighted in order to reach the groups at greatest risk. In 2000, a report from a National Committee on Public Health presented national goals in public health, which emphasized the need for decreasing gaps in terms of health among different social groups. An estimate of the relative significance of various risk factors for health has been performed by the National Institute of Public Health. Many risk factors can be simultaneously related to several different diseases. Table 9 shows estimates of the relative importance and magnitude of various risk factors.

Table 9. Proportion (%) of the burden of disease[a] that can be ascribed to various contributory causes

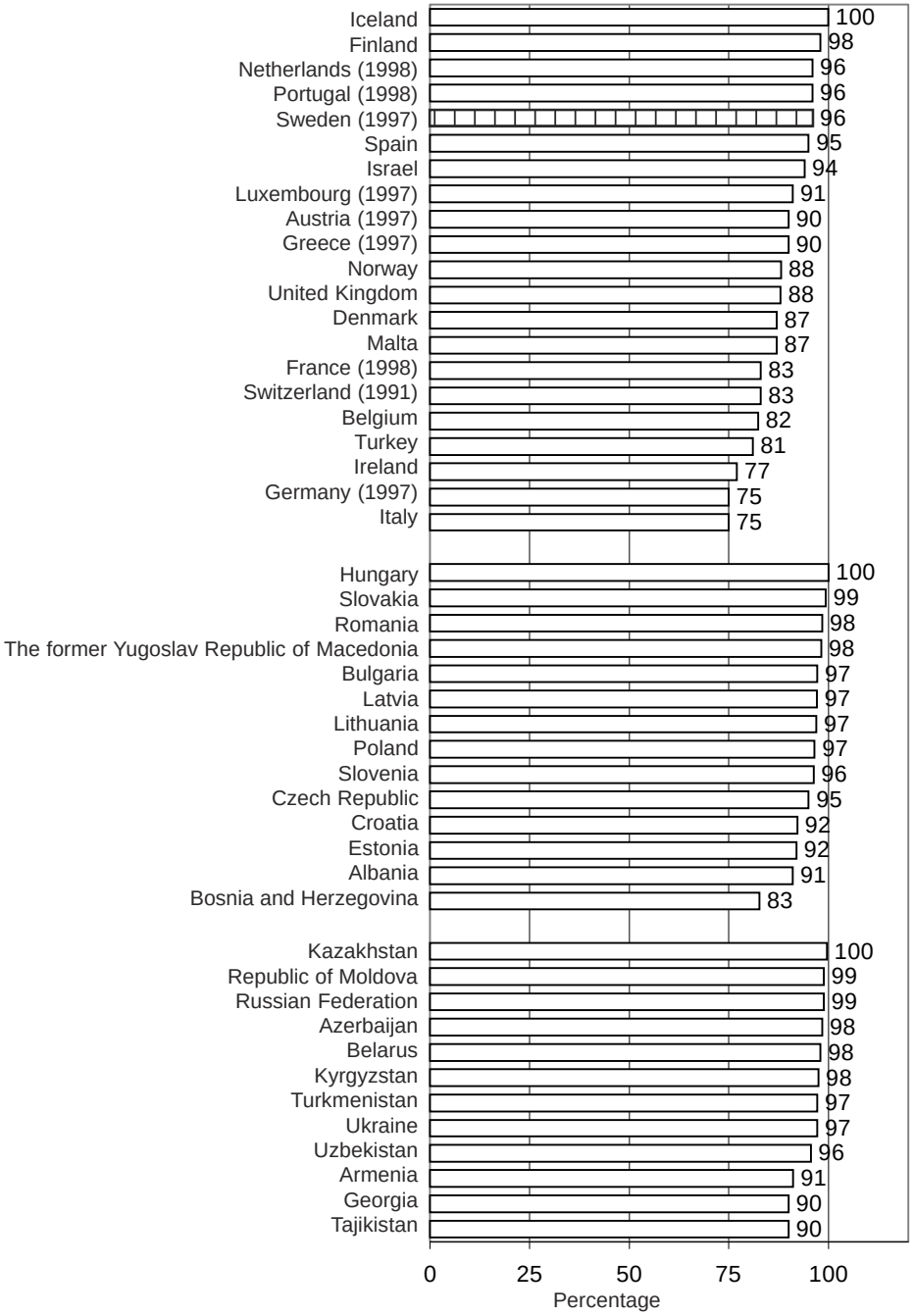
Risk factor	Sweden	EU
Smoking	8.0	9.0
Alcohol use	3.5	8.4
Vegetable/fruit deficiency in food	4.0	3.5
Overweight	2.8	3.7
Unemployment	2.4	2.9
Work-environment factors	2.2	3.6
Drug use	1.7	2.4
Fat content of food	1.5	1.1
Physical inactivity	4.4	4.4
Relative poverty	1.2	3.1

Source: Diderichsen, Dahlgren, Vågerö (National Institute of Public Health, 1997).
[a] Measured in DALY's (Disability Adjusted Life Years)

County councils and local authorities are responsible for health care and the wellbeing of residents. However, the actual duty of offering people social help and support rests with the municipalities. The municipalities play a central role in preventive measures, and in such areas as alcohol abuse and in caring for alcohol abusers. Recently, the focus of public health at the municipal level is shifting to the structural determinants of health, e.g. unemployment, education, environment, etc. It is very difficult to estimate how much is spent on prevention and health promotion, although it accounts for roughly 3% of total health care expenditure, excluding drugs and dentistry. The European health for all strategy has had a significant impact on the health programmes of the county councils, partly because Sweden has not yet developed its own health targets. The national government supports the county councils' disease prevention and health promotion work through an annual transfer of SEK 48 (about €6) per capita. Swedish health promotion is primarily concentrated on disease prevention, such as immunization against childhood diseases. As shown in Fig. 10, Sweden's 1997 immunization level for measles of 96% is among the highest in the WHO European Region.

Preventive and population-oriented health care have been integrated into primary health care. At health centres, measuring blood pressure and blood cholesterol is determined by the clinical situation or by request. A school nurse, teachers and/or physicians give general health education in schools. Special health education on tobacco, eating and/or alcohol are all functions generally carried out by general practitioners. General practitioners are also involved in providing some diagnostic services, in immunizing children and in paediatric surveillance. General practitioners also provide preventive services to women, i.e. making cervical smears when requested, breast examinations, etc. Midwives, district nurses and general practitioners provide family planning service.

Fig. 10. Levels of immunization for measles in the WHO European Region, 1999 (or latest available year)



Source: WHO Regional Office for Europe health for all database.

Practical public health work takes place at local level, in the childcare sector, in schools, in institutional housing for the elderly and at the workplace.

The National Board of Health and Welfare has the specific role of supervising and monitoring the public health activities of county councils and municipalities. An epidemiological centre (EpC) monitors and analyses the health status and the social situation of the population, as well as morbidity hazards and social maladjustment. In collaboration with the WHO Regional Office of Europe, the centre has developed an epidemiological and social information database, including indicators on health, disease, social problems, and risk factors on national, regional, and municipality levels.

Environmental protection has been considered an important issue in Sweden for a long time. Despite measures for an improved environment, several environmental health risks remain, such as air pollution from traffic, high radon levels in indoor air, exposure to tobacco smoke, poorly-ventilated schools and day care centres, and noise. The Report of the Environmental Health Commission in 1996 considers that the following problem areas require particular attention in Sweden: asthma and respiratory trouble; lung cancer; malignant melanomas; accidents; the depositing of resistant substances in the human body; and food processing. Local authorities, the municipalities, bear the responsibility for the major part of local environmental policy. Their responsibilities include disease prevention, food quality, animal protection, nature management and conservation, water management, drinking water quality, sewerage policy, garbage disposal, supervision of environmentally hazardous activities, and chemical control. Municipalities also work on new forms of environmental auditing and accounting as well as on new environmental tariffs to improve protection, food quality and animal welfare. Environmental safeguards in the form of natural resource management and structural planning are central. Agenda 21, signed at the Rio Summit on World Environment in 1992, emphasizes sustainable development and summarizes much of what has been the role of local government. The Swedish Association of Local Authorities works to ensure that Agenda 21's perspective, covering the environment, welfare and public health, is emphasized in municipal activities.

Secondary and tertiary care

For conditions requiring hospital treatment, medical services are provided at county and regional hospitals. In Sweden, a relatively large proportion of the resources available for medical services has been allocated to the provision of care and treatment at the hospital level.

Sweden's 79 hospitals are divided into regional hospitals, central county hospitals or district county hospitals depending on their size and degree of specialization. In the 47 district county hospitals, there are at least four specialties; internal medicine; surgery; radiology; and anaesthesiology. The average number of short-term beds is 124 per district hospital. At county hospitals, medical competence and equipment enables treatment of patients suffering from almost all diseases, including psychiatric problems. Somatic care is provided through inpatient and outpatient care. Currently, Sweden has 23 central county hospitals, at least one hospital for each county council area. These also serve as referral hospitals for their neighbourhoods. In these hospitals, there are about 15–20 specialties and the average number of short-term beds is 422 per hospital. Patients with complicated and/or unusual diseases and injuries need highly specialized care and are attended at regional hospitals.

For highly specialized care, Sweden has six large medical care regions, in which the county councils cooperate to provide the population with highly specialized care. These regions have one or two regional hospitals, and serve a population of between one and two million inhabitants. The reason for this organization of highly specialized care is so that the county councils, through cooperative planning, are able to use available resources in the most efficient way. The regional medical care system is responsible for patients whose medical problems require the collaboration of a large number of specialists and sophisticated diagnostic or treatment facilities. Its activities are regulated by agreements among the county councils within each region. Sweden's six medical care regions have a total of nine regional hospitals, of which eight are affiliated to a medical school and also function as research and teaching hospitals. The central government compensates for those costs associated with teaching and research. The regional hospitals have an average number of 911 short-term beds per hospital, which is relatively large compared to the same type of hospital in other countries. Regional hospitals provide an extensive range of medical specialities, and have a broader spectrum of specialists and sub-specialist fields than at county level, including neurosurgery, thoracic surgery, plastic surgery and highly-specialized laboratories. These hospitals also provide secondary care to the residents of their county councils. According to a government decision, regional care encompasses *those few patients who present especially difficult problems and demands cooperation among a number of highly-educated specialists, as well as special equipment that is costly and difficult to use. This also includes diseases that occur so rarely that county level lacks experience as to their treatment.* The county within which the regional hospitals are located administers the hospitals and the neighbouring county councils reimburse the administering county for care provided to their respective inhabitants. The Federation of County Councils administers a financial clearing-

house to facilitate various reimbursements between and among the counties for out-of-county emergency care, shared services, and other financial undertakings.

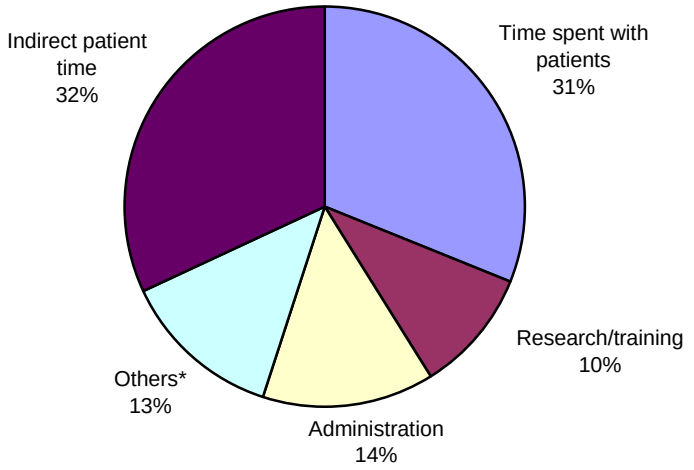
Central county hospitals and district county hospitals are administrated within the county councils. During the second half of the 1990s, county councils increased their cooperation and distribution of workload between hospitals. Administration of some hospitals has been merged into several nearby hospitals to increase efficiency. Moreover, some fields of activities have been combined, e.g. laboratories. The organizational structure of hospitals varies among counties, depending on their size and the political committees in charge. However, even if differences exist, the structure basically consists of a hierarchical organization with traditional departments. The most common structure involves a hospital director, an advisory physician to the director, who has no managerial responsibilities, and the departments, each with a head and two levels of physicians. The departments match the medical specialties, with sub-departments for subspecialties. All staff, including physicians, are employed and salaried by the county council.

During the second half of the 1990s, the county councils introduced an extensive system that aims at letting the individual choose where to seek care (free health care seeking). These agreements are voluntarily made by the county councils and are not regulated by any law. It is up to each county council to decide on the framework and the extent of such agreements. However, according to the Health Care Act, the county council is obligated to offer the patient treatment at a hospital in another county council if the medical treatment needed by the patient not is available in the patient´s county council. Also by law, the patient can choose to seek a second opinion in another county council.

Hospital physicians divide their working time among different activities, (see Fig. 11). On average, two thirds of their working time is devoted to patients, directly or indirectly. However, there are great differences among specialities, e.g. specialists in internal medicine have a distribution of work very close to the average, while the distribution of work for surgeons and radiologists differs largely from other physicians. The differences among specialties can be explained by the different working conditions and assignments.

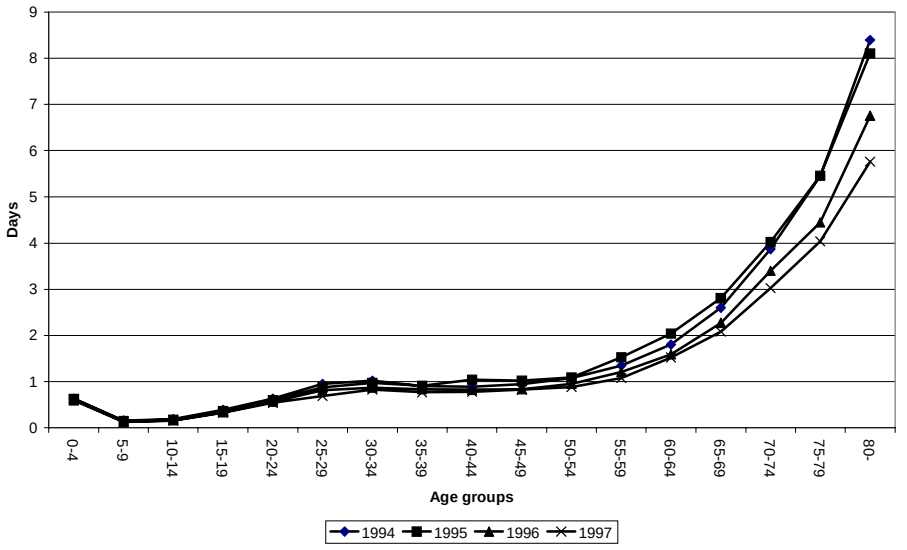
Total inpatient care decreased during the 1990s from an average of 1.6 days per person in 1994 to 1.2 days per person in 1997. As shown in Fig. 12, the decrease is mainly in the older age groups. At the same time, outpatient care has increased. There are several explanations for these changes. First of all, outpatient care received greater emphasis during the 1990s. The number of visits to physicians in outpatient care has increased and the nature of these visits has changed. In addition, consultations with medical staff other than

Fig. 11. The distribution of work for hospital physicians in 1999



Source: Persson and Anell, 2000.
* Including lunch break

Fig. 12. Utilization of inpatient hospital care per person in different age groups, 1994–1997



Source: Epidemiologiskt centrum.

doctors have been encouraged. Also, new and more effective treatments have been introduced, such as day-care surgery. Moreover, there has been a change in general care practice. From 1992 onwards, the municipalities assumed economic responsibility for elderly patients whose clinical treatment is completed. This has given the county councils an incentive to report patients as having completed their clinical treatment at an early stage and, at the same time, municipalities have the incentive to encourage patient discharge from hospital care into special housing. In the long run, an increase in advanced home care may also lead to fewer inpatient days, although thus far the effect is marginal.

Sweden is considered to have a relatively large proportion of health care resources allocated to the provision of care and treatment at hospitals. However, since 1992, the number of hospital beds has decreased substantially.

In 1980, the total number of beds per 1000 population was 15.1 and, as shown in Table 10, the number of beds decreased to 5.2 per 1000 population in 1997. This was mainly due to a decline in non-acute beds (e.g. long-term, psychiatric, etc.), in large part as a result of the Ädel-reform, which transferred responsibility for 31 000 patients in long-term somatic care nursing homes to the municipalities starting in 1992. Fig. 13 shows the number of hospital beds in acute hospitals per 1000 population in western Europe in 1990 and 1999. As can be seen, there is also a drop in the number of these beds during these years in Sweden, namely from 4.1 to 2.5 per 1000. Fig. 14 compares the trend in the number of acute hospital beds in Sweden with its neighbours Denmark, Finland and Norway as well as with the EU average. As can be seen, Sweden had a steady decline throughout the 1990s which was more constant and drastic than the other countries and, like its neighbours, is well below the EU average.

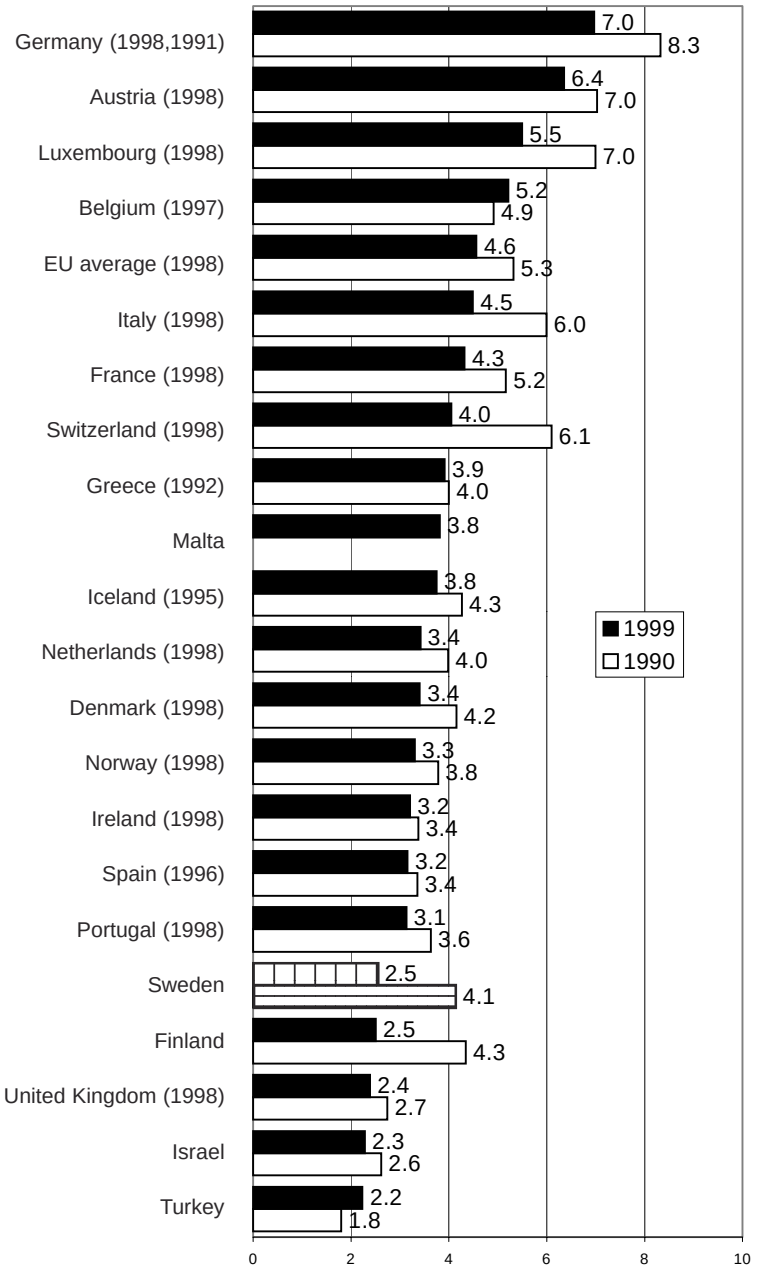
Table 10. Inpatient and acute care utilization and performance, 1980–1999

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All inpatient care admissions per 100 population	18.3	20.0	19.6	20.0	19.6	19.5	19.1	18.6	18.0	–	–	–
Acute care admissions per 100 population	15.6	17.0	16.6	17.0	17.3	17.2	16.8	16.2	16.0	15.6	15.6	–
All inpatient care beds per 1000 population	15.1	14.6	12.4	11.8	7.6	7.0	6.5	6.0	5.5	5.2	–	–
Acute care beds per 1000 population	5.1	4.6	4.1	3.9	3.7	3.4	3.2	3.0	2.8	2.7	2.6	2.5
Average length of stay in days, all inpatient care	23.2	21.2	18.0	16.8	10.1	9.4	8.1	7.8	7.5	–	–	–
Average length of stay in days, acute care	8.5	7.5	6.5	6.2	5.8	5.5	5.3	5.2	5.1	–	–	–
All inpatient care occupancy rate as of % of available beds[a]	83.0	85.8	84.2	84.7	81.7	83.0	82.1	82.1	81.9	–	–	–
Acute care occupancy rate as of % of available beds	72.1	75.3	72.2	73.0	74.8	76.2	77.3	75.9	77.5	–	–	–

Source: WHO Regional Office for Europe health for all database.

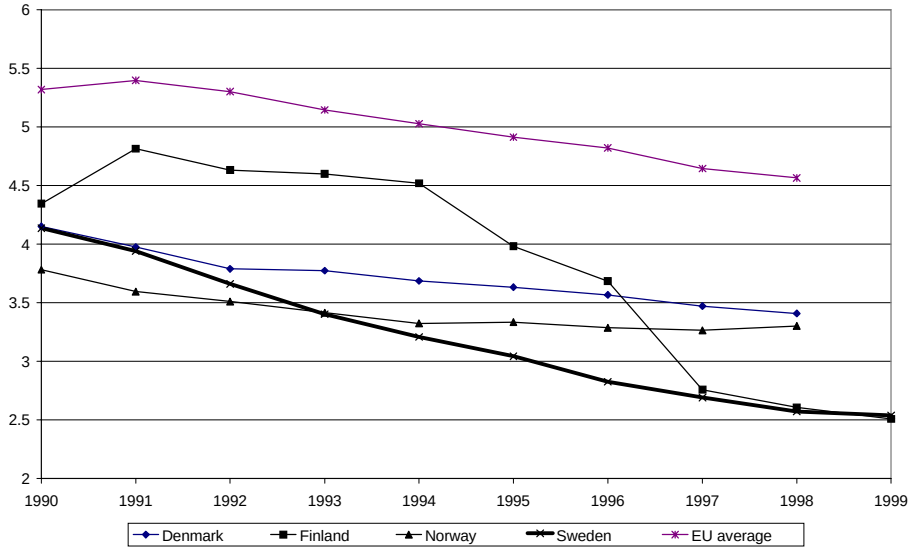
[a] OECD DATA BASE 2000.

Fig. 13. Hospital beds in acute hospitals per 1000 population in western Europe, 1990 and 1999 (or latest available year)



Source: WHO Regional Office for Europe health for all database.

Fig. 14. Number of acute hospital beds per 1000 population in Sweden and selected countries, 1990–1999



Source: WHO Regional Office for Europe health for all database.

Finally, Table 11 compares Sweden with other countries in the WHO European Region with regard to current inpatient utilization and performance in acute hospitals. As is illustrated, the number of acute hospital beds per 1000 in Sweden is very low compared with other western European countries.

In addition, over the past ten years, considerable changes have been made in the area of psychiatric care. People with mental handicaps, to a great extent, have left institutional care to live in the community. At the same time as reductions have been made in inpatient care, outpatient care has increased. The introduction of day surgery, for example, demonstrates the changes that are taking place.

Private inpatient care mainly consists of nursing homes for the chronically ill within geriatric and psychiatric care, and several smaller hospitals of about 50 beds or less. Around 200 nursing homes are privately owned and operated. The share of total beds available in private nursing homes and hospitals increased during the 1990s, as did the number of private companies which run nursing homes. It should be noted, however, that there are large regional differences among the county councils with regard to private care providers.

Public hospitals are larger than private hospitals and have more highly specialized sectors and equipment. They also have a different patient

Table 11. Inpatient utilization and performance in acute hospitals in the WHO European Region, 1999 or latest available year

Country	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Western Europe				
Austria	6.4[a]	25.8[a]	6.8[a]	75.4[a]
Belgium	5.2[b]	18.9[c]	8.8[b]	80.9[c]
Denmark	3.4[a]	18.7	5.7	78.3[a]
Finland	2.5	19.7	4.5	74.0[d]
France	4.3[a]	20.3[d]	5.6[a]	75.7[a]
Germany	7.0[a]	19.6[b]	11.0[a]	76.6[b]
Greece	3.9[g]	–	–	–
Iceland	3.8[d]	18.1[d]	6.8[d]	–
Ireland	3.2[a]	14.6[a]	6.8[a]	84.3[a]
Israel	2.3	17.9	4.3	94.0
Italy	4.5[a]	17.2[a]	7.1[a]	74.1[a]
Luxembourg	5.5[a]	18.4[e]	9.8[c]	74.3[e]
Malta	3.8	–	4.2	79.3
Netherlands	3.4[a]	9.2[a]	8.3[a]	61.3[a]
Norway	3.3[a]	14.7[c]	6.5[c]	81.1[c]
Portugal	3.1[a]	11.9[a]	7.3[a]	75.5[a]
Spain	3.2[c]	11.2[c]	8.0[c]	77.3[c]
Sweden	2.5	15.6[a]	5.1[c]	77.5[c]
Switzerland	4.0[a]	16.4[a]	10.0[a]	84.0[a]
Turkey	2.2	7.3	5.4	57.8
United Kingdom	2.4[a]	21.4[c]	5.0[c]	80.8[a]
CCEE				
Albania	2.8[a]	–	–	–
Bosnia and Herzegovina	3.3[a]	7.2[a]	9.8[a]	62.8[d]
Bulgaria	7.6[c]	14.8[c]	10.7[c]	64.1[c]
Croatia	3.9	13.2	9.4	87.2
Czech Republic	6.3	18.2	8.7	67.7
Estonia	5.6	18.4	8.0	69.3
Hungary	5.7	21.8	7.0	73.5
Latvia	6.3	20.0	–	–
Lithuania	6.4	20.6	9.1	78.8
Poland	–	–	–	–
Romania	–	–	–	–
Slovakia	7.0	18.4	9.6	69.8
Slovenia	4.6	16.0	7.6	73.2
The former Yugoslav Republic of Macedonia	3.4	8.8	8.8	63.0
NIS				
Armenia	5.5	5.6	10.4	29.8
Azerbaijan	7.5	4.7	14.9	30.0
Belarus	–	–	–	88.7[e]
Georgia	4.6	4.7	8.3	83.0
Kazakhstan	5.8	14.0	12.3	92.6
Kyrgyzstan	6.1	15.5	12.8	92.1
Republic of Moldova	6.8	14.4	14.0	71.0
Russian Federation	9.0	20.0	13.7	84.1
Tajikistan	6.1	9.4	13.0	64.2
Turkmenistan	6.0[b]	12.4[b]	11.1[b]	72.1[b]
Ukraine	7.6[a]	18.3[a]	13.4[a]	88.1[a]
Uzbekistan	–	–	–	–

Source: WHO Regional Office for Europe health for all database.
Note: [a] 1998, [b] 1997, [c] 1996, [d] 1995, [e] 1994, [f] 1993, [g] 1992.

distribution. For the most part, private hospitals tend to concentrate on care requiring fewer investments. Private hospital inpatient care is focused on a few small hospitals with very old traditions. At these hospitals, advanced hospital care is offered and also outpatient care. Recently, two private emergency hospitals have been established. There is currently an ongoing debate as to whether a law should be stipulated that prohibits private for-profit hospitals.

During the 1980s, there were long queues to certain treatments in the public sector, e.g. hip joint replacement and cataract surgery. As a consequence, some patients chose to pay for the treatment themselves at private clinics rather that waiting for publicly provided care. This resulted in a growth of private providers, especially in the larger cities. However, to guarantee prompt treatment for certain medical procedures that had long waiting lines, in 1992 the government granted extra funding (SEK 500 millions) to the county councils and gave patients who did not receive care within three months the right to seek treatment outside their county. This agreement was made with the purpose of reducing waiting times for certain necessary treatments and operations. However, in practice this agreement did not mean much for the patients since most county councils already practised free health care seeking and had pre-existing agreements with neighbouring county councils. In 1997, a revised guarantee of medical treatment came into force regulating the accessibility for health care seeking in primary care and specialist care. Patients are able to receive medical attention from a nurse practitioner from the health centre on the same day. An appointment to see a physician is given within eight days. If a patient is referred to specialist care, an appointment is offered within a three-month period and, when the diagnosis is uncertain, an appointment to see a specialist will be given within a month. In those cases in which specialist care cannot be offered within these timeframes, care must be offered in another county council. As freedom of choice had already been given to patients in the early 1990s, the purpose of the guarantee of medical care was not to increase the freedom of choice for patients, but to force the primary health care and specialist care levels to offer health care services within certain timeframes.

Link between primary care and hospital care

Most patients who are discharged from hospitals are in great need of receiving continuing care from the primary care level. The information regarding the patient's care needs is sometimes formally transferred between the hospital and the municipality in which the patient resides. In some cases, the hospital makes contact directly with a district nurse. This way of handling patients in need of outpatient care has shown to be less successful, since it has not always been clear which care the different actors should provide. A new method for

improving cooperation in health care between primary and hospital care has been introduced in some county councils. General practitioners from primary care spend a certain proportion of their working time at hospital clinics every month in order to share knowledge about work and resources available at health centres. In turn, they also inform the primary level about problems and issues of interest and concern from hospital clinics.

Care programmes have been developed locally by general practitioners and specialists which aim at improving both the quality of care and the cooperation between physicians. The demand for care programmes has increased recently, leading to the development by the National Board of Health and Welfare of national care programmes for larger patient groups, such as diabetics.

Quality

The interest in quality-oriented development work increased and gained a stronger position in the 1990s. In 1994, a new set of regulations on quality issues came into force, produced by the National Board of Health and Welfare. According to these regulations, regular, systematic and documented work to ensure quality should take place in the health services. A law followed the regulation in 1997, which stated, "*Within the health care system, the quality in the sector must systematically and continuously be developed and assured*" (31§, HSL). Health care workers are obliged to integrate continuous and methodological quality assurance activities into their daily routines. The new regulations symbolize a changed approach towards quality assurance work. The focus has moved from monitoring quality improvement measures on technical quality to focusing on all health services provided for patients. The overall aim is to improve the value of services provided for patients, their relatives and the public in general, and to improve the ability of the health system to meet their needs. The Federation of County Councils and the National Board of Health and Welfare cooperate together with the Swedish Society of Medicine to enhance the development of national quality registers. Funds have been allocated annually since 1990 to the local governing bodies that manage national health care quality registers and currently, about 40 quality registers exist. These national quality registers vary by purpose, time of development, and manner in which they were constructed, but they were all started by representatives from the medical profession and were created to support local quality improvement activities at clinical departments. Register managers are distributed among clinical departments and county councils throughout Sweden. The registers, which contain individual-based data on diagnoses, interventions, and outcomes, have gradually grown from serving local interests to becoming

national in scope. Their main aim is to enable individual departments to compare themselves with the national average, discuss and analyse this data internally, and initiate actions needed to improve quality. The registers also provide a knowledge base for national health care activities and national guidelines for good medical practice. Internationally, the Swedish registers have attracted attention and efforts to develop similar systems are under way in other countries.

The Federation of County Councils has taken initiatives to support the county councils in quality assurance. Several county councils have established quality committees or assigned a special quality assurance manager to support hospitals and health centres in developing systems for quality assurance and continuous quality improvement. Some county councils also have a special budget for quality improvement activities. At hospitals, quality committees at management level are becoming common. Health care staff meets in order to continuously observe their performance and find areas improvement. For estimating patient satisfaction, hospitals and health centres carry out research of various kinds, such as telephone interviews and questionnaires. According to the regulations, quality should be measured on a regular basis, i.e. at least every third year, although some health centres do not meet this recommendation.

At national level, the Federation of County Councils has created an instrument for analysing the ability of the health services to achieve systematic quality improvement, called QUL (Quality Development and Management). The instrument is linked to the Swedish Health Services Quality Award, an award presented annually to an organization that is considered a model for the Swedish health care system.

The professional part of quality control is related to the supervision and evaluation of clinical work. The Swedish Medical Association, for example, has introduced a programme for quality assessment in different specialties. In 1991–1992 the Swedish Society for General Medicine initiated a national working group for quality assurance. Most of the work is being done in practices locally or regionally. Patient views are of interest, as well as methods for child health care and preventive care in general. The interest in quality assurance among politicians within the county councils has grown during the last few years. As shown in Table 12, Swedish patients are pleased with the services provided. Patients also seem aware of their own active involvement in achieving improved health.

Swedish health care legislation provides for the protection of a patient's integrity. Health personnel are required to inform a patient about his/her state of health and the available types of diagnostic procedures and treatment. A patient's identity is protected in various registers. According to a law from

Table 12. Patient views in primary health care, 1998

Statement	Answer			
	Agree fully	Agree partly	Do not agree	Do not know
"I have good experiences of the medical competence I have come across in the Swedish health care system"	49%	43%	3%	5%
"I have good experiences of how I have been received within the Swedish health care system"	58%	38%	2%	2%
"The patient and the general practitioner have a shared responsibility for succeeding with the medical treatment"	60%	32%	5%	3%

Source: Study commissioned by the Federation of County Councils, performed by the Swedish Institute for Health Economics, 1998.

1998, every county council must organize one or more regional boards of trustees to facilitate contact between the patients and the health personnel, and supply patients with any needed assistance.

The latest Eurobarometer was carried out in 1998 and as shown in Table 13, 57.5% of Swedes claim to be satisfied with the running of health services, which is a decrease from 1996 when the number was 67.3%. The result should be interpreted carefully and the public's opinions on health care are usually more negative than patients' views on the same subject. Nevertheless, the survey provides some indication of a decrease in satisfaction regarding the running of health services among Swedes. One probable explanation for this is that the Swedish health sector has been cutting back during the 1990s due to demands for cost containment. In fact, the downsizing of staff has been given frequent attention in the media.

Currently, questions being discussed in Sweden involve accessibility to health care to a large extent. This is due to recent criticisms regarding waiting times for certain treatments and also when acute care at hospitals is being sought.

Social care

The local authorities, i.e. the municipalities, are responsible for some of the health services provided to citizens. These include social welfare services, care of the elderly and the disabled and psychiatric patients. The 289 municipalities

Table 13. Distribution of satisfaction/dissatisfaction (in %), among the public, with the running of health services within the EU in spring, 1998[a]

	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Do not know
Denmark	90.6	3.5	5.6	0.3
Finland	81.3	18.5	10.2	0.8
Austria	72.7	18.5	6.7	2.2
Netherlands	69.8	8.4	20.9	0.7
Luxembourg	66.6	18.7	12.0	2.5
France	65.0	18.5	15.5	1.0
Belgium	62.8	21.6	14.7	0.8
Ireland	57.9	25.0	24.3	4.5
Sweden	57.5	14.3	26.1	2.1
United Kingdom	57.0	11.0	31.4	0.6
Germany	57.5	17.6	23.5	1.0
Spain	43.1	30.1	26.1	0.5
Italy	20.1	25.0	53.3	1.6
Portugal	16.4	16.0	66.5	1.1
Greece	15.5	24.6	59.6	0.2

[a] Figures represent the percentage of the total number of people questioned. Those that gave no answer are excluded from the Table.

are in charge of community care. They each serve a population ranging from about 3000 to 750 000 and, like the county councils, they are governed by local councils, which are elected every four years. The traditional organization of the municipalities consists of a Municipal Executive Board, a Municipal Council and several local government committees. The Municipal Executive Board leads and coordinates all the municipality's business and acts as a supervisor for the committees. The board is responsible to the council for following up on matters that could possibly influence the development and economy of the municipality. The Municipal Council makes decisions on all community-run businesses. The council also makes decisions about goals, budgets, taxes, organization of the committees and tasks for the municipality. Community services are partly financed by direct taxes levied on the municipality's population and by national grants, and partly by the patient. In 1997, care of the elderly comprised 27% of the municipalities' total expenses.

In 1992, full responsibility for long-term care (nursing homes) for the elderly and the disabled was transferred from the county councils to the municipalities, which consisted of responsibility for approximately 31 000 patients and financial responsibility for these services. The main purpose for giving municipalities responsibility for elderly and disabled services is that the organization of care and services is believed to be more adequate and efficient this way. During the 1980s, it became apparent that cooperation regarding the division of

responsibilities between the county councils and the municipalities was unsatisfactory. Furthermore, the growing size of the elderly population indicated that the problem would increase. Currently, the municipalities are in charge of all types of institutional housing, including nursing homes, and care facilities for the elderly and disabled. Half of the municipalities are also responsible for home nursing care.

The basic principle of Swedish care of the elderly is that everyone who would like to remain at home in spite of illness or diminished capacity should be offered support and care in order to do so. Great efforts have been made to make it possible for the elderly and disabled to be cared for at home, and home assistance services are offered 24 hours a day. Among those above 65 years of age, 8%–9% receive help from the home service and an equal share of the population lives in nursing homes/elderly peoples' homes, where they receive help. Special nursing staff make home visits and provide necessary services 24-hours a day. The home assistance services include shopping, cleaning, cooking, washing and personal hygiene for those elderly people living at home who cannot cope on their own. The home service has changed during the last five years to become more care-oriented and less aimed at providing general services.

Municipalities become financially responsible for elderly patients who receive hospital care as soon as these patients have been fully treated and can be discharged. At the nursing homes, no permanent physician is employed but there is always a physician to contact when needed. It is the responsibility of the medically responsible nurse or sometimes the physiotherapist to contact a physician when a patient needs care. The municipalities charge for the services they provide. Consequently, fees vary among municipalities according to the numbers of hours of help received. However, fees cannot exceed real costs and they are subsidized so the patient only pays part of the cost. The part that the patient pays usually depends on her or his income, which is quite different from the flat rate fees charged by the county councils for health care.

Currently, a total of 180 000 people are employed in connection with care of elderly and in 1997, the net cost for the services provided, including transport services and institutional housing, was around SEK 51 000 (€6200) per individual 65 years and older. Table 14 shows differences in fees between Sweden and some other European countries.

The decentralization of decision making regarding community services means that it is up to each municipality to decide how services are provided. Municipalities may choose to purchase private services or provide them themselves. Cost containment has been on the municipalities' agenda during the 1990s and one way to cut costs has been to contract out services. In this

Table 14. Fees for an elderly individual with an income which is 80% of an average industrial worker (adjusted for purchasing power), Euros, 2000

Country	Home services ca. 10 hours. Fee per month	Extra fees for home health care	Visit by physician in the patient's own home. Per visit	Uniform standards within the country
Denmark	0	0	0	Yes
Finland	24	0	10	Partly
Norway	37	0	17–22	No
Sweden	12–24[a]	0	14	No
France	50	5 per injection 5 per change of bandage on wound	25	partly
The Netherlands	35	0	30	Yes
Great Britain	37.5	0	0	No
Germany	160 + 3.5 per trip	4.5 per injection 6.5 per change of bandage on wound	3.5	No

Source: The Ministry of Finance, 1999 and own calculations.
[a] Are provided free-of-charge in some municipalities

way, an alternative to publicly-delivered services is offered. Among the Nordic countries, Sweden is perhaps the country in which contracting out municipal services has led to the largest changes. However, municipal services are still mainly publicly provided and the municipality directly employs the personnel working in the sector. Approximately half of the municipalities use private companies and in total, private entrepreneurs handle 7% of the care of elderly. They are most commonly contracted for running nursing homes/residences for the elderly.

The care provided is generally considered to be adequate and of good quality. This includes both the care given in nursing homes as well as care and assistance received at home by the elderly. Great importance is attached to making nursing homes as much like home as possible. For example, most of the patients in nursing homes have their own room. Surveys indicate that the majority of the elderly are satisfied with the level of care that they receive (Socialstyrelsen, 2000).

Human resources and training

In 1998, Sweden had about 300 000 people employed in the health services, which accounted for 8% of all employees in the country. Of these, 92% were

publicly employed and 8% were privately employed. The number of employees in the health sector increased substantially during the 1970s and the early 1980s. Some of this long-term growth can be attributed to a shortening of working hours and a growing proportion of part-time employees, but the main explanation for this is the overall expansion in the Swedish health care sector. In the early 1990s, the number of health workers stagnated and some personnel categories were substantially reduced due to financial pressure and organizational changes, e.g. major cutbacks were made in the number of auxiliary nurses. Nonetheless, there has been a considerable increase in the number of full time employees over the past twenty years. The number of inhabitants per physician varies greatly among the county councils, from 217 to 450, and the average for the whole country in 1999 was 321 inhabitants per physician. The number of active physicians per 1000 inhabitants has increased slightly during the second half of the 1990s. In Fig. 15, the development of health care staff is shown from 1970 onward.

The health sector may face some problems in the future as the number of retirements will increase substantially. However, the trend varies for different groups of personnel, which implies that the balance between supply and demand differs across different groups

The number of physicians in Sweden is about 10% lower than the EU average, and is in betweeen Denmark and Finland (see Fig. 15).

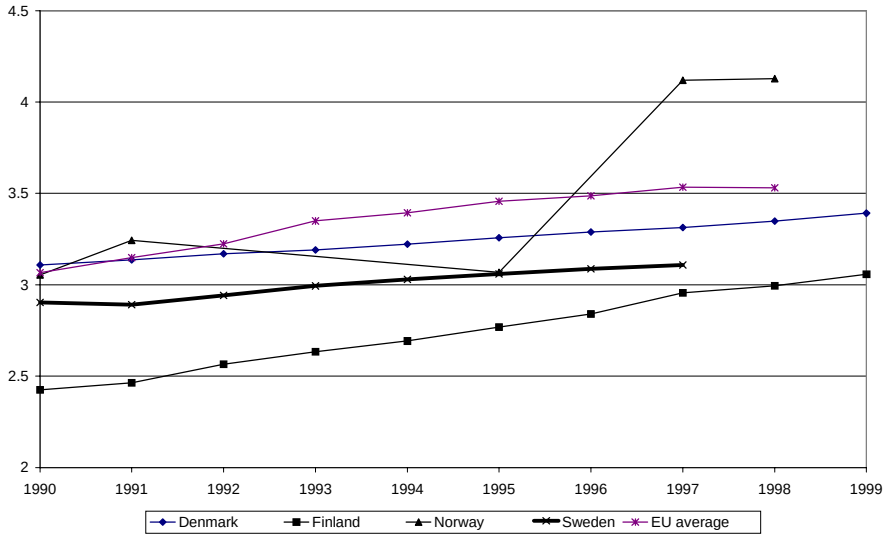
However, in isolated rural areas and in some metropolitan areas, there is a shortage of general practitioners. The average physician is above 45 years of age and in the beginning of the next century, a number of physicians will retire and new physicians will need to be recruited. The percentage of female physicians is approximately 40%, which is significantly higher than the EU average of 23%. Women currently represent 50% of all medical students.

During the 1990s, the share of physicians and nurses increased at the expense of less qualified staff. There is a certain shortage of nurses, especially nurses with specialist skills. At the same time, it is difficult to recruit physicians to certain geographical areas and with particular specialities. Every year, about 800 physicians graduate from Swedish Universities and 200–300 physicians join the workforce with a foreign degree. However, since the mean age is high, about 400 physicians retire every year.

Regarding the number of nurses in Sweden, there are fewer than in neighbouring Norway and Finland, but there are slightly more than in Denmark (see Fig. 16).

The number of dentists in 1997 is very high, with 1.52 dentists per 1000 population, much more than the EU average of 0.68 (see Table 15).

Fig. 15. Number of physicians in Sweden and selected countries, per 1000 population, 1990–1999



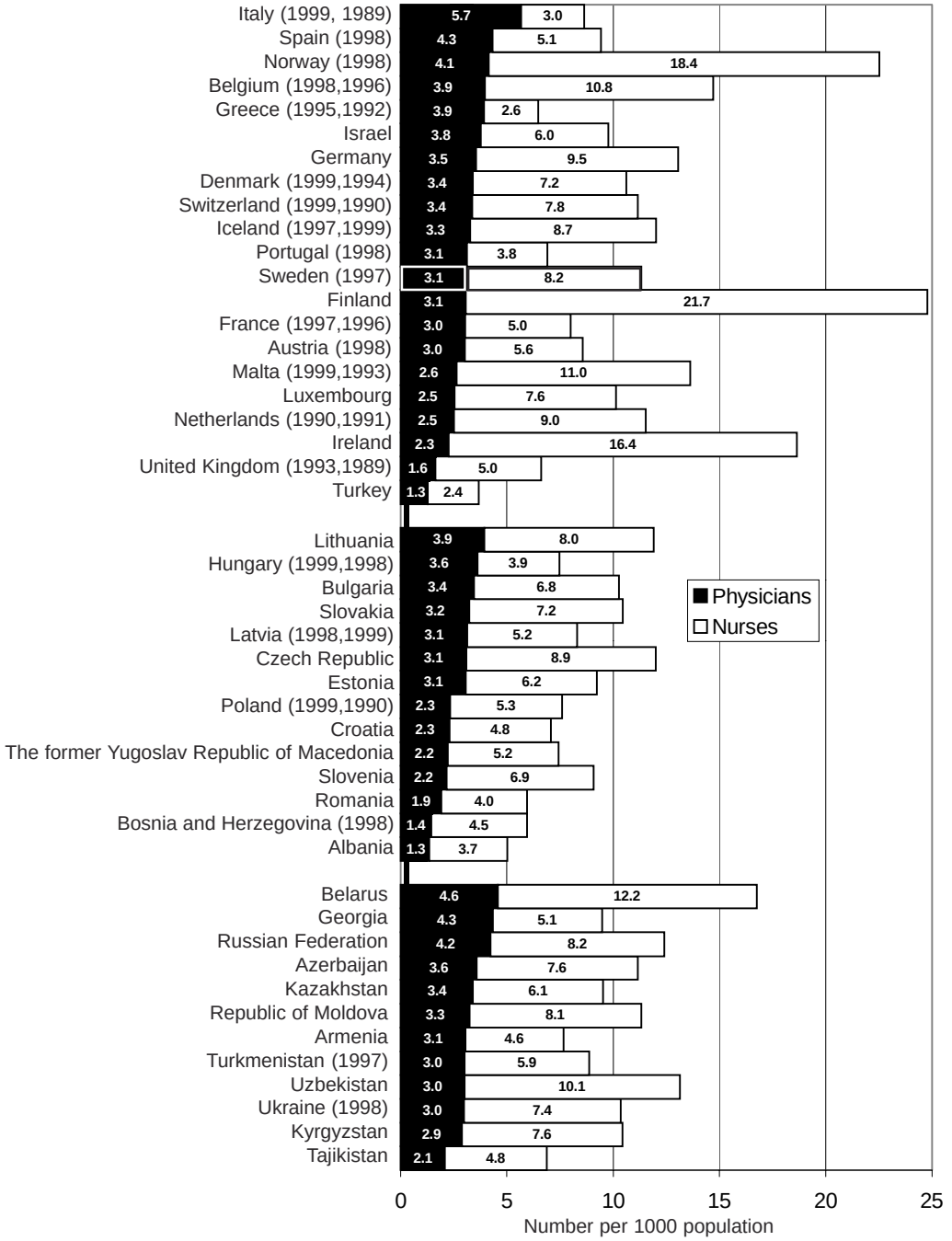
Source: WHO Regional Office for Europe health for all database.

Table 15. Health care personnel per 1000 population, 1980–1998, selected years

Health personnel	1980	1985	1990	1991	1992	1993	1994*	1995	1996	1997	1998
Physicians	2.20	2.62	2.90	2.89	2.94	2.99	3.05	3.05	3.08	3.11	–
General practitioners	0.26	0.29[a]	–	0.43	0.50	0.52	0.54	0.55	0.56	0.56	–
Dentists	1.24	1.41	1.45	1.46	1.47	1.49	1.50	1.52	–	1.52	–
Pharmacists	–	0.49	0.59	0.61	0.63	0.64	0.66	0.67	0.68	0.68	0.67
Nurses	8.81	7.72	8.80	9.01	8.69	8.56	8.69	8.45	8.40	8.21	-

Source: WHO Regional Office for Europe Health for all database.
Note: [a] = 1987.

Fig. 16. Number of physicians and nurses per 1000 population in the WHO European Region, 1999 or (latest available year)



Source: WHO Regional Office for Europe health for all database.

Education and training

Sweden has six medical schools where physicians are trained. These are the universities of Lund, Gothenburg, Linkoping, Stockholm (Karolinska Institutet), Uppsala and Umeå. Medical education is entirely financed by the state. Medical education is linked to the university hospitals and other relevant parts of the medical services, for example, the primary health care service. The number of medical students is limited, and every year approximately 900 students begin medical training programmes. For admission to university medical school, graduation from secondary school, including subjects in natural science, is required. To become a registered physician, a student must successfully complete a study programme of five and a half years, and after that, a 21-month training period in general medical care, followed by a written examination. After this, the physician is registered and is authorized to practice the medical profession, but almost all physicians choose to continue their studies in order to qualify as a specialist after five years of service in one of the 60 recognized specialist fields. To become a consultant or head of a department, a physician needs five years of postgraduate specialist training.

Regarding wages, a registered physician negotiates salary with the employer. In 1998, the average basic salary for a physician with a specialist degree was around SEK 33 500 (€3900). Physicians also receive extra payment on top of their salary as compensation for being on call during non-regular working hours, increasing their actual monthly income. There are, however, differences among various specialties and regions. Also, male physicians tend to have a higher salary than female physicians.

Nurses are educated at approximately 30 nursing schools spread throughout the country. These schools are normally run by the county councils. Every year, the number of students who begin their nursing education is about 3500. The study programme for nurses consists of three years of basic education, followed by specialist training. Nurses can choose to train in midwifery or intensive care, anaesthesia, community or child nursing, which lasts from 40 to 60 weeks. Training in occupational health nursing lasts for ten weeks after a general nursing education and two years of post-certification experience. In 1998, the average salary for a registered nurse was SEK 18 500 (€2150).

Research

Medical research in Sweden strongly links basic and clinical research. Research and development has always been integrated into health services, particularly at the university hospitals. Primary responsibility for research and development work both about and within the medical and health care sector used to be

regarded as belonging to the state. Currently, however, the county councils and the municipalities have partial responsibility for initiating and financing research and development. Many physicians employed by the county councils, through their own initiative and within the framework of their duties, are engaged in research. Of the total national resources invested in research and development, 25% is allocated to research and development connected to health and health care, and of this, two thirds is for medical research. Despite economic constraints during the 1990s, there have been large investments in research and development in both municipalities and county councils. At universities, approximately 25% of university spending on research is allocated to the medical field. Research carried out at university and university hospital departments is partly financed by the government via faculty appropriation grants, and partly through other, so-called external sources. A large share of the external funds is used to finance technical personnel and equipment. The Swedish Medical Research Council (MFR) provides funds for basic research, while sector organizations within the field provide funds for applied research. Medical research is also funded by grants from various foundations, e.g. the Swedish Cancer Society and the Swedish Heart and Lung Foundation, as well as county councils and local authorities. Finally, the pharmaceutical industry and foreign foundations also provide support for Swedish medical research.

Pharmaceuticals and health care technology assessment

Pharmaceutical expenditures for Sweden and selected European countries are illustrated in Table 16.

As shown, Sweden has relatively low pharmaceutical expenditures compared to other European countries. This fact is illustrated through columns 1 and 3. Swedish drug expenditure in relation to total health care expenditures (column 2) seems to be approximately average to that of the compared countries. However, Swedish pharmaceutical expenditures increased during the 1990s. Total expenditure on pharmaceuticals increased approximately 7% per year since 1994. Fig. 17 shows that pharmaceuticals increased in 1994, 1995, and 1996, but decreased by 11% in 1997. This was due to a new system of subsidizing pharmaceuticals that was introduced in 1997. The statistics were affected by the stockpiling of pharmaceuticals that took place. As illustrated, expenditure on prescribed drugs increased in almost all age groups, although the largest increase is among the elderly. Forty per cent (40%) of all expenditures on

Table 16. Pharmaceutical expenditures as % of GDP and health care expenditures and pharmaceutical expenditures per capita. 1997, selected countries

	% of GDP	% of health care expenditures	Per capita expenditures in PPP EUROs (Index Sweden=100)
Austria	1.2	15.1	130
Belgium	1.4	18.4	147
Denmark	0.7	8.7	79
Finland	1.1	14.9	102
France	1.7	17.2	160
Germany	1.3	12.3	134
Greece[a]	1.8	21.3	107
Ireland[a]	0.7	10.6	58
Italy	1.5	19.4	140
Netherlands	0.9	10.9	93
Portugal	2.1	26.9	138
Spain	1.5	20.7	111
Sweden	1.1	12.7	100
United Kingdom	1.2	16.9	107

Source: OECD Health Data Base #2 1999.

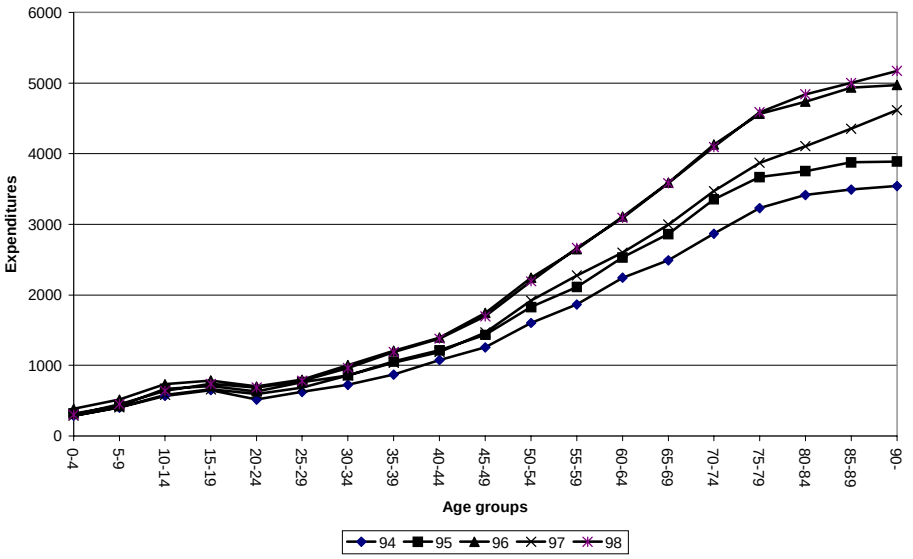
[a] 1996.

prescribed pharmaceuticals can be attributed to the age group above 65 years. This share has remained rather constant during the 1990s.

There are several explanations as to why pharmaceutical expenditures have increased in Sweden over the last ten years. New drugs are continuously being introduced, either to replace older drugs or to cover a new area of drug treatment. These pharmaceuticals are often more expensive than older ones and, as a result, expenditure increases. At the same time, the demand from patients is increasing and the population structure is changing as people live longer. A number of ways to contain pharmaceutical expenditures have been discussed, and actions are being taken to change the trend both on the supply and the demand side.

Drugs are reimbursed through the social insurance system. In 1998, the latest pharmaceutical reform aimed at giving county councils full responsibility for pharmaceuticals. In a transition period, the social insurance system will continue to subsidize pharmaceuticals until an agreement is made for the county councils to fully take over this responsibility. In the meantime, the prescribing of certain drugs has been limited, county councils are conducting trials with decentralized drug budgets, and the compensation system has changed. A law has been introduced that requires special pharmaceutical committees in every county council. Their role is to put together a list of recommended pharmaceuticals and work towards a rational use of drugs. Moreover, parallel imports

Fig. 17. Expenditure on prescribed pharmaceuticals in different age groups, 1994-98, in 1994 prices



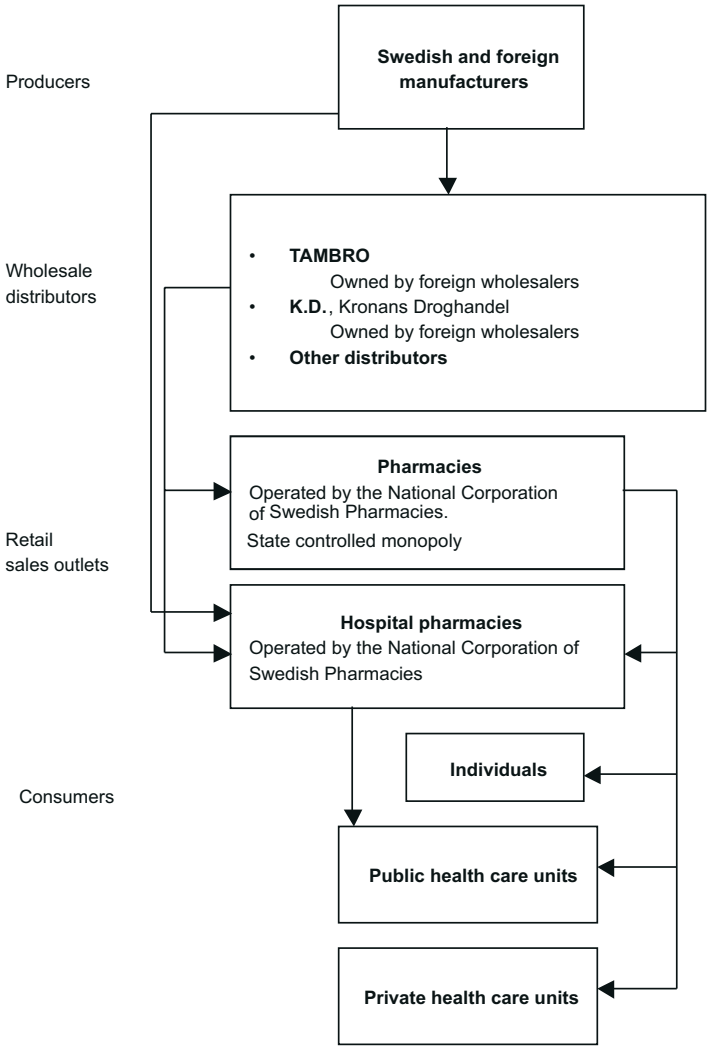
Source: Swedish pharmaceutical association and own calculations.

and generic substitution could have effects on the expenditure level in the longer run, as well as other forms of price negotiations.

The 1993 Drug Act is the basis for all activities regarding pharmaceuticals and drug distribution in Sweden. The act classifies pharmaceuticals into three categories; prescription drugs; over-the-counter drugs (OTC), also called non-prescription drugs; and drugs that can only be used at clinics that have special resources. The Act on Retail Trade in Drugs gives the state the exclusive right to conduct retail trade in drugs through the National Corporation of Swedish Pharmacies. This is done via 885 pharmacies. The flow of pharmaceuticals from the manufacturers to the end users is illustrated in Fig.18.

According to an agreement between the National Corporation of Swedish Pharmacies and the state, the National Corporation is responsible for ensuring a good drug supply at uniform prices throughout the country at the lowest possible cost to the individual consumer and to society. The Swedish Medical Products Agency, a central government agency, is responsible for the control of pharmaceutical preparations. The National Corporation is required to stock drugs approved and registered by the Swedish Medical Products Agency. These drugs must be prescribed by physicians, dentists, some nurses and veterinarians. The National Corporation of Swedish Pharmacies is required to maintain a countrywide distribution system and decide on the number of sales outlets and

Fig. 18. The flow of pharmaceuticals (excluding medical appliances) from the manufacturers to the end users



their location in order to fulfil the requirement of availability. Furthermore, the National Corporation of Swedish Pharmacies is also responsible for providing factual information about drugs to the public and to prescribers.

The National Corporation of Swedish Pharmacies runs all hospital pharmacies under a one-year contract with the county councils. The hospital pharmacies operate in collaboration with physicians and nurses through the daily distribution of drugs and also through the pharmaceutical and therapeutical committees, research projects and clinical trials.

Reimbursements for drugs are made directly to the National Corporation of Swedish Pharmacies from the National Social Insurance Board and from the public and private health care providers. Deductions are made for the part that the patient has to pay. The Drug Affairs Division within the National Social Insurance Board sets reimbursement prices. The Federation of County Councils is invited to formal discussions, but does not have access to price approval meetings. Pharmaceutical companies may set their own prices, although if the drug to be covered by the Drug Benefit Scheme, the company must apply to the National Social Insurance Board for a reimbursement price. Negotiations are confidential and are based on information supplied by the individual company, as the National Social Insurance Board does not undertake independent research. When applying, the price of the product to pharmacies in ten other European countries must be provided (Austria, Belgium, Denmark, Finland, France, Germany, the Netherlands, Norway, Switzerland and the United Kingdom). Each product has a single price and once a reimbursement price has been granted, the product is sold at that price to all patients and to hospitals. The National Social Insurance Board finances their activities mainly through contributions from employers in terms of fees and taxes. According to law, both private and public employers pay a certain amount per employee to the National Social Insurance Board's sickness insurance. The National Social Insurance Board is partly financed by state grants.

When buying pharmaceuticals only to be used at the hospital, hospitals may negotiate directly with suppliers. However, the process is regulated under the Law on Public Purchase. Within the county councils' health districts, pharmaceutical committees draw up drug formularies of which pharmaceuticals are to be used. This list is primarily intended for pharmaceuticals used in outpatient care.

There is a positive list of reimbursed drugs in operation as well as a negative list. The positive list enumerates all pharmaceuticals for which a physician's prescription is required for reimbursement. The list includes most cases of preventive drugs. For OTC drugs and products, reimbursements are only made if they are included in a list corresponding to positive lists used in other countries. For those pharmaceuticals that lack fixed prices, certain prerequisites need to be fulfilled in order for them to be included on the positive list. The negative list contains OTC products which are non-reimbursable pharmaceuticals, e.g. vitamins, laxatives, cough remedies, etc. These are not reimbursed by county councils, even when prescribed.

Given that a drug has been registered by the Medical Products Agency, a physician can prescribe it and, as soon as a reimbursement price has been fixed with the National Social Insurance Board, the product is included in the positive

list and becomes eligible for reimbursement. The Drug Benefit Scheme gives the patient subsidies on a graduated basis per twelve-month period. Insulin for diabetics is provided free of charge. The Drug Benefit Scheme includes prescription drugs, birth control pills and drugs, articles of consumption for patients recently operated on in the colon or ileum, and articles needed for medication (Läkemedelsboken, 1999/2000).

For drugs and other articles to be included in the scheme, a price set by the National Social Insurance Board is needed. The benefit scheme limits the patients' total expenditure for prescribed drugs during a twelve-month period. As soon as the patient's share of co-payment exceeds SEK 1800 (about €200) within a twelve-month period, no further co-payments are needed on prescribed drugs. The patient then receives a card that entitles him/her to free pharmaceuticals during the rest of the twelve-month period (counted from the first purchase of drugs). A prescription by a physician can include OTC drugs, but only those OTC drugs included in the Drug Benefit Scheme are reimbursed.

Private medical insurance coverage exists but has relatively little significance. There is also the possibility that employees may be reimbursed by their employer for drug expenditures. The extent to which insurance or companies cover these expenditures is unknown. Such cost coverage, however, can be considered insignificant.

Developments during the 1990s led to an increasing number of patients with cards that entitled them to free pharmaceuticals and, in 1999, approximately 975 000 patients carried such cards (Apoteket, 2000). This has lead to increases in pharmaceutical expenditure within the National Social Insurance. However, the largest share of these costs for prescribed pharmaceuticals is covered by the county councils. These are reimbursed by state grants. In 1999, sales within the Drug Benefit Scheme mounted to SEK 19.3 billion, of which the county councils paid 14.9 billion and out-of-pocket payments were 4.4 billion. The increase in cost of the Drug Benefit Scheme is considered to be an important issue in Swedish health care. Measures to reduce costs thus far have not been satisfactory.

A governmental team charged with assessing drug benefits presented their work in the autumn of 2000. The investigation focused on how pharmaceuticals included in the scheme are prescribed and which factors are costly. There were various suggestions for change and the proposal led to discussions involving policy makers, patient associations and others.

Financial resource allocation

Third party budget setting and resource allocation

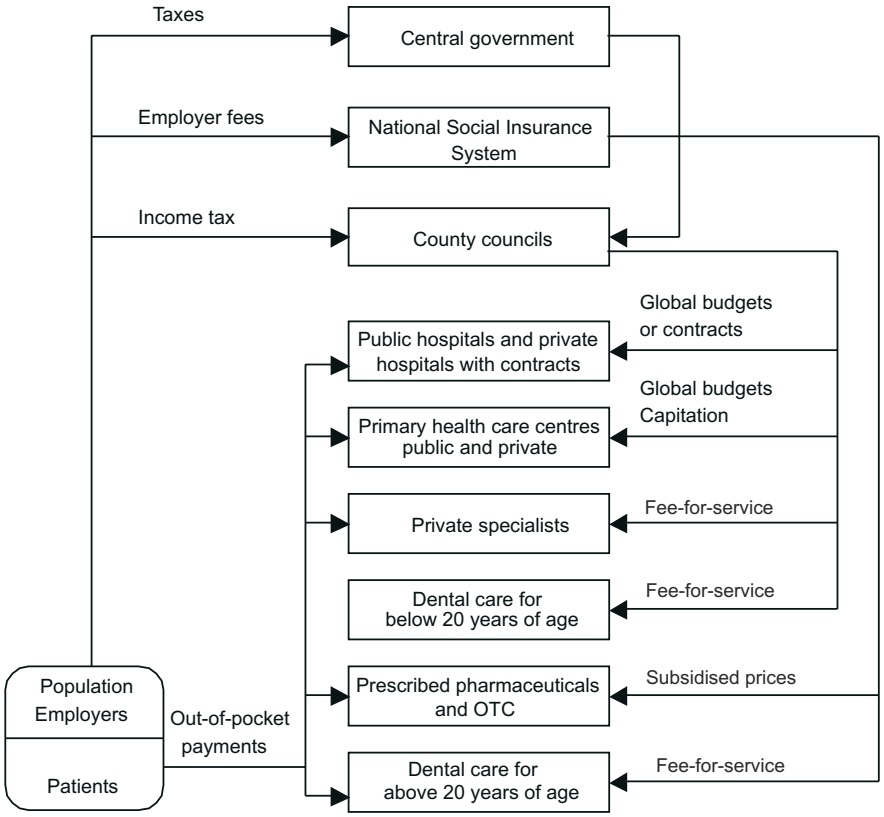
The Swedish health care system's economic framework is limited by overall economic development and the demands of cost control within the sector. At the turn of the century, the Swedish economy is experiencing a period of growth, both regarding productivity and employment. GDP increased by 4% in 1999 and several factors indicate a continuous growth in the economy. The county councils' expenditure decreased by 8% between 1992 and 1997 (constant prices and excluding prescription drugs), and in 1998, the trend changed as expenditure increased by 8%. Altogether, half of the cut-backs from recent years have been replaced by higher costs in the last two years.

Sweden's total health care budget is determined by tax revenues and patient fees for physician visits, nursing visits, bed-days, etc., along with consumption volume and drug mix, which generate revenues in terms of patient fees and reimbursements from the National Social Insurance Board. The county councils' total health care budget is determined by generated income tax revenues, state grants, patient fees and reimbursements from other sources for treatment of patients from outside the county council. In Fig. 19, the financial flows within the health care system are described (excluding care of the elderly and disabled).

Money flows from the central government to county councils. Part of the county councils' income also comes from income tax paid by the county's citizens. The county councils then allocate their monetary resources to hospitals, health centres, private specialists and dentists. The financing of dental care for adults above the age of 20 is carried out by the National Social Insurance system based on fee-for-service. Drugs are currently reimbursed through the social insurance system, although the latest pharmaceutical reform aims at giving

county councils full responsibility for pharmaceuticals. In a transition period, the social insurance system will continue to subsidize pharmaceuticals until an agreement is made for the county councils to fully take over this responsibility.

Fig. 19. Financing flow chart



As the financial and political responsibility for health care is decentralized to the county councils, it is difficult to precisely connect the financing sources with different activities within the county councils. This is because most county council activities are financed through county tax revenues and the county councils are responsible for other activities as well, e.g. education and cultural activities and care of the mentally retarded. In 1998, the total costs for the county councils were SEK 117.6 billion of which 93.4 were directly connected to health care. Sixty-two per cent (62%) consisted of costs for highly specialized acute regional care (tertiary) and county (secondary) care, 10% were costs for psychiatric care, 6% were for geriatric care and 22% were for primary health care.

The county councils finance their activities mainly through county taxes and general state grants, 48% and 13% of total income, respectively. These resources are not earmarked for special activities. Two point four per cent (2.4%) of total county council income consists of patient fees for inpatient and outpatient health services.

The National Social Insurance system reimbursements to the county councils constitute general health care reimbursements within the so-called DAGMAR reform, i.e. reimbursements for ambulatory care provided by the county council or by private practitioners connected to a regional insurance office. The reimbursements by DAGMAR-means are currently rather insignificant, as they represent approximately 1% of total health care costs.

The resource allocation formula that determines grants to county councils from the government for health care (state grants) is based on an assessment of need. The aim of this allocation is to assure the county councils equal conditions of providing care, independent of tax-level, service, efficiency and fees within the county. The approach is based on the assumption that the different needs for health care by the various groups in the population are matched by their varying uses of health services. The allocation formula considers differences in average health care costs per individual in the general population divided by sex, age, civil status, occupation, income, housing and groups with a high consumption of health care resources.

The county councils make most resource allocation decisions regarding health services within the county. Designated state grants are almost negligible. Traditionally, however, central government and the county councils have extensively collaborated as to the planning and resource allocation regarding highly specialized regional (tertiary) health services and certain investments in high technology. According to the Health Care Act, central government decides on the grouping of county councils into health care regions. The act also states that county councils should collaborate within these regions with respect to highly specialized health care. The collaboration between county councils regarding specialized hospital care and the existence of some specially designated state grants make it difficult to clearly differentiate the responsibilities for health services resource allocations.

Payment of hospitals

Resource allocation principles vary within the county councils. Most county councils have decentralized a great deal of the financial responsibility to health care districts through global budgets. Moreover, half of the county councils

have introduced some form of purchaser-provider organization. The purchasing organizations negotiate with hospital health care providers and establish financial and activity contracts. These contracts are often based on fixed prospective per case payments, complemented with price or volume ceilings and quality components. DRGs are the most common case system with respect to short-term somatic care. Prices are determined through negotiations between purchasers and providers. The extent of DRGs and other classification systems, however, varies among regions and county councils. Per case reimbursements for outliers, such as complicated cases that grossly exceed the average cost per case, may be complemented by per diem payments.

All activities are usually not reimbursed prospectively per case; several activities, e.g. psychiatry, geriatrics and emergency services, are normally financed through global budgets. Regarding highly specialized regional hospital health services, retrospective patient related fee-for-service reimbursement systems are common, at least for patients who do not belong to the county council in which the regional hospital is situated. In those county councils that have not introduced purchasing organizations, per case payments can still exist as payments between hospitals/districts and payments within hospitals among departments. Primary health care providers are usually paid through global budgets or by capitation. Capitation became common in 1993–1994 when the law on family doctors was introduced. The payments, whether they are based on fixed per case payments, per diem reimbursements, global budgets, fee-for-service or a combination of these systems, traditionally are based on full costs. The principle of full cost charges for public services has been an issue in the Local Government Act. Due to inertia in cost accounting systems, among other reasons, most payment systems used regarding health services are based on historical costs.

With respect to the allocation of resources, one important issue in the 1990s is that patients have increased options for choosing among health care providers. At the same time as patients' freedom for selecting health care providers has substantially increased in the 1990s, the allocation of resources has been affected, since the payment usually follows the patients' choices. Districts or county councils have to reimburse the provider chosen by the patient.

County councils are financially responsible for ambulatory care provided by either the county council or by private practitioners connected to a regional insurance office. General state grants are disbursed to the county councils for funding these activities. The county councils pay private practitioners connected to regional insurance offices who have an agreement with the county council, and private specialists are paid fee-for-service. The rates are determined by the National Social Insurance Board. The private providers have the right to charge

patient fees according to the fee level determined by the county council. The payments to private providers may also be based on other kinds of contracts.

Payment of physicians

In the totally integrated health care delivery system in Sweden, the physicians at public facilities are employed by and receive a monthly salary from the county councils. A physician with a specialist degree makes around SEK 33 500 (€3900). This represents almost 70% more than the average salary in Sweden, which in 1999 stood at SEK 20 000. Physicians also receive extra payment on top of their salary as compensation for being on call during non-regular working hours, increasing their actual monthly income. In addition to that, since the mid 1990s, they also receive a fee per patient. The National Social Insurance Board reimburses private dentists through a fee-for-service system.

Health care reforms

Aims and objectives

The Swedish health care sector has undergone several important reforms, particularly in the 1990s. Changes have been initiated both at national level through legislation, and locally at county council level. The locally initiated reforms are mainly associated with the introduction of new management systems and new organizational structures, such as contracting out to private providers. Taking an aggregate view of reform over several decades, the general focus of the 1970s and early 1980s was on equity issues; in the late 1980s, on cost containment; the early 1990s on efficiency; and in the latter part of the 1990s, on structural changes in the delivery and organization of health care. Reforms in the latter half of the 1990s have been a response to renewed concerns about cost containment.

Since most health care reforms have already been presented and discussed in earlier sections, this section will provide a broad summary. Some reforms that are being discussed, but which have not actually been introduced, will also be included. What is meant by reform is a somewhat subjective issue, especially if it does not result in legislation. It may be difficult to separate a reform from incremental changes, e.g. regarding organizational and management issues. However, this section attempts to describe all substantial changes, starting from the 1970s.

It is important to note that other circumstances have affected health care in parallel to reform, such as the 1991–1993 recession in the labour market, national decisions about tax levels, and, in the mid-1990s, the strong growth in the Swedish economy.

Content of reforms and legislation

National reforms

The health care sector expanded significantly after the Second World War, and continued to grow throughout the 1960s and 1970s. A great deal of the structural development was focused on transferring the responsibility for health care from the state to the county councils. The *1970 Seven Crowns Reform* meant that privately-provided outpatient services at county council managed hospitals were taken over by the county councils. The physicians at outpatient hospital departments became employed and salaried by the county councils. Another issue in the reform was that all patients should pay a uniform fee, SEK 7, at the point of service. The new fee structure had important implications with respect to equity of access to the health care delivery system. This new flat fee system replaced full cost recovery fees paid directly to the outpatient department physicians, where the individual patient was later reimbursed for 75% of the costs by the regional insurance office. The most important objective of the reform was to improve access to health care for the most economically disadvantaged population. Another reason for implementing the reform was that central government wanted to promote the establishment of primary health units outside the hospital by making it less lucrative for physicians to work in hospital outpatient departments.

The *1982 Health Care Act* (see Table 17) stated that the county councils were responsible for health services. The Act meant that financial responsibility as well as political resource allocation decisions were decentralized to county council level. Furthermore, the county councils were to allocate resources according to the needs of the residents. The Act includes a health for all policy: "*The fundamental objectives of health care in Sweden are good health and health care on equal terms for the entire population*", (2§). The Act manifested the policies that had been developed in the 1960s and 1970s: namely that health should be considered in relation to other social services and that health should include preventive responsibilities as well as diagnosis and treatment. The focus on equity in the delivery of services was strongly emphasized in the act. Special attention was to be given to vulnerable groups, e.g. the elderly, immigrants and early retirees. The Act also stressed that local authorities must work to enable people with physical or mental handicaps to live in a way that corresponds to their needs and to play an active part in the community, gaining access to public premises, etc.

Table 17. Health care reforms during the last twenty years

Year	Reform	Outcome
1982	Health care Act	County councils receive responsibility for health services
1985	Dagmar reform	County councils receive the cost liability for ambulatory health care provided by public and private providers
1991	Health care Act	Senior chief physicians must be medical specialists
1992	ÄDEL-reform	Municipalities receive responsibility for providing long-term health care and social welfare services to elderly and disabled.
1992	National guarantee of treatment	Limited waiting times for treatments
1993	Reference price system	Regulation of drug reimbursement
1994	Handicap reform	Extended rights of people with functional impairments
1994	Family doctor Act	Residents could choose a family doctor
1994	Act on freedom of private practices	Increased possibilities to establish private practices
1995	Abolishment of family doctor Act and Act on freedom on establishing private practices	Decreased possibilities to establish private practices and choosing family doctor
1995	Psychiatric reform	Municipalities receive responsibility for fully treated psychiatric patients
1997	Law of supervision	Every provider must have supervision
1997	Quality systems	General rules addressing quality systems in health care
1997	Guarantee of medical treatment	Increase of accessibility for health care seeking in primary and specialist care
1997	Law on priorities	Priorities regulated in health care
1997	Drug reform	New drug benefit scheme implemented
1998	Drug reform	County councils receive full responsibility for drug treatments
1999	Law on professional activities in the health care sector	All health care activities/provision must be reported to the National Board of Health and Welfare
1999	Patients' rights reform	Increased obligations for county councils regarding patients' rights in the health care system

The *1985 DAGMAR reform* transferred liability for costs of ambulatory health care provided by public providers and private practitioners linked to regional social insurance offices from the National Social Insurance Board to the county councils. Instead of the regional social insurance offices reimbursing ambulatory services according to a fee-for-service system based on number of consultations, the National Social Insurance Board disbursed general health care grants to the county councils based on per capita adjusted for social measures. The main motive of the reform was to establish county councils'

control over new private establishments through agreements and control over reimbursements to private providers.

In the *1991 Health Care Act*, focus was placed on the total medical and administrative management responsibility at diagnostic or treatment departments. This new direction is referred to as the "senior chief physician" reform, which stated that senior chief physicians must be medical specialists. The county councils appoint the senior chief physicians if considered necessary. The appointment is thus a county council discretionary decision. The reform was abolished in 1997 when the Law of Supervision was introduced, stating that for all health care providers, a responsible individual must be appointed. This law, in turn, was abolished in 1999, but its content is included in the Law on Professional Activities in the Health Care Sector, which states that all publicly-financed health care provision must be accountable to the National Board of Health and Welfare.

The *1992 ÄDEL reform* was the most dominant structural reform during the 1990s, in which responsibility for providing long-term health care and social welfare services to the disabled and the elderly was transferred from the county councils to the local municipalities. The main reason for implementing the ÄDEL reform was to concentrate planning and financial responsibilities for all services for the elderly and disabled, including home services and services at nursing homes and elderly residences, to one source, the municipalities. Clear incentives were introduced to reduce the number of elderly patients waiting to be discharged from acute care hospitals, so-called "bed blockers". Capacity at acute care hospitals was to be freed up. The local municipalities are required to pay the county councils for care delivered to patients at hospitals when the patient is considered fully medically treated by a hospital doctor. The reform has affected the health care structure in Sweden substantially. The general view from the National Board of Health and Welfare, which is in charge of evaluating the reform, is that the introduction of ÄDEL has been rather successful and has met at least some of its objectives.

As an addition to the ÄDEL reform, the Swedish Parliament introduced a *Handicap reform* in 1993. This resulted in the inclusion of two new paragraphs in the Health Care Act. The county councils' responsibility to provide rehabilitation and technical aids was emphasized. The municipalities became responsible for the handicapped under the age of 65. A year after the handicap reform, a law came into force: the act concerning Support and Service for Persons with Certain Functional Impairments. This law extended the rights of people with functional impairments under 65 years of age. The major element in the act is the right to personal assistance. The municipalities must appoint assistants or provide financial support for this assistance. Other rights set by

the act are consultations and other kinds of support, companion services and short stays outside the home (relieving the burden on relatives), family homes or homes with special services for children and young people needing to live outside their parents' home, and homes with special services for adults. Help provided under the terms of this Act is free of charge.

In 1995, the responsibility of the local municipalities was extended further through the *Psychiatric reform*. The reform was similar to the ÄDEL reform. Local municipalities are financially responsible for patients after they have been fully treated. Thus, after patients have had three months of consecutive inpatient psychiatric treatment, the local municipalities must provide housing, occupational and some rehabilitation services. The objective of the reform was to improve quality of life for psychiatric patients through housing and daily activities. The reform has had both positive and negative effects. One major problem, although not due to the reform itself, is that the number of individuals seeking early retirement due to psychiatric illness has increased during the 1990s. As intentions were to create early individual rehabilitation for individuals as soon as they fall ill, this development actually goes in the opposite direction.

Much of the political discussions regarding health care in the 1990s have evolved around accessibility, e.g. waiting times for medical attention and for treatment. In 1992, a *National Guarantee of Treatment* for patients was introduced. The guarantee was the result of an agreement at national level by the Ministry of Health and Social Affairs and the Federation of County Councils. The government granted extra funding to the county councils and gave patients who did not receive care within three months the right to seek treatment elsewhere. The objective was to reduce waiting times for ten elective hospital treatments with long waiting times. If a patient had to wait more than three months for treatment, the hospital had to make certain that the patient was offered care within three months at another hospital, either within the patients "own" county council or at a hospital in another county council. The waiting times were reduced substantially during the first two years. It was found, however, that in practice most patients chose to wait for treatment at "their" hospital, even if the waiting time exceeded three months.

The guarantee of treatment received some criticism. It focused on "popular" medical problems that attracted the public and not on weaker individuals within the society. In 1993, government research on priorities in health care pointed out that weaker groups should be prioritized, e.g. mentally ill and elderly. The criticism led to a revision of the guarantee in 1996.

In 1997, a *revised Guarantee of Medical Treatment* came into force, which regulated accessibility for health care seeking in primary and specialist care.

Patients can receive care from a nurse practitioner at the health centre the same day. An appointment to see a physician must be offered within eight days. When the patient is referred to specialist care, an appointment needs to be offered within three months, and when the diagnosis is uncertain, an appointment to see a specialist must be offered within a month. In those cases in which specialist care cannot be offered within these time frames, care must be offered in another county council. Some county councils offer patients even better accessibility and have their own measures for improving accessibility.

In 1997, an addition was made into the Health Care Act regarding *priorities in health care*. The law regulates how patients should be prioritized depending on type of medical problem. Those patients who have the greatest need of care should have priority over other patients. National guidelines are included in the law stating who is regarded as having higher need than others. The ethical base for these guidelines consists of three principles: human value; need and solidarity; cost-effectiveness, in order of priority.

From 1 January 1999, additional paragraphs were added to the *1982 Health Care Act* increasing county councils' obligations towards patients. *Patients' rights* in the health care system were increased. Among other areas, patients have the right to choose their primary care physician. This right is not restricted to a certain geographic area. The patients also have the right to individually tailored information about her or his medical condition, examinations, care and treatment. In addition, the patient has increased influence over treatment. In those cases in which several treatment options are available, the patient may choose which she or he prefers. If the patient suffers from a serious medical condition which is difficult to judge, the patient may obtain a second opinion anywhere within the country. It is still too soon to discuss the effects of this change in the Health Care Act, although the Federation of County Councils is documenting some of the effects.

In 1997, statutes and rules for quality registers, quality systems in the health and medical services were established. The regulation was a natural follow-up of the expansion of the national quality registers during the 1990s and the increasing demands for patient-focused care, efficiency, monitoring, and quality. These rules also give the National Board of Health and Welfare an opportunity to supervise the system. The regulation lays down that all activities are subject to systematic inspections, a requirement that applies to all levels of the health care system and all health care professionals.

The fundamentals for primary health care providers have been substantially changed during the mid-1990s. In 1994, *the Family Doctor Act* came into effect, as did the *Act on Freedom to Establish Private Practices*, although these two laws were withdrawn in June 1995 before they were fully implemented. Even

though they were withdrawn, these laws fostered some reform in the primary health care sector. First, regarding the Family Doctor Act, several counties had already started to make changes in their delivery of primary health care as a result of the act. This act allowed the county councils to organize outpatient primary health care in a way in which all residents within the county council are able to choose a family doctor, i.e. a general practitioner. Freedom of choice was extended to cover the services of private general practitioners who did not have contracts with the county councils. Traditional primary health care, which consisted of collaboration with district nurses within geographically determined responsibility areas, was substituted for the family doctor system. Payments from the county councils were to be partly based on a monthly fixed fee (capitation) per listed individual, and partly on fee-for-service. The family doctors were given financial incentives to attract patients. The main objective of the reform was to improve accessibility and continuity in primary outpatient care. *The Act on Freedom to Establish Private Practices* increased possibilities for establishing private practice by taking away the county councils' ability to regulate the number and reimbursement of private practitioners. The county councils were supposed to have implemented the family doctor reform by the end of 1995 but, in June 1995, the new social democrat government, which came into power in 1994, abolished both the Family Doctor Act and the Act on Freedom to Establish Private Practices. Among other things, the Family Doctor Act, together with the Act on Freedom to Establish Private Practices, resulted in an increased privatization of primary health care in some counties.

A new act on primary health care organization was issued in June 1995, announcing primary health care as the basis of health care organization. The new act moves from a focus on hospital care to primary care, from the individual primary care doctor to the primary health care team, and it puts emphasis on the patients' rights to receive information and to influence care. Freedom of choice was retained, but it was restricted to doctors on contract with county councils. For the first time, primary care by definition became a separate care level and the basis of the health care organization. Some modifications of the Health Care Act were introduced in connection with the abolition of the Family Doctor Act. First, the county councils have recovered regulatory power over private health care, as they are able to sign agreements for providing reimbursement to new private establishments. Furthermore, the National Board of Health and Welfare is responsible for evaluating reforms concerning primary and private health care.

In 1993, a *reference price system* for drugs was introduced for multi-source drugs which were no longer under patent. The Medical Products Agency determines which drugs should be considered generic. According to the

reference price system, the National Social Insurance Board reimburses the National Corporation of Swedish Pharmacies for an amount that exceeds the cheapest product available on the market with the same ingredient, plus 10%. The patient can choose a more expensive drug with the same components than the one the physician has prescribed. However, the patient has to pay for the difference between the price and the portion covered by the National Social Insurance Board.

At the end of the 1990s, a *drug reform* was implemented in two steps. The first step was taken in June 1997 when a new National Drug Benefit Scheme came into force. The drug benefit scheme regulated co-payments on pharmaceuticals for patients, and was separated from the cost ceiling for medical treatments. The ceiling limits the patient's out-of-pocket payments to SEK 1800 during a twelve-month period. In contrast to earlier schemes, patients have to pay for medicines prescribed for chronic diseases, with the exception of insulin, which is free of charge. Most OTC products, even when prescribed, are not covered. However, drugs for birth control, products for patients recently operated on in the colon or ileum, and articles needed for the intake of medicines are included. Also in 1997, county councils received the right to buy pharmaceuticals for inpatient care directly from pharmaceutical companies. In addition, the law on pharmaceutical committees was introduced, requiring the appointment of at least one committee in every county council. Moreover, this same year, a law was introduced stating that registers on prescriptions, containing a patient's personal security number, should be kept and run by the National Corporation of Swedish Pharmacies. Finally, in 1997, the National Board of Health and Welfare was given the responsibility of keeping a record of prescribers.

The second step of the drug reform was taken in 1998. The county councils were given full responsibility over costs of drug treatments. This responsibility was transferred gradually during a transition period. One major reason for this reform was due to the open third party payment system, which was considered to contribute to the need for cost containment. Under this system, the health care providers were responsible for costs of health care, but not for outpatient drug treatment, which meant that the prescribing physician, public as well as private, lacked direct incentives to keep drug costs under control. The intentions of the reform were for the county councils to take full responsibility over pharmaceuticals after a transition period of four years. During three years, up until 2001, the Federation of County Councils negotiated with the government that they would financially support the county councils' pharmaceutical expenditure through state grants. However, there is some disagreement between the Federation of County Councils and the government on this issue and state grants are likely to be also given after 2001.

County council reforms

Reforms initiated at county council level are almost exclusively associated with the introduction of new management and organizational schemes. County councils are free to choose how to organize the health care they provide, which is a unique feature of the Swedish system.

The decentralization of financial responsibility within county councils according to the Health Care Act 1982 was further reflected in decentralization efforts within each county council. Changes in county council management systems reflect goals and problems that county council politicians and responsible officials have encountered. Before the beginning of the 1980s, county council health care was characterized by rapid development and expansion; real resources increased as well as county council responsibility areas. The development was financed through general economic growth in Sweden and increased taxes. Important goals for county councils as well as the state were to create a health care system reflecting political intentions of good health on equal terms. However, in the beginning of the 1980s, it was evident that county council revenues could no longer increase at the same pace as before. Rapid expansion along with increased wages since the 1970s resulted in increasing costs for the health care sector. Cost containment became an important health care policy issue for the county councils. The expansion also meant that possibilities decreased for managing health care activities through central county planning. As a result, the principles of global budgeting were introduced. Health care districts received global budgets from their central county council. Many districts subsequently adapted the same principles for managing their departments and primary health care.

Global budgeting, however, was questioned in many county councils, as there was uncertainty as to whether the budgets represented a fair allocation among districts. An official national report also established that there was a great variation in resource allocation practice within and among county councils. *Global budgeting based on the need of the residents* was issued as a solution to variations among county councils and districts. By the end of the 1980s, 14 out of 26 county councils had developed a model for global budgeting based on the needs of the residents. Since such a solution created financial winners and losers among districts, implementation was often postponed; the models were introduced incrementally during several consecutive years. The models varied but were usually based mainly on demographic variables. Some county councils also included indicators on health status, e.g. based on remaining life years and sick leave, or on health as indicated through population surveys.

In spite of the changes, global budgeting did not provide enough incentives for increasing productivity. Productivity development of the health care sector

was considered low compared to other sectors. As a result, new payment schemes were introduced in order to increase productivity. By the end of the 1980s, 20 out of 26 county councils intended to establish full cost liability over direct patient care departments. General and medical ancillary departments were to be reimbursed according to per case payment schemes. The dominating reimbursement system, however, was still global budgets, at district as well as departmental level.

Purchaser-provider split

In the early 1990s, some county councils initiated more substantial changes to their management systems. Dalarna, Stockholm and Bohus were the first county councils to make reforms, referred to as the Dala model, the Stockholm model and the Bohus model, which included most issues that had been discussed in the 1980s, i.e. resource allocation according to the needs of the residents, per case payment schemes, total cost liability over direct patient care departments, and transfer pricing systems. Furthermore, the roles for politicians and professionals were changed; the politicians were to act as representatives of the patients through purchasing organizations, and health professionals were to be responsible for the provision of the health care. Several county councils introduced solutions in which *separate purchasing organizations* were established. In 1994, 14 out of 26 county councils had introduced such models. The purchasing organizations vary among and, in some cases, within the county councils. Some county councils have introduced one large central county council purchasing organization, while others have introduced purchasing organizations at district level. Two county councils, Dalarna and Bohus, have introduced local purchasing organizations; each local municipal boundary constitutes one purchasing organization. The choice of purchasing organization seems to be influenced by the traditions of organizing health care activities within the county council.

Local municipalities as well as other countries have influenced county policies, e.g. the United Kingdom when they decided to introduce purchasing organizations. The purchasers and providers belong to the same public organization and the actual negotiating with providers is carried out by administrative staff, not politicians. Besides the level at which the purchasing organizations are established, practice varies as regards contractual arrangements between purchasers and providers; for example, prices can be established by central county council or through negotiations between purchasers and providers. Furthermore, there are variations in the way purchasing organizations work among as well as within county councils. Initially, due to the constrained financial situation, price and volume negotiations were the most important

issues. More recently, other important issues have become the focus, e.g. the promotion of public health, collaboration with social services and regional social insurance offices.

The institutional relationship between purchasing organizations and health care providers has called for new contractual arrangements, or reformed payment schemes. The contracts are usually based on prospective per case payments complemented with price or volume restrictions and quality guarantees. DRGs are the most common per case payment scheme in short-term somatic care. Weighted visits are a common per case payment scheme with respect to hospital-based outpatient care. However, the kind of different per case payment systems varies substantially among county councils and hospitals. Per diem payments may complement per case payments, e.g. with respect to outliers. Psychiatric care, geriatric care and emergency services are usually reimbursed through global contracts. Highly specialized and resource demanding regional (tertiary) health care services are often reimbursed through fee-for-service. Primary health care providers may be reimbursed through capitation or global budgets. The prevailing payment systems are without exception based on fully absorbed costs, without a profit margin.

Again, it should be noted that new contractual arrangements have been disseminated also among those county councils that have not introduced a purchasing organization, and at several organizational levels. The development of payment schemes within departments have been an issue somewhat separated from the third party payment schemes between purchasing organizations and providers. By the end of the 1980s, it was common to introduce total cost liability over direct patient care departments, meaning also that prospective per case payment schemes in direct patient care departments and ancillary departments were introduced. Thus far, these solutions have been more widely spread than purchasing organizations, which purchase care from direct patient care departments. Furthermore, several of the nationally initiated reforms have resulted in new contractual arrangements. The ÄDEL reform and the psychiatric reform have introduced contractual relationships between the county councils and the local municipalities. The national health care guarantee created contractual relations between county councils. The highly specialized regional health care has been reimbursed through fee-for-service based contracts for a long time. Finally, a new contractual relationship between districts and county councils has developed from the increased possibilities for patients to choose among health care providers, since reimbursement usually follows the choices of the patients.

Increased consumer orientation has been reflected in the increased possibilities patients have for choosing health care providers. At the end of the

1980s and beginning in the 1990s, patients' freedom of choice was an important policy issue among politicians. Freedom of choice has been more similar and extensively disseminated throughout the country than purchaser-provider split or reformed payment schemes. In all county councils, patients can choose their family doctor or health centre. In many county councils, the patients can also select which hospital to be treated at, with, and in some cases even without, a referral.

To a great extent, the public debate has included the issue of the establishment of competition in health care, predominantly by contracting out services. Competition is especially directed towards care of the elderly and primary health care. Recently, contracting out to private providers has increased, such as for general ancillary services. However, large differences exist among the county councils, and competition is greater in some counties than in others. Recently, contracting out has also been discussed regarding inpatient care.

Other issues have increased the competitiveness in Swedish health care. New contractual relationships mentioned above have enhanced competition. Furthermore, increased opportunities for choosing health care providers, combined with the resources following the choices of patients, have resulted in a competitive environment, as health care providers may lose revenues because patients choose other providers. Since patients are insensitive to price due to third party payments, the competitive factors focus on quality and access, rather than on cost-effective treatment. In the long run, such a situation may create problems with respect to cost containment.

Effects of reforms initiated at county council level

According to the National Board of Health and Welfare, the management and organizational reforms introduced at county council level have had little effect on the health care structure. The structural changes during recent years are mostly the effect of economic measures. For example, the structure of primary health care is to a greater extent the effect of the ÄDEL reform and the Family Doctor Act than a result of changes in management systems and organization. The conclusion made by the National Board on Health and Welfare is that special activities aimed at changing health care structure through management and organizational systems should be considered complementary, as they do not seem to affect health care structure.

New management systems have not increased the presence of private health care providers. The new roles established by the introduction of purchasing organizations have resulted in initial difficulties for purchaser representatives to establish clear and strong roles, because of asymmetric information in favour of the provider.

Awareness of costs among personnel and systems for cost containment have been improved because of new management systems and organizational structures. Total health care costs have been reduced in fixed prices by 1%–2% per year during the latter half of the 1990s. Crucial time lags still exist with respect to cost accounting in several county councils. Efforts undertaken to control health care expenditure have been fairly successful, as Sweden is the only OECD country that has been able to continually reduce health care expenditure in the 1990s. Cost control varies in different areas of the health care sector. For example, there are difficulties controlling costs for outpatient care drugs, although recent pharmaceutical reforms are trying to address this. It is difficult to know the extent to which successful cost control is a result of new management systems and organizational structures or whether it is an effect of economic measures.

Productivity gains have been accomplished within regional and county care. Productivity has increased both in county councils that have explicitly introduced new management systems and organizational structures, and in county councils that have been studied as control groups. There is no evidence that quality has been negatively affected by these reforms.

The increased freedom to choose among providers has been used by a small share of total patients. However, in a few geographic areas, the patient flows, and thus the financial flows, have been significant. Those providers who have lost patients have had difficulties in adjusting their capacity in the short run. There has not been real patient influence over different treatment strategies. Some support exists among professionals for a changed attitude and stronger consumer orientation.

A number of mergers between county councils have taken place during the second half of the 1990s. This development has been driven by the increased pressure on county councils to contain costs and to increase efficiency. During the last few years there has been an ongoing debate as to how county councils can become more efficient and maintain high quality at the same time. By merging smaller county councils into larger regions, it is believed that this objective will be easier to meet.

Contracting out certain health care services has increased in some regions. This is considered to contain costs for the county councils. While the effects on quality are still controversial in some quarters, this framework is viewed by advocates to be a means to obtain efficiency and at the same time maintain quality. It is mainly in the larger, more urban health care regions that contracting out has become increasingly common.

The fact that county councils gained responsibility over pharmaceuticals in 1998 has meant that they pay close attention to current expenditures and

influence prescriptions. The reform has given county councils direct incentives to increase prescriber knowledge about pharmaceutical costs and consumption patterns. Committees have been formed in every county council and in some counties, prescriber advisers inform prescribers of use and cost of pharmaceuticals. County councils have also been creating incentives and/or rules for hospital managers and other managers in the health sector to prioritize among pharmaceuticals in order to decrease costs. However, it will take several years before the effects of this reform can be fully assessed.

Reform implementation

The reforms of the Swedish health care sector have very much been targeted to address problems with the health system. For example, the latest pharmaceutical reform is a result of increasing drug costs. At the end of the 1980s and 1990s, productivity development was considered too low and, as a consequence, prospective payment schemes, purchasing organizations, and increased possibilities for choosing providers were introduced. Every reform of management systems, in turn, creates demand for new reforms. Ideally, reforms should take into account all relevant health policy goals and should be coordinated. Moreover, a system of following up already implemented reforms should be set in place.

Several factors make a coordinated reform strategy difficult to achieve. Among the most important are changes in government, which very much have affected Swedish reform-making, e.g. the Family Doctor Act was introduced by one government and then abolished by another government one year later. Other important problems include the difficulties of taking a global perspective of the reform process, considering all health policy goals (cost-containment, cost-effectiveness, high quality, equal access etc) at the same time. In addition, different administrative levels sometimes make decisions that are not well coordinated.

Conclusions

The current Swedish health care system is the product of a long ongoing process throughout the twentieth century. The structure of the system has been influenced very much by the societal ideas in Sweden after the Second World War. One important component of this is that health care provision traditionally has been considered an important part of the general welfare system. An outcome is the emphasis on equity in the system, i.e. every individual has the right to good health and access to health services irrespective of income, sex, age, etc. Furthermore, it has been understood that Swedes should not only have equal access to health services, but they should have equal access to high quality health services. Both equity and quality have been very important issues in the development of the Swedish model.

Important features of the Swedish health care system are that it is publicly financed, mainly through county council tax revenues, and publicly provided, by hospitals and health centres owned and managed by the public county councils. The county councils are independent regions with political boards, and through the 1982 Health Care Act, they have the legally binding obligation to plan for all health services. This legal obligation, combined with the successive transfer of health care responsibilities from the state to the county councils, means that the Swedish system is a rather mature decentralized system. The decentralization of responsibilities has furthermore continued within the county councils, resulting in local districts having rather strong discretionary powers as regards the management of health services. A traditional feature of the system is regional level planning for highly specialized care, which avoids duplication of high cost resources.

In the 1970s, 1980s and in particular the 1990s, the health care system has undergone several reforms. Specific problems and issues considered politically important at the time of each reform have determined the determinants and

objectives of reform. An aggregated view of the three decades indicates that equity and quality were the predominant determinants of reforms in the 1970s and early 1980s; that cost containment was the most important issue at the end of the 1980s; that efficiency was the predominant determinant driving in the early 1990s; and that priority setting and pharmaceutical expenditure have dominated in the latter half of the 1990s. The reforms have been initiated both at national and county council level; often several different reforms have run parallel to one other.

Some lessons can be learned from the implementation of management reforms initiated at county council level. Coordination problems have occurred with respect to the purchasing organizations and the increased possibilities for patients to choose among health care providers. The problem some purchasers have encountered is that their purchasing activities may or may not coincide with the preferences of the patients; the patients may choose a health care provider other than the one with whom the purchaser has negotiated and signed a contract. Two different control paradigms have been introduced simultaneously. The magnitude of this coordination problem varies among county councils. Purchasers at local level in densely populated areas in county council border areas seem to have been particularly affected.

Developments throughout the county councils are similar, at least when studied over several decades. Introducing global budgeting, budgeting based on the needs of the residents, transfer pricing, profit centre management, increased possibilities to choose among providers, per case payment schemes, etc. have been discussed in most county councils. The variations refer to the time of introduction and the application of reforms. Thus, at any given point in time, management systems have varied among country councils, although trends are the same in the long run. This leads to the conclusion that county councils should have been able to learn from each other by evaluating and following up implemented changes, an issue that usually has been neglected. There is good reason for county councils to spend effort and time in the future on evaluating reforms.

Unfortunately, to a large extent, reforms have focused on a piecemeal approach of solving one problem at a time. Also, health care reforms have been followed insufficiently and an assessment of their impact on the system as a whole has been lacking. It seems difficult to manage reforms with due consideration to all health care policy goals: cost containment, cost effectiveness, high quality and equal access. A coordinated reform approach should be considered, which includes all relevant health policy goals, not only considering the most acute problem in a piecemeal way at a given time.

Another explanation for the constant focus on management system reforms may be the fact that county councils are political organizations. The political decision making process does not guarantee that decisions made during different periods and reform implementation are coordinated. A change of regime may quite to the contrary imply that decisions and implementation strategies are not coordinated. However, the same contradictions are also sometimes present within the same term of office, e.g. increasing the patients' freedom of choice and establishing purchasing organizations. Furthermore, decisions on reform implementation have been made at national level, decisions that perhaps do not match the local reform implementation strategy. Criticisms of the county council health care management have obviously created a good organizational environment to implement reforms or changes. Management systems have subsequently been changed, many reforms have been implemented within a short period of time, and reforms have been initiated both at national and county council level, often without due consideration as to whether the incentives of the different reforms are coherent.

The political ideology at central government level regarding health care management has changed twice in the 1990s, which, to some degree, may help explain the introduction of differing reforms. Between 1991 and 1994, central government was non-socialist. Before 1991 and since 1994, the social democrats had control and today form the government. The changes of regime have naturally affected important issues with respect to managing health care. However, the broad model that dominants policy formulation in Sweden has resulted in a good organizational environment to implement reforms.

Despite observed problems related to reform implementation, the management and organization of Swedish health care have improved. The decentralization of financial responsibility is a key explanatory factor. Cost awareness has increased, as has interest in more and better financial information, which has improved cost accounting systems. Cost awareness has also led to the merger of several county councils into new regions and the increase in cooperation among counties.

Currently, cost containment is an important issue, especially when it comes to pharmaceutical expenditures that have been rising at a rate that is among the fastest in the European Union. Since county councils have taken over the responsibility for pharmaceutical expenditures, stronger incentives exist for them to control these expenditures. New mechanisms of controlling costs are being discussed. Efforts will likely be made to increase physicians' awareness of costs and to stimulate cost-conscious clinical behaviour. Another important issue today is patients' rights. National proposals to strengthen the position of patients have been presented during the latter half of the 1990s and the imple-

mentation of these is still under debate. Priority setting is an area that has been very much discussed in the public arena lately and this will probably continue to be the case in the next few years. The issue as to whether overall health care resources should increase or whether they could be more efficiently used is another important area under discussion.

An ongoing topic in the debate regarding the health care sector and its future development is primary health care. There are discussions as to how primary health care can be strengthened and how its position in the health sector can be consolidated. One important issue centres on how to increase interest among physicians to work in the primary health sector. Since in some areas it has been difficult to recruit physicians to the primary care level, attempts have been made to recruit these doctors from other countries, such as Germany.

In summary, the Swedish health care system can be described as a system that has been put under economic pressure during the 1990s and has undergone several major structural reforms. The decentralization of the system is strong and it has been a very homogenous system, although small differences have been emerging recently among county councils. Aside from balancing the objectives of the health care system, there are several remaining areas of focus. The main challenge ahead is how to find a compromise between public priorities and individual needs. To a large extent, the public priorities regard cost awareness – how to increase efficiency and at the same time maintain a high level of quality in the health care sector. This, however, must be considered in relation to the growing health care needs. New technology is being developed that affects health care costs and changes the nature of health care. At the same time, the demographic picture is changing, as an increasing proportion of the population is above 65 years of age. This will put pressure on the entire health care system. Throughout the 1990s, and especially during recent years, the position of patients has gradually become stronger. The issue of handling the availability of health services and increased patient influence remains to be solved. The question which remains is whether there is still room to meet growing health care needs by means of continued efficiency raising measures.

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