Health Care Systems in Transition

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Foreword

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

HiTs seek to provide relevant comparative information to support policy-makers and analysts in the development of health care systems in Europe. The HiT profiles are building blocks that can be used:

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

The HiT profiles are produced by country experts in collaboration with the Observatory's research directors and staff. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides the detailed guidelines and specific questions, definitions and examples needed to compile a HiT. This guidance is intended to be flexible to allow authors to take account of their national context.

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. Due to the lack of a uniform data

source, quantitative data on health services are based on a number of different sources, including the WHO Regional Office for Europe health for all database, Organisation for Economic Cooperation and Development (OECD) Health Data and data from the World Bank. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.

The HiT profiles provide a source of descriptive information on health care systems. They can be used to inform policy-makers about experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analysis of health care systems. This series is an ongoing initiative: material is updated at regular intervals. Comments and suggestions for the further development and improvement of the HiT profiles are most welcome and can be sent to info@obs.euro.who.int. HiTs, HiT summaries and a glossary of terms used in the HiTs are available on the Observatory's website at 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 Systems and Policies. The European Observatory on Health Systems and Policies is a partnership between the WHO Regional Office for Europe, the governments of Belgium, Finland, Greece, Norway, Spain and Sweden, the European Investment Bank, the Open Society Institute, the World Bank, the

[1] For reasons of international comparability and consistency with the former HiT profile (1) the names of institutions used in the following text do not necessarily reflect the English names that institutions use themselves (see *Glossary*).

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 research directors Martin McKee, Elias Mossialos and Richard Saltman.

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The HiT reflects the state of reform and data in November 2004.

Introduction and historical background

Introductory overview

The Federal Republic of Germany is situated in central Europe and covers an area of about 357 000 km^2. The longest distance from north to south is 876 km, from west to east 640 km. The country shares borders with (clockwise from the north) Denmark, Poland, the Czech Republic, Austria, Switzerland, France, Luxembourg, Belgium and the Netherlands (Fig. 1). Germany has 82.5 million inhabitants, with 42.2 million women and 40.3 million men.

The area of the former German Democratic Republic (GDR) in the eastern part of Germany accounts for 108 000 km^2 (30%) of the total land. Its 13.5 million residents represent 16% of the country's total population (2003 figures, excluding the eastern part of Berlin with about 1 million inhabitants). The population density is unevenly distributed and varies between 75 inhabitants per km^2 in Mecklenburg Western-Pomerania and 3804 inhabitants per km^2 in Berlin. Of the 19 cities with more than 300 000 inhabitants only three (including Berlin) are in the eastern part of Germany. The largest city is the capital Berlin, with 3.4 million inhabitants. Other densely populated areas are the Rhine-Ruhr region with about 11 million people and the Rhine-Main area surrounding Frankfurt.

Political and economic background

Germany is a federal republic consisting of 16 states (*Länder*)[2] (Fig. 2), each of which has a constitution consistent with the republican, democratic and social

[2] The new *Länder* in the area of the former German Democratic Republic (GDR), which accessed the Federal Republic of Germany in 1990, will be called "eastern part" in the ensuing text according to their geographic location in Germany. The old *Länder* in the area of the former Federal Republic of Germany (FRG) will be termed "western part".

Fig. 1. Map of Germany

Source: The World Factbook, 2004.

principles embodied in the national constitution (known as the Basic Law or *Grundgesetz*). The constitutionally-defined bodies with legislative functions are the Federal Assembly (*Bundestag*) and the Federal Council (*Bundesrat*).

The Federal Assembly is made up of 603 members, elected every four years. Since 1998, the coalition of Social Democrats and Greens has held the parliamentary majority and formed the government. The main functions of the Federal Assembly are to pass laws, elect the Chancellor and control the government. The Federal Council, which represents the sixteen federal states, does not consist of directly-elected representatives but of three to six members –

depending on population size – from each of the sixteen state governments. The main function of the Federal Council is to approve laws passed by the Federal Assembly. About half of all bills require the formal approval of the Federal Council, while in other cases the Assembly may overrule a negative vote by the Council. The requirement for passage by both chambers applies especially to bills of vital interest to the states, such as those regarding financial affairs or their administrative powers. Passing laws that need the approval of both chambers is often difficult and requires compromise, since the political majority in each chamber is typically held by opposing parties or coalitions. Compromise is often found by the 32-member Mediation Committee (16 from the Federal Assembly and 1 from each *Land*) before being passed by both chambers.

Fig. 2. Political map of Germany at the level of the *Länder*

The President (currently Horst Köhler) is elected for five years by an assembly consisting of the members of the Federal Assembly and an equal number of representatives from the states according to their population size. The President's major tasks are to sign new laws, formally appoint the chancellor and the federal ministers and to fill the role of head of state.

Legislative authority lies principally with the 16 federal states (*Länder*), except in areas for which this authority is explicitly given to the federal level. The Federation's legislative authority falls into three different categories:

1. legislation pertaining to foreign affairs, defence, monetary matters, air transport and some elements of taxation
2. legislation necessary to establish uniform laws for the whole country
3. framework legislation, though the states retain a considerable amount of legislative latitude, e.g. in higher education, nature conservation, landscape management, regional planning and water management.

The states can fill in any gaps left by federal legislation or in areas not specified by the constitution. Thus they are responsible for culture and education (see *Human resources and training*) almost in their entirety as a manifestation of their "cultural sovereignty". They are also responsible for legislation defining the powers of local government and the police. The real strength of the states lies in their participation in the legislative process at the federal level through the Federal Council. All administration, such as tax collection, lies in their hands, and their bureaucracy implements most federal laws and regulations. Difficulties can arise due to the fact that the Federal Council is often dominated by states led by parties that are a minority in the Federal Assembly and not part of federal government.

The Federal Government's Cabinet consists of the Chancellor, who is head of the government, and the federal ministers. The Chancellor chooses the ministers and proposes them to the President for appointment or dismissal. He also determines the number of ministers and their responsibilities. The Chancellor is in a strong position primarily due to the fact that he establishes the guidelines for government policy. The federal ministers run their departments independently but within the framework of these guidelines. Besides the legislature and the executive, the various separate court systems (administrative, constitutional and civil courts) represent a strong third pillar of decision-making.

Germany is a member of the G8 group of leading industrial countries. In 2003, the gross domestic product (GDP) amounted to a total of €2130 billion and to €25 662 per capita (Table 1). Following German unification, real GDP growth peaked at 7.4% in 1992 and has been much lower since then, reaching

a negative real growth rate of -0.1% in 2003. Throughout this period, the real GDP increased less than the OECD countries' average *(2)*.

Unemployment rates ranked above OECD average and have increased recently following a recovery around the turn of the millennium (Table 1). According to national figures, around 3.7 million people were unemployed in 2003 at a rate of 10.5% of the workforce. In the eastern federal states, unemployment rates were substantially higher – from 16.7% in Thuringia to 20.7% in Saxony-Anhalt – than in the western federal states, where unemployment rates ranged from 6.1% in Baden-Württemberg to 13.2% in Bremen. In Berlin the unemployment rate was 18.1% *(3)*.

The workforce as a share of the population as well as the number of employees subject to mandatory statutory insurance have decreased slightly since 1992. While the share of fulltime employment decreased, the share of self-employed people and part-time employees increased. Total and public expenditures on education have decreased during the 1990s and rank below OECD average (Table 1).

Table 1. Macro-economic indicators, 1992–2002

	1992	1994	1996	1998	1999	2000	2001	2002
GDP at current prices (billion €)[a]	1 613	1 736	1 834	1 929	1 979	2 030	2 074	2 110
GDP per capita at real 1995 prices (€1000)	21.7	21.7	22.2	22.9	23.3	24.0	24.1	24.1
Government income per capita at real 1995 prices (€1000)	9.9	10.2	10.3	10.7	11.0	11.3	11.0	10.9
Government expenditure per capita at real 1995 prices (€1000)	10.4	10.7	11.1	11.2	11.4	11.0	11.6	11.7
Average annual income of blue-collar workers (€1000)	20.0	21.0	23.0	23.6	24.7	25.6	26.3	27.0
Total employment								
(% of population)	45.7	44.4	44.0	44.4	44.2	44.4	44.4	43.9
Unemployment								
(% of work-force)	6.2	8.7	8.7	9.6	8.9	7.9	7.8	8.5
Part-time (% of work-force)	11.3	12.3	13.4	14.7	15.6	16.2	16.8	17.2
Total expenditure on education (% BIP)	–	5.8	–	5.6	5.6	5.3	–	–

Source: OECD Health Data 2004 *(2)*.
Note: [a] Billion is defined as a thousand million (10^9) throughout this document.

Demography and health status

In December 2003, Germany had 82.5 million inhabitants, 66.6 million in the western part, 13.5 million in the eastern part and 3.4 million in Berlin. Since reunification, the population in the eastern part decreased from 15.9 million in 1991 to 13.5 in 2003, attributable to migration to the west and the very low birth rate in the east.

Among the 7.4 million inhabitants who do not hold German citizenship, 2 million hold Turkish citizenship, 2 million come from central and eastern European countries and the Russian Federation, 1.8 million from European Union countries, and 1.4 from extra-European countries. Among foreign passport holders, 3.3 million have an unlimited status, 2.3 million have been in the country for 10 or more years and 1.6 were born in Germany. In 2002, 26.5 million German inhabitants were Catholic, 26.2 million Protestant and 98 000 Jewish by religion. The number of Muslims was estimated at about 3 million in 1998 *(3).*

The share of the population in all of Germany below 15 years of age decreased from 25% in 1970 to 15% in 2003, whereas the share of those over 64 years old remained at around 15% until 1993, and has since increased to 18%. The share of the age group above 80 years has remained stable over the last ten years, at around 3.8% but is predicted to grow *(3).*

Valid morbidity data about the population in Germany are not easy to obtain although the data situation has improved in recent years. An important overall source for health data has been the Basic Health Report 1998 which has since been updated and supplemented by reports on specific aspects. Data are available free of charge in a web-based format *(4).* A useful overview of national as well as comparative data is provided by the World Health Organization's Regional Office for Europe *(5)*, available via its homepage free of charge, and the health data of the Organization of Economic Co-Operation and Development (OECD) *(2).* One of the national sources for morbidity data is the Hospital Diagnoses Statistic of the Federal Statistical Office *(6),* which has provided data since 1993. In 1995, the Cancer Registry Act came into effect, according to which every federal state was to establish a cancer registry by 1999 but implementation has been slow. Except for cancer in children, data on the incidence and prevalence of cancer are still not available for all states and are considered difficult to extrapolate to the national level. Data are also derived from specific representative population surveys or the notification of infectious diseases. Other morbidity data relate to the 88% of the population with statutory health insurance coverage for example expenditure data, statistics on the utilization of cash payments, hospital care and other benefits that require pre-authorization from sickness funds, or prescription data (see *Pharmaceuticals*).

A national periodical survey, the micro-census, gathers subjective data on the perceived health status of a representative sample of the population *(7)*. According to the 2003 survey, 89% of respondents considered themselves healthy, 10% sick and 1% injured due to an accident. 93% of children under the age of five were considered healthy. The largest share of healthy people was found among 10 to 20 year olds (96%) and decreased to 85% among 60–65-year-olds and 72% of those over 75, who had the highest share of sick (27%) and injured (1.1%) people. The share of Germans in good subjective health was similar in 1992 and lower in 1999 (87%). According to various population surveys, subjective health is higher in younger age groups and slightly higher among men, west Germans and people with higher education *(8)*.

Data from sickness funds indicate that the share of people on sick-leave decreased from 4.9% of the sickness fund members in 1991 to 3.6% in 2003 *(9)*, reflecting not only health conditions but also the tight job market (Table 1). In 2003, 1.8 million (2% of the population) had a recognized reduced capacity to work and received disability benefits from statutory retirement insurance. In 2001, 6.7 million (8%) were officially registered as severely disabled *(10)*. The percentage of people entitled to statutory long-term care benefits was about 1.9 million 2.3% of the total population in 2003, increasing by age. Only 0.6% of those under the age of 50 were entitled, compared to 1.7% of 60 to 65-year-olds, 4.7% of 70–75-year-olds and 30% of those over 80 *(11)*. It should be noted that many people are represented in several of these groups.

Table 2 presents some indicators of morbidity, life style and environmental risk whose incidence and/or letality that can be influenced by curative or preventive measures to a certain extent. Most parameters have in fact improved between 1991 and 2001 (see *Public health*). Dental diseases offer an example of likely success of preventive efforts. In 1992 and 1993, 12-year-olds in Germany had one of the highest indices of decayed, missing and filled teeth (DMFT) among EU countries reporting this index at that time (3.9 versus 2.9). But the DMFT index improved to 1.7 in 1997 and 1.2 in 2000. The incidence of HIV infections has remained among the lowest in the European Union (EU). The incidence of clinically diagnosed AIDS (Table 2) decreased following a peak of 2.5 per 100 000 in 1994 to 0.8 in 2002, perhaps due to a concerted prevention strategy, ready access to comprehensive advice and medical care *(5)*.

Mortality data reflect a limited part of health conditions affecting the population, but are more reliable than morbidity data. The former are derived from the Cause of Death Statistics compiled by the state statistical offices and then transferred to the Federal Statistical Office *(4)*.

In 2003, 853 946 people died while 706 721 children were born alive *(3)*. The crude death rate decreased in both parts of Germany from 1975. Following the

reunification, it increased transiently in 1990 and 1991 in the eastern part, and in 1993 and 1994 in the western part. Since then, it decreased again slowly but continuously, despite the increasing share of elderly in society *(3)* (Table 2).

By 2003, life expectancy at birth reached 75.6 years for men and 81.6 years for women (Federal Statistical Office, 2004). According to the World Health Organization (WHO), the disability-adjusted life expectancy in 2002 was 69.6 years for men, 74.0 years for women and 71.8 years in total, ranking and just above the EU-15 average . The percentage of life expectancy lost to disability (7.8% for men, 9.3% for women) was the second lowest in the world after Japan (5).

Table 2 shows that the age-standardized mortality rate decreased substantially between 1991 and 2001, by about one fifth. The improvement is also reflected by data on the life expectancy at birth (see Table 3) and at all other ages *(5).* In fact, the substantial decrease in (age-standardized) mortality during this period was observable in most causes of death including cardiovascular diseases (causing about half of all deaths) and neoplasms (causing about a quarter of deaths). Increases were observed in perinatal and neonatal mortality and infectious diseases, the latter being mainly due to sepsis and viral hepatitis. There was a peak of mortality from diabetes mellitus and female breast cancer in the mid of 1990s, yet rates have decreased since then to a lower value than in the early 1990s.

Standardized mortality rates still rank above EU-15 average (655.3).[3] However, the gap has become substantially smaller since 1991. The higher mortality can be found in most age groups except for infant mortality (4.3 versus 4.7 per 1000 life births) and child mortality (5.3 versus 5.6). The mortality gradient was mainly due to a substantially higher mortality from cardiovascular diseases (286.7 versus 275.1 per 100 000 in 2001), especially ischaemic diseases. Other causes of death that ranked above the EU-15 included for example suicide and self-inflicted injury (15.2 versus 11.5) and alcohol-related causes of death (62.0 versus 60.7).

At the same time, mortality from neoplasms ranked below the EU-15 average which, for example, was also true for lung cancer but not for cervical cancer or breast cancer. Cervical cancer had both a higher incidence (16.7 vs. 12.8 in 1998, latest data) as well as a higher age-standardized mortality rate (3.3 versus 2.6 in 2001). Standardized death rates for motor vehicle traffic accidents were also below EU-15 average (7.9 versus 10.0) though they remain a problem in the eastern part of Germany, especially among young males. At the same time,

[3] In the following text, the term "EU-15" refers to the 15 EU member states prior to 1 May 2004, the term "EU-10" to the 10 countries that became EU members on 1 May 2004.

Table 2. Trends in health risks, morbidity and mortality, 1991 and 2001

	1991	2001
Decayed, missing or filled teeth at age 12 (DMFT-12 index)	3.9[b]	1.2[c]
Average amount of fruits and vegetables available per person per year	197	212
Fat available per person per day (in g)	145	157
Pure alcohol consumed, litres per capita, in the population aged 15 or older	12.7	10.9
Number of cigarettes consumed per person per year	1 752	1 553[c]
SDR selected alcohol related causes[a]	101.6	62.0
SDR selected smoking related causes[a]	320.8	242.2
Persons killed or injured in road traffic accidents per 100 000	654.4	609.4
SDR all transport accidents[a]	13.8	8.5
New cases of occupational diseases per 100 000	20.9	33.4
People injured due to work-related accidents per 100 000	2 568	1 695
Deaths due to work-related accidents per 100 000	1.9	1.3
Perinatal deaths per 1000 births	5.0	5.9
Maternal deaths per 100 000 live births	8.7	3.7
Infant deaths per 1000 live births	6.9	4.3
Probability of dying before the age of 5 years per 1000 live births	8.5	5.3
SDR, acute respiratory infections pneumonia and influenza, under 5 years[a]	3.2	1.4
SDR suicide and self-inflicted injury[a]	15.5	11.7
SDR homicide or intentional injury[a]	1.1	0.7
SDR infectious and parasitic disease[a]	5.2	8.7
Incidence of clinically diagnosed AIDS per 100 000	2.3	0.9
Incidence of tuberculosis per 100 000	16.9	8.5
SDR tuberculosis[a]	1.1	0.5
SDR bronchitis/emphysema/asthma[a]	22.8	18.2
SDR trachea/bronchus/lung cancer[a]	35.9	34.4
Incidence of cervix cancer per 100 000	17.1	16.7d
SDR cancer of the cervix[a]	4.6	3.2
Incidence of female breast cancer per 100 000[c]	106.9	110.1[d]
SDR female breast cancer[a]	32.0	27.5
– in the age group 0–64	20.0	16.4
– in the age group 65+	128.8	117.5
SDR neoplasms[a]	203.7	176.6
– in the age group 0–64	89.1	74.3
– in the age group 65+	1 130.7	1 004.4
SDR ischaemic heart disease[a]	158.5	122.9
SDR diabetes[a]	17.0	16.2
SDR diseases of the circulatory system[a]	388.3	286.1
– in the age group 0–64	74.7	48.8
– in the age group 65+	2 925.7	2 205.4
SDR all causes[a]	830.8	657.6
– in the age group 0–64	283.9	212.6
– in the age group 65+	5 255.7	4 258.9
Crude death rate per 100 000	1 139.0	1 006.0

Source: WHO Regional Office for Europe health for all database, June 2004 *(5).*

Note: [a] (age-)standardized death rate per 100 000 population, [b] 1992, [c] 2000; [d] 1998.

non-lethal injuries are substantially higher. Besides a high density of cars and the lack of a general speed limit on motorways, alcohol consumption is seen as a contributing factor in 31% of all road accidents in 2001 *(13)*.

German alcohol consumption is above the average of EU-15 countries as well as the entire EU (10.9, 9.2 and 9.1 litres of pure alcohol per year respectively in 2001). The rate of regular smokers is still higher than in the average of EU-15 countries (with population shares of 35% and 29% respectively in 2001). Germans eat about the same number of calories as their EU-15 neighbours but fewer fruits and vegetables (212 and 240 kg per person in 2001).

The German population's health may also be analysed against the background of a 40-year political and geographical separation which provides a very interesting case-study for changes in health due to political, social and economic influences on an otherwise homogenous population. The most obvious indicator of a different pattern of population health in the western and eastern parts of Germany is life expectancy at birth, which initially increased faster in the eastern part (from a slightly higher level) but stagnated by the late 1960s. In contrast, this indicator showed continued growth since the late 1960s in the

Table 3. Life expectancy in years at birth in the western part and the eastern part of Germany,[a] 1949–2003

	Male				Female			
	Germany	West	East[a]	East-west difference	Germany	West	East[a]	East-west difference
1949/1953	–	64.6	65.1	+0.5	–	68.5	69.1	+0.6
1980	–	69.9	68.7	-1.2	–	76.8	74.6	-2.2
1990	72.0	72.6	69.1	-3.5	78.4	79.0	76.2	-2.8
1991	72.1	72.8	69.3	-3.5	78.7	79.2	76.6	-2.6
1991/1993	72.6	73.1	69.9	-3.2	79.1	79.5	77.2	-2.3
1992/1994	72.7	73.4	70.3	-3.1	79.2	79.7	77.7	-2.0
1993/1995	73.1	73.5	70.7	-2.8	79.6	79.8	78.2	-1.6
1994/1994	73.3	73.8	71.2	-2.6	79.7	80.0	78.6	-1.4
1995/1996	73.6	74.1	71.8	-2.3	79.9	80.2	79.0	-1.2
1996/1997	74.0	74.4	72.4	-2.0	80.3	80.5	79.4	-1.1
1997/1999	74.5	74.8	73.0	-1.8	80.6	80.7	80.0	-0.7
1998/2000	74.8	75.1	73.5	-1.6	80.8	80.9	80.4	-0.5
1999/2001	75.1	75.4	73.7	-1.7	81.1	81.2	80.6	-0.6
2000/2002	75.4	75.8	74.3	-1.5	81.2	81.5	81.0	-0.5
2001/2003	75.6	–	–	–	81.6	–	–	–

Source: HiT 2000 *(1)*; Federal Statistical Office 2003 *(14)*; Federal Statistical Office 2004 *(10)*.
Note: [a] Data for Berlin are summarized under West.

western part of Germany. Between 1980 and 1990 the gap in life expectancy widened, up to the peak in 1990 when men and women living in the eastern part had life expectancies 3.5 years and 2.8 years shorter than their western counterparts.

Table 3 shows an increasing equalization of life expectancy at birth between the eastern and the western parts of Germany after reunification. By the period of 2000 to 2002, the east-west gap had narrowed to 1.5 years among men and 0.5 among women. Between 1990 and 2000–2002, the gap in life expectancy between men and women decreased from 7.1 years to 6.7 years in the eastern part and from 6.4 years to 5.7 years in the western part (Table 3).

The reasons for the differences in life expectancy in the two parts of Germany are complex and not fully understood. Explanations for the widening gap pre-1990 include differences in diet, better living conditions in the western part during the old FRG, differences in access to high technology care, better health care at all levels and the selective migration of pensioners from East to West *(15)*. For the post-1990 changes the following factors are considered influential: selective migration, the adoption of the western German social welfare system as a whole and a reduction in health risk factors such as alcohol, meat and fat intake. Medical care has been identified as another important component in the post-unification mortality decline in the eastern part *(16)*.

For example, a study of the potential impact of medical care on changes in mortality between 1992 and 1997 estimated that 14–23% of the increase in life expectancy between birth and age 75 of 1.4 years in men and 0.9 years in women was accounted for by declining mortality from conditions amenable to medical intervention. During the same period life expectancy increased comparably less in the western part by 0.6 years in men and 0.3 years in women.

Falling death rates from hypertension, cerebrovascular diseases, cervical and breast cancers and a 30% decline in neonatal mortality have been important contributors *(17)*. These results are supported by an increase of technological infrastructure and utilization of highly specialized care, for example, dialysis facilities, coronary catheterization (see *Health technology assessment*), surgery related to ischemic heart disease and pacemaker implantation *(18)*. While the East-West gradient of neonatal mortality decreased in the past decade, there is still room for improvement in neonatal care *(19)*.

Current health concerns in Germany are mainly related to diseases associated with demographic trends, including increases in one-person households, long-term chronic-degenerative diseases, public expectations with respect to medical and paramedical care as well as incentives for excessive use of health care services. In addition, the share of elderly people in the population is increasing

while the relative number of people of working-age is decreasing, leading to shrinking social security revenues.

Future changes in the structure of the population will lead to a moderate increase in the elderly population's need for prevention, therapy, and rehabilitative and nursing care, whereas the morbidity transition will result in less need for curative medical intervention. It is also expected that there will be an additional need for health services responding to obstructive lung diseases, diseases of the cardiovascular system, urogenital diseases and cancer diagnosis and therapy. A large preventive potential for ischaemic and cerebrovascular diseases, respiratory diseases and accidents is also foreseen.

Since 2000, a number of activities to strengthen and coordinate prevention has been undertaken at federal level involving a broad set of stake-holders (see *Public health* and *Other health reform objectives*): These include the establishment of a round-table on prevention in 2001, the development of health targets at the federal level by a multi-stakeholder committee, and subsequent institutionalization of a prevention forum, whose activities will be supported by a foundation. In addition, a bill for a special section of the Social Code Book on prevention has been developed. It shall enhance the coordination of preventive services financing, delivery and regulation (see *Public health* and *Health care reforms*).

Historical background

The rise, continuity and prominence of statutory health insurance

The rise of Germany's modern health care system dates back to 1883, when the parliament passed a law that made health insurance nationwide mandatory for certain employees (called "statutory health insurance" in the following text). This statutory health insurance was to be based on the solidarity and pay-as-you go principles; and it was built upon existing voluntary or mandatory local schemes of social insurance. Cash and in-kind benefits were to be financed by proportional contributions from mandatory as well as voluntary members and their employers. Self-governmental structures were to operate the sickness fund and decide about benefit coverage beyond the legally defined scope. Germany is therefore recognized as the first country to have introduced a national social security system. In the following decades the principle of statutory social insurance, called the "Bismarck system", was also applied to alleviate the risks

of work-related accidents and disability (1884), old age and disability (1889), unemployment (1927) and the need for long-term care (1994). The prominence and structural continuity of social insurance is one of the key features of the historical development of Germany's health care system to the present day.

The origins of social insurance lie in the mutual-aid societies of guilds that emerged after the middle ages. During the nineteenth century, the rising class of industrial workers adopted this principle by setting up voluntarist self-help and self-regulatory structures to alleviate the risk of poverty due to sickness and death. Contributory funds were also set up by companies and local communities, thus relieving (and complementing) municipal funds' support for the poor and charity. In 1849 Prussia – the largest of the German states – made health insurance mandatory for miners and allowed local communities to oblige employees and their employers to pay financial contributions.

Multiple economic crises during rapid industrialization worsened already miserable living conditions, especially of the urban working class. The government responded to increasing workers' protests by prohibiting socialist and communist organizations including trade unions in 1878. It increasingly perceived political repression as an insufficient means of maintaining the existing social order. In 1876, five years after the unification of the German states, the parliament enacted national standards for minimum contributions and benefits, but opposed regulations for mandatory payments. The Emperor's charter of 1881 declared social welfare for the poor to be essential for national survival in a hostile world. Motivated by paternalism and concerns about military and economic efficiency, Chancellor Bismarck suggested a national health service-type of system in 1881. However, state governments as well as liberal members of parliament from business, agriculture and the church opposed tax-based financial provisions and the expansion of national government.

The legislation of 1883 reflected a compromise of these rival interests but was opposed by leftist-liberals and social democrats. They dismissed the "carrot and stick" strategy of the bill and instead called for political rights and workers' protection within the industrial process – demands which were only met gradually from the 1890s onwards. The law built upon existing local funds and occupation-based funds (miners, guilds and companies). Health insurance was made mandatory for workers of certain industries with hourly wages or up to a legally fixed income ceiling. They were to pay two thirds of the contributions while their employers were obliged to pay one third. Furthermore, the two opponents in the class conflict were forced to cooperate in elected assemblies and boards proportionate to their 2:1 contributions. The funds functioned on a non-profit basis. They were initially free to choose private suppliers of health care (physicians or any other health care professionals) and to determine the

nature of contractual relationships with them. The role of the national parliament and government was limited to setting the regulatory framework and the legal standards for the self-administrated funds, which were to be supervised by state governments.

The law defined a minimum benefit catalogue which the self-governing structures of funds could decide to extend, a regulation which became widely used in many funds during the ensuing decades and was the motor of the gradual extension of the legal minimum catalogue. Members were eligible to receive monetary benefits in the form of sick pay equivalent to 50% of the customary local wage for 13 weeks, maternity pay and death compensation. In addition, a minimum set of primary health care services including medication was to be provided while hospital care was left to the decision of the funds on a case-by-case basis.

For the statutory work-related accident insurance, employers accepted the 100% contributions to self-administered accident funds as an alternative to third-party liability insurance schemes. Thus, they increasingly introduced and controlled preventive safety measures and rehabilitative care which were to precede financial compensation. The statutory insurance for old age and working incapacity, to which employers and workers contributed equally, also offered health care services according to the principle of "rehabilitation before compensation". Rehabilitative care, for tuberculosis patients for example, was delivered directly by most financing agencies, including sickness funds and local communities, in the form of inpatient treatment in the countryside. This led to the heterogeneous development of rehabilitative care and to the popularization of spa treatments which became an institutional niche for natural treatments and remedies (often categorized as alternative medicine today).

During the 1880s many workers boycotted the self-administered sickness funds and chose self-supporting funds as a legal alternative to sickness funds (known as substitute funds). These funds were self-governing and were run entirely by the workers. However when this choice became restricted in the early 1890s, sickness funds became the stronghold of the social democratic party. The national government interfered to separate the rising white-collar movements from the blue-collar by introducing a separate string of statutory health insurance for salaried employees in 1901. Since white-collar workers received greater rights to choose, the existing substitute funds catered almost exclusively for white-collar employees from that time onwards (until 1995). The substitute funds, although contributions were now shared with employers, maintained the historical pattern of representation that is 100% employees, which is still the case today. The 1911 Imperial Insurance Regulation introduced a common legal framework for social insurance. These regulations covering

health insurance remained in force – with changes – until 1988, the regulations governing maternity benefits still remain in force today (see *Health care benefits and rationing*).

The number of citizens with health insurance doubled from 1880 to 1885. Table 4 shows that over the ensuing decades statutory health insurance was gradually extended from 10% of the population in 1885 to 88% in the Federal Republic of Germany (FRG) in the western part; while the (socialist) German Democratic Republic (GDR) in the eastern part provided coverage to 100% of the population from 1949 onwards (Table 4). The universal statutory health insurance system of the GDR was abandoned after reunification in 1990 in favour of the social insurance type of the former FRG. The extension of membership was achieved either by increasing the income ceiling of mandatory membership or by adding new occupational groups to the sickness fund system,

Table 4. Trends in statutory health insurance (SHI), 1880–2003

	1885	1913	1925	1938	1950	1960	1987	1997	2003
	German Empire				western part of Germany[b]			Germany	
Statutory sickness funds									
Number	18 776	21 342	7 777	4 625	1 992	2 028	1 182	476	319
Contributing members per fund	229	636	2 345	4 832	10 141	13 383	30 917	91 782	159 780
Membership									
Insured people per population (%)	10	35	51	–	–	83	88	88	88
Contributing members in population (%)	9	20	29	34	40	49	60	61	62
Mandatory members/ working population (%)	22	44	57	66	62	67	76	78	76
Contributions									
% of income	2	3	6	–	6	8.4	12.6	13.5	14.3
Income ceiling for mandatory membership (multiple of the average income)	3.1	2.1	1.6	1.9	1.5	1.3	1.1	1.3	1.6
Ratio contributions by employees/employers	2:1	2:1	2:1	2:1	2:1	1:1	1:1	1:1	1:1
SHI expenditure									
% of GDP[a]	0.2	0.7	1.7	1.9	2.6	3.2	6.2	6.4	6.8[c]
Ratio monetary/service benefits	1.7:1	–	1:1	–	–	1:4	1:8	1:12	1:12

Source: Alber 1992 *(20)*; Federal Statistical Office *(4,55),* Federal Ministry of Health 2004.

Note: [a] including transfer payments e.g. sick pay, maternity benefit; [b] in the German Democratic Republic, 2 funds covered nearly 100% of the population; [c] data for 2002.

i.e. white-collar workers from the transport and commercial sectors (1901), domestic servants, agricultural and forestry workers (1914) or farmers (1972) *(20)*. Germany also managed to integrate certain social groups into the statutory scheme that were covered by public agencies in some other European countries, such as the unemployed, family dependants, pensioners, students, the disabled and, in 2004, recipients of social welfare.

Contributions and expenditure increased substantially during more than 120 years of statutory health insurance (Table 4). This was the result of the extension of benefits – often following decisions by the social courts – through state intervention but mainly by the self-administered funds themselves or by joint committees of the funds and physicians. While initially the statutory health insurance scheme aimed primarily at preventing impoverishment by compensating income in cases of illness, sickness funds increasingly funded services and the prescriptions of specialized professionals. This is reflected in the falling ratio between monetary and service/ product benefits. The trend was accelerated even further after 1969, when FRG employers became obliged to continue remunerating their employees during the first six weeks of sickness (Table 4).

When looking at rising expenditures it should not be overlooked that the pay-as-you-go principle of contributions and expenditure were crucial in providing a sound financial basis for health care financing even during the two World Wars, mega-inflation in 1923, the economic crisis of 1929 and the introduction of a totally new currency in 1948.

Collective victories of the medical profession over funds and other professions

The shift from monetary to service benefits (Table 4) corresponded with a growing number of health professionals (Table 5). This trend reflects a broader transformation from nineteenth-century industrial society to what has been called a "professional society". Health care services were one of the solutions which the rising class of professionals offered as a means of addressing social and physical problems, with the approval of most sections of society. However the "socialization" of professional health care developed alongside deep conflicts over income and power.

The conflicts between the sickness funds and physicians working in the ambulatory sector on a for-profit basis were one of the major factors that shaped Germany's current health care system. Office-based physicians not only played, and still play, a dominant role in the ambulatory sector but also affect the health care sector as a whole. Until 1933 they gained major victories over the quasi-

public funds, over other health professions and over physicians working in the public or non-profit private sector.

The 1883 legislation did not address the relationship of funds and doctors or the qualifications of health care professionals, leaving these matters up to the funds. Doctors initially hardly took any notice of this regulation, but from the 1890s they fought for autonomy and income through strikes and lobbying. The underlying developments were the extension of the number of patients with insurance coverage, the restricted access of insured patients to doctors, the dependence and low status of (salaried) doctors from the worker-dominated funds and the doubling of the ratio of physicians per population from 1887 to 1927. From 1900 onwards the medical profession managed to nationalize its campaign and to convince the rival panel and private doctors to make uniform demands. The most successful interest group was the Leipzig Union, later called Hartmann Union, which was founded in 1900 and whose membership grew from 21 doctors to nearly 75% of all German physicians by 1910.

Since the 1911 Imperial Insurance Regulation did not address any of these demands, physicians threatened to go on strike shortly before it took effect in 1914. In December 1913, the government intervened for the first time in the conflict between funds and physicians. The Berlin Convention made joint commissions between physicians and funds obligatory in order to channel the conflict into constructive negotiations. The ratio of doctors to fund members was now legally fixed at a minimum of 1:1350, to be put into practice by joint registering committees. Contracts with physicians had to be agreed with all funds collectively.

After the Berlin Convention expired at the height of inflation in 1923, office-based physicians went on strike repeatedly. Some funds responded by setting up their own health care centres which – although few in number – were perceived by the medical profession as a menacing throwback to nineteenth-century conditions and socialization of medical services. Private practitioners also felt threatened by the establishment of a broad diversity of services for prevention, health education and social care, delivered by local communities and welfare organizations. The government also responded to the strikes and created the Imperial Committee of Physicians and Sickness Funds (which still exists today as the Federal Joint Committee) as the joint body responsible for decisions regarding benefits and the delivery of ambulatory care.

In 1923 the first cost-sharing measure in the form of a 10–20% co-insurance for pharmaceuticals and medical appliances was introduced into the statutory health insurance (SHI) system during a period of economic recession, and an exemption mechanism for the unemployed was already put in place (Reichelt, 1994a). In 1930 this co-insurance was replaced by a flat fee co-payment per

prescription and an additional co-payment for ambulatory care consultations was introduced (Reichsministerium des Innern, 1930). These changes were part of a number of emergency regulations passed to counteract substantial reductions in sickness fund revenues and increases in claims for unemployment benefits during the financial crisis at the end of the Weimar Republic (Alber, 1992). As part of emergency regulations, the supervision of doctors through a medical service of the sickness funds and a doctor/fund-member ratio of 1:600 were also introduced. In return, ambulatory physicians were granted a legal monopoly for ambulatory health care (1931) for which they had been lobbying (with gradual success) over the preceding decades. These regional physicians' associations obtained the right to negotiate complex contracts with statutory sickness funds and to distribute their payments among their medical members. The regulations reflected a major collective victory by ambulatory physicians over sickness funds, hospital doctors, medical officers in community health, and other health care professionals.

State regulations had already subordinated allied health professionals (such as midwives and nurses) under the medical profession since 1854 and they now restricted their autonomy further by completely prohibiting them from contracting directly with statutory health insurers. The ambulatory monopoly for physicians in private practice meant that it was illegal for medical officers in the community health services to provide curative services, for sickness funds to buy and supply pharmaceuticals or medical services, and for most hospitals to treat outpatients.

Table 5. Health care personnel and hospital capacities, 1876–2002

	Number of inhabitants per					Total population
	Physician	Dentist	Pharmacist	Nurse	Hospital bed	in millions
1876	3 136	86 460	6 877	–	406	43.1
1885	3 004	86 752	7 483	3 260	324	46.7
1900	2 047	9 529	–	–	219	56.0
1909	2 085	5 682	6 414	926	158	63.7
1927[a]	1 447	2 690	5 982	712	120	63.3
1938	1 371	1 924	5 789	517	107	68.4
1952[b]	700	1 706	4 182	476	89	48.7
1960[b]	699	1 705	3 514	527	95	55.4
1975[b]	521	1 946	2 415	388	85	61.8
1987[b]	356	1 573	1 802	292	91	61.1
1991	329	1 450	1 922	–	99	80.3
2002	274	1 289	1 528	117	111	82.5

Source: Alber 1992 *(20)*; Federal Statistical Office 2004 *(21)*; Federal Statistical Office 2004 *(3)*.
Note: [a] or 1928; [b] applies to the Federal Republic of Germany only.

Thus, the legalization of the physicians' ambulatory monopoly contributed substantially to their division from the hospital sector and to the marginalization of community health services. The separation of inpatient and outpatient care was also enhanced by the rapid expansion of acute hospital care, with the majority of personnel working full-time from the 1920s. Acute hospital capacities increased substantially between 1885, when there was one bed for 324 inhabitants, and 1938, when the ratio decreased to one bed for 107 inhabitants (Table 5). The separation between inpatient and outpatient care was further promoted by the division of financing and planning responsibilities between the corporative associations of funds and physicians and the public agencies at the state and community level, each with their particular traditions of health administration and legal frameworks.

Another factor contributing to the division of inpatient and outpatient sectors was the early specialization and professionalization of medicine. The pioneering role of German physicians in empirical scientific research in medicine had been strongly supported by regional and national authorities since the 1880s. By the turn of the century most medical faculties provided chairs for all major clinical and basic science sub-specialties, which were made obligatory subjects for medical students by 1920. Medical and specialist training continued to be science-oriented and based in hospitals only, as is still the case today. The exceptional specialization process was a result of these trends and of the competition among the medical profession for income and operational fields. Conversely, the specialization and subsequent professionalization (including full-time occupation and separate professional organizations) increased intra-professional rivalries further – both between medical professionals in the private and the public sector and between generalists and specialists, a conflict which is currently as important as ever.

Rationing and structural continuity during the National Socialism period

During the period of National Socialism (1933–1945) the fundamental structures of the social insurance system, including health care financing and delivery, were maintained. Statutory health insurance coverage was extended to pensioners (1941), and sickness funds became legally obliged to provide hospital care not only to members but also to dependants (1936), which most funds had already voluntarily provided.

Despite structural continuity, fundamental principles of statutory health insurance were discarded. Access to services and cash benefits from statutory health insurance, accident and old age insurance was increasingly restricted or

denied to the Jewish population and other stigmatized minorities due to the broad realization of National Socialist policies of expulsion, exclusion from social life, murder and detention in concentration camps. Forced migrant labourers were obliged to contribute to statutory health insurance but could not count on their formally acquired right to benefits. Service delivery was often below standard. Members of the medical profession were instrumental in legitimizing murder, social selection and cruelty.

In contrast to the general structural continuity of the health care system, the management of health care and the balance of power among the main actors was changed during the Nazi regime. Sickness funds (1934), community health services (1935), nongovernmental organizations dealing with welfare or health education and the health care professions' organizations (1933–1935) were each centralized and submitted to a leader nominated by the National Socialist German Workers' Party (following the so-called *Führerprinzip*). Self-administration became penetrated by nominated members of the National-Socialist Party. The participation of workers and employers was reduced to functions in an advisory council. In addition physicians and local communities were allowed to send representatives to the council, and the balance of power was shifted further from the funds to the physicians.

In 1933 socialist and Jewish employees and the majority of workers representatives in sickness funds were expelled by law. Already in 1933, one quarter of employees in sickness funds and about one third of the doctors working for local community welfare services were forcefully released. Subsequent laws prohibited Jewish doctors from treating patients with statutory health insurance (1933) and non-Jewish patients (1937) and eventually from practising medicine at all (1938). Thus 12% of physicians in the country (and 60% of doctors practising in Berlin) were restricted from delivering health care, which further reduced the access of Jewish patients to health care. The majority of the medical profession – the profession with the highest membership in the National Socialist party – welcomed the exclusion of Jewish doctors from the panel.

The weakening of sickness funds was accompanied by a strengthening of the structures of ambulatory physicians. The regional physicians and the newly founded National Physicians' Association were established as public bodies (1934). They were also granted the right to decide over the registration of office-based physicians themselves without negotiation with sickness funds. In return they were forbidden to strike, and made responsible for emergency care in the ambulatory sector as well as for the administration and control of all ambulatory physicians. Although nature therapists were promoted ideologically during the first years of the Nazi regime, their status of free traders was restricted

since 1939, when their certification and practice were submitted to the control of public health officers.

Post-Second World War

When the National Socialist period was finally ended with Germany's surrender on 8 May 1945, health care and virtually all other sectors of German society began to bifurcate into two separate and differently organized systems. The three zones occupied by western allies were to become the Federal Republic of Germany (FRG), while the Soviet zone in eastern Germany was to become the German Democratic Republic (GDR), and so they remained until reunification in 1990.

In the Nuremberg war-crime trials, chaired by an international committee of judges, some of the medical doctors who had misused their skills, power and research in concentration camps or institutions for mentally handicapped received capital sentences for crimes against humanity.

Health care in the first years of post-war Germany was characterized by ad-hoc public health interventions aimed at handling and preventing epidemics and distributing scarce resources for health care. The western allied forces basically supported and relied upon existing personnel and structures in health care and administration. The British administered health affairs in a more centralized fashion whilst the French tried to restrict centralized powers within their zone and the whole of the western part of Germany. The Americans concentrated mainly on ad-hoc policies, tried unsuccessfully to establish a school of public health and blocked the re-establishment of the monopoly of regional physicians' associations until the 1950s.

The national health service in the German Democratic Republic

In contrast, the Soviets took a more interventionist role in their zone in the eastern part of Germany which, in 1949, became the German Democratic Republic (GDR). They called 60 health experts to advise them on designing a new model, which came to be influenced by the social hygiene traditions of the Weimar-era community health care services and by the health care systems in Soviet Union, Sweden and the United Kingdom. They took an authoritarian approach to controlling infectious diseases, and despite the protests of physicians gradually introduced a centralized, state-operated health care system.

The resulting GDR health care system differed from its Soviet counterpart through a structural division between ambulatory and hospital services, which in practice, however, often operated closely together on the same premises.

In addition, the principle of social insurance was maintained de jure with workers and employers sharing contribution costs but with administration concentrated in only two large sickness funds, one for workers (89%) and one for professionals, members of agricultural cooperatives, artists and the self-employed (11%). De facto, however, the role of the social insurance system was extremely limited.

As in most socialist countries, the majority of health care personnel were employed by the state, with a few delivering ambulatory care in solo practices but most through community-based or company-based health care centres, usually staffed by a range of medical specialists and other health care professionals. Unlike the neighbouring Soviet bloc countries, not all health care institutions were formally nationalized. Instead, independent institutions could continue to exist but faced increasing difficulties when exercising their role as health care providers. As a result, the number of non-profit hospitals decreased from 88 to 75 between 1960 and 1989, and the number of private hospitals fell from 55 to 2 in the same period. However, in 1989 about 7% of all hospital beds were still not state-owned and a few physicians were still in private practice *(18).*

Local communities provided preventive services, encompassing health education, child and maternity health and specialist care for chronic diseases such as diabetes or psychiatric disorders. These health care services were complemented by comprehensive social support provided by the state, such as housing, day-care and crèches, which also contributed to the policy imperatives of increasing the population and the active workforce. Thus, they soon achieved a type of health care system which the political left of the Federal Republic of Germany (FRG) in the western part of the country and in many other western countries aspired to until at least the 1960s.

However, due to under-financing, personnel shortages and lack of access to modern equipment, the GDR health care system gradually began to fall behind the standards of western industrialized countries beginning in the 1970s and visibly worsening in the second half of the 1980s. In the hospital sector, the GDR had about a quarter fewer hospital cases per 1000 population than in the west yet hospital occupancy fell below 75% in the 1980s.

This lack of modern medical care has been associated with population health. Available evidence suggests, for example, that shortages in surgical capacity may have been related to higher infant death rates due to congenital anomalies of the heart and cardiovascular diseases in the GDR than in the FRG in the 1980s. Other data indicate under-treatment or less effective treatment of hypertension, as the prevalence of recognized but untreated hypertension was shown to be lower, while rates of treated but uncontrolled hypertension were found to be higher than in the FRG. Further evidence suggests possible under-

treatment of elderly stroke patients in the former GDR, which was reflected in a high case fatality especially among those over 65. A recent study reported a case-fatality rate of about 20% after proximal femoral fractures in the former GDR in 1989–considerably higher than that in the FRG. Although other factors such as case mix have to be considered, these findings point to the possible effect of differences in medical care on the widening mortality gap between the two parts of divided Germany. This gap to the disadvantage of the GDR had developed since the mid-1970s while previously life expectancy had improved almost equally, with even a slight advantage for men in the GDR during the 1960s and early 1970s (Table 3). In 1989, a National Health Conference had decided to introduce profound health care reforms with increased investment, but the GDR ceased to exist after November, when the Berlin Wall was opened.

The continuation of the social insurance system in the Federal Republic of Germany

The local sickness funds, labour unions and the Social Democratic Party campaigned for a single statutory insurance fund for health, old age and unemployment in order to increase bargaining leverage over the monopoly that ambulatory physicians already enjoyed in different regions. However, the conservative Christian Democratic Party won the first elections in 1949 and by 1955 had basically restored the Weimar Republic health care system on a national level (in coalition with the employers). Sickness fund contributions were now shared equally between employees and employers as well as representation (except in the substitute funds). The insurance for work-related accidents and disability continued to be entirely financed by employers, yet trade unions were granted a 50% representation. (Due to the power of the Allies, the health care system in West Berlin was governed by slightly different arrangements and a unified health insurance was maintained until the early 1960s.)

Self-administration became predominantly a field for corporatist representatives with relatively little transparency and democratic rights for insured members. Private ambulatory physicians were again granted a monopoly with the corresponding rights, power and duties. In addition, the legal ratio of physicians to fund members was increased to 1:500 and then abolished completely in 1960 in favour of professional self-regulation after the Constitutional Court had declared the freedom to choose one's work a constitutional right.

The period from 1955 to 1965 could be characterized as a period of struggle over cost-reducing structural reforms that a coalition of physicians, sickness funds, media and health product companies were able to subvert. Health care

reform proposals failed in 1960 and in 1964, both of which contained provisions for user charges far exceeding those introduced during the cost-containment period. From 1965 to 1975, costs for health care increased substantially, due to rising prices and wage costs (including a shift from religious orders to secular personnel), demographic trends, the supplementary use of more expensive equipment and the modernization and expansion of health care services and infrastructure. Ambulatory physicians developed an increasingly sophisticated system of fee-for-service remuneration. New services for secondary prevention and partly for occupational medicine were put under the auspices of office-based physicians, which saved costs for public health services but also decreased their role in the health care system.

The 1970s saw an extension of reform-oriented social, psychiatric and nursing services, mainly delivered by private non-profit organizations at the community level. In addition, new membership groups were brought under the roof of statutory health insurance (farmers, the disabled and students). In 1972 the responsibilities of states and funds in financing hospital reform were clarified and converted to the "dual financing" method, which made funds pay for services and personnel while states were to finance investment but no running costs. Therefore, it is important to note that the growth of the health care sector and health care expenditure was the result of an explicit political strategy. It aimed at overcoming the infrastructural deficits and shortcomings caused by the destruction suffered during the Second World War as well as the insufficient mode of financing hospital investment that existed at the time.

After the oil crisis (from 1975 onwards), the continuous cost increases attracted criticism of health care providers' financial interests. The era of cost-containment in German statutory health insurance began in 1977, with the introduction of the Health Insurance Cost-Containment Act, ending the period of rapid growth in health care expenditure, especially in the hospital sector. Since 1977, the main cost-containment target in health care has been that the sickness funds and providers pursue a goal of stability in contributions. This requirement pegs increases in contribution levels to the rate of increases in contributory income. Ensuring compliance with this legislation was one of the main tasks of Concerted Action in Health Care, a round-table for the rival corporatist organizations which was established in the 1980s by the Christian Democratic government (in power from 1982 until 1998) to decide on how to contain costs jointly. The committee was expanded over the years to about 130 representatives, but due to continued conflicts did not meet its political expectations. It last met in 1997, and was finally abolished in 2003 after the red-green government had consulted stakeholders in a series of smaller ad-hoc round-tables (see *Organizational structure of the health care system*).

The basic principle behind "German style" cost-containment was an "income-oriented expenditure policy" to guarantee stable contribution rates. This was an important objective in a time of economic restructuring and growing international competition, since the contributions are jointly paid by employers and employees. Therefore, increases in contribution rates are seen as a question of international competitiveness.

The drive for cost-containment, which intensified after re-unification, was realized through a long series of legislation (see *Content of reforms and legislation*) applying a variety of measures for expenditure control and cost-shifting and incentives to increase technical and allocative efficiency.

The transfer of the FRG health care system to the eastern part of Germany

In 1990, after the fall of the Berlin Wall, the transitional GDR government and the FRG government signed the Treaty of German Reunification, integrating the 17 million former GDR citizens quickly and comprehensively into the system of the old FRG. The transformation of the "new *Länder*" in the eastern part according to FRG standards already existing in the western part not only affected the widely criticized political and economic system but also the social security and health care, which the public had regarded more positively. Yet ideas for a "third way", for example, one uniform health insurance system in the eastern part of Germany or in the whole country, were dismissed on practical, political, legal and lobbyist grounds.

Only minor compromises were made concerning the financing and delivery of health care. For example, the Treaty of Reunification granted the community health care centres (polyclinics) only five-years grace after which they were to negotiate jointly with regional physicians' associations. But the time limit and the restrictions on remuneration that could be achieved by these centres – they received per capita payments instead of the fee-for-service that office-based physicians collected – did not offer great prospects for the future. By May 1992, 91% of physicians, who previously had worked in different ambulatory public settings, were running their own single practices. There are only a few polyclinics (in Berlin and the federal state of Brandenburg) that have managed to continue operating either as a network of distinct solo-practices or as cooperatives. It is only since 2004 that this interdisciplinary form of delivery has been admitted for the whole of Germany, as medical care centres, headed and staffed by physicians.

In addition, the German health insurance types of the old FRG expanded quickly into the new *Länder* in the eastern part, but this has resulted in a lower

percentage of privately insured citizens (2% versus 10% in 1993) and a higher proportion of general regional fund members (61% versus 64% in 1991). The federal government supported the upgrading of infrastructure in the eastern part through an immediate aid programme of several billion Euros, directed mainly towards hospitals and nursing homes.

Health care reforms in a unified Germany after 1990

These extraordinary tasks increased the pressure on the system and contributed to the increasing speed of health care reform legislation in the 1990s, and especially after the turn of the millennium (see *Health care reforms*). The leading reform principles since reunification have been expenditure control and enhancing technical efficiency by increasing (regulated) competition, while avoiding adverse effects on equity and securing quality. Rationalization was given priority over rationing, and few benefits were taken out. At the same time, a substantial number of innovative drugs and technologies were reimbursed, and the service profile was shifted towards long-term care, palliative care and prevention.

Health policy under the Christian Democratic-Liberal government (1982–1998) after reunification can be divided into two major periods: First, the health care reforms from 1988 until the mid-1990s were characterized by stronger expenditure control in all sectors of care. On the other hand pro-competitive regulations among payers and in the hospital sector were introduced, buffered by measures to avoid adverse effects on equity and quality. In addition, new benefits were introduced to meet health needs of the population more appropriately and at efficient points of care. In particular, access to long-term care benefits was extended substantially by introducing statutory long-term care insurance as a new fifth pillar of social insurance (see *Social care*). Second, the three reform acts in 1996 and 1997 emphasized income raising out-of-pocket payments. Preventive and rehabilitative benefits were reduced and youth was excluded from denture benefits while budgets were relaxed.

The health care legislation by the Social Democratic-Green government (since 1998) can be divided into three shorter phases (see *Health care reforms*): First, from 1998 to 2000 the majority of legal arrangements of the 1996 and 1997 acts were removed and replaced by strict cost-containment measures targeting all sectors of provision. In addition, the catalogue was extended by minor benefits (socio-therapy, patient information), complemented by a modernization of health professional education. Second, between 2000 and 2003, a variety of small acts were introduced following a change of minister and a "round-table" consultation of a broad range of actors. The pharmaceutical spending

caps were lifted and replaced by negotiation powers for the actors of the SHI self-governance and finally prescription feedback for physicians. In addition, a decisive realization of the legislation on diagnosis-related groups (DRGs) as a payment system in hospitals and a reform of the risk structure compensation scheme that reallocates revenues among sickness funds (see *Main source of financing and coverage*) were undertaken. Third, with the introduction of the Statutory Health Insurance Modernization Act in 2004, many of these reforms were pushed a step further or made obligatory. In addition, a policy turn toward private financing and benefit exclusion partly reverted on solutions of the 1996-1997 reforms. Furthermore, innovative delivery models of care were given a firm basis, thereby diversifying the delivery landscape of health care.

While health care reforms with their focus on efficiency and appropriateness have shaped the performance of health care providers and payers substantially, one should keep in mind that non-health reforms had substantial influence. First, the principle of institutional transfer of the German reunification had substantial impact on structural reforms in the eastern part and required substantial investment to decrease inequalities. Second, a broad series of welfare reforms impacted on the revenue side of health care, usually by diminishing the contribution of welfare recipients (pensioners, the unemployed, students or social welfare recipients). Partly, revenues were also increased by making people with minor part-time jobs pay contributions. Third, European Union legislation and jurisdiction has exerted considerable influence health care goods and services; though largely out of the public eye, it is expected to have profound impact on health care in the future. In addition, a fundamental reform of the financial basis and the institutional arrangement of the health care system and long-term care insurance are under heated public debate, including the extension to universal coverage.

Organizational structure and management

Organizational structure of the health care system

A fundamental facet of the German political system – and the health care system in particular – is the sharing of decision-making powers between the *Länder*, the federal government and legitimized civil society organizations. In health care, governments traditionally delegate competencies to membership-based, self-regulated organizations of payers and providers. Their knowledge and motivation, that are actually involved in financing and delivering health care covered by statutory insurance schemes. In the – for health care – most prominent scheme, the statutory health insurance, sickness funds, their associations and associations of SHI-affiliated physicians have assumed the status of quasi-public corporations. These corporatist bodies constitute the self-regulated structures that operate the financing and delivery of benefits covered by statutory health insurance within the legal framework. They are based on mandatory membership and internal democratic legitimization. They may define and raise membership fees and finance or deliver services to their members. In joint committees of payers (associations of sickness funds) and providers (physicians' or dentists' associations or single hospitals) legitimized actors have the duty and right to define benefits, prices and standards (federal level) and to negotiate horizontal contracts, to control and sanction their members (regional level). The vertical implementation of decisions taken by senior levels is combined with a strong horizontal decision-making and contracting among the legitimated actors involved in the various sectors of care.

All major actors as well as their main interrelationships are shown in Fig. 3. Beyond the established decision-making corporatist organizations, other organizations have recently been given formal rights to contribute to decision-making bodies by consultation (e.g. nurses and allied health professions),

participation and proposals (patient organizations) or becoming a deciding and financing partner at the table (private health insurance for case payments in hospitals). A separate group of actors are the courts which will be dealt with separately after the federal, *Länder* and corporatist levels.

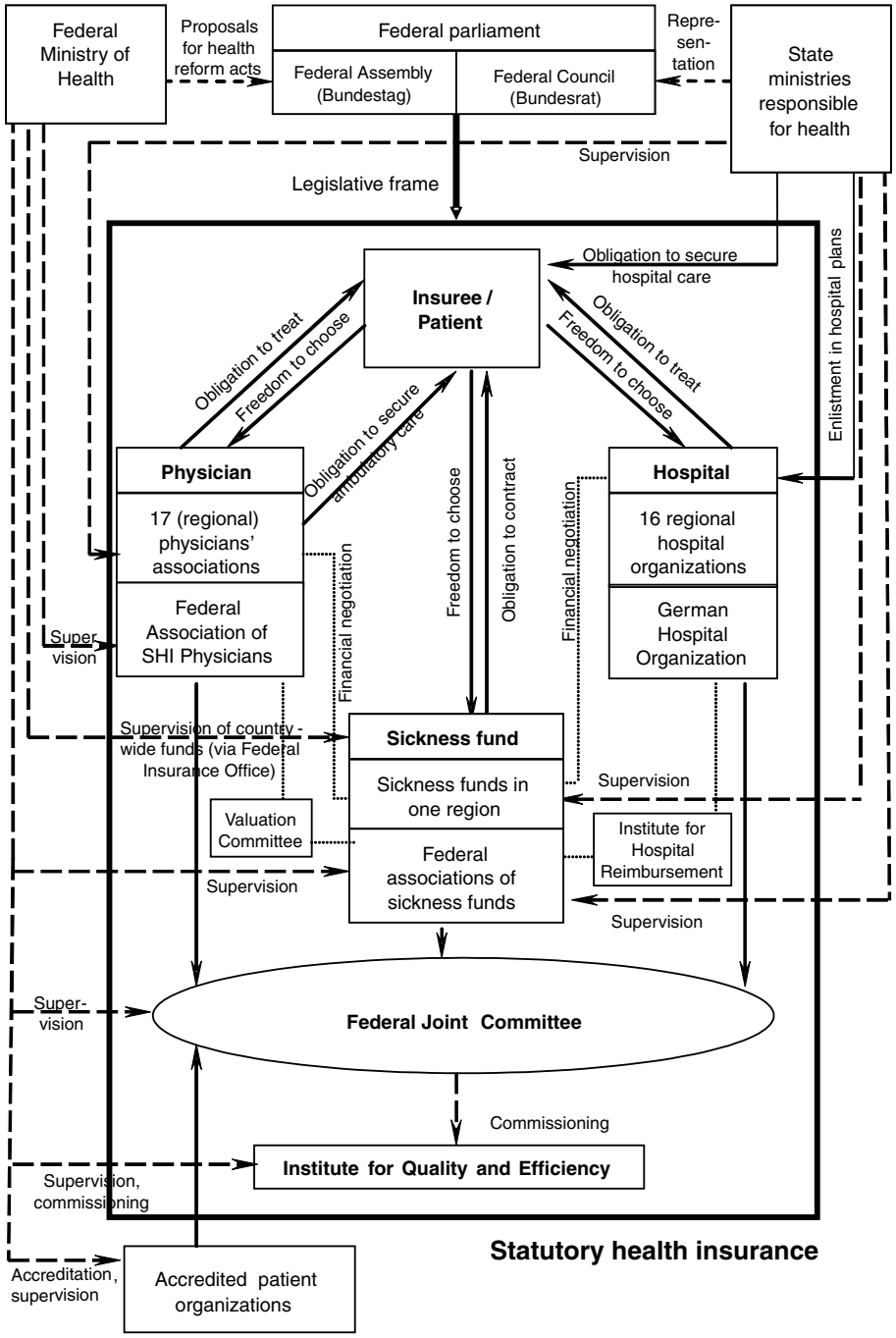
The German constitution (known as the Basic Law) requires that living conditions shall be of an equal standard in all *Länder*. However, health promotion or protection is not specifically mentioned as a goal. (This was different in the German Democratic Republic, where Article 35 of the constitution named health protection as a state objective.) As mentioned, the constitution defines areas of exclusive federal legislation and concurrent legislation. Health is not an area exclusive to federal legislation but specific topics relevant to health are included in the concurrent legislation, for example, social benefits, measures against diseases that threaten public safety, protection against ionizing radiation, certification of physicians and other health professions, pharmaceuticals and drugs, and the economy of hospitals. However, federal law – where it exists in these areas – takes precedence over *Länder* law. In addition, parts of environmental policies fall into this category. Implicitly, all other aspects of (public) health are therefore the responsibility of the *Länder*.

Federal level

At the national level, the Federal Assembly, the Federal Council and the Federal Ministry of Health and Social Security are the key actors. In 2002, the divisions for social security of the former Ministry of Labour and Social Policy were integrated into the former Ministry of Health. As before 1991, one ministry is responsible for all branches of social security except unemployment, which is now integrated in the Ministry of Economy and Labour. Since then the Ministry of Health and Social Security (in the following text called Ministry of Health) has been reorganized into eight areas with two or three sub-divisions each:

- administration
- European and international health and social policy
- planning, future of the social state, innovation and information
- pharmaceuticals and health protection
- health care, statutory health insurance, securing long-term care
- prevention, combating disease and biomedicine
- social insurance, retirement insurance, Social Code Book, social compensation
- issues of disabled people, social welfare.

Fig. 3. The organizational relationships of the key actors in the health care system, 2005



The ministry's former division of consumer protection (mainly food-related) and veterinary medicine had been shifted already to a new Ministry of Consumer Protection and Agriculture in 2001 when the Ministers of Health and Agriculture resigned in the BSE crisis.

Linked to the Ministry of Health and Social Security are the Narcotic Drug Commissioner of the Federal Government (since 1998), the Commissioner of the Federal Government for the Concerns of Disabled People (since 2002), the Commissioner of the Federal Government for the Elections in Statutory Insurance (since 2002) and the Commissioner of the Federal Government for the Concerns of Patients (since 2004). The Ministry of Health is consulted by ad-hoc committees and the Advisory Council for Evaluating the Development in Health Care which previously reported to the Concerted Action in Health Care.

The Ministry of Health is assisted by subordinate authorities (not included in Fig. 3) with respect to the execution of licensing and supervisory functions, scientific consultancy work and information services to the population or scientific community:

- The Federal Institute for Pharmaceuticals and Medical Devices (BfArM) licenses pharmaceuticals and supervises the safety of pharmaceuticals and medical devices (see *Health technology assessment*).
- The Federal Institute for Sera and Vaccines (Paul-Ehrlich-Institute) licenses sera and vaccines.
- The Federal Institute for Communicable and Non-Communicable Diseases (Robert Koch-Institute) has the tasks of surveillance, detection, prevention and control of diseases. It is responsible for issuing and publishing health reports and epidemiological bulletins. Since 2001, its role in infectious disease control has been strengthened with respect to monitoring, the coordination of interventions, international cooperation, risk communication as well as performing microbiological and epidemiological research (see *Public Health*).
- The Federal Centre for Health Education (BZgA) is responsible for developing and disseminating health education materials. It organizes, coordinates or supports prevention campaigns and performs social marketing research for conceptual and evaluative purposes (see *Public Health*).
- The German Institute for Medical Documentation and Information (DIMDI) has the task of providing information to the public and professionals in all fields of the life sciences. After initially concentrating on health care and

medicine, DIMDI now offers a broad collection of databases covering the entire spectrum of life sciences and social sciences. It has organized the prioritization, out-sourcing and publication of health technology assessment reports since 2000 (see *Health technology assessment*).

The first three institutions are the successors of the Federal Health Institute, which was more independent of the ministry but was dissolved after being accused of mishandling the requirement to carry out HIV testing of blood products in 1993.

Other federal institutions relevant to the health care system are the Federal Insurance Authority (for social insurance actors) and the Federal Authority for Financial Services Supervision, responsible for supervising private for-profit insurance (not included in Fig. 3).

Länder level

The federal structure is represented mainly by the 16 state governments and, to a very small extent, by the state legislatures. In 2003, 13 out of the 16 *Länder* governments had a ministry with "health" in its name. However, none has an exclusive health ministry. In most of these *Länder* it is most commonly combined with Labour and Social Policy (which is also the case in the remaining three *Länder*), less commonly with family or youth affairs, and only in one Land is it combined with environmental affairs, a combination more common in the 1970s and 1980s.

Within a *Land*'s Labour Ministry, "health" is typically one of four or five divisions. In Lower Saxony for example, the health division is further sub-divided into units concerned with

- public health services and environmental hygiene
- health promotion, prevention and AIDS care
- state-owned hospitals
- hospital planning
- supervision of health professions and their professional institutions
- psychiatry and illegal drugs
- pharmaceuticals and supervision of pharmacists and their professional institutions.

Most other areas affecting health such as traffic, city planning or education are controlled by other ministries.

Corporatist level

Providers

For the statutory health insurance scheme, corporatism is represented by the SHI-affiliated physicians' and dentists' associations on the provider side and the sickness funds and their associations on the purchasers' side. These bodies have assumed the status of a quasi-public corporation and are based on mandatory membership.

Physicians treating SHI-insured patients are organized in regional physicians' associations, based on obligatory membership and democratically elected representation. There is a physicians' association in each of the 16 *Länder*. In addition, the highly populated *Land* North Rhine-Westphalia has two physicians' associations. From 2005, the management of the now 17 physicians' associations will be rendered more efficient by introducing a long-opposed professional full-time executive board to replace a board of part-time voluntary physicians. In addition, the number of elected members represented in the regional physicians' assembly will be reduced and the majority voting system will be replaced by a proportional election system to better represent smaller groups among the physicians and psychologists. Also, the associations no longer distinguish between their "ordinary" members, that is, physicians in private practice, and other members, mainly hospital physicians who are specially accredited to treat SHI patients on an ambulatory basis (see *Primary and secondary ambulatory care*). Since the Psychotherapy Act of 1999, psychologists with a sub-specialization in psychotherapy were admitted to the physicians' associations. This was done to balance the provision and reimbursement of psychotherapy between physicians and psychologists.

SHI-accredited dentists are organized in the same way as physicians, that is, through dentists' associations in the *Länder* and a Federal Association of SHI Dentists.

The German Hospital Organization has increasingly been integrated into decision-making bodies of the statutory health insurance structures. Formally it does not have the status of a quasi-public corporation but represents the interests of hospitals as an organization based on private law. It is, however, increasingly charged with legal responsibilities as well. The membership of the German Hospital Organization consists of 16 *Länder* organizations and 12 associations of different types of hospitals, for example, university, public municipal, or private for-profit. Other organizations have gained consultative rights but no decision-making powers in recent years.

Payers

The payers' side is made up of autonomous sickness funds organized on a regional and/or federal basis. In January 2004 there were 292 statutory sickness funds with about 72 million insured people (about 50.7 million members plus their dependants) (Table 6) and 49 private health insurance companies covering around 7.1 million fully insured people. On 1 January 2004:

- 37% of all SHI members were insured with one of the 17 general regional funds (*Allgemeine Ortskrankenkassen*, AOK);
- 33% were insured at one of the 10 substitute funds, formerly open to either white collars or to blue collars;
- 21% were covered by one of the 229 company-based sickness funds (BKK) and
- 6% were covered by 20 guild funds (IKK).

Special rules apply to the sickness funds for farmers (14), miners (1) and sailors (1) with "closed" and comparably small membership (4% in total).

All funds have non-profit status and are based on the principle of self-governance. By law, sickness funds have the obligation to raise contributions from their members, which includes the right to determine what contribution rate is necessary to cover expenditure. In most funds, the management is made up of an executive board of two full-time managers responsible for the day-to-day management of the fund, and an assembly of delegates deciding on bylaws and other regulations of the fund, passing the budget, setting the contribution rate and electing the executive board. Usually, the assembly is composed of representatives of the insured and employers, whereas the assemblies of the substitute funds are entirely comprised of representatives of the insured population. Both the representatives of the employees and insured and of the employers are democratically elected every six years. Many representatives are linked to trade unions or employers' associations.

The total number of sickness funds has decreased steadily since the general regional funds and the substitute funds were legally opened to all those seeking insurance through the Health Care Structure Act of 1993 (Table 6). The first wave of mergers in 1994/1995 affected the general regional funds. As some of them were very small, they merged into single general regional funds per *Land*. In 1995, the guild funds followed – partly before they opened themselves to outside members. The latest wave of mergers has been that of the company-based sickness funds, also often as a prelude to competition. From the beginning of 1999, the "open" company-based sickness funds had more members than those that remained "closed", with an exclusive in-company membership.

Table 6. Number of sickness funds, 1993–2004 (on 1 January)

	1993	1995	1997	1998	1999	2000	2001	2002	2003	2004
General regional funds	269	92	18	18	17	17	17	17	17	17
Company-based funds	744	690	457	386	361	337	318	282	255	229
Substitute funds	15	15	14	13	13	12	12	12	12	10
Guild funds	169	140	43	43	42	32	28	25	24	20
Farmers' funds	22	21	20	20	20	20	19	17	15	14
Sailors' fund	1	1	1	1	1	1	1	1	1	1
Miners' fund	1	1	1	1	1	1	1	1	1	1
Total	1 221	960	554	482	455	420	396	355	325	292

Source: Federal Ministry of Health and Social Security 2004 *(9,30)*.

Other statutory insurance funds

Corporatist institutions similar to the sickness funds exist in other health-related statutory insurance schemes as well:

- accident funds covering curative and rehabilitative care services for work-related accidents and diseases,
- retirement funds, responsible for most rehabilitative measures, and
- since 1995, long-term care funds which are formed by the existing sickness funds (see *Social care*).

Professional chambers

Outside the scope of the statutory health insurance, legally established professional "chambers" exist for physicians, dentists, pharmacists, veterinarians, and since 2003 for psychologists providing psychotherapy. By law, all these health care professionals must be members of their respective chambers at the *Land* level. The chambers are regulated by laws of the *Länder,* and are responsible for secondary training and accreditation and continuing education, setting professional, ethical and community relations standards. To coordinate these affairs at federal level, the *Länder* associations have formed federal chambers such as the Federal Physicians' Chamber (also called the German Medical Association). Federal chambers are, however, based on private law and therefore can only pass recommendations. Professionals organized in chambers enjoy certain exclusive rights, such as the right to maintain their own pension schemes. Nurses, midwives and physiotherapists are not organized in chambers but in a variety of professional organizations with voluntary membership. Nurse organizations have associated in an umbrella organization called German Nursing Council which by law is consulted on statutory health insurance decisions affecting nursing.

Other actors

Voluntary organizations outside the above-mentioned legal actors are too numerous to be listed. They may be differentiated by their main focus of interest (scientific, professional, political or economic) and by the group they represent.

There are 145 medical scientific organizations, united in the Association of the Scientific Medical Societies. Physicians' organizations outside the corporatist field are of two types, professional and politico-economic. The former includes organizations for general practitioners and for other (sub) specialties, working on professional standards and defending their interests among the wider group of all physicians. Another type of professional organization are local physicians' unions, which have as their main functions continuing education and providing a forum for physicians from all sectors working in a particular region. The organizations, which are clearly designed for lobbying, comprise the Organization of German Doctors – the Hartmann Union – as the successor of the Leipzig Union which was formed in 1900 to defend the economic interests of physicians (see *Historical background*) and has its main membership base in the ambulatory sector, and the Marburg Union, which was formed in 1948 to defend the rights of hospital physicians. Another organization is the Organization of Democratic Physicians which often finds itself in opposition to the traditional physicians' organizations since it views itself as a lobby for better health and health care rather than better working conditions for physicians.

Psychologists are organized in the Professional Organization of Psychologists. Those providing psychotherapy within SHI are organized mainly in two organizations, the German Psychotherapist Organization and the Organization of SHI-affiliated Psychological Psychotherapists.

The main voluntary organizations of nurses with a professional focus are the independent German Nursing Association and the Federation of German Nurses' Associations as the representation of Catholic, Protestant and Red Cross nurses' associations. Besides these, the German Nursing Council represents 9 other organizations of nurses, midwives, child nurses and care-takers of the elderly. Other professional groups are represented in a variety of professional bodies, the main being the German Organization for Physiotherapy, the Federal Organization of Speech Therapy, the Organization of Ergotherapists.

The most important organization for pharmacists outside the corporatist sector is the German Pharmacists' Organization, the lobbying group for private pharmacists. Together with the pharmacists' chambers it forms the Federation of Pharmacists' Organizations.

The organization of the German pharmaceutical industry changed in the 1990s, when the large, research and international companies formed their own organization, the Association of Research-based Pharmaceutical Companies (42 manufacturers representing about two thirds of the market), so that the remaining Federal Association of the Pharmaceutical Industry (ca. 300 members) has become the organization of small and medium size companies only. The split was partly attributable to disagreements over whether to support negative or positive prescription lists. Two other associations represent pharmaceutical manufacturers with special interests: The Federal Association of Pharmaceutical Manufacturers (320 members) for producers of over-the-counter medications and the smaller German Generics Association (27 members) for generics producers. The latter has recently been complemented by an organization called Pro Generics representing internationally active generic manufacturers.

The interests of producers of medical technologies and medical devices are represented by the Federal Association Medical Technologies.

Another important group on the providers' side is the Federal Alliance of Voluntary Welfare Organizations of the six leading non-profit welfare organizations which own and manage hospitals, nursing homes, home care agencies and ambulance transportation. In the latter area, the non-profit organizations actually provide the majority of services. The six associations are the Workers' Welfare Organization (with roots in the Social-Democratic workers' movement), the German Red Cross, the Catholic German Caritas Organization, the Association of Protestant Welfare Organizations, the Welfare Organization of the Jews in Germany and the Association of Independent Voluntary Welfare Organizations.

Turning to the payers' side, the 49 major private health insurance companies (2004) are represented through the Association of Private Health Insurance, a rather powerful lobby group when it comes to defending the private health insurance sector. Of the 49 private insurers, 30 are traded on the stock market.

There is also a large and diverse spectrum of self-help groups, disabled organizations and organizations of socially insured people. There are about 40 000 to 60 000 health-related self-help groups with about 3 million members. Of these only about 360 are also organized at federal level *(22)*. Many disabled organizations and disease specific self help groups are organized in a Federal Alliance for the Support of Disabled which is also organized at state level in 14 *Länder*. An increasing number, about 1.8 million in 2004, are organized in two organizations promoting the rights of citizens and insureds in governmental welfare schemes and in statutory insurance. Of these, the German Council of Disabled People represents an alliance of independent self-help groups or their

umbrella organizations for disabled people, chronically ill people or social insured people.

Since 2004, four federal organizations have been accredited by the Federal Ministry of Health to send delegates to the Federal Joint Committee (see *Planning, regulation and management*). Besides the Council of Disabled People, the three other organizations represent institutions for informing and counselling patients and consumers, namely the Federation Consumer Centres, the Federal Alliance of Patient Centres and Initiatives and the German Alliance Self-Help Groups, an alliance of contact centres to promote the development of self-help groups *(22).*

Furthermore, the mainly publicly funded Foundation for the Testing of Consumer Goods (and Services) and other consumer protection agencies have started to investigate contribution rates, the service quality and benefit package of sickness funds, and to evaluate the performance of hospitals and other providers and to advise the public accordingly. All of the above-named organizations are politically independent, not associated with particular political parties.

Planning, regulation and management

Federal level

Issues of equity, comprehensiveness and the rules for providing and financing social services are regulated at the federal level. All SHI schemes are regulated through the Social Code Book (SGB) – the cornerstone of social insurance legislation – but fall within the authority of different ministries. The Social Code Book has regulated the statutory insurance schemes in the new eastern *Länder* since 1 January 1991, in the same way as in the western *Länder*, except for certain special, mainly transitional regulations.

The entitlements, rights and duties of insureds covered by statutory insurance schemes are layed down in Social Code Book I and specified in subsequent social code books. Health-related social services are regulated through several statutory insurance schemes, most importantly SHI. Others include accident insurance, retirement insurance (including responsibility for part of the rehabilitative measures) and, since 1995, long-term care insurance. Statutory health insurance (under the authority of the Federal Ministry of Health since 1991) is dealt with in Social Code Book V (SGB V), amended and supplemented by various reform laws. In fact, it was modified about 100 times between its inception in December

1988 and December 2003. Book I defines the general rights and responsibilities of the insured and Books IV and X define responsibilities and administrative procedures common to all social insurance agencies.

Chapter 1 of SGB V defines the basic principles of the SHI. The remaining chapters regulate the following issues:

- mandatory and voluntary membership in sickness funds (chapter 2);
- contents of the sickness funds' benefit packages (chapter 3);
- scope of negotiations between the sickness funds and providers of health care, most notably the physicians' associations (chapter 4);
- Advisory Council for Evaluating the Development in Health Care (chapter 5);
- organizational structure of sickness funds and their associations (chapters 6 and 7);
- financing mechanisms including the risk compensation scheme between funds (chapter 8);
- tasks and organization of the medical review boards (chapter 9);
- collection, storage, usage and protection of data (chapter 10);
- administrative fines and penalties (chapter 11), and finally
- special regulations for the eastern part of Germany (added through the Re-Unification Treaty as chapter 12).

Chapter 4 is the core chapter regulating the corporatist – or self-regulated – structure of the SHI system. It defines what has to be and what may be self-regulated through joint committees of funds and providers (for example, the details of the benefit package or the relative points for services) or through direct negotiations (for example, the total remuneration for ambulatory or dental care); the level at which these negotiations have to take place; how the composition of the joint committees is decided; what happens if they cannot agree, etc. (details will be discussed in the appropriate sections).

While the rules are defined by the legislature through SGB V at the federal level, the Federal Ministry of Health is responsible for supervising compliance by the federal associations of physicians and sickness funds and the joint committees (see the respective sub-section below). The supervision of nationally operating sickness funds is the responsibility of the Federal Insurance Authority, which is also charged with calculating the risk-structure compensation mechanism among all sickness funds.

Long-term care is also regulated under the authority of the Federal Ministry of Health through Social Code Book XI (SGB XI), which is in most parts similar to SGB V in its main content. Other health-related duties at the central level include legislation in the areas of pollution and ionizing radiation, which

is the responsibility of the Federal Ministry for the Environment and Nuclear Energy, and supervision of private health insurance companies by the Federal Authority for Financial Services Supervision (under the authority of the Federal Finance Ministry).

Patient rights are codified in a broad diversity of legislation and jurisdictions. A patient charta summarizes central elements. A charta for recipients of long-term care is currently being developed in a similar process by various stakeholders and under the auspices of the federal ministries of justice and health.

Länder level

The *Länder* governments are responsible for maintaining hospital infrastructure, which they do through "hospital plans" and their funding (see *Secondary and tertiary hospital care* and *Hospital payment*). The investments are paid for independently of actual ownership of the hospitals and according to the priorities of the *Land* government. While the responsibility for major investments (buildings and large-scale medical technology) is undisputed, sickness funds are now responsible for financing building maintenance and repairs, by adding 1.1% to the negotiated hospital budget. With the exception of Bavaria, all *Länder* have refused to pay for these since 1993.

A second major responsibility of the *Länder* is public health services (subject to certain federal laws concerning diseases dangerous to public safety). Some *Länder* operate them themselves while the majority of the *Länder* devolve responsibility for community health services to local governments. The public health tasks comprise supervision of employees in health care institutions, prevention and monitoring of transmissible diseases, supervision of commercial activities involving food, pharmaceuticals and drugs, environmental hygiene, counselling, provision of community-based psychiatric services, health education and promotion and clinical examination of school children. Since the 1970s, most of the preventive measures, such as screening programmes and health check-ups for children and adults, were included in the sickness funds' benefits package and thus are carried out by office-based physicians.

Additionally, the *Länder* are responsible for undergraduate medical, dental and pharmaceutical education and the supervision of the regional physicians' chamber as well as the regional physicians' association(s) and the sickness funds operating in the *Land*.

The *Länder* co-ordinate their (public) health activities through the Working Group of Senior Health Officials and the Conference of Health Ministers, both of which are unable to pass binding decisions, however. In addition, the *Länder*

have established various joint institutions to enable them to perform certain tasks. For example, the *Länder* of Bremen, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia and Schleswig-Holstein maintain the Academy of Public Health Services in Düsseldorf to train their public health physicians. A similar academy is run by Bavaria with the support of Baden-Württemberg, Rhineland-Palatinate, the Saarland, Saxony, and Thuringia (so that only Mecklenburg-Western Pomerania and Saxony-Anhalt run their training for public health physicians independently). A joint institution of all *Länder* is the Institute for Medical and Pharmaceutical Examination Questions, which is responsible for preparing and evaluating written examinations in the undergraduate education of physicians, dentists and pharmacists. From 2004, the Institute will mainly exert consultative functions in the education of physicians since the regulation for approbation of physicians of 2003 rules that medical schools shall be more autonomous in examining students and designing curricula.

Corporatist level

While the Federal Government, the Federal Assembly and the Federal Council have assumed increasing responsibility in reforming health care through legislation since the 1980s, the health care system of the population-rich country is still characterized by a relatively strong degree of decentralized and autonomous decision-making. Of particular importance are corporatist actors of payers and providers which are operating the statutory health insurance and other statutory insurance schemes. Governments and parliaments at federal or *Länder* level typically do not take part in the decision-making bodies of the statutory health insurance, the statutory long-term care insurance nor the statutory accident insurance (while federal government has decisional powers and financial duties for example in the statutory unemployment insurance). The operations of the non-profit corporatist SHI actors are financed by their respective mandatory members and organized on the basis of internal representative democratic structures. Furthermore, a large part of decision-making is realized by horizontal negotiations in joint committees among provider organizations and payer organizations at federal level and regional level.

While the decision-making powers of SHI bodies have been reduced in most European countries in order to reach cost-containment targets, they have been increased in Germany. The federal governmental aim to exercise more control of the types and delivery of services included in the benefit has led to enhanced state supervision of decisions taken by the self-governance but has not led to a centralization of decision-making powers towards governmental authorities. It paradoxically led to the creation of new committees within the

self-governance of the statutory health insurance system which is charged with implementing those legal stipulations.

Within self-governing structures, federal legislation promoted competition at the level of sickness funds while centralizing decision-making powers towards the federal level to secure uniform standards *(23).* The shift towards joint committees meant a relative decrease of physicians' autonomy in favour of increased powers for sickness funds.

Payers

The corporatist institutions on the payer side – the sickness funds – have a central position within the SHI system, as defined by the social code book. The sickness funds have the obligation to raise contributions from their members and to determine what contribution rate is necessary to cover expenditure. Their responsibilities include negotiating prices, quantities and quality assurance measures with providers on behalf of all sickness funds' members. Services covered by such contracts are usually accessible to all fund members without any prior permission from the fund. Permission is necessary, however, for preventive spa treatments, rehabilitative services and short-term nursing care at home. In cases where there is doubt, the sickness funds must obtain an expert opinion on the medical necessity of treatment from their Medical Review Board, a joint institution of the sickness funds.

A reform to make these benefits together with non-emergency ambulance transportation and physiotherapy optional, that is, to leave it to the individual sickness fund to decide upon inclusion of these services in its benefit package, failed late in 1996 as the sickness funds threatened to remove them altogether. Their main argument was that without these benefits they could offer lower contribution rates which would attract a healthier clientele, thus widening the gap in contribution rates and possibly forcing "generous" funds out of the market since expenditure for voluntary benefits would be outside the risk compensation mechanism among the funds.

Providers

The corporatist institutions on the provider side have to provide all personal acute health care services. The most prominent examples are the physicians' and dentists' associations, which have corporatist monopolies and missions to secure ambulatory care. The monopoly means that hospitals, communities, sickness funds and others do not have the right to offer ambulatory medical care except for purposes mandated by legislation or by joint commissions of payers and providers. These exceptions have been gradually extended in recent

years (see *Primary and secondary ambulatory care*). The mission includes the obligation to meet the health needs of the population, to guarantee provision of state-wide services in all medical specialties and to obtain a total, prospectively negotiated budget from the sickness funds which the physicians' associations distribute among their members (see *Payment of physicians*). Regional physicians' associations and regional dentists' associations are obliged to secure the provision of ambulatory care during practice hours and out-of-hour services. The monopoly also implies that regional physicians' associations negotiate collective contracts with the numerous sickness funds that operate in their region for ambulatory care, for example (Fig. 3). They distribute financial resources among their members according to nationally uniform but regionally adapted rules (Fig. 15). The monopoly also means that neither hospitals (with a few exceptions, such as university outpatient clinics), nor sickness funds, nor municipalities, nor non-medical health professionals have the right to provide ambulatory services outside the scope of the collective contracts.

The legal obligation to deliver ambulatory care includes the provision of out-of-hour services within reasonable distances, but since 1997 no longer includes emergency care. The physicians' associations must provide health services as defined by both the legislature and contracts with the sickness funds. The physicians' associations must guarantee the sickness funds that this provision meets the legal and contracted requirements. Due to the necessity of intervening and controlling delivery in this way, the physicians' associations were established as self-governing bodies, facilitating their work, which is constantly influenced by doctors' freedom of diagnosis and therapy and supports the principle of a democratically legitimized cooperative.

Ambulatory medical care is therefore the classic sector in which the corporatist institutions have the greatest power. Social code book V concentrates mainly on regulating the framework, that is, generic categories of benefits and the scope of negotiations between the sickness funds and the physicians' and dental physicians' associations. These negotiations determine both the financing mechanisms and the details of the ambulatory benefit package. As a general rule, both the scope of services which can be reimbursed through the sickness funds and the financing mechanisms are tightly regulated, sometimes legally but usually through negotiations between providers and sickness funds.

Due to the absence of corporatist institutions in the hospital sector, hospitals contract individually with the sickness funds. Usually, all sickness funds with more than a 5% market share in a particular hospital negotiate the contract with that hospital. However, the conditions regarding both the range and number of services offered and the remuneration rates are valid for all sickness funds. After the Federal Ministry of Health had unsuccessfully proposed to make the

hospital organizations corporatist bodies, a weaker regulation was included in the second SHI Restructuring Act to widen the hospital organizations' legal powers, for example to negotiate the catalogue of prospective case and procedure fees with the sickness funds.

Joint institutions

An important aspect of self-regulation is termed "joint self-regulation" by at least two actors, and comes in two different forms: negotiations leading to contracts and decisions by joint committees. While some delegated tasks always require decisions by joint committees (for example, defining the benefits), others are only decided by joint committees if no agreement can be found in open negotiations (for example on the budget for ambulatory care). In still others, a joint committee is the first level of appeal against decisions of another joint committee (for example, in the case of claims review). On the federal level, joint self-regulatory institutions in the German system include the Federal Joint Committee, the Valuation Committee and the Extended Valuation Committee. On the level of each of the 16 *Länder*, there are arbitration committees (if bilateral negotiations for example on reimbursement increases lead to no result), accreditation committees, accreditation arbitration committees, claims review committees and claims review arbitration committees. Atypical joint self-regulatory institutions include government representatives; this was the case with the committees to plan the infrastructure of high-level technologies, until their abolition in 1997.

Since 2001, the federal associations of sickness funds and the German Hospital Organization have been jointly running the independent Institute for the Development of the Hospital Payment System, which supports the continuous technical development of the diagnosis-related group system (see *Payment of hospitals*).

The most important body for the benefit negotiations between sickness funds and physicians concerning the scope of benefits used to be the Federal Committee of Physicians and Sickness Funds, which was responsible for the ambulatory sector. Established in 1923, it was the oldest joint institution in the German statutory health insurance system. During the last few decades, it issued around 20 directives to regulate the certification of sickness, the provision of screening services or family planning, the prescription of pharmaceuticals, medical aids and care by non-physicians such as physiotherapists, the quality-assurance of diagnostic imaging techniques, needs-based planning of the distribution of physicians in private practice, or the inclusion of new technologies and procedures into the ambulatory benefits package. The second SHI Restructuring Act gave the Federal Committee new competencies in July

1997, when it became responsible for technological assessment of the existing benefits, for defining a positive list for care by non-physicians and for directives on providing rehabilitative entitlements. The Federal Committee had several sub-committees, one of which made proposals for decisions concerning the effectiveness of new diagnostic and therapeutic methods according to a set of criteria that were outlined in directives first passed in 1990. After the extension of the committee's mandate, this sub-committee was renamed the Medical Treatment Sub-committee and passed new evaluation directives (see *Health technology assessment*).

In 2000, a joint committee was introduced for the hospital sector consisting of representatives of sickness funds and the German Hospital Organization. The committee was charged with quality assurance functions and with decision-making on benefit exclusions but was not required to provide positive decisions on benefit coverage as was its ambulatory counterpart. In addition, a Coordinating Committee was introduced to for the committees for ambulatory physician care and hospital care. It also was charged with identifying areas of over-utilization or under-utilization as well as with passing intersectoral treatment health care guidelines and disease management programmes.

Since the Statutory Health Insurance Modernization Act came into force in 2004, the various joint committees for the ambulatory sector, the hospital sector and the coordination committee have been unified into one common committee, the Federal Joint Committee. The main body of the Committee consists of nine representatives of the federal associations of sickness funds (three for general regional funds, two for substitute funds and one each for company-based, guild, farmers' and miners' funds) and nine representatives from provider groups (four from the Federal Association of SHI Physicians, one from the Federal Association of SHI Dentists, and four from the German Hospital Organization), two neutral members with one proposed by each side, and a neutral chairperson – accepted by both sides – who has the decisive vote if no agreement can be reached. In addition, nine non-voting representatives of formally accredited patient organizations have been given the right to participate in consultations and to propose issues to be assessed and decided upon.

Based on the legislative framework of the Social Code Book, the Federal Joint Committee issues directives relating to all sectors of care. Some directives are passed by the Plenary, the central decision-making body of the Federal Joint Committee, e.g. the body's standing rules and the rules of procedures for assessing technologies for inclusion or exclusion from the SHI benefit catalogue.

Furthermore, the Federal Joint Committee is composed of 4 additional bodies, each of which passes directives for a distinct field of regulation. They

consist of actors involved in the respective field. While federal associations of sickness funds (decision-making powers) and patient representatives (no vote) are represented in all of the four committees, the composition of providers varies, i.e. the Federal Association of SHI Physicians is represented in the Committee on Ambulatory Care, the Committee on Physician Issues, but not the Committee on Dental Care where the Federal Association of SHI Dentists is represented. The German Hospital Organization delegates representatives to the Committee on Hospital Care and the Committee on Physician Issues. These joint committees consist of various joint sub-committees that prepare recommendations, conclusions and directives, partly supported by working groups.

Their directives are legally binding for actors in statutory health insurance although subject to complaints at social courts. They are mainly concerned with the coverage of benefits and assuring that SHI services are adequate, appropriate and efficient (Table 7). They seek to clarify rules for patients' access and to steer accountable behaviour of all office-based physicians individually. Other directives concern planning of capacities or price setting. The four committees have the following functions:

1) The decision-making body with the broadest range of responsibilities is the Committee on Ambulatory Care, the successor of the Federal Committee of Physicians and Sickness Funds. It consists of sub-committees for medical procedures, psychotherapy, sickness certification, prevention, family planning, care provided by allied health professionals and medical aids, pharmaceuticals, prescription of hospital care and patient transport, home nursing care, rehabilitation, socio-therapy, quality reporting and assurance as well as needs-based planning.

- Apart from directives concerning the named fields of health care the Committee has e. g. issued a definition for chronically ill persons who are eligible to co-payment limitations or a directive about conditions for SHI-affiliated physicians to employ a physician colleague.
- Directives relating to care provided by allied health professionals are developed in consultation with the federal organizations of the providers concerned, for example physiotherapists, speech and language therapists, ergo-therapists (the so-called partner model). In a similar mode, nursing associations are consulted when directives on home nursing care are amended by the committee.
- The committee's directives on evaluating technologies sets the criteria for deciding upon benefit coverage in the ambulatory sector of statutory health insurance, where a new method has to obtain a positive evaluation in order to be covered and reimbursed by SHI (see *Health technology assessment*).

- The directive on pharmaceuticals entails a broad range of decisions upon coverage, prescription recommendations for physicians and price determination for outpatient drugs covered by SHI (Table 7). Decisions upon coverage include the listing of brands for substances which the ministry put on a negative list or exemptions from co-payments. Instead of excluding drugs from SHI coverage altogether the predecessors of the Committee preferred to inform about efficacy, safety and prices of substances by indication and to issue prescription recommendations based on relations of benefits and price. The committee is also responsible for selecting and grouping drugs to be subjected to the reference price scheme, which since 2004 relates not only to off-patent drugs but also again to patented drug (see *Pharmaceuticals*).
- The needs-based planning directives for ambulatory care of SHI-affiliated physicians provide the framework for planning the number of SHI-affiliated physicians across all specialties needed to provide appropriate health care at the *Länder* level through joint committees of physicians and sickness funds (see *Human resources*).

2) The Committee on Dental Care, the successor of the previous Federal Committee of Dentists and Sickness Funds, issues directives on dental treatment and orthodontic treatment, case-finding, individual prophylaxis, dentures, procedures to assess new and existing technologies, as well as needs-based planning.
3) The Committee on Hospital Care is the successor of the previous Committee for Hospital Care. It consists currently of the Sub-Committee for Methods to Evaluate Technologies which prepares directives for decisions upon the exclusion of technologies (in contrast to the ambulatory pendant which has to decide upon the inclusion of technologies), the Sub-Committee for External Quality Assurance in Hospitals and the Sub-Committee for Other Forms of Quality Assurance in Hospitals.
4) The Committee on Physician Issues is the successor of the previous Coordinating Committee and consists currently of the Sub-Committee for Ambulatory Treatment in Hospitals which issues for example a list of highly specialized conditions that may be treated in outpatient departments, the Sub-Committee for Disease Management Programmes and the Sub-Committee on Quality Assurance which has to report on and evaluate quality assurance programmes and to issue recommendations for uniform standards quality assurance across professions and sectors.

All directives issued by the Federal Joint Committee are transferred to the Federal Ministry of Health. Unless the ministry objects to a directive for formal

reasons within a period of two months the directive becomes binding for the concerned SHI actors at federal level, *Länder* level, and local level as well as for individual providers and insured patients.

Once a decision to include a technology into the benefit catalogue of ambulatory SHI-affiliated physician services has not been objected by the Ministry of Health, another joint committee at federal level determines reimbursement issues and requirements for physicians who want to want to claim reimbursement for the delivery of this technology from statutory health insurance (see *Health technology assessment*). This Valuation Committee consists of representatives from sickness fund associations and the Federal Association of SHI Physicians. In particular it determines the relative value of a technology compared to other technologies in the Uniform Value Scale (see *Payment of physicians*).

The decision-making in the Federal Joint Committee shall be assisted by the Institute for Quality and Efficiency, a foundation which is paid for by the stakeholders of self-governance (rather than the federal government, as originally planned). The establishment of the Institute was approved by the supervising Federal Ministry of Health in July 2004. It has the legal tasks of:

- evaluating the efficacy and safety of drugs as a basis for deciding whether a drug falls under the reference price scheme or not;
- writing scientific reports and statements on questions of the quality and efficiency of SHI benefits;
- giving recommendations on disease management programmes;
- evaluating evidence-based guidelines for epidemiologically important diseases;
- researching, evaluating and presenting up-to-date medical knowledge of diagnostic and therapeutic interventions of selected diseases;
- providing comprehensible information to citizens on the quality and efficiency of care.

Supervision and conflict resolution

Supervision of corporatist decisions – whether those of single institutions or joint committees – is a multi-layered endeavour involving self-regulatory institutions themselves, the government and the social courts. "The government" is the Federal Ministry of Health in cases concerning federal associations of sickness funds and providers, joint institutions and their decisions and contracts. Nation-wide sickness funds are supervised by the Federal Insurance Authority.

Table 7. Decision-making competencies in German health care[a] by sector, 2004

	Coverage decisions	Licensing/ Accreditation	Financing decisions	Quality assurance
Ambulatory care (primary and secondary care)	basic definition by federal law; details mainly delegated to actors on federal level	basic definition by federal law; details delegated to actors on federal (rules) and *Länder* (actual implementation) levels	mainly delegation to actors on *Länder* level; limited since 1999 as increases in regional budgets are limited by federal law	mandated by federal law (internal QM); details delegated to actors on federal (rules) and *Länder* (actual implementation) levels
In-patient care	until 1999 implicitly included in financing decisions; since 2000 mainly delegated to actors on federal level	de facto by *Länder* governments; Legally sickness funds may de-contract hospitals, but the final decision is taken by the *Land* government.	capital financing: mainly "bottom-up devolution" by *Länder*, running costs: delegation to actors on local level, preparation of the DRG system mainly federal level with substitutive execution by federal government	mandated by federal law (internal and external QM); actual implementation delegated to actors on *Länder* level
Trans-sectoral care	basic definition by federal law; details delegated to actors on federal (rules) and *Länder* (actual implementation) levels	basic definition by federal law; details delegated to actors on federal (rules) and *Länder* (actual implementation) levels	basic definition by federal law; details delegated to actors on federal (rules) and *Länder* (actual implementation) levels and selective contract partners	basic definition by federal law; details delegated to actors on federal (rules) and *Länder* (actual implementation) levels and selective contract partners
Dental care	basic definition by federal law; details mainly delegated to actors on federal level	basic definition by federal law; details delegated to actors on federal (rules) and *Länder* (actual implementation) levels	mainly delegation to actors on *Länder* level; limited since 1999 as increases in regional budgets are limited by federal law	basic definition by federal law; details delegated to actors on federal (rules) and *Länder* (actual implementation) levels

	Coverage decisions	Licensing/ Accreditation	Financing decisions	Quality assurance
Pharmaceuticals	mixture of governmental regulation (negative list; in future positive list) and delegation to actors on federal level	Basic definition by federal and EU law; licensing by governmental agency at federal level or EU agency	Legal definition of wholesaler and pharmacy surcharges for prescription drugs; ex-factory prices mainly manufacturer's decision; delegation of reference price setting and aut idem to actors at federal level; negotiation and control of target volumes per practice at regional level	Basic definition by federal law; pharmaco-vigilance by the governmental and European licensing agency at federal level; details and implementation of prescription quality improvement delegated to actors at federal and regional level
Public health services	legislation only on certain aspects at federal level, for example infectious diseases, radiation; state legislation and regulation varying by state	none	"bottom-up devolution" by *Länder*, further devolved to municipal level in most *Länder*	supervised by higher administrative level; internal quality management as part of administrative modernization initiatives at municipal or state level

Source: own compilation.

Note: [a] "actors" refers to the (corporatist) associations of the self-governance representing the payers (sickness funds) and providers (SHI-affiliated physicians, hospitals) at *Länder* level and federal level of the statutory health insurance system.

For actors, decisions and contracts on the *Länder* level, the government is the statutory health insurance unit within the *Länder* ministry responsible for health.

Supervision and enforcement can be divided into several levels:

- formal governmental approval of (or lack of objection to) decisions taken by self-regulatory bodies;
- governmental veto of self-regulatory decisions if these are not taken according to the law;

- the federal government's right to intervene where no decisions have been taken (*"Ersatzvornahme"*) as for example applied during the introduction of diagnosis-related groups as a payment system in hospitals (see *Payment of hospitals*);
- legal action against institutions that do not fulfil their charge.

While the theoretical threat of closing sickness funds applies mainly to financial instability or incompetence, the ultimate threats to physicians' and dentists' associations are more related to their behaviour as corporatist institutions. As a first step, a state commissioner may be installed if no board is elected or if the elected board refuses to act according to its legal responsibilities (§ 79a SGB V). In the case of 50% or more members of an association refusing to treat sickness fund-insured patients, the association loses its legal monopoly to provide care which is then passed to the sickness funds (§ 72a SGB V).

Both of these threats were only came into force in 1993 as a result of the announcements by self-governing associations to disobey certain legal requirements. The instalment of a state commissioner has been used twice. In 1995, the government of Lower Saxony removed the board of the dentists' association due to its refusal to sign required remuneration contracts with the sickness funds. It installed a senior government official as state commissioner, who then signed contracts on behalf of the dentists' association. Only afterwards were the board members allowed to return to office. Another case occurred in Bavaria in February 2004, when the state government installed a commissioner at the dentists' association for six weeks after the dentists' assembly had decided to make patients pay co-payments for preventive visits (although these are excluded from co-payments by law). In November 2003 the assembly had decided not to implement major parts of the SHI Modernization Act and to prepare for giving back the mandate to guarantee to provide dental care for SHI-insured patients.

Furthermore, in July 2004, the government of Lower Saxony was the first to pass the obligation to provide care to the sickness funds, after one quarter (44) of the orthodontists of the regional dentists' association of Lower Saxony had given back their SHI accreditation in protest against income loss following the federal contract between the Federal Association of SHI Dentists and the federal associations of sickness funds, which attributed lower monetary values to orthodontic specialist procedures and higher values to general dentistry procedures. Since the regional dentists' association was not able (or willing) to provide alternative sources of care, the Social Ministry found that the criteria for sufficient access were no longer guaranteed in three planning areas and delegated the legal duty to guarantee the provision of orthodontic care to the

sickness funds. These have to act jointly, and contract selectively with university outpatient departments, local dentists with a qualification in orthodontics and orthodontic specialists in other states.

Beyond this rare mode of state intervention, disputes are usually resolved during the joint negotiations. If the actors cannot resolve disputes over tasks that have been delegated to them by law, a sophisticated system of joint arbitration committees and regulations is applied to make sure that a regulatory vacuum is avoided and that contracts among the responsible actors are in place in time.

Self-administration has been regarded as a sound basis for effective negotiations, public trust and safeguard against unwanted government interference. However self-governance is also criticized as lacking transparency and accountability. In a sector-specific report, Transparency International (1999) criticized state governments' weak exertion of their supervisory powers on health care actors and failure to control fraud and corruption adequately. Various fraudulent claims have received substantial publicity since then, resulting in criminal charges. Since 2004, sickness funds as well as regional associations of physicians and dentists have been obliged to install internal corruption units.

Social courts

Many corporatist decisions as well as parliamentary laws or governmental regulations may be challenged before the social courts, which exist at the local, state, and federal levels, constituting a separate court system. Until 2003, filing a legal case was free of charge. Since then, differential user fees apply for socially insured people, individual providers, social insurance institutions or private sector actors. Within health care, cases resolved by social courts include, for example: patients suing their sickness fund for not granting a benefit; individual physicians disputing the calculations of the Claims Review Arbitration Committee at state level; or medical device companies objecting to the non-inclusion of their product in the ambulatory medical services benefits package. In fact, the number of complaints that drug manufacturers have filed against the price-setting and grouping of drugs under reference price schemes or against prescription recommendations through the directive on pharmaceuticals seems exceptionally high in international comparison. Most of the claims challenged the legitimacy of the Federal Committee of Physicians and Sickness Funds, the predecessor of the Committee on SHI-affiliated Physician care, to intervene into the drug market as a nongovernmental actor within statutory health insurance structures. The committee's legitimacy to define reference prices was approved by the European Court of Justice in early 2004 based on the legal delegation of public tasks for public purposes.

Another example is the Federal Social Court's refusal of some company-based funds' complaint against their obligation to contribute to the risk structure compensation among all sickness funds, as upheld by the Federal Constitutional Court in July, 2004 (see *Main source of financing and coverage*).

Decentralization of the health care system

Decentralization can take on different forms, reflecting an increasing level of autonomy from governmental powers: deconcentration, devolution, delegation or privatization. The usual term "decentralization" does not capture the entire realm of German-style federalism, however. At first sight the considerable power of the *Länder* might look like a case of devolution but this is not a true description, since powers were never passed down from the federal level to the *Länder*, which predate the Federal Republic (which they actually founded). Instead, the opposite of devolution took place in Germany: the *Länder* passed certain rights and responsibilities, as defined in the constitution, to the federal level and retained others.

Deconcentration is only of minor importance in the German health care system, due to most levels of administration (with the exception of some *Länder* administrations) lacking any sub-level administrative offices since all political units from the local level upwards have their own autonomous, elected representatives and governments.

As may be seen from the section on planning, regulation and management, the most striking component of the decentralized health care system is the delegation of state power to corporatist actors (Table 7). While most of the legal rights and obligations of the corporatist associations of sickness funds and providers are the result of a long process (see *Historical development*), the transfer of the existing West German system to the eastern part constituted a real delegation of responsibilities by the government to corporatist actors.

Privatization is another important feature of the German health care system. Unlike other areas (for example higher education), public and private health care seem to be untainted by ideology. Notably, "public" is only used on the delivery side (for public hospitals), while public funding through the sickness funds is labelled "statutory". The sickness funds have been said to transcend public and private categories since they are private in formal ownership, but public in their responsibilities and liabilities *(24)*. They co-exist with private insurance companies providing substitutive, supplementary, and complementary voluntary

health insurance (see *Complementary sources of financing*). The switch to private health insurance is not seen as a political statement but rather as a way to pay less or – for traditionally excluded – self-insured as a necessity.

Out-sourcing of maintenance services to private companies occurs frequently but has never caused any public debate. In fact, some health care sectors are based entirely on private providers, for example, the office-based ambulatory care and dentistry or the private pharmacies. In other sectors, both private non-profit and for-profit providers co-exist with public providers, for example in the social care sector (see *Social care*) in the hospital sector (with a trend towards more privatization, Table 8). In fact, the vast majority of hospitals, including the private, for-profit, are part of the hospital plan, may treat SHI-insured patients, and are regulated by the same set of rules. Only a few private, for-profit hospitals are not integrated in the hospital plan, do not treat SHI-insured patients and are thus exempt from most regulations ensuring equal distribution, access and financial sustainability (see *Hospital care*).

Germany has a mix of public (usually meaning ownership by local governments), non-profit and for-profit hospitals. While the structure of German hospitals did not change dramatically in the 1990s, a clear trend is noticeable. The overall bed reductions took place entirely as a result of bed reductions in public hospitals while private, non-profit hospitals kept their numbers stable and private, for-profit hospitals increased theirs by 81% from a low level of 3.7% in 1990 to 8.3% of total general hospital beds (Table 8).

The increase of private for-profit ownership was mainly realized through take-overs of previously publicly owned hospitals. Take-overs of previously public hospitals by private investors are more frequent in the eastern part (where the share of privately owned beds in the acute sector was more than double compared to the western part). More than half of all private beds belong to hospital chains, which are responsible for the dynamic growth of the private, for-profit sector.

There are several reasons for the ongoing trend toward privatization. First, there is a shrinking public share of investment financing because of a rather precarious economy, and since many hospitals are need capital, an obvious solution the attraction of private capital. Second, agreements between trade unions and e mployers are more inflexible and expensive than collective agreements in the private sector. Furthermore, laws allow stronger participation of employees in public hospitals than in private hospitals, which may increase resistance against rationalization of cost-containment in personnel expenditures. Third, the complementary public sector pay-as-you-go retirement insurance is becoming more and more expensive because of the demographic shift *(25).*

Table 8. Development of the public-private mix in ownership of general hospitals, 1990–2002

	Public		Not-for-profit		Private		Total
	Beds	**% share**	**Beds**	**% share**	**Beds**	**% share**	**Beds**
1990	387 207	62.8	206 936	33.5	22 779	3.7	616 922
2002	272 203	53.9	190 426	37.7	41 965	8.3	504 684
Change	-29.7%		-8.0%		+84.2%		-18.2%

Source: own calculations based on Federal Statistical Office 2004 *(52).*

Health care financing and expenditure

Health care financing in Germany is characterized by a pluralistic funding system. Statutory health insurance is the major source of financing health care, covering nearly 88% of the population in 2003. Ten per cent (10%) took out private health insurance which includes about 4% civil servants with free governmental care and complementary private insurance. Furthermore, 2% of the population was covered by other, sector-specific governmental schemes (military, persons on substitutional service, police, social welfare and assistance for immigrants seeking asylum). Another 0.2% of the residents, that are about 170 000, had no prepaid coverage for health care *(7).* Among the uninsured there are mainly self-employed, rich and poor, and persons who previously failed to pair contributions to the statutory insurance or premiums to the private health insurance.

Even though SHI dominates the German discussion on health care expenditure and reform(s), its actual contribution to overall health expenditure was only 57% in 2002 (Table 9). The other three pillars of statutory insurance contributed an additional 10.5% of total health expenditure: statutory retirement insurance financed 1.7% (mainly for medical rehabilitation), statutory (work-related) accident insurance 1.7%, and statutory long-term care insurance financed 7.0%. Governmental sources contributed another 7.8%. Altogether, public sources accounted for three quarters of total expenditure on health and private sources for one quarter. Private households financed 12.2% of total expenditures on health in 2002 (figures include – negligible – expenditures of nongovernmental organizations). Private insurers financed 8.4% which includes expenditures for comprehensive health insurance

The most distinct changes over the last 10 years are the introduction of long-term care insurance and the increase in out-of-pocket payments.

Main system of financing

Contributions towards statutory health insurance with its 292 (January 2004) sickness funds constitute the major system of financing health care in Germany (see also *Organizational structure*). The sickness funds are responsible for collecting contributions, purchasing benefits on an in-kind basis and paying providers (see also *Financial resource allocation*).

Table 9. Main sources of finance, in percentage of total[a], 1992–2002

	1992	1994	1996	1998	1999	2000	2001	2002
Public sources	**77.7**	**77.0**	**77.2**	**75.3**	**74.8**	**75.5**	**74.9**	**75.2**
Taxes	13.0	12.9	10.8	8.1	8.0	7.9	7.8	7.8
Statutory health insurance	60.7	59.7	57.4	56.7	56.8	56.9	57.0	56.9
Statutory retirement insurance	2.3	2.4	2.4	1.7	1.7	1.8	1.8	1.7
Statutory accident insurance	1.8	1.9	1.7	1.7	1.8	1.7	1.7	1.7
Statutory long-term care insurance	n. a.	n. a.	4.9	7.0	7.1	7.2	7.0	7.0
Private sources	**22.3**	**23.0**	**22.8**	**24.7**	**25.2**	**24.5**	**25.1**	**24.7**
Out-of-pocket payments/NGOs	10.7	11.1	11.3	12.6	12.3	12.2	12.3	12.2
Private insurance	7.3	7.6	7.3	7.8	8.3	8.2	8.2	8.4
Employer	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.1

Source: Federal Statistical Office 2004 *(12)*.

Note: n.a.: not applicable; NGO: nongovernmental organization.

Sickness fund membership is mandatory for employees whose gross income does not exceed a certain level. This limit was increased from €3375 per month to €3825 gross salary per month starting in January 2003 to reduce the number of high earning voluntary members leaving statutory health insurance (adapted year, to €3862 in 2004). In 2003, ca. 88% of the population were covered by statutory health insurance (nearly 78% mandatorily and 10% voluntarily) *(7)*.

Contributions for SHI are dependent on income, and not risk, and include non-earning spouses and children without any surcharges. Contributions are based on income from gainful employment (up to a level of €3487.5 in 2004), pensions, or unemployment benefits, and not from savings or possessions at present. Such broadening of the income base was introduced transiently for voluntarily insured pensioners in 2000, but was soon refuted by jurisdiction.

The total sum of the income of all the insured up to that level (the so-called contributory income) is among the most important figures in health policy since its growth rate from year to year determines the level of cost-containment. It is influenced on the one hand by changes in wages and employment rates and on the other hand by regulatory interventions defining the contribution base for social transfer payments. Thus, growth in average contributory income is not

necessarily the same as wage increases. Higher than average wage increases for workers earning less, increase the contributory income disproportionately, while rising unemployment – especially hidden unemployment through people leaving the workforce and becoming "dependants" – decreases the contributory income disproportionately. Reforms of the statutory retirement insurance and statutory unemployment benefits also had large effects on the contributory income of the sickness funds.

From 1949 until 2004, contributions have been shared equally between the insured and their employers (Table 4). Taking the current average contribution rate of 14.2% as an example (summer 2004), the insured person pays 7.1% out of his or her pre-tax income below the upper threshold (€3487.5 in 2004 and €3525 in 2005) and the employer pays the same amount in addition to wages. For people with earnings below a threshold of €400, only employers have to pay for contributions (at a rate of 11% for all funds). Until 1998, income up to that level was not liable for sickness fund contributions. From July 2005, the parity shall be shifted towards higher contributions from the employees' side. They will have to pay a special contribution of 0.4%, which shall be increased to 0.9% (i.e. employers then save 0.45%) (see *Health care reforms*). These two measures will lead to a financing mix of approximately 54% for employees and 46% for employers.

For artists and students the federal government takes over half of the contributions. In the case of retired and unemployed people, the retirement funds and the Federal Agency for Employment respectively take over the financing role of the employer; in practice, these transfer 100% of the contribution rate to the sickness funds. Since 2004, pensioners have to pay contributions also from company pensions and other non-statutory pensions from which they deduct the full contribution rate.

Sickness funds collect the contributions directly from the employers or the mentioned public agencies; sanctions apply in case of evasion. The sickness funds operate on a pay-as you-go principle and may officially not incur deficits or accumulate debts. They are free to set their own contribution rates. Their decision is, however, subject to approval by the responsible state authority.

German health policy is primarily concerned about the contribution rates rather than the percentage of total health expenditures or statutory health insurance expenditures of the GDP since these have risen considerably faster than the rate of GDP. In fact, statutory health insurance expenditure has grown at GDP level which was achieved by a variety of cost-containment measures including sectoral budgets, rational prescribing, price reductions and downsizing. Yet over the last 25 years, the revenues from contributions have increased slower than both GDP and health expenditure. This led to repeated

deficits and increasing debts although sickness funds increased their contribution rates (Table 10, Fig. 4). From 2001 to 2003, the statutory sickness funds made deficits of circa €3 billion per year. Because the sickness funds are not allowed to incur long-term debts they were forced to raise contribution rates. The average contribution rate has increased quite steeply from 13.5% of gross earnings in 2001 to 14.3% throughout 2003 and in April 2004 (Table 10). Similar to the last substantial increase of contribution rates (from 12.4% to 13.2% between 1991 and 1993), the rise in contribution rates and deficits was followed by a major health care reform which was conceptualized jointly by government and opposition parties (*26*) (see *Health care reforms*).

The problem with revenues from contributions is that it is not based on the total economy but only on that part on which health insurance contributions are based (i.e. income of insured persons up to the threshold). Major reasons for the shrinking income base of sickness funds are the decreasing wage quota in the total economy, the decreasing share of the social insurance relevant part of wage, the increasing share of pensioners (as pensions are only around 48% of gross wages), the ongoing high rate of unemployment (since 2000, contributions for unemployed are only half as high as those for employed persons), and a. Although mini-jobs are included into mandatory statutory health insurance since 1999, the current system – oriented at life-long fulltime employment status, does not respond to nor profit well from the current working biographies and arrangements involving semi-entrepreneurship, part-time basis and multiple jobs.

Competition and risk structure compensation

Traditionally, the majority of insured people had no choice over their sickness fund and were assigned to the appropriate fund based on geographical and/or job characteristics. This mandatory distribution of fund members led to greatly varying contribution rates due to different income and risk profiles. Only voluntary white collar members – and since 1989 voluntary blue collar members – had the right to choose among several funds and to cancel their membership with two months' notice. Other white collar workers (and certain blue collar workers) were able to choose when becoming a member or changing jobs. Since this group grew substantially over the decades, around 50% of the population had at least a partial choice in the early 1990s.

The Health Care Structure Act of 1993 gave almost every member the right to choose a sickness fund freely (from 1996) and to change between funds on a yearly basis with three months' notice. All general regional funds and all substitute funds were legally opened to everyone and have to contract with

Table 10. Trends in financing statutory health insurance (SHI), 1992–2003

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
SHI revenues (billion €)	103	114	119	120	124	126	128	131	134	136	140	141
SHI expenditures (billion €)	108	108	117	124	126	125	128	131	134	139	144	145
SALDO (billion €)	-4.8	5.3	1.4	-3.7	-3.6	0.9	0.3	0.3	0.02	-3.0	-3.1	-2.9
SHI expenditure												
– cash benefits (billion €)	9.6	9.3	8.7	11.1	9.4	9.7	9.3	9.3	9.4	9.9	10.3	8.5
– in-kind benefits (billion €)	99.0	99.2	109	113	117	116	118	122	124	129	133	136
as % of GDP	6.1	6.0	6.2	6.3	6.4	6.2	6.1	6.2	6.1	6.2	6.3	6.4
Average SHI contribution rate (%)	12.7	13.2	13.2	13.2	13.5	13.6	13.6	13.6	13.6	13.5	14.0	14.3
Contribution to long-term care insurance (%)	n. a.	n. a.	n. a.	1.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Total social insurance contribution (%)	36.8	36.5	37.2	39.0	39.2	40.8	41.9	42.1	41.1	40.8	41.3	42.1

Source: Federal Ministry of Health 2004 *(27)*; Federal Statistical Office 2004 *(12)*.

Note: n. a.: not applicable.

all applicants. The company-based funds and the guild funds may choose to remain closed, but if they open, they too have the obligation to contract with all applicants. Only the farmers', and sailors' funds as well as the minors' fund retain the system of assigned membership.

As this date-fixed opportunity was felt to encourage many insured people to switch (see below), the opportunity to do so in 2001 (for 2002) was cancelled. Since 2002, change is possible at any time but the interval to remain insured with a particular fund will be 18 months. However, voluntary members – those earning above the threshold – can still move from one fund to another at any time with two months' notice. A decision to leave the SHI system in favour of private insurance cannot be revoked, however.

To provide all sickness funds with an equal position or a level playing field for competition, a risk structure compensation scheme (RSC) was introduced in two steps, in 1994 and 1995, the latter including retirees, replacing the former sharing of expenses for retired people between funds). The RSC seeks to equalize differences in expenditures among sickness fund insureds (due to age, sex and disability). Characteristically, the German RSC also seeks to equalize contribution rates due to differences in income levels from proportional contributions.

Basically, the RSC requires all SHI members to contribute an equal share of their income, about 13.5% in 2004, via their sickness fund to a scheme which than redistributes resources according to the risk structure of the SHI insureds per fund. In practice it is the sickness funds that are required to provide or receive compensation for the differences in their contributory incomes as well as in averaged expenditures. About 90% of a sickness fund's expenditures are RSC relevant since they are being spent for benefits that are covered by the uniform, comprehensive SHI package and that determine a sickness fund's "contribution-need" (need for finances). The remaining expenditures for administration and fund-specific benefits enacted in its statutes are not taken into account.

For both sexes, the average expenditure for the RSC-relevant benefits is calculated for one-year age brackets using actual expenditure data (the actual calculation is always retrospective and only estimated for the current year). About 90% of all expenditures are subject to the redistribution through the risk compensation scheme

The sum of these average expenditures for all insureds of a sickness fund determine that fund's "contribution need". The sum of all funds' contribution needs divided by the sum of all contributory incomes determines the compensation scheme's rate, which is used to calculate the compensated sum paid to funds, or the sum required from those funds making payments into the scheme. The risk compensation mechanism also equalizes for different income levels among fund members as well as differences in the number of dependants (since they are included on the expenditure side while they enter the contribution calculations as zero).

The impact of both the free choice and the risk structure compensation scheme on the structure of the sickness funds, the actual movement of members between funds, the development of the contribution rates and transfer-sums between funds can be summarized as follows:

- Even before the period of actual free choice for the insured began, sickness funds began to merge (Table 6).
- The percentage of insured ready to switch funds is increasing steadily. While only 9.3% of all SHI-insureds indicated they were thinking of changing their fund in 1998, this percentage increased to 23.4% in 2003 *(28).*
- Members increasingly leave one fund and join another. While no data on actual moves are available, net gains and losses in membership may be taken as an indicator: From the introduction of free choice of funds in January 1996 until January 2004, the general regional funds have lost 16% of their membership, to 18.6 million. The substitute funds, traditionally with white-collar membership, have lost 11%, to 15.8 million, although in the first years

they gained in membership. Other funds, like miners' and farmers', have lost 5.5%, to 1.7 million, mainly due to death of the relatively old membership. The most substantial gain of members was achieved by the company-based funds which doubled their membership to 10.4 million. Further gains were made by the substitute funds, traditionally with blue-collar membership (5% increase, to 1.0 million insured), and guild funds (3% to 3.1 million) *(9,29).*

- These net gains and losses are correlated to the contribution rates of the funds, that is, funds with higher than average contribution rates lose members while those with lower than average rates gain members.
- The importance of the contribution rate is further highlighted by several survey studies. For people who have moved from one fund to another, lower contributions were cited as the prime motive, while for people considering a move, both the contribution rate and better benefits are equally important. People not considering a move regard better benefits to be more important. People joining a sickness fund for the first time mostly cited "other" reasons for choosing a particular fund.
- Movement of members between funds has not equalized the different risk structures, but the first opportunity to change funds segregated membership further, i.e. the healthier, younger, better-earning people moved more often and towards cheaper funds, which in turn has increased the transfer sums (Table 11). This development implies that a risk compensation mechanism will be needed permanently, not just temporarily.
- The RSC scheme – and not competition – has reduced contribution rate variation among funds. While in 1994, 27% of all members paid a contribution rate differing by more than one percentage point from the average, this number had dropped to 7% in 1999. Around 2000, however, the increasing movement of relatively healthy people to cheaper funds has temporarily stopped this positive development. When considering associations of sickness funds, contribution rates vary less than between single funds. Furthermore, differences in contribution rates between the associations have been reduced, also in recent years (Fig. 4).

Concerns about the increasing amount required for redistribution and risk selection practices among sickness funds led to the enactment of two additional laws: The Act to Equalise the Law in Statutory Health Insurance made the risk structure compensation mechanism uniform for all of Germany from 2001. This led to an increase of the West-East transfer of financial resources (Table 11). On the other hand, the income basis of SHI in the eastern part of Germany was broadened by adjusting the limits for contributions, mandatory membership, and exemption from co-payment to levels in the West.

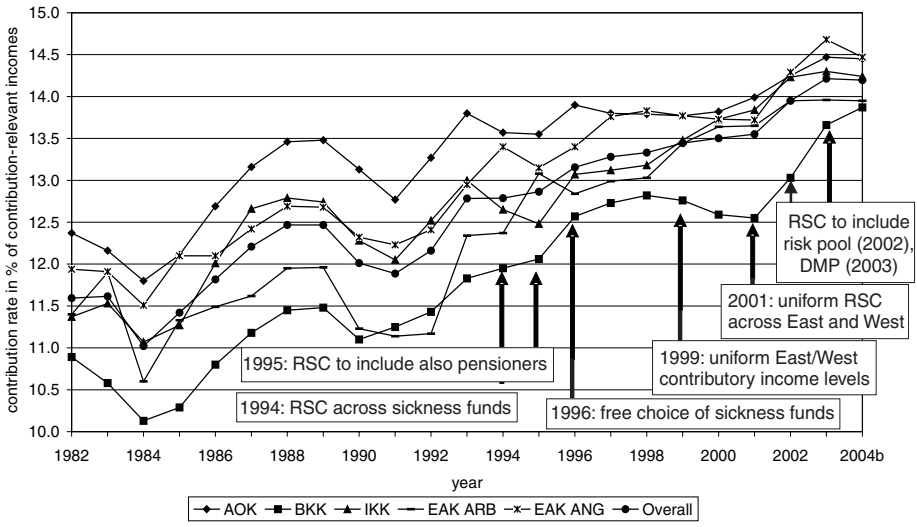
Table 11. Transfer sums in the risk structure compensation (RSC) scheme – absolute and relative to total SHI expenditure for the western and eastern parts, 1995–2003

	Western part			Eastern part			Germany		
	RSC / SHI expenditure[a] (billion €)		RSC as % of SHI	RSC / SHI expenditure[a] (billion €)		RSC as % of SHI	RSC / SHI expenditure[a] (billion €)		RSC as % of SHI
1995	6.90/	97.29	7.1	2.36/	19.70	12.0	9.23/	116.99	7.9
1996	7.27/	100.41	7.2	2.51/	20.47	12.3	9.78/	120.88	8.1
1997	7.71/	98.23	7.8	2.63/	20.05	13.1	10.34/	118.29	8.7
1998	8.22/	99.74	8.2	2.80/	19.97	14.0	11.01/	119.71	9.2
1999	8.30/	102.68	8.1	3.29/	20.52	16.0	11.60/	123.21	9.4
2000	8.30/	105.05	7.9	3.73/	20.89	17.8	12.03/	125.94	9.6
2001	9.09/	108.89	8.3	4.43/	21.75	20.4	13.52/	130.63	10.3
2002	9.28/	111.79	8.3	4.66/	22.54	20.7	13.94/	134.33	10.4
2003	9.87/	113.14	8.7	4.93/	23.08	21.4	14.79/	136.22	10.9

Source: own calculations based on Ministry of Health *(27)*.

Note: RSC = risk structure compensation; [a] total expenditure of sickness funds without spending on administration and fund-specific benefits as detailed in the funds' articles (ca. 90% of total).

Fig. 4. Annual contribution rates by sickness fund association, 1982–2004[a]



Source: own compilation based on data from Federal Ministry of Health 2004 *(30),* Federal Ministry of Health 2002 (*29*), Federal Ministry of Health 1991 *(31)*.

Note: RSC: risk structure compensation; DMP: disease management programmes; AOK: regional sickness funds; BKK: company-based funds; IKK: guild funds; EK ARB: substitute funds traditionally for blue collars; EK ANG: substitute funds, traditionally for white collars; [a] data for 1982–1990 refer to the western part only, overall average rates include sailors' fund, excluding miners' and farmers' funds; [b] state of 1 January, for all other years: annual average rates are used.

The Act to Reform the Risk Structure Compensation Scheme was passed in 2001 to compensate better for differences in the morbidity structure, to avoid cream-skimming among sickness funds and to give them an incentive to offer special treatment offers to chronically ill insureds. In addition to the existing compensation for differences in income as well as expenditure by age, sex and invalidity among insureds, the law introduced a high risk pool and separate RSC categories for people participating in Disease Management Programmes. From 2007, the RSC scheme shall be "morbidity-oriented".

The courts have repeatedly approved the present risk structure compensation scheme among sickness funds. The last decision of the Federal Social Court was also upheld when the Federal Constitutional Court declined in July 2004 to accept the appeal of two company-based sickness funds.

Disease management programmes

The Act to Reform the Risk Structure Compensation Scheme introduced Disease Management Programmes (DMPs) as a new form of SHI-organized managed care instrument to reduce risk selection among funds through incentives to improve the care of the chronically ill. Thus insureds enrolled in a DMP are treated as a separate category in the risk structure compensation scheme.

The Act defined a complicated process for the introduction of DMPs: The then newly formed Coordinating Committee (now the Federal Joint Committee) was charged with recommending to the Ministry of Health which major chronic diseases to select and the minimum common requirements for DMPs for these diseases. This was a new division of labour, with the self-governing bodies proposing, and the Ministry passing, an ordinance. The Act also stipulated the factors to be taken into account when selecting a disease for DMPs, namely the number of patients, potential for quality improvement, existence of evidence-based guidelines, need for trans-sectoral care, potential for improvement through patients' initiative, and high expenditure.

Based on the defined minimum requirements, sickness funds contract with providers and install their own provisions of informing and convincing their members to enrol voluntarily. Other requirements include patient education and an evaluation of the programmes. Sickness funds then apply for accreditation of their DMP at the Federal Insurance Authority, which mainly checks whether the DMP fulfils the legal requirements. Upon accreditation, the sickness funds run and coordinate the disease management programmes.

A few weeks after the Act became law, the Coordinating Committee proposed the first four conditions for DMPs: diabetes mellitus type II, breast cancer,

coronary heart disease, and asthma/chronic obstructive lung disease. The process to define the minimum standards was most disputed and time-consuming. A major blockade occurred in the summer of 2002, when a federal assembly of all regional physicians' associations passed a motion that no regional association should sign a DMP contract until federal elections later that year. After the re-election of the federal government, progress was smoother but still with hurdles and delay. One reason was the need to disentangle the contracts between several sickness funds and groups of providers. While DMPs have to be offered by individual sickness funds, they had usually collectively negotiated the conditions with the associations of statutory health insurance physicians. The sickness funds still have to build their own specific patient enrolment regulations, patient information systems and evaluation according to that contract.

In February 2003, the Federal Insurance Authority accredited the first DMPs for breast cancer in North Rhine. The DMPs are based on a uniform contract between all sickness funds of the region and the regional physicians' association as well as a number of hospitals. Measures for quality assurance include standardized documentation, feedback reports to physicians, patient information and reminder systems *(32).*

On 12 October 2004, 5525 applications for DMPs had been received. Of these, the Federal Insurance Authority had decided on 3068. For 1030 sickness funds had signalled to the Authority to be ready to start. 471 applications were being handled by the authority and 956 had not been dealt with (BVA 2004). Of the 5525 applications for accrediting DMPs, 3133 concerned diabetes, 1624 breast cancer, and 768 coronary heart disease. The ordinance for chronic obstructive lung disease/asthma had been issued, but applications were not yet available. Most of DMPs are based on contracts of sickness funds with regional physician's associations. In only few cases sickness funds have contracted selectively with a network of physicians. Furthermore, a relatively small share of the hospitals have become contract partners until now *(33).*

The current degree of activities indicates that the incentives for sickness funds to offer DMPs and increase the number of enrolled insureds are working. Critics maintain that DMPs would still not save money, but require an additional monetary input. In a longer term, a disadvantage is also that sickness funds are not very flexible in adapting their DMPs to experience or new treatment options, since most changes require a change of the underlying uniform requirements. These have to be issued by the Ministry of Health in form of an ordinance based on recommendations from the Federal Joint Committee. Although documentation requirements have been reduced in a 2004 ordinance, the requirements for accreditation and documentation of DMPs are still perceived as a hurdle by physicians. DMPs may serve as a concerted improvement of patient care by implementing guidelines linked to patient information and data-based

feedback. They were implemented rather hasty and without gaining experiences from pilot projects since the sickness funds have financial interests in getting DMPs started and enrolling insured.

The evaluation will be planned and supervised by the Federal Insurance Authority. The various programme versions per DMP shall be compared to each other. Due to data protection concerns and the dynamic evolution of the programmes a controlled study design seemed not feasible. Information about best practice and barriers in implementing DMPs shall inform the public and political debate that is mainly concerned with the feasibility and the success of DMPs in minimizing risk selection, redistributing financial resources and improving the quality of care of chronically ill patients.

Health care benefits and rationing

Independent of the status, the amount of contribution paid or the duration of insurance, members and their dependents are entitled to the same benefits. Benefits and recipients of statutory long-term care insurance are described in the section *Social care*. Concerning the main source of finance, the statutory health insurance, the following types of benefits are currently included in the benefit package, usually in generic terms through chapter 3 of the Social Code Book V:

- prevention of disease, health promotion at the workplace;
- screening for disease;
- treatment of disease (ambulatory medical care, dental care, drugs, care provided by allied health professionals, medical devices, inpatient/ hospital care, nursing care at home, and certain areas of rehabilitative care, sociotherapy);
- emergency and rescue care, patient transport in certain health conditions;
- certain other benefits like patient information.

In addition to these benefits in kind, sickness funds give sick pay to their employed members 70% of the last gross salary (max. 90% of net salary), from week 7 up to week 78 of certified illness, while employers continue to pay 100% of the salary during the first 6 weeks of sickness. The ratio of cash benefits to in-kind benefits has decreased substantially since SHI began 120 years ago (Table 4). In 2004, the share of cash benefits has again decreased since funeral allowances have been excluded.

Further benefits that have been legally excluded from SHI health insurance coverage since 2004 include glasses, lifestyle medications and all over-the-

counter medications with few exceptions. From 1989 to 1996 and again from 2000, health promotion measures were offered by sickness funds directly to their members. While the second SHI Restructuring Act had abandoned this benefit, it has been partly reintroduced through the SHI Reform Act of 2000.

While the Social Code Book regulates preventive services and screening in considerable detail (for example concerning diseases to be screened for and screening intervals) but leaves further regulations to the Federal Joint Committee (or its predecessors), the Committee has considerable latitude in defining the benefits package for curative diagnostic and therapeutic procedures. The decision-making process concerning coverage is described in more detail in the chapter *Health technology assessment*. All procedures covered in the ambulatory sector are listed in the "Uniform Value Scale" together with their relative weights for reimbursement (see *Payment of physicians*). The range of covered procedures is wide, from basic physical examinations in the office to home visits, antenatal care, terminal care, surgical procedures, laboratory tests and imaging procedures including magnetic resonance imaging.

Until 1997, exclusions were not explicitly possible but the legal mandate to evaluate already covered technologies made this possible. So far the committee has taken decisions upon only a small number of technologies with limited medical benefits, for example osteodensitometry for asymptomatic patients. Nevertheless, the committee's decisions have raised protests from providers and the public. Until 1997 exclusion of benefits was thus limited to other sectors. Consequently, certain dental services like gold or ceramic inlays, some medical devices, funeral allowances for those insured after 1989, and pharmaceuticals for so-called trivial diseases like the common cold, or travel-related diseases and pharmaceuticals that are either cheap or unproven were incrementally excluded from the SHI benefits package.

While benefits for ambulatory physician services are legally defined in generic terms only, one can observe more details in the description of dental – especially prosthetic – benefits in Social Code Book V. One reason was the dysfunction of the Federal Committee of Dentists and Sickness Funds, until 2003 in charge of decision-making on ambulatory dental care concerning benefits, accreditation and quality. The SHI Contribution Rate Exoneration Act's regulation to remove crown/denture treatment from the benefits package for people born after 1978 (even though they still had to pay the full sickness fund contribution rate) was politically contentious. The Act to Strengthen Solidarity in SHI re-introduced these benefits from 1999. A new legal initiative to exclude dentures from the SHI catalogue in favour of mandatory co-insurance was modified in 2004 in favour of a "special contribution" to be paid only by employees from July 2005.

Dentures thus continue to be part of the benefit catalogue, and were excluded in practice for about a year (see *Health care reforms*).

Another sector comprises the therapeutic services of allied health professionals other than physicians, such as physiotherapists, speech and language therapists, and occupational therapists. Insured patients are entitled to such services unless they are explicitly excluded by the Federal Ministry of Health, which is currently not the case (§§ 32 and 34 SGB V). According to §138 SGB V, services provided by allied health professionals may be delivered to the insured only if their therapeutic use following quality assurance guidelines is recognized by the Federal Joint Committee. In the Committee's directives for care provided by allied health professionals, the conditions for the prescription of these services have been reformed in consultation and cooperation with professional bodies which however have no right to take part in the Federal Joint Committee's final decision-making (see *Planning, regulation and management*). The list of services provided by allied health professionals reimbursable by statutory health insurance is now linked to indications and therapeutic targets. Non-physician care may be ordered only if a disorder can be recognized, healed or mitigated or if aggravation, health damage, endangerment of children or the risk of long-term care can be avoided or decreased.

As mentioned previously (see *Organizational structure of the health care system*), psychologists specializing in psychotherapy are the exception to the rule as they have become members of the physicians' associations and therefore no longer have the status of non-physicians.

Home nursing care is regulated separately. Mandated by the second SHI Restructuring Act, the Federal Committee passed directives to clarify responsibilities and improve cooperation among the sickness funds responsible for acute home nursing care and the long-term care funds. However, organizational responsibilities and financing obligations are still subject to debate, for example the Federal Social Court decided that medical aids for recipients of statutory long-term care insurance have to be paid by their statutory sickness fund.

The range of services provided in the hospital sector has traditionally been determined by two factors: the hospital plan of the state government, and the negotiations between the sickness funds and each hospital. The introduction of DRGs as the dominant form of payment in hospital care since 2004 will also affect the range of services. Access to and financing of innovative interventions is subject to especially intense debate (see *Payment of hospitals*).

Priority-setting and rationing: the public's and the experts' views

Decision-making on benefit coverage at the political level or in joint committees of SHI represents a form of explicit priority setting. Since 1999, the Federal Committee of Physicians and Sickness Funds and its successor, the Federal Joint Committee/ Committee of SHI-affiliated Physician Care have applied a formal tool to select technologies for decision-making. The development of health targets and other initiatives to stimulate a discussion about priority-setting include for example the health target initiative project (see *Health targets*).

The public has been supporting the political priority of rationalization over benefit reduction and favours a comprehensive benefit package. If a choice had to be made between substantial benefit cuts and an increase in contribution rates, 70% of the socially insured population would opt for the latter *(28)*. The majority of them would also pay more to get access to better quality care and therapeutic innovations. A 2004 survey indicates a shift in public opinion, however: a relative majority favours benefit cuts over increasing contributions. On the other hand, 80% said they would accept a gatekeeping system by family doctors and 17% would accept a restricted pool of physicians if contributions were decreased substantially *(34)*. In a further survey in 1998, a three quarter majority favoured restrictions on pharmaceuticals. Seventy-four per cent (74%) were of the opinion that drugs lacking explicit proof of effectiveness should not be paid for by the sickness funds. Seventy-three per cent (73%) were in favour of restricting physicians' choices to cheaper drugs in cases where pharmaceuticals differ in price but not effectiveness. Another survey in the summer of 1998 showed that the majority of the population (59%) backed the decision of the Federal Committee of Physicians and Sickness Funds to exclude "lifestyle" drugs such as Viagra, a measure that was legally enacted in 2004 (see *Health technology assessment*).

The vast majority of the population also approves of the main principles of statutory health insurance – solidarity in financing and needs-based access to benefits – according to several recent surveys *(28,35)*. In a 2002 survey, around 80% of the SHI-insured population approved of financial redistribution between people with high and low income, good and bad health, younger and older age. In this respect "net payers" hardly differed from "net recipients" *(36)*.

At the same time, in several surveys over the last decade *(35)* about 40% of respondents favoured the inclusion of health risks in the calculation of sickness fund benefits, mainly through bonuses for healthy lifestyle and, less frequently, through extra contributions for people with risky behaviours or elimination of lifestyle related diseases from coverage. The notion of rejecting

rationing in favour of equal treatment opportunities independent of age, income or status may be stronger in the eastern part, possibly due to a longer history of advocating equity.

Beyond transplantation services, there are no formal requirements to document waiting lists, though institutions use lists for planning purposes. The scant available literature on institutional waiting lists and implicit rationing in practice shows, that for cardiac interventions and ambulatory eye surgery in the early 1990s were reduced substantially when capacities were expanded. In minor surveys, waiting times are reported by a small share of respondents, mainly for services at sub-specialty treatment centres. The German Hospital Institute evaluating the impact of the shift from retrospective to prospective payment in hospital care in 1995 (see *Payment of hospitals*) found that 21% of hospitals reported to use waiting lists in 1997; their number is estimated to have increased substantially. Many reported that waiting times had been prolonged and that waiting lists were not only due to limited capacities but to the hospital target budgets which render the treatment of SHI patients financially less attractive, since degressive prices applied once the target budget had been exceeded. The prospective budget in SHI was indicated to favour faster access for non-SHI insured persons. A quantification of these reports and follow-up studies are not available at present *(37)*. The introduction of the case payments based on diagnoses-related groups shall again be evaluated considering its impact on quality, risk selection and access.

Based on a survey of all major stake-holders in health care, including payers, providers, self help groups and government agencies, the Advisory Council for the Concerted Action in Health Care documented evidence for under-provision of health care services as well as over-provision and avoidable harm due to the omission or commission of health care interventions *(16)*. The reasons reported for under-use were complex for most issues and seldom related to a lack of capacities, except in some rural areas of the eastern part and some sub-specialties. Reported under-provision of diagnostic services was often attributed to lack of skills, under-provision of prevention to structural deficits and under-provision of pharmaceuticals in ambulatory care to budgetary constraints or insecurity of SHI-affiliated physicians about legitimate conditions to exceed prescription limits. The Federal Association of SHI Physicians recently documented substantial underprovision of drugs by SHI-affiliated physician care for patients with selected chronic and rare diseases if compared to the (merely expert-based) clinical guidelines and estimated that additional finances were required *(38)*.

Complementary sources of financing

Even though statutory health insurance dominates the discussion on health care expenditure and reforms, its actual contribution to overall expenditure is only 57%. Complementary sources thus contribute 43% to the total health expenditure, of which statutory insurance schemes for retirement and accidents contribute 1.7% each (see *Historical background*) and the statutory insurance for long-term care 7% (Table 9) (see *Social care*).

The long-standing role of statutory retirement funds in financing a large part of medical rehabilitation services is characteristic of the German health care system. The financing of medical rehabilitation, often in inpatient institutions owned by the retirement funds, shall serve as a means to prevent disability and incapacity to work which would. 39% (€1.8 billion) of the retirement funds' expenditures on rehabilitation services were spent on medical rehabilitation, while the other resources were spent on occupational rehabilitation.

Three other complementary sources of finance can be identified: taxes, out-of-pocket payments and private health insurance. According to National Health Accounts (Table 9), taxes were overtaken as the major complementary source by out-of-pocket financing in the early 1990s.

Taxes

Taxes as a modest source of finance are used for various purposes in the health care system. The 1972 Hospital Financing Act introduced the dual financing principle in the acute hospital sector, which means that investment costs are financed out of taxes from state and federal level and that running costs are paid by the sickness funds or private patients (who may be reimbursed by private health insurers). In order to be eligible for investment, hospitals have to be listed in the hospital plans set by the *Länder*, independent of ownership. Through this mechanism, public, owners of private non-profit and private for-profit hospitals receive tax money for investments in their hospitals as long as these investments are according to the hospital plans and as long as money allocated for this purpose is available (see *Payment of hospitals*).

Taxes are also used for funding research funding in university hospitals and the education of medical doctors, dentists, pharmacists, nurses and other health professionals in public schools. Other purposes include free governmental health care schemes for police, military, other officials, young civil service, prisoners, immigrants seeking asylum and municipalities on services for the severely disabled. Since 2004, all recipients of social welfare, that are not insured elsewhere, and a part of immigrants seeking asylum have to choose a sickness

fund and will have the same rights and duties as other insureds. Municipalities do not pay contributions on behalf of the recipients of social welfare, but reimburse sickness funds for health care services that were actually delivered to the individual. It is expected that the shift from the reimbursement principle to in-kind benefits and from private sector prices to statutory health insurance prices will decrease municipal spending further.

Taxes as a source of health care financing have decreased throughout the last decade (Table 9). The most substantial decrease was observed in spending on long-term care, reflecting the relief of municipal budgets after the introduction of statutory long-term care insurance (see *Social care*) but other spending on investments e.g. has been decreased as well.

With the exception of subsidies for artists and the farmers' funds expenditure for retired farmers, sickness funds or long-term care funds did not receive any tax subsidies until 2004. Since then sickness funds receive a fixed amount from the federal budget for several benefits relevant to family policies: maternity benefits, sick-pay for parents caring for sick children, in-vitro fertilization, sterilization for contraceptive purposes, and prescription-only contraception up to the age of 20. To compensate for increasing spending, the tobacco tax is being increased by almost €1 per pack in three steps by 2005. The transfers from the federal government are legally fixed, independent of actual utilization of benefits and actual revenue from tobacco tax (see *Health care reforms*).

Out-of-pocket payments

Out-of-pocket expenditure as a share of total expenditure increased from 10.7% of total expenditure in 1992 to 12.2% in 2002 (Table 9). Out-of-pocket payments relate to co-payments for benefits partly covered by prepaid schemes and to direct payments for benefits not reimbursed by one's prepaid scheme. Table 12 gives an overview of co-payments for the various types of services and products covered by SHI between 1994 and 2004.

Co-payments and corresponding exemption mechanisms have a long tradition in the German health care system, most traditionally in pharmaceuticals, for which cost-sharing was introduced in 1923 and has existed ever since (*39*). Nominal co-payments were in place from 1977 until 1989, when reference prices were introduced. Between 1989 and 1992 no co-payment had to be paid for reference-priced drugs above the price differential. Since 1993 flat-rate co-payments have to be paid above the differential between the actual and reference prices (Table 12). It is noteworthy that because of competition within the reference-price groups and the legal obligation for physicians to inform patients that they are liable for the price difference for reference-priced drugs,

very few drugs now exceed the reference price. In 1993, the co-payment amount was linked to the price of the drug sold – an idea re-introduced from 2004. From 1994 until 2003, it was linked to package size as an incentive to patients to ask for larger package sizes (Table 12). The graded scheme was meant to provide an incentive for physicians to prescribe larger package sizes with lower average costs-per-dose resulting in overall cost savings per patient treated.

The overall amount of SHI pharmaceutical co-payments continuously increased from €0.6 billion in 1991 to €2.7 billion in 1998. The then newly elected Social Democratic/Green coalition government lowered nominal co-payment rates immediately after the elections. As a consequence, aggregate co-payments for pharmaceuticals decreased to €2 billion the following year and remained stable at €1.8 billion from 2000 to 2002 *(40)*. Higher levels of co-payments for pharmaceuticals after July 1997 resulted in 20% of all prescriptions and 4% of pharmaceutical sales volume in the SHI market being below the co-payment ceiling – which in effect constitutes a 100% co-payment. Co-payments for pharmaceuticals grow with age and are higher for women than men *(39)*.

In other areas, cost-sharing was reduced in the 1970s by enlarging the benefit package, but cost-sharing was increased again later. New areas for cost-sharing since the 1980s are charges for inpatient days in hospitals, rehabilitative care facilities and ambulance transportation. Most of these were cost-containment measures to shift spending from the sickness funds to patients; they were not intended to reduce overall spending. For example, patients were told that the co-payment for hospital treatment had to be paid to cover food.

In the Health Care Reform Act of 1989, cost-sharing was advocated for two purposes: to raise revenue (by reducing expenditure for dental care, physiotherapy and transportation and making patients liable for pharmaceutical costs above reference prices) and to reward "responsible behaviour" and good preventive practice (dental treatment) with lower co-payments. These cost-sharing regulations were part of a complete restructuring of co-payments, resulting in generally higher cost-sharing. Crown and denture treatment were removed from the benefit package for everyone born after 1978. Prosthetic treatment was no longer directly reimbursed through the sickness funds but patients were required to obtain private treatment and receive a fixed reimbursement from the sickness fund. Through this regulation, prosthetic treatment became the first area in German SHI to use "contracts" between patients and providers. While the law had established limits for private billing until 1999, the ministry estimated that at least one third of dentists overcharged. Accordingly, the regulation was abolished late in 1998 in favour of the former co-insurance regulation.

From 2004, co-payments and other out-of-pocket payments are expected to rise again substantially for SHI-insured patients since the bulk of expected savings through the SHI Modernization Act (4% of current expenditures) will be achieved by shifting costs to users via increased co-payments or the exclusion of benefits (for example eye glasses, transport to ambulatory care and over-the-counter medications). Co-payment amounts have been increased and standardized to €10 per inpatient day and to between €5 and €10 for services and products in ambulatory care. Co-payments of €10 per quarter now also apply to the first contact at a physician's (not necessarily a GP) or dentist's office and when other physicians are seen without referral during the same quarter.

Exemptions from co-payments have a long tradition in Germany, being granted either to specific population sub-groups, to the poor or to people with substantial health care needs. Population sub-groups which have usually been exempt from user charges were children and adolescents up to the age of 18 years (except for dentures, orthodontic treatment and transportation) and pregnant women. According to studies of differing methodologies, the number of people fully exempt from co-payments tripled between 1993 and 2000 from 10% to about 30% of the population. In 2001, 47% of prescriptions were exempted from co-payments *(39).*

From 2004, the general exemption due to poverty or other reasons has been abolished, and the regulations for partial exemption have been tightened. According to the new definition an SHI-insured person is eligible for exemption from user charges for benefits covered by statutory health insurance once more than 2% of the gross household income per annum has been spent on co-payments, or 1% of the gross household income for a sufferer from a serious chronic illness, defined as one that has been treated at least once per quarter for at least a year and is associated with at least one of the following additional characteristics:

- a need for long-term care grade II or III
- a 60% severe disability or a 60% incapacity to work OR
- a certificate from the treating physician that the omission of continuous health care (at least one physician contact per quarter for the same disease) would cause a life- threatening aggravation, a reduction of life expectancy or a long-term reduction in the quality of life.

This definition of chronic illness was approved by the Minister of Health in March 2004, after the first draft of the Federal Joint Committee had been refused as too restrictive (it required evidence of at least two hospital stays in the previous 2 years or 8 physician visits per year or 70% disability or 70% working incapacity).

Table 12. Co-payment/ co-insurance levels,[a] 1994–2005

	1994-1996	1st half 1997	2nd half 1997	1998	1999	2000–2003[b]	2004–2005
Ambulatory medical treatment (€)	0	0	0	0	0	0	10[c]
Pharmaceuticals (€)[d]							5–10[e]
– small pack (€)	1.5	2	4.6	4.6	4.1	4.1 (4)	
– medium pack (€)	2.6	3.1	5.6	5.6	4.6	4.6 (4.5)	
– large pack (€)	3.6	4.1	6.6	6.6	5.1	5.1 (5)	
Conservative dental treatment (€)	0	0	0	0	0	0	10[c]
Crowns and dentures[h]	50% 40%[f] 35%[g]				50%[i] 40%[f] 35%[g]	50% 40%[f] 35%[g]	100% above fixed sum[i]
– for people born before 1979[h]		50% 40%[f] 35%[g]	55% 45%[f] 40%[g]	100% above fixed sum			
– for people born after 1978		100%	100%	100%			
Orthodontic treatment	0–20%[j]	0–20%[j]	0–20%[j]	0–20%[j]	0–20%[j]	0–20%[j]	0–20%[j]
Transportation to and from medical facility							
– inpatient treatment or emergencies (€ per trip)	10.2	10.2	12.8	12.8	12.8	12.8 (13)	5–10[e]
– ambulatory treatment	100%	100%	100%	100%	100%	100%	100%
Non-physician care (for example home nursing, physiotherapy)	10%	10%	15%	15%	15%	15%	10% plus €10/ prescription[k]
Hospital stay and inpatient rehabilitation after a hospital stay (€ per day)[l]	6.1	6.1	8.7	8.7	8.7	8.7 (9)	10
Preventive spa or inpatient rehabilitation unrelated to hospital stay (€ per day)	6.1	12.8	12.8	12.8	12.8	8.7 (9)	10

Source: modified from Busse, 2000 *(1)*; Gericke et al., 2004 *(39)*.

Note: [a] Several rates in this table were lower in the eastern part of Germany until 1999;
[b] in brackets: changes for 2002/2003;
[c] per physician or dentist consulted per quarter except referrals;
[d] with price of drug as maximum; plus the difference between the price and the reference price;
[e] 10% with min. €5 and max. €10;
[f] if insured had regular annual check-ups for the last five years;
[g] if the insured had regular annual check-ups for the last ten years;
[h] 100% for major dental work (more than four replacement teeth per jaw or more than three per side of mouth, except multiple single bridges, which may exceed three);
[i] fixed sum is higher for insured with regular check-ups for 5 and 10 years respectively;
[j] if eating, speaking or breathing is severely limited and treatment is begun under age 18, otherwise 100%; full cost is reimbursed retrospectively by the sickness fund if a predefined treatment plan is entirely completed;
[k] for short-term home nursing limited to 28 days per year;
[l] until 2003 limited to a total of 14 days per calendar year, from 2004 limited to 28 days.

The number of people possibly targeted by these exemption rules is difficult to estimate. There is probably substantial overlap between the following relevant groups: About 1.5 million received long-term care benefits grade II or grade III and about 3 million (of a total of 6.7 million) had a level of 60% severe disability in 2001 *(3)*. About half of the 1.8 million people received disability benefits from statutory retirement insurance due to incapacity to work in 2003 *(4)*. In practice, by September 2004, an estimated 3.1 million insured had been exempt from co-payment.

The exemption rules do not apply to benefits that are not covered by the SHI package, or to price differentials for reference-priced pharmaceuticals. Besides the SHI exemption mechanism, relief from income tax is granted for out-of-pocket health care spending over €600 per year and a certain percentage of the annual household income.

Private health insurance

Private health insurance (PHI) has two facets in Germany: to fully cover a portion of the population and to offer supplementary and complementary insurance for SHI-insured people. Between 1975 and 2002, the number of people having full cover rose from 4.2 million to 7.7 million, representing 6.9% and 9.3% of the population respectively *(41,42)*. Both types are offered by 50 private health

insurers, united in the Association of Private Health Insurance. In addition, there are around 45 other very small and usually regional private health insurers. In terms of premium turnover, the full-cover segment is more than four times as large as the supplementary insurance segment. People with full-cover private health insurance consist of three main groups:

- active and retired permanent public employees such as teachers, university professors, employees in ministries etc., who are excluded de facto from SHI as they are reimbursed by the government for at least 50% of their private health care bills and purchase private insurance to cover the remainder;
- self-employed people who are excluded from SHI unless they have been a member previously (except those who fall under mandatory SHI cover like farmers), and
- employed people who have opted out of SHI once their income exceeded the threshold. Employees whose earnings are initially below the limit, but then exceed it as a result of an increase in wages may remain in the SHI voluntarily if they have been covered by it for the last 12 months or for 24 months within the last 60 months. Employees whose occupational income exceeds the cut-off limit from the start of their first gainful employment – or up to two months after returning from another country – may have voluntary SHI coverage if they apply within three months. This option does not apply to civil servants and soldiers.

Employees who have left the statutory health insurance scheme but who are brought back within its scope by an increase in the cut-off limit or a reduction of their salary may be exempt from mandatory membership if they have been outside SHI for at least 5 years. Since 2000, this choice only applies to those younger than 55; those older than 55 have to remain in voluntary health insurance no matter how low their income is.

Private health insurers are forced by law to set aside savings for old age from the insurance premiums when the insured are young (whereas statutory health insurance is financed on a pay-as-you-go basis, financing of private health insurance is based on capital cover). Since premiums still rise with age, and entry of privately insured people into SHI is not permitted in ordinary circumstances, private insurers are obliged to offer an insurance policy with the same benefits as SHI at a premium that is not higher than the average maximum contribution to sickness funds. People who have had continuous private coverage for at least 10 years and who are at least 65 years old can opt for the so called "standard tariff" (2000), which guarantees that insurance premiums are not higher than the maximum average SHI contribution. The regulation for this tariff entails that benefits and chargeable prices are restricted (or extended) to the catalogue of statutory health insurance. In addition, private health insurers announced in

2004 the voluntary introduction of a new basis tariff which also provides the benefits of the SHI package without a prior health examination.

Fully privately insured patients usually enjoy benefits equal to or better than those covered by SHI. This depends, however, on the insurance package chosen; for example it is possible not to cover dental care. In the private health insurance market, premiums vary with age, sex and medical history at the time of underwriting. Unlike in SHI, separate premiums have to be paid for spouses and children, making private health insurance especially attractive for single

Table 13. Changes in per capita SHI and PHI expenditure, 1992–2002 in the western part of Germany

	SHI (in %)	PHI (in %)	Ratio PHI to SHI
Ambulatory physician care	+24	+70	2.9
Dental care	+6	+33	5.5
Pharmaceuticals (ambulatory care)	+32	+84	2.6
Medical aids, prostheses and ambulatory non-medical services	+49	+67	1.4
Hospital care	+33	+55[a]	1.7
Total	+36	+50	1.4

Source: Association of Private Health Insurance, 2003 *(42)*.

Note: [a]Hospital care relates to general services and not to optional services in private health insurance for accommodation (-10%) and for head physician care (+22%) which however are included in total expenditures of private health insurers (last line).

people or double-income couples. Physicians, dentists and pharmacists are allowed to opt out of SHI and buy substitutive PHI while students or in their early years in the profession, even if their income does not exceed the usual threshold *(42)*.

From 1999 to 2000, the number of PHI policies jumped by 240 000, followed by a similar increase in 2001. This development probably has to do with rising SHI contribution rates that give a strong incentive for single young people without health problems to move to private insurance. This prompted the re-elected government to increase the threshold for opting out by approximately 13%, from €3375 to €3825 per month from 2003. Policies with high deductibles and/or excluding certain benefits like dental care are mainly bought by the self-employed, as for all employees the employers contribute 50% of PHI premiums, up to a ceiling of €241.50 per month (in 2003). Between 1989 and 2001 total contributions to PHI increased from €8.7 billion to €21.7 billion *(43)*.

Unlike SHI insureds, privately insured people generally have to pay providers directly and are reimbursed by their insurer. While a price list for privately

delivered medical services exists as an ordinance issued by the Federal Ministry of Health, physicians usually charge more – by a factor of 1.7 or 2.3 (which are the maximum levels for reimbursement by the government and by most private health insurers for technical and personal services, respectively) or even more. The real fee-for-service reimbursement for privately insured people has led to cost increases on average considerably higher than in SHI (Table 13).

The second market for private health insurers is supplementary insurance, for example to cover extra amenities like hospital rooms with two beds or treatment by the head-of-service. Since sickness funds are prohibited from offering these extra policies, people must obtain private coverage. Based on microcensus data, the number of people with supplementary PHI is estimated at around 7.5 million (9% of the population; excluding private health insurance during travel). It had increased from 5.3 million in 1991 to 7.6 million in 1998 *(42)*.

A third market is complementary health insurance to cover co-payments for benefits that are not fully covered by the main insurer of an insured: While traditionally not enrooted in the system, a considerable growth of the number of insured took place from 1996 due to the introduction of a new insurance segment to cover crowns and dentures, which were excluded from the SHI benefits package for people born after 1978. They were reintroduced from 1999. Around 4.5 million policies each are issued for optional hospital benefits and optional outpatient insurance. Both are taken by 6% of SHI enrolees. The latter segment experienced its heyday in 1997–1998 due to benefit package restrictions in dental care. The number of insured children with complementary coverage dropped from 2.2 million to 1.4 million between 1998 and 1999 after the reintroduction of these benefits. Approximately 900 000 people (1.3% of SHI insureds) had complementary insurance against loss of income, a benefit useful for voluntary SHI-insured self-employed people with an income much above the threshold (as sick pay is based on that amount). The latter came to account for 13% of revenues of private health insurers

Until 2003, there were few insurance policies which covered co-payments. Many complementary policies offer, among other services, allowances for co-payments for benefits like medical aids, remedies or hospital stays while such allowances for pharmaceutical co-payments are offered less and less.

Health care expenditure

Total and public expenditure

Germany continues to spend a substantial amount of its wealth on health care, in 2002, €2840 per inhabitant according to national figures *(44)*. Altogether total health expenditures accounted for €234 billion and 11.1% of the gross domestic product (GDP). OECD and WHO put figures slightly lower at €2789, €230 billion and 10.9% respectively *(2)*. By international comparison, the health care system is expensive, both in percentage of GDP (Fig. 5, Fig. 6) and absolute figures (Fig. 7). Among OECD countries Germany ranked sixth in per capita expenditure and third in the share of GDP spent on health in 2002.

Table 14. Trends in health care expenditure[a], 1970–2002

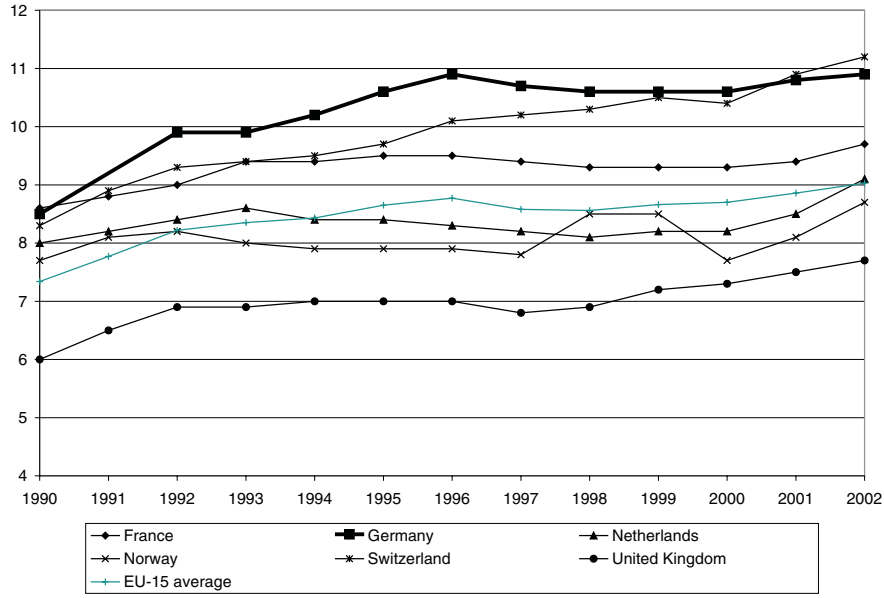
	1970	1980	1990	1992	1995	1996	1997	1998	1999	2000	2001	2002
Total expenditure on health care												
- in current prices (billion €)	21.7	66.4	108.3	159.8	190.4	199.4	200.2	204.7	210.4	214.9	223.0	230.0
- in constant 1995 GDP prices (billion €)	55.2	102.1	125.7	173.2	190.4	197.4	196.7	199.1	203.6	208.4	213.6	216.9
- in current prices per capita (€)	223	824	1 600	1 982	2 331	2 434	2 441	2 495	2 563	2 613	2 708	2 789
- in current prices per capita (US$ PPP)	266	955	1 729	1 962	2 263	2 410	2 416	2 470	2 563	2 640	2 735	2 817
- as share of GDP (%)	6.2	8.7	8.5	9.9	10.6	10.9	10.7	10.6	10.6	10.6	10.8	10.9
Public expenditure on health care												
- as share of total expenditure on health care (%)	72.8	78.7	76.2	80.9	80.5	80.6	79.1	78.6	78.6	78.8	78.6	78.5
- as share of GDP (%)	4.5	6.8	6.5	7.7	8.5	8.8	8.5	8.3	8.4	8.3	8.5	8.6

Source: OECD Health Data, 2004 *(2)*.

Note: US $PPP: US dollar in purchasing power parities; [a] 1970–1990: data relate to the western part only.

From 1992 to 2001, health expenditure increased from 9.9% of the GDP to 10.8%. However, the real annual growth of total health expenditures by 2.2% during this period was smaller than in the 3.2% average of OECD countries. The overall increase is perceived differently depending on the use of various deflators, none of which is tailored specifically to the health care system as a

Fig. 5. Trends in total expenditure on health care in Germany, selected countries and EU-15 average, 1990–2002 (percentage of GDP)



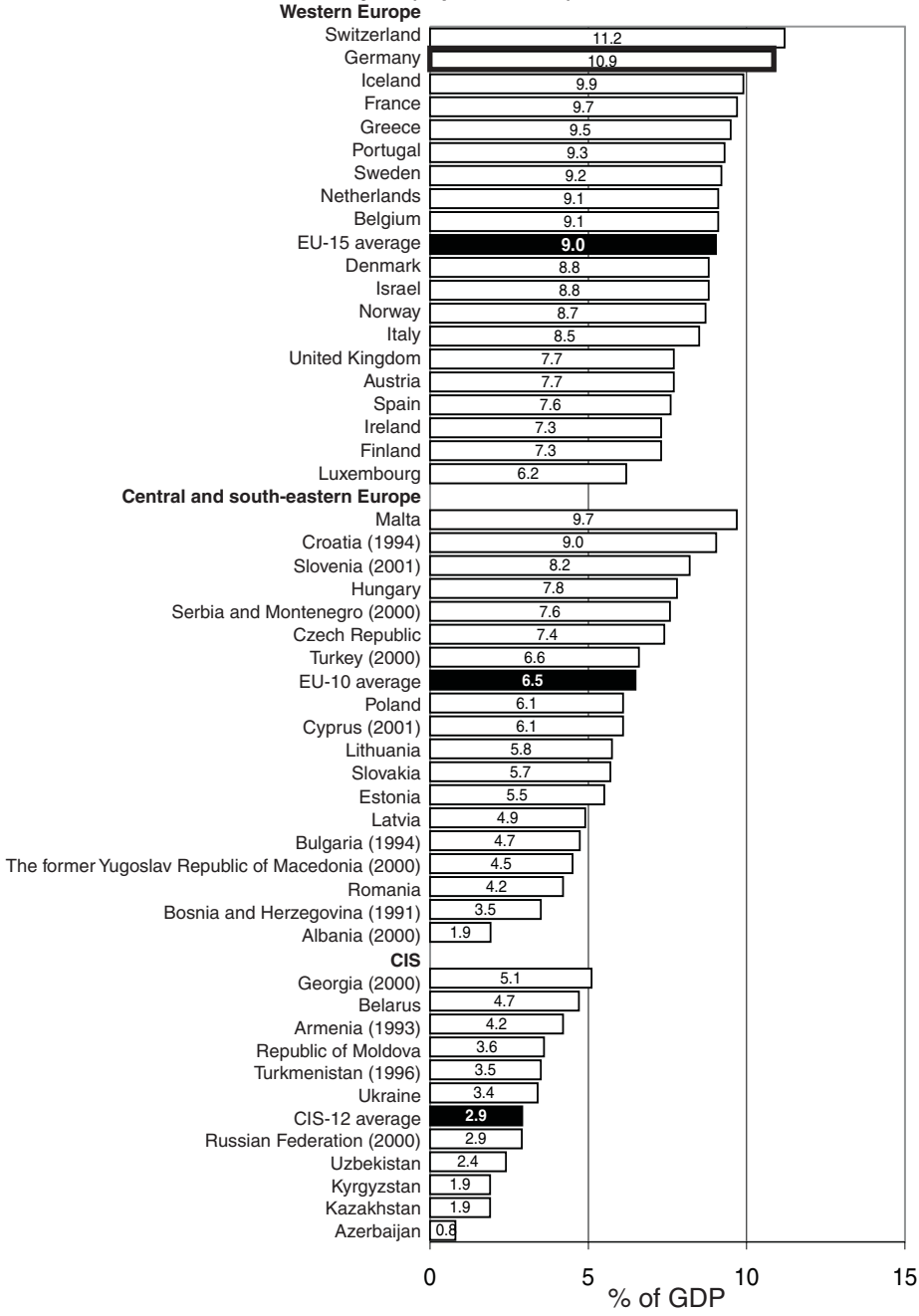
Source: WHO Regional Office for Europe health for all database, June 2004 (*5*).

whole. While the nominal increase of total expenditures was 38.5% between 1992 and 2001, the real increase was 20% if the GDP deflator was applied, 15% when the consumer price index was used and 12% when the health care price deflator was applied. The latter two reflect private expenditures on health related goods but not the prices in the public sector of health care.

The public share of total health expenditures, including governmental and various social insurance sources, has decreased slightly throughout the last decade (Tables 9,14) despite the introduction of new benefits as part of the statutory long-term care insurance. This trend reflects a relative increase of private sources and a decrease in tax spending. German national data (Table 9) are continuously around 3.5 percentage points lower than those of OECD or WHO (Table 14, Fig. 8). Depending on the source, Germany occupies a middle (Table 9) or relatively high (Table 14, Fig. 8) position in the public share of funding .

In the context of the overall economy, indicated as a share of GDP, the largest increase of public spending on health care occurred in the 1970s and in the early 1990s. Since 1995, public expenditures on health have remained stable at around 8.5% of GDP (Table 14), the highest value of any OECD country.

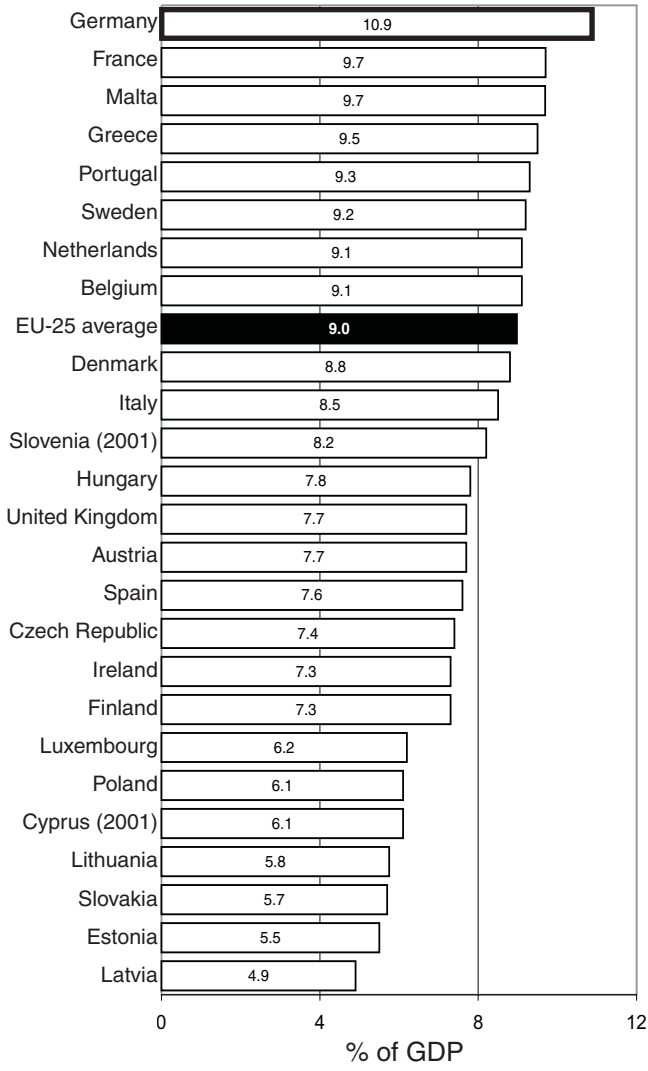
Fig. 6a. Total expenditure on health as a % of GDP in the WHO European Region, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.

Note: CIS: Commonwealth of independent states; EU: European Union; EU-10 average: for new member states after 1 May 2004; EU-15 average: for member states prior to 1 May 2004. Countries without data not included.

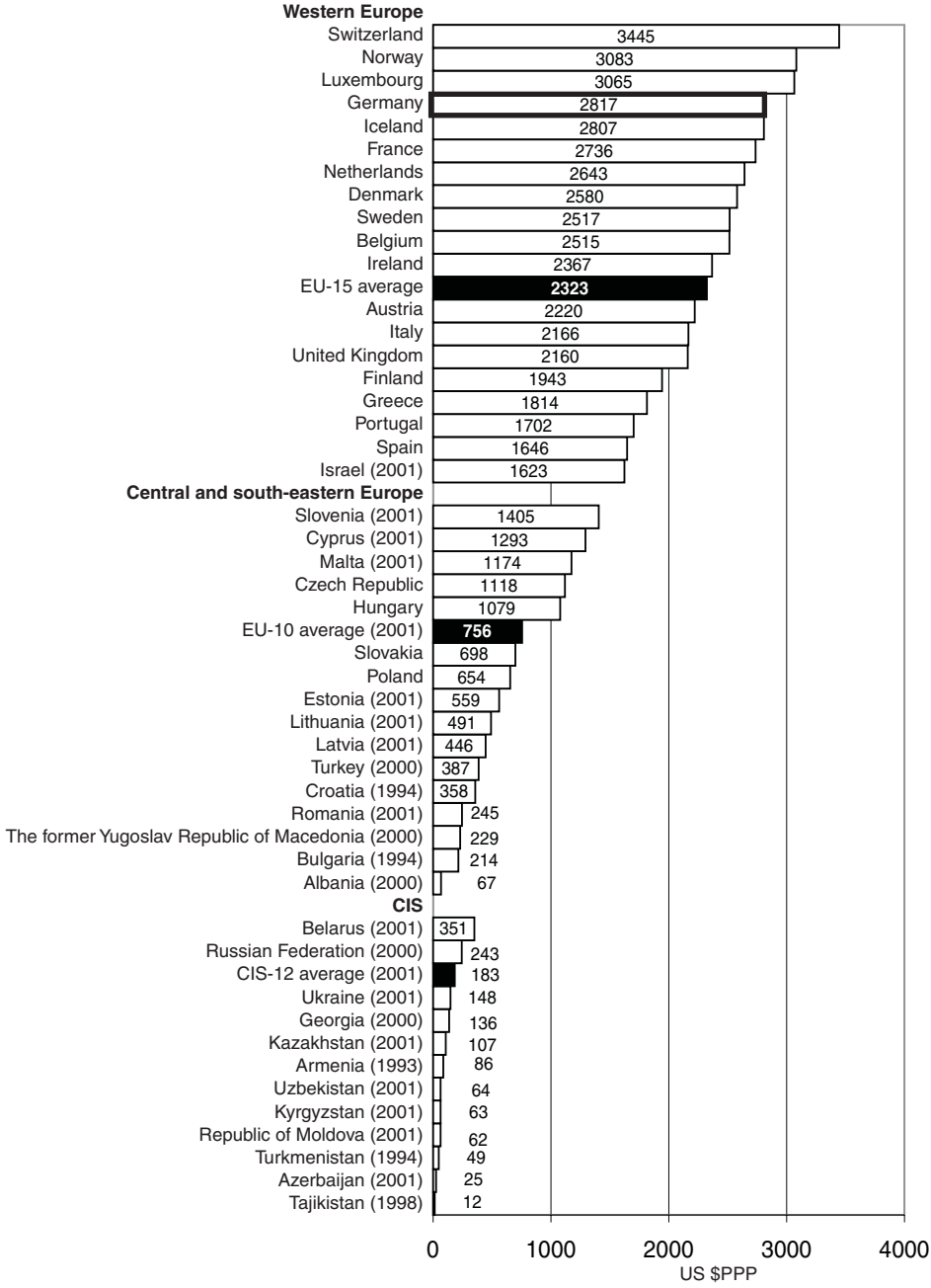
Fig. 6b. Total expenditure on health as a % of GDP in the European Union, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.

Note: EU: European Union; EU-25 average: all member states. Countries without data not included.

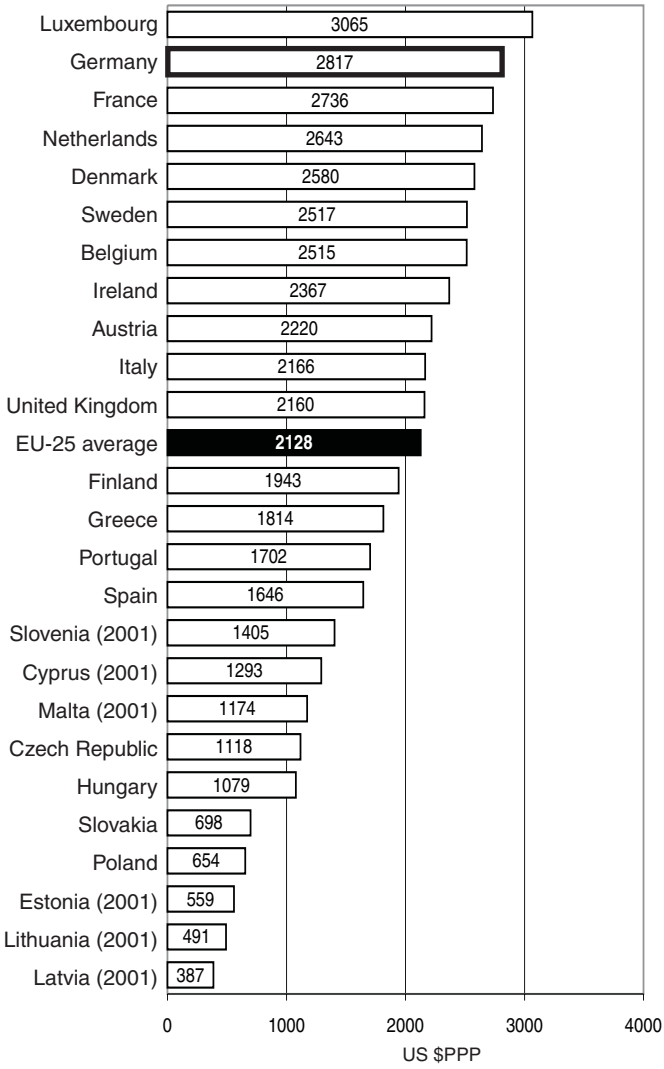
Fig. 7a. Health care expenditure in US $PPP per capita in the WHO European Region, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.

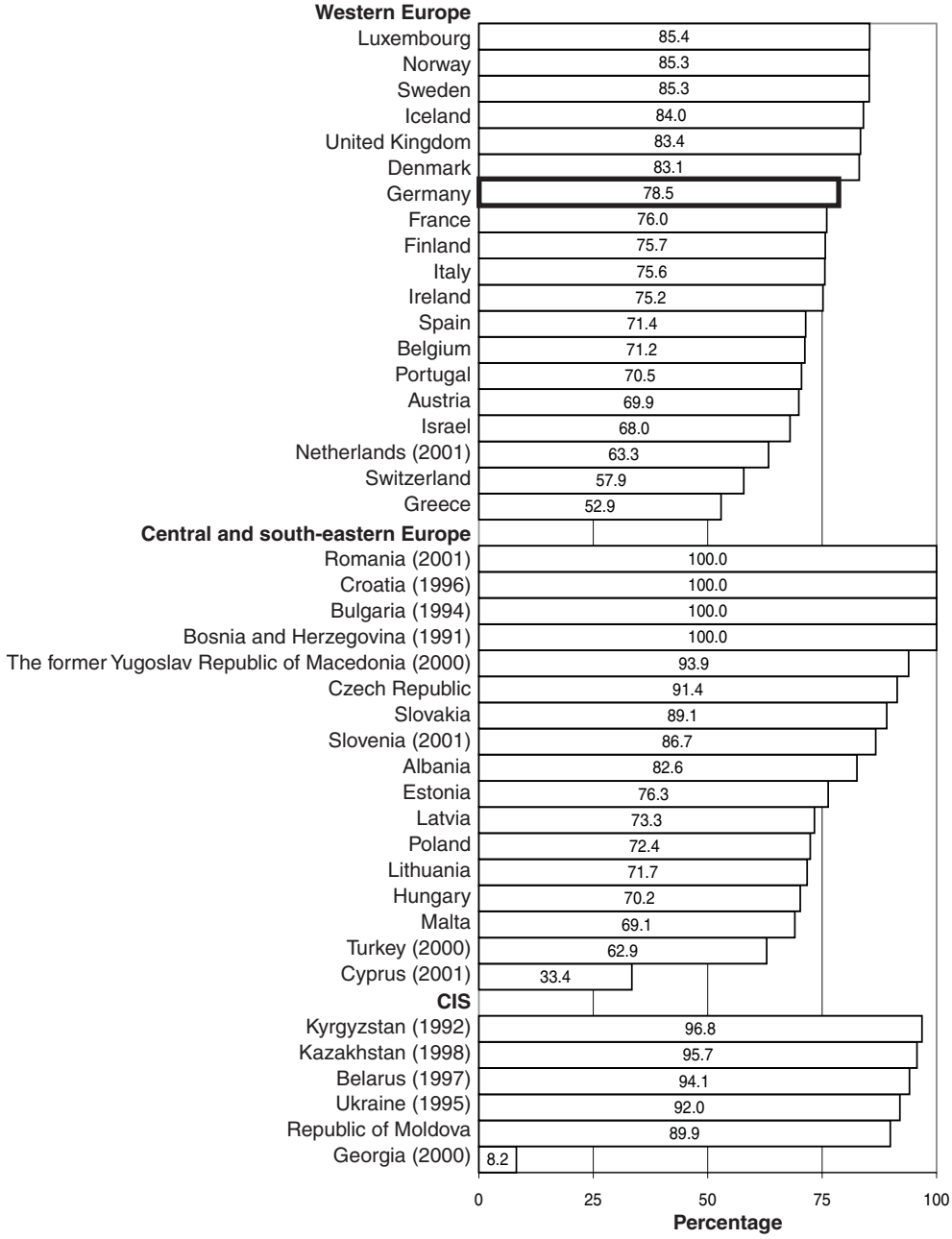
Note: CIS: Commonwealth of independent states; EU: European Union; EU-10 average: for new member states after 1 May 2004; EU-15 average: for member states prior to 1 May 2004; EU-25 average: for all member states. Countries without data not included.

Fig. 7b. Health care expenditure in US $PPP per capita in the European Union, 2002 or latest available year (in parentheses)



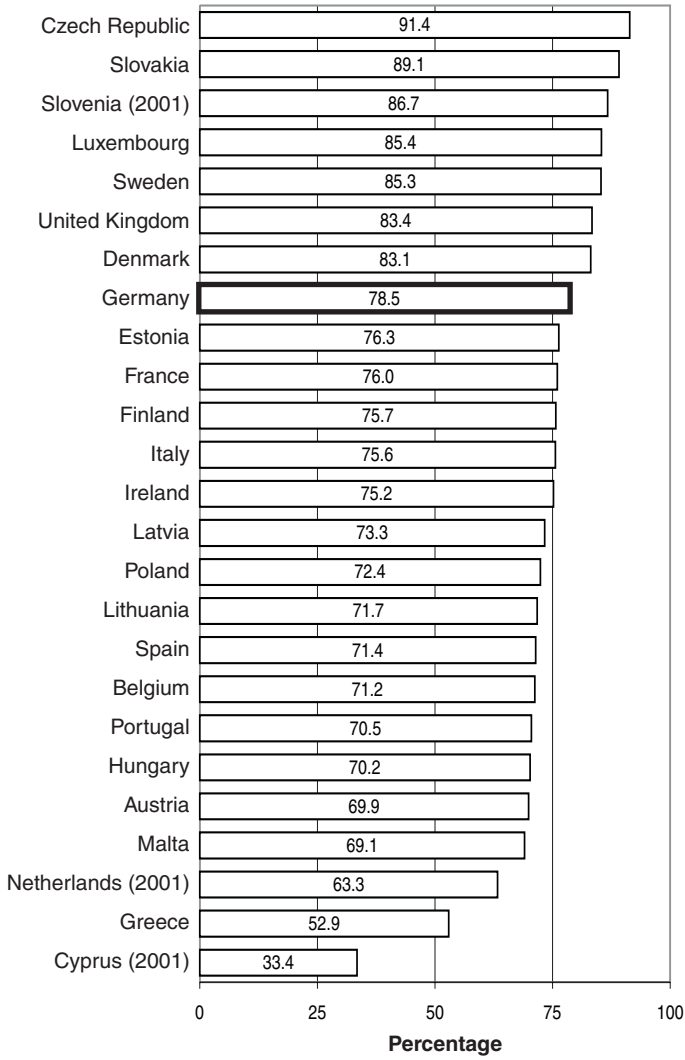
Source: WHO Regional Office for Europe health for all database, June 2004.
Note: EU: European Union; EU-25 average: all member states.

Fig. 8a. Health care expenditure from public sources as a percentage of total health care expenditure in countries in the WHO European Region, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.
Note: CIS: Commonwealth of independent states; countries without data not included.

Fig. 8b. Health care expenditure from public sources as a percentage of total health care expenditure in countries in the European Union, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.
Note: EU: European Union; EU-25 average: for all member states.

Table 15. Total and SHI expenditures on health by institution as a share of GDP (%) by type of service, 1992–2002

	1992	1994	1996	1998	1999	2000	2001	2002
SHI expenditure	6.14	6.20	6.36	6.13	6.15	6.13	6.21	6.32
Inpatient institutions	2.31	2.49	2.52	2.52	2.48	2.47	2.44	2.47
– Acute hospitals	2.21	2.37	2.37	2.38	2.34	2.32	2.30	2.33
Ambulatory institutions	3.26	3.11	3.28	3.12	3.16	3.16	3.25	3.31
– physician offices	1.07	1.11	1.13	1.12	1.12	1.12	1.11	1.11
– pharmacies	1.03	0.86	0.93	0.89	0.94	0.95	1.03	1.07
Rescue and emergency providers	0.06	0.08	0.08	0.08	0.09	0.09	0.09	0.09
Administration[a]	0.35	0.35	0.36	0.35	0.36	0.36	0.37	0.38
Outside the country	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total expenditure	10.1	10.4	11.1	10.8	10.8	10.8	11.0	11.1
Inpatient institutions	3.89	4.19	4.29	4.23	4.22	4.20	4.20	4.25
– Acute hospitals	2.88	3.07	3.05	3.08	3.04	3.01	3.00	3.02
Ambulatory institutions	4.70	4.64	5.01	4.94	4.96	4.95	5.08	5.14
– physician offices	1.36	1.42	1.46	1.48	1.49	1.48	1.49	1.49
– pharmacies	1.40	1.27	1.36	1.38	1.40	1.40	1.49	1.53
Rescue and emergency providers	0.08	0.10	0.10	0.10	0.10	0.10	0.11	0.11
Administration[a]	0.54	0.56	0.60	0.61	0.62	0.61	0.62	0.65
Outside the country	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Source: authors' calculations based on Federal Statistical Office, 2004 *(12).*

Note: [a] includes expenditures of payers, expenditures of providers are part of reimbursement for health services/products; expenditures of patient organizations or governmental agencies are not included (except disease management administration which is paid by sickness funds).

Structure of health care expenditure

The allocation of resources within the overall health care budget showed some distinct features and trends between 1992 and 2002 (Table 15). While total nominal health expenditure increased by 39%, spending on medical goods increased by 41% and spending on services by 30%. Among the latter the largest increase of 121% was seen in nursing care following the introduction of statutory long-term care insurance in 1993 (see *Social care*).

Statutory health insurance expenditures developed close to the GDP but came to exceed GDP growth rate in 1996 and again in 2002. Table 15 shows, that, following an increase in the early 1990s, SHI expenditures on ambulatory physician services and acute hospital services even decreased since 1997 and 1998 respectively. In international comparison, spending on acute hospital care is low due to the strong ambulatory care sector offering almost all medical specialties *(45).*

In contrast to these highly controlled sectors of personal health services, SHI expenditures on pharmaceuticals increased above average, joint by smaller expenditure items like rescue services or administrative costs. Administrative costs differ substantially between the statutory and private sectors. In 2002, administration and marketing accounted for 6.1% of sickness funds' expenditures, as compared to 16.7% for private insurers *(42).*

Per capita expenditure in the eastern part has increased much more than in the western part, but is still lower than in the western part, particularly in personal health services, except in emergency care and home nursing care. In contrast pharmaceutical costs have even overtaken expenditure in the western part, partly due to the higher risk structure of the population and partly to the less rational prescribing of physicians in the eastern part (*18*).

Health care delivery system

A key feature of the health care delivery system in Germany is the clear institutional separation between (1) the public health services, (2) primary and secondary ambulatory care, and (3) hospital care, which has traditionally been confined to inpatient care. The following chapter is arranged accordingly. In separate sections, emergency care, hospital outpatient care, day-case surgery, and integrated care are accounted for.

Public health services

While the specific tasks of the public health services and the levels at which they are carried out differ among *Länder*, they generally include activities linked both to sovereign rights and care for selected groups, such as:

- surveillance of communicable diseases;
- health reporting;
- supervision of hospitals, institutions for ambulatory surgery and ambulatory practices of physicians and non-medical therapeutic professions;
- supervision of commercial activities involving food, pharmaceuticals and drugs;
- overseeing certain areas of environmental hygiene;
- physical examinations of school children and certain other groups;
- diagnostic and – in exceptional circumstances – therapeutic services for persons with specific communicable diseases including sexually transmittable diseases and tuberculosis;
- provision of community-oriented psychiatric services;

- health education and promotion;
- cooperation with and advice to other public agencies.

These functions are exerted by roughly 350 public health offices across Germany, which vary widely in size, structure and tasks. In 2000, 78 were run by state governments (in Bavaria and Hamburg), while 274 were run by municipalities in the other 14 *Länder*.

In the first decades of the Federal Republic's history, the *Länder* defended their responsibility for public health services against several attempts by the federal government to extend its influence in this sector. Originally, immunizations, mass screening for tuberculosis and other diseases as well as health education and counselling were in the hands of the public health services. Since the 1970s, however, the rules of the Social Code Book have been extended to include many of the individual preventive services that were transferred to office-based physicians. Before 1970, only antenatal care was included in the sickness funds' benefit package. Since 1971, screening for cancer has become a benefit for women over 20 years old and men over 45. At the same time, regular check-ups for children under the age of four were introduced (and extended to children under the age of six in 1989 and to adolescents in 1997). Also in 1989, group dental preventive care for children under 12 and individual dental preventive care for 12- to 20-year-olds became sickness fund benefits; individual preventive care was extended to 6 to 20-year-olds in 1993. Regular health check-ups such as screening for cardiovascular and renal diseases and diabetes for sickness fund members over 35 were also introduced in 1989.

Health promotion was made mandatory for sickness funds in 1989, was eliminated in 1996 and reintroduced in a modified form in 2000. Since 2003, the existing cancer-screening benefits covered by SHI (cervix/genitals, breast, skin, rectum/colon, prostate) have been extended to cover colonoscopy (two tests, after age 55 and 65) as an alternative to stool-testing and a systematic mammography screening programme for women aged 50–69.

The legal mandate for case finding and check-ups means that office-based physicians are obliged to deliver these services as part of the regional budget for physician services. For other services the physicians were able to negotiate fees with the sickness funds. Thus, preventive services are now delivered under the same regulations as curative services, meaning their exact definition is subject to negotiations between the sickness funds and the physicians' associations. The current directives of the Federal Joint Committee on preventive services include clinical and lab services for screening and information about test results and prognosis, while health education is still given low priority in the reimbursement and documentation requirements.

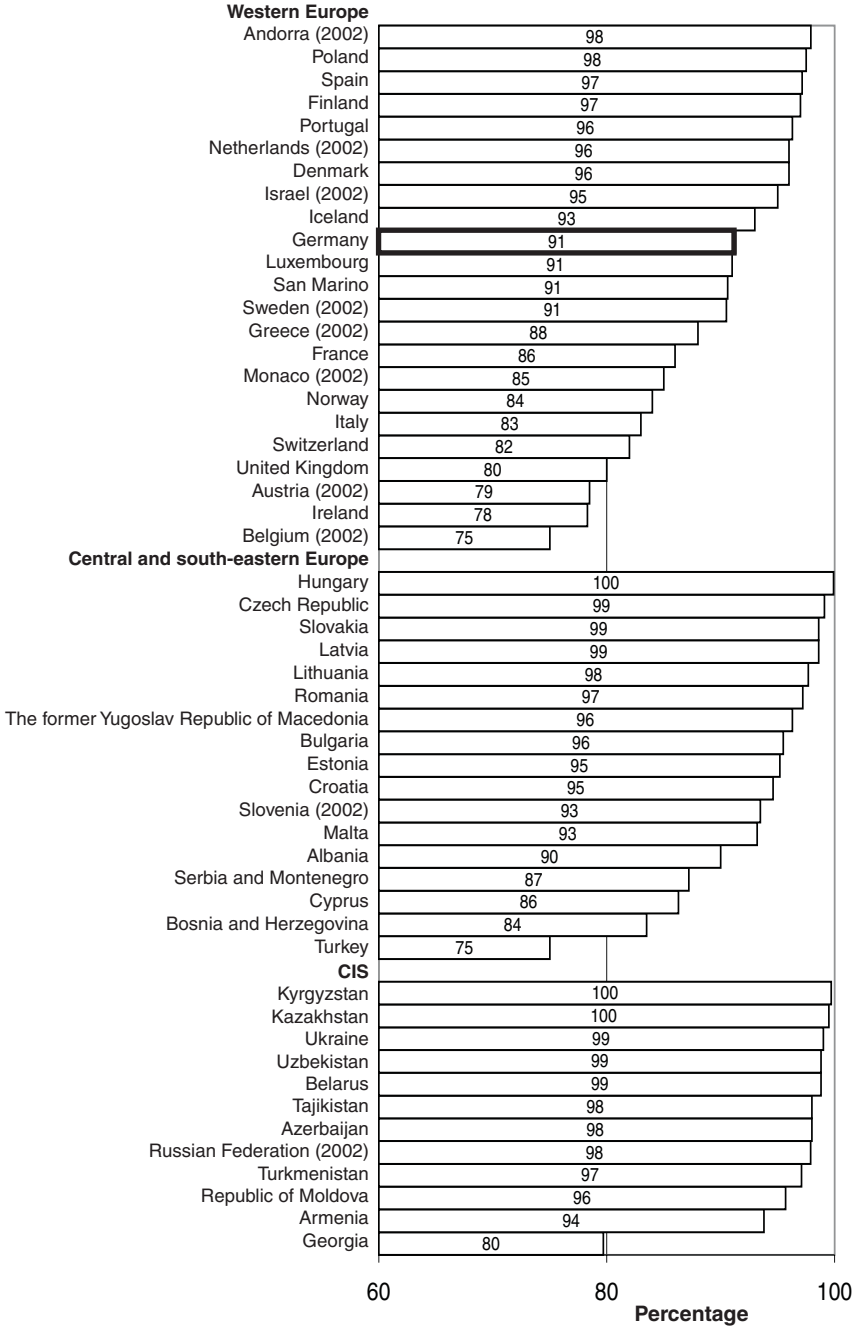
The shift in responsibilities for immunizations from public health offices to physicians' practices has resulted in immunization rates that are rather low by international standards (Fig. 9). Although vaccination rates of children have improved in recent years (Table 2), immunization is still an area of under-provision *(46,47)*. The average vaccination rate at school entry was 97% for tetanus, 74% for pertussis and 37% for hepatitis B between 1999 and 2001. Vaccinations are performed comparably late, and fewer than 25% of children receive the recommended second vaccination for mumps, measles and rubella. In addition, the influenza vaccination recommended for the elderly was received by only one third of people above the age of 69 years *(47)*. Since the enactment of the Infection Protection Act in 2000, school entry examinations include documentation of vaccination status but vaccinations may not be performed by the examining public health office physicians.

After many of health promotion and prevention services were taken from the public health service, it became much smaller and even less publicly visible. The number of physicians working in the public health service decreased from 4900 in 1970 (western part of Germany only) to 3300 in 1996 and about 3000 in 2002. Besides physicians, social workers (2000) and assistants of physicians or dentists (2000) were the largest professional groups working in public health offices in 2002, followed by administrative personnel, health supervisors, and dentists (*4*). From 1992 to 2002, total expenditure on public health offices remained virtually stable in nominal terms and thus decreased in real terms. In 2002, total expenditure on public health offices accounted for €2.0 billion or 0.09% of GDP compared to €1.9 billion and a GDP share of 0.12% in 1992.

Since 2000, the public health services' functions in controlling communicable diseases have been reorganized according to the long-sought Infection Protection Act. The surveillance procedures were streamlined and essentially centralized at the Federal Institute for Communicable and Non-Communicable Diseases, the Robert Koch Institute, an agency to better evaluate and inform the public about infectious diseases and cooperate with European disease-control agencies. Besides supervising hygienic standards of hospitals, public health offices also check hygienic standards in practices of ambulatory physicians, dentists and other health professionals. Hospitals and ambulatory surgery facilities are now required to report nosocomial infections and multi-resistant microbes, with recommendations for improving the situation. The Robert Koch Institute collects their data as part of an anonymous benchmarking, publishes the aggregate results and provides feedback to individual institutions (see *Organizational structure of the health care system*).

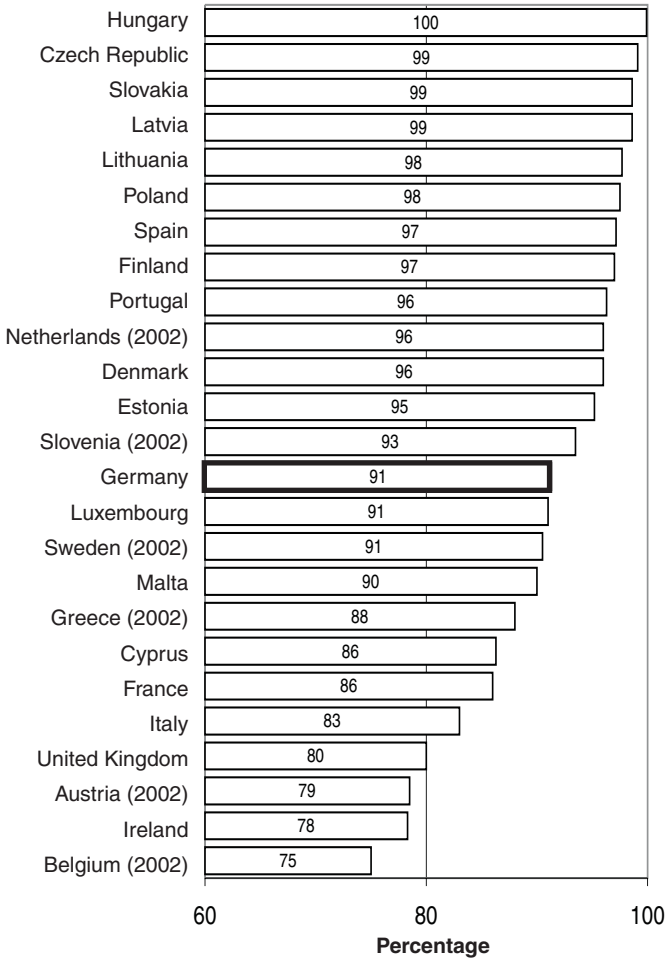
According the Infection Protection Act, not only hospitals but all types of shared facilities including homes, schools, and prisons must provide hygienic

Fig. 9a. Levels of immunization for measles in the WHO European Region, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.
Note: CIS: Commonwealth of independent states; countries without data not included.

Fig. 9b. Levels of immunization for measles in the European Union, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.
Note: Countries without data not included.

plans and are subject to the supervision of public health offices. People admitted to homes for the elderly, homeless or asylum-seekers must present a health certificate including X-ray.

The well-proved voluntary and educational standards for HIV are applied to all sexually-transmittable diseases while former, more strict regulations were abolished. Public health offices are required to strengthen their counselling services and to provide diagnostic services and treatment in certain cases, including for example non-compliant tuberculosis patients.

Some state public health services have initiated conferences bringing together a broad variety of providers, payers, and self-help groups in order to agree on health targets and better coordinate prevention. In North Rhine-Westphalia, health conferences have been established through legislation. Several public health offices have also introduced municipal conferences.

Another forum for improving cooperation among public health services, office-based physicians, policy-makers and many other stake-holders has been established at the federal level. The German Forum for Prevention and Health Pro motion was founded in July 2002 following stake-holder initiatives at the federal level since 2000 to define health targets and debate ways to strengthen prevention in round-table discussions. The target of the forum's 41 institutional members is to actively strengthen prevention and health promotion, to promote the development of broad preventive programmes and information and to establish sustainable organizational structures capable of fund-raising. Priority areas of activity are: health promotion in kindergarten, schools and workplaces, prevention in old age and a comprehensive programme to prevent cardiovascular diseases (see *Health care reforms*).

Primary and secondary ambulatory care

Ambulatory health care is mainly provided by private for-profit providers, including physicians, dentists, pharmacists, physiotherapists, speech and language therapists, occupational therapists, podologists, and technical professions (see *Human resources*). Acute care and long-term care are commonly provided by non-profit or for-profit providers employing nurses, assistant nurses, elderly caretakers, social workers and administrative staff (see *Social care*).

Patients have free choice of physicians, psychotherapists (since 1999), dentists, pharmacists, and nursing care providers. They may also choose other health professionals, however access to reimbursed care is available only upon referral by a physician. Family practitioners (about half of ambulatory physicians) are no gatekeepers in Germany, although their coordinating competencies have been strengthened in recent years.

Of the 304 100 active physicians in 2003, 132 400 worked in ambulatory care. Of these, a minority of 6600 practised solely for private patients, while 117 600 worked as SHI-affiliated physicians (Table 16) and 8200 as salaried physician. The majority of physicians have solo practices; only around 25% share a practice. The practice premises, equipment and personnel are financed by the physicians. Depreciation of investments is sought through reimbursement

from sickness funds, private health insurers, and to a small but increasing degree by patients directly.

Solo practices are also the dominant form of ambulatory physician care in the eastern part, where during the GDR times until 1989 public polyclinics were the dominant deliverers of ambulatory services, in conjunction with local community dispensaries and company-based health care services. As part of the institutional transfer of the old FRG health care system into the new *Länder* in the eastern part, these forms of care were quickly given up in favour of entrepreneurial solo practices after reunification. Only few polyclinics continued to exist in the eastern part after reunification, initially on an exemption basis (see *Historical development*). Interdisciplinary care has been reintroduced from 2004 at "medical treatment centres", which may be owned by companies or independent professionals but have to be headed by a physician, and comply with regulations as members of regional physicians' associations.

Ambulatory physicians offer almost all specialties; the most frequent ones are listed in Table 16, together with their development since 1990. The table also provides information on two aspects linking the ambulatory and the hospital sector. First, around 5% of all office-based physicians have the right to treat patients inside the hospital. This is mainly the case for small surgical specialties in areas where the hospital has so few cases that a physician operating once or twice a week is sufficient. All other physicians transfer their patients to hospital physicians for inpatient treatment and receive them back after discharge (for example, post-surgical care is usually done by office-based physicians). Second, in addition to the office-based physicians, around 11 000 other physicians are accredited to treat ambulatory patients. These accredited physicians are mainly heads of hospital departments who are allowed to offer certain services or to treat patients during particular times (when practices are closed). Altogether 8% of all hospital physicians had the right to provide ambulatory care to SHI patients in 2002. On average, more than one internist and nearly one surgeon per general hospital had an ambulatory accreditation. The accredited hospital physicians accounted for 0.9% of all those involved in ambulatory SHI care. Taking reimbursement as a proxy for activity, they still provide around 2% of all ambulatory services (and the outpatient departments of the university hospitals around 5%).

Family physician and specialist physician care

The German health care system has traditionally no gatekeeping system; instead patients are free to select a sickness-fund-affiliated doctor of their choice. According to the Social Code Book (§76 SGB V), sickness fund members select a family physician who cannot be changed during the quarter relevant

for reimbursement of services for that patient. Since there is no mechanism to control or reinforce this "self-selected" gatekeeping, patients frequently choose office-based specialists directly.

Despite efforts by the federal government to improve the status of family practice in the ambulatory care sector, the number of office-based specialists has increased more rapidly than that of general practitioners over the past few decades, so that GPs dropped to less than 35% of all office-based physicians in 2002. However, since qualified internists and paediatricians practising as SHI-affiliated physicians had to decide whether to work as family physicians (*Hausärzte*) or as specialists (*Fachärzte*) (§ 73 SGB V), the ratio of specialist physicians to SHI-affiliated family physicians has increased in recent years. This also applies to internists or paediatricians starting a new practice. Family physicians and specialists have different reimbursable service profiles, different reimbursement pools and, from 2005, separate representation on the board and in the assembly of regional physicians' associations (see *Payment of physicians*).

Of the 116 065 SHI-affiliated physicians practising in 2002, 58 884 practised as family physicians (51%) and 57 221 as specialists (49%) (Table 16). Among the family physicians,

- 31 758 were qualified in general practice (physicians holding a specialist qualification in general practice)
- and 11 303 worked as practitioners (physicians without any specialist qualification practising family medicine).
- Furthermore, 10 336 internists (specialists in internal medicine)
- and 5447 paediatricians had opted to practise as family physicians.

Thus, in 2002, 94% of all SHI-affiliated paediatricians and 60% of all SHI-affiliated internists worked as family physicians following policy interventions to strengthen the professional influence and income of family physicians. While general practitioners and practitioners accounted for only 38% of all SHI-affiliated physicians, the inclusion of family internists and family paediatricians shifted the ratio of family physicians to 51% and specialist physicians to 49%. This ratio had been reached already in 1998 and has not changed since, but the share of family physicians is expected to decrease again due to higher retirement rates.

Altogether, the number of office-based SHI-affiliated physicians increased by 31% between 1990 – the baseline year of needs-formula based planning (Table 23) – and 2002, with trends varying widely by discipline. While the number of general practitioners and practitioners increased by 14%, the

number of all physicians with a specialist degree increased three times as much (Table 16).

From 1993, sickness funds were allowed to initiate pilot projects for gatekeeping systems and to offer their insured a bonus. However, few pilot projects were introduced and sustained due to various legal barriers, resistance of the regional physicians' associations, and extra costs in the gatekeeping pilots. Since 2004, sickness funds are obliged to offer the option to enrol in a "family physician care model", with a bonus for complying with the gatekeeping rules. The first project was negotiated by the regional sickness fund of Saxony-Anhalt and the regional physicians' association and the regional office of the Federal Family Physicians' Organization (BDA). All 1600 family physicians in the state take part, and all regional fund-insured people above the age of 18 may take part. Enrolees pay 50% of the physician visit user-fee and may expect shorter waiting times to see their family physician and support in arranging appointments with specialists.

The number of visits to ambulatory physicians has increased according to various surveys in the past decade. Between 1999 and 2002, the average rate of visits to office-based physicians was reported from 9.5 to 11.5 per year, varying by survey (*48*). Physician claims data for 2000 show that SHI-insured patients generated an average of 7.8 cases per year and thus saw an SHI-affiliated physician at least 7.8 times a year or more often since a "case" represents the first visit per quarter while all subsequent visits at the same physician are not reflected in the claims data. Data presented in Fig. 10 may rather underestimate actual outpatient utilization since physicians' claims data suggest a higher number of visits, including to outpatient department of hospitals.

Rescue and emergency care

There are substantial regional variations among the 16 *Länder* with respect to legislation, regulation, organization, purchasing, financing and delivery of after-hours care, rescue care and emergency care.

Ambulatory physicians provide the major part of urgent care during regular practice hours or during after-hour services in their practice. Home visits are provided by the vast majority of family physicians (*Hausärzte*) as part of their regular work and in rural areas also at outside regular hours. Only a few specialists offer home visits. After-hour services are coordinated by the regional physicians' associations. They include telephone counselling, practice visits and home visits. Increasingly, after-hour services are also offered by ambulatory physicians at hospitals in the interests of efficiency and good

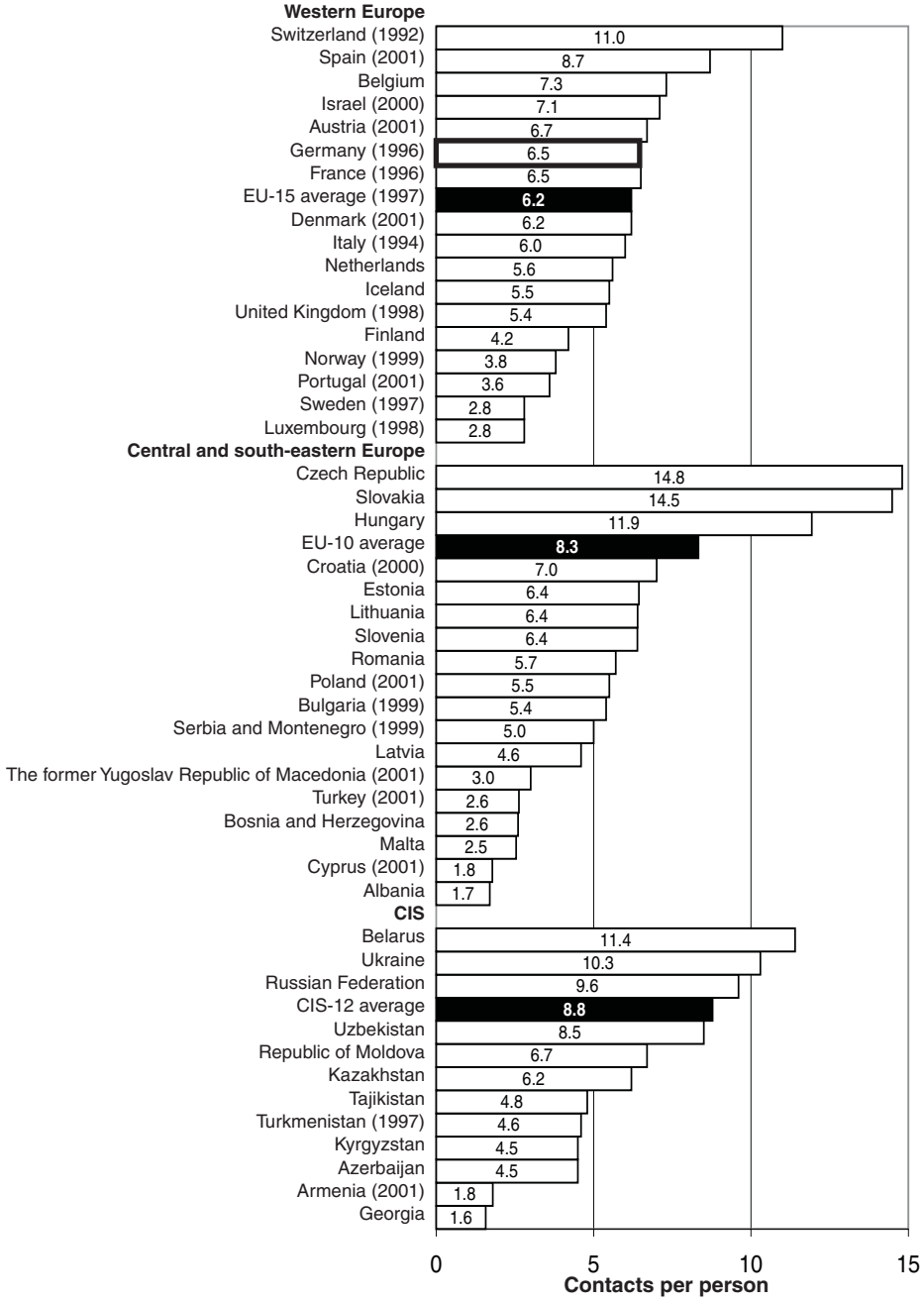
Table 16. Specialties and functions of physicians providing ambulatory care in SHI, 1990–2002

	SHI-affiliated physicians in private practice[b]				Hospital physicians
	in 1990	Increase 1990–2002	in 2002	of these: with a right to treat inpatients in 2002	with a right to treat SHI patients on ambulatory basis in 2002
Anaesthetists	508	490 %	2 491	[a]	1 085
Dermatologists	2 535	30 %	3 308	24	100
Ear-nose-throat physicians	2 967	32 %	3 926	1 509	158
Gynaecologists	7 306	33 %	9 702	1 451	868
Laboratory specialists	419	47 %	615	[a]	78
Neurologists/ Psychiatrists	3 228	56 %	5 049	18	213
Ophthalmologists	4 092	27 %	5 201	575	133
Orthopaedists	3 460	43 %	4 963	542	307
Psychotherapists	842	382 %	3 223	0	213
Radiologists	1 439	68 %	2 424	[a]	512
Surgeons	2 539	42 %	3 601	534	1 832
Urologists	1 744	46 %	2 552	477	220
Specialist internists	12 720	35%	6 843	265	2 668
Family internists			10 336	81	n. a.
Specialist paediatricians	5 128	13%	322	28	784
Family paediatricians			5 447	19	n. a.
All physicians with a specialist degree (incl. Other specialists)	50 567	44%	73 004	5 823	13 974
Specialist physicians[c]	n.a.	n.a.	57 221	5 723	10 522
General practitioners	38 244	14 %	31 758	73	69
Practitioners			11 303	18	286
Family physicians[d]	n.a.	n.a.	58 844	191	355
Total (family physicians + specialist physicians)	88 811	31 %	116 065	5 914	10 877

Source: Federal Association of SHI Physicians, 2004, 1999 *(49,50)*.

Note: n.a. = not applicable; [a] very small number, incl. in all specialists and total; [b] excluding physicians employed with office-based physicians; [c] all specialists excluding those practising as family internist or family paediatrician; [d] incl. family internists and family paediatricians.

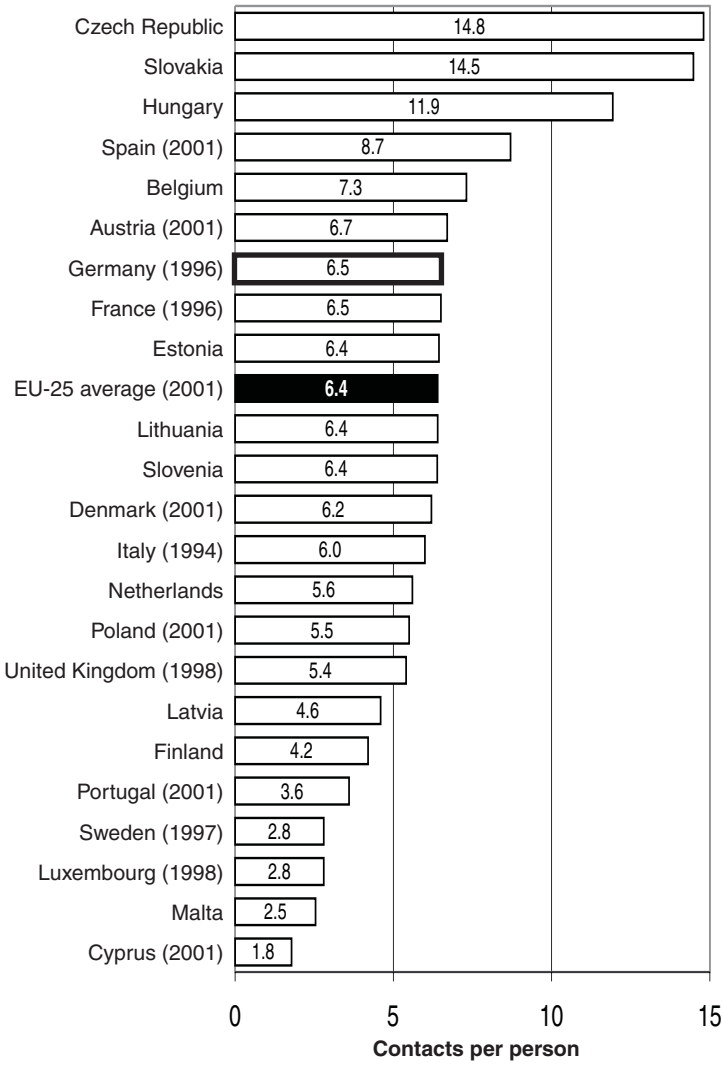
Fig. 10a. Outpatient contacts per person in the WHO European Region, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.

Note: CIS: Commonwealth of independent states; EU: European Union; EU-10 average: for new member states after 1 May 2004; EU-15 average: for member states prior to 1 May 2004; countries without data not included.

Fig. 10b. Outpatient contacts per person in the European Union, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.
Note: EU: European Union; EU-25 average: for all member states. Countries without data not included.

hospital-community relations. Patient satisfaction with the accessibility of family practitioners is relatively high in Germany compared to other European countries, and home visits seem to be an important factor *(51).* In rural areas individual ambulatory physicians also take part in emergency physicians' services in close cooperation with rescue organizations. However, their role in emergency services has been decreasing.

Emergency physician care is integrated with other types of rescue services, including non-emergency rescue, fire protection and technical security. Often non-rescue patient transport is also part of the rescue package. There are about 360 control and coordination centres for rescue care in Germany, with uniform telephone numbers and criteria to differentiate between the need for rescue care or emergency physician care. This integration of rescue services outside the hospital somehow hinders the full integration of an emergency care chain. Outside the hospital, mechanisms of regulation, provision and financing are different from emergency care in the hospital outpatient or inpatient departments. Outside the hospital, emergency rescue care is usually regulated by ministries of interior and often integrated with fire and technical security services. Emergency care at hospitals is regulated, planned and supervised by the ministries responsible for health at the *Länder* level.

Since the second SHI Restructuring Act (1997), planning for emergency physician service capacities has been clearly allocated to the *Länder,* unless state legislation explicitly delegates the duty to regional physicians' association (as in Bavaria). Non-emergency after-hour care is still delegated to the regional physicians' associations and is thus supervised by the state ministries responsible for health.

Most *Länder* (except for Berlin, for example) delegate the organization and delivery of rescue care to the municipalities. Within the framework of the state rescue law, local communities may accredit, regulate and plan for capacities of integrated public providers (mostly integrated with fire protection) as well as contracted private rescue providers. Among private providers, priority is clearly given to non-profit providers over for-profit providers in legislation as well as practice. Non-emergency transport is usually out-sourced by municipalities. Private for-profit entrepreneurs play a bigger role here than in the emergency care market, but welfare organizations still have priority in most states over private for-profit providers.

Financing rescue care follows a dual principle: while recurrent expenditures are financed by SHI or private health insurance or out-of pocket, capital financing is mainly a task of the *Länder*. For hospital-based emergency care, the general rules of hospital financing and planning apply, led by health and education ministries. For providers outside the hospitals the interior ministries

of interior are responsible for planning and financing. With respect to capital financing, there are great variations among states: Baden-Württemberg finances investments in buildings, technical and organizational development if these are part of the rescue plan. Bavaria pays for transport vehicles and major technical equipment. In North Rhine-Westphalia municipalities finance investments within their field of responsibility. In Brandenburg depreciation of investment costs is explicitly enacted as part of (negotiated) service prices.

Recurrent expenditures are financed by SHI or – to a lesser extent – by private health insurance. But contracting between SHI and providers outside the hospital is still rare. Instead a pure reimbursement system on a fee-for-service basis is in place, which may have been crucial in the increase of SHI expenditures on "transport", an item which includes regular patient transfers as well as ambulance-based emergency and rescue care (Table 15). Co-payments have traditionally applied to non-emergency transport services, but since 2004, they also relate to emergency transport and services at the hospital. In addition, non-rescue patient transports have been excluded from SHI. A few exceptions have been outlined by the Federal Joint Committee, including the transport of patients with certain severe disabilities or in need of challenging ambulatory treatments, for example chemotherapy and haemodialysis.Time standards for reaching patients are established in all states; however, they are only specified in the legislative text (amended 1999) of Brandenburg (arrival within 15 minutes).

Secondary and tertiary hospital care

German hospitals have traditionally concentrated on inpatient care; sectoral borders to ambulatory were strict. While acute hospitals in the hospital plan provide outpatient emergency care, only university hospitals have formal outpatient facilities. Day surgery and ambulatory pre- and post-hospital care have become other fields of increasing activity. Since 2004, hospitals have been granted additional competencies to provide care to outpatients that require highly specialized care on a regular basis. Also, participation in integrated care models offers new opportunities to become active in ambulatory care (see the separate sections below).

Inpatient care

Planning and regulation of treatment facilities for inpatients are done by ministries of health and/or science at *Länder* level based on the federal legal

framework of the Hospital Financing Act (see *Payment of hospitals*). This applies to highly specialized care (for example neurosurgery) as well as secondary in-patient care. Planning units are institutions, departments and, in certain *Länder*, beds. Contents and methods of the hospital plans differ substantially among states. Regulation of capacities is planned according to the principles of need (for specific departments per municipality or county) and performance, but criteria differ substantially. In recent years several administrations have sought counselling from research institutes for defining need and interpreting performance. Several states define capacities as sufficient if the departments available for one specialty in a given municipality or county had an occupancy rate of 80% or below. Sickness funds and providers have a say at *Länder* hospital committees, but in the end decisions are taken at the politico-administrative level. In addition, funds have the right to collectively de-contract a hospital under certain conditions, but in practice this right is rarely used.

In 2002, there were 2221 hospitals with 547 284 beds (6.7 beds per 1000). Of these, the 274 psychiatric hospitals had 42 600 beds and the 1898 general (or acute) hospitals had 504 684 beds (Table 18). Of the latter 712 were publicly owned, 758 were private non-profit and 428 private for-profit hospitals, with bed shares of 54%, 38% and 8% respectively (see Table 8). Beds in university hospitals accounted for 8.3% of all general and psychiatric hospital beds; beds in hospitals enlisted in state hospital plans for 88.7%; beds in hospitals additionally contracted by sickness funds for 1.5% and beds in hospitals without such contracts – that is, purely for privately insured patients – for 1.5%. That is, 97% were enlisted in the hospital plans and entitled to investments from the *Länder* independent of hospital ownership (see *Decentralization of the health care system*). But since listed hospitals have no right to have the financing of (all) the requested investments secured, they often do not receive investments within the requested time. Decisions on resource allocation depend on political priorities and the amount of finance available for hospital investments. Hospital beds per capita and investments per bed vary among *Länder* (see Table 28). Private for-profit hospitals are entitled by the Hospitals Financing Act to depreciate parts of their investments via the sickness funds' reimbursement of recurrent expenditures (see *Payment of hospitals*).

Besides acute care, 1343 institutions with 184 635 beds (2.2 beds per 1000) were dedicated to preventive and rehabilitative care in 2002. Compared to general hospitals, ownership is very different for preventive and rehabilitative institutions with 17%, 16% and 67% of beds being public, non-profit and for-profit respectively.

Table 17 shows a substantial shift in the provision of inpatient care. While the number of beds in homes for elderly and long-term care has more than doubled between 1991 and 2001, acute and psychiatric hospital care have

been decreased. The corresponding decrease of total hospital beds was partly offset by an increase in rehabilitative hospitals (for more details see below and in *Social care*).

In 2002, the general and psychiatric hospitals' workforce amounted to 1038 million people or 850 400 full-time equivalents (of which 12% were physicians), around 4% less than the employment peak reached in 1995 *(3)*. Compared with 1991, the total of 1 065 million general hospital employees was virtually the same. Yet the structure of employment shifted during this period. While maintenance and technical employees decreased by 28% due to outsourcing, the number of physicians increased by 13%, the number of nurses by 6%, personnel in medical technical service by 9%, and in functional services (theatre, day care wards) by 11% *(44)*. The average number of nurses per acute bed increased from 0.43 in 1992 to 0.48 in 2001*(2)*.

Despite this increase in health care personnel, German acute hospitals still have relatively low ratios of hospital employees, nurses and physicians per bed compared to the EU-15 average or other OECD countries *(2,45)*. On average a full-time working physician had to care for 4 occupied beds; this ratio varied between 4.7 in Brandenburg and 2.9 in Berlin, with a higher density of university

Table 17. Number of beds in hospitals and homes (per 100 000 inhabitants), 1991–2001

	1991	1993	1995	1997	1998	1999	2000	2001
Hospital beds	1 012	966	968	938	930	920	912	901
Acute hospital beds	748	713	691	659	651	644	636	627
Psychiatric hospital beds	154	132	132	127	127	127	128	127
Nursing & elderly home beds	337	370	370	443	–	786	–	819

Source: WHO Regional Office for Europe health for all database, 2004 *(5)*.

hospitals. The ratio of physician full-time equivalents per 10 000 hospital cases was 66 in 2001, varying between 58 in Brandenburg and Lower-Saxony and 97 in Berlin *(3)*.

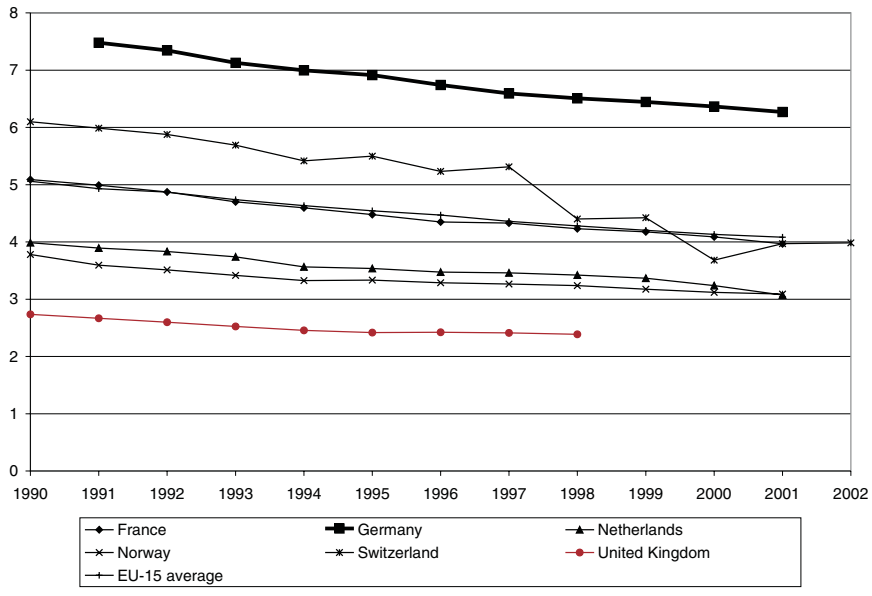
Until 1992, the number of hospital beds, inpatient cases, and lengths of stay had changed gradually and had been foreseen by all parties involved. The decreasing number of acute hospital beds was largely compensated by beds in newly opened preventive and rehabilitative institutions. The shorter lengths of stay were almost equalled by the increasing number of inpatient cases, so that both the occupancy rate and the number of bed days per capita had remained stable. The first hospitals faced with restructuring initiatives were those in the East after reunification, since they had to adapt to the Western standards of infrastructure, planning and financing.

Although acute hospital beds have been reduced substantially throughout the last decade, the number of acute hospital beds is still about 50% higher than the EU-15 average (6.3 vs 4.1 per 1000 in 2001) since capacities were decreased in other EU countries as well (Fig. 11, Fig. 12).

Since 1993, hospitals in the West and in the East have been faced with a rapidly changing environment with challenges through fixed budgets, the threat of deficits, ambulatory surgery, the introduction of prospective payments from 1996, and the introduction of DRGs as the virtually sole system of payment (see *Payment of hospitals*). This has changed utilization much more rapidly than previously.

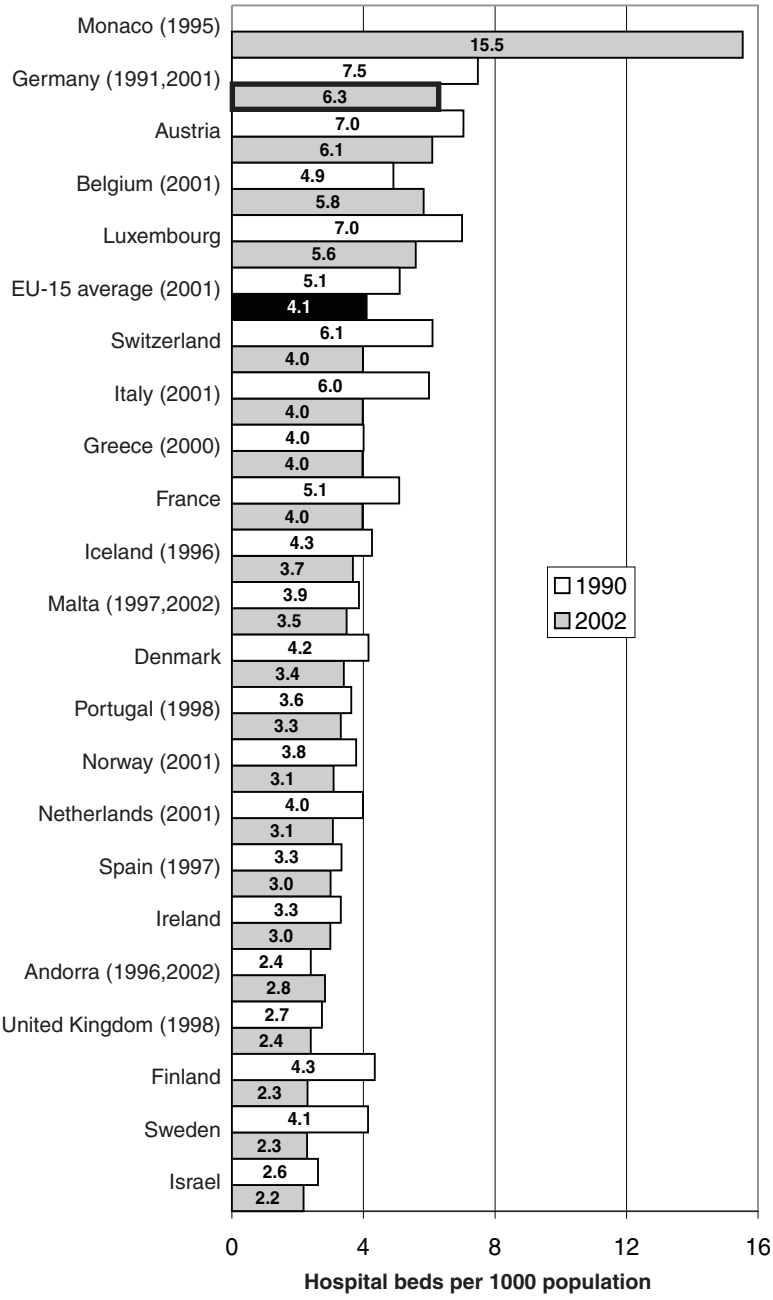
Table 18 provides more detailed data on the structure and utilization of acute care in western and eastern Germany. It is apparent that the initially different figures in the eastern part approached those in the western quite rapidly. Table 19 shows the same for preventive and rehabilitative institutions, where the adaptation process was even more dramatic. It also shows the considerable problems in the later part of the 1990s, when a change in social security laws cut preventive and rehabilitative benefits. The sector has recovered to a large

Fig. 11. Number of acute hospital beds in Germany, selected countries and EU-15 average, 1990–2002 (per 1000 population)



Source: WHO Regional Office for Europe Health for all database, June 2004 (*5*).

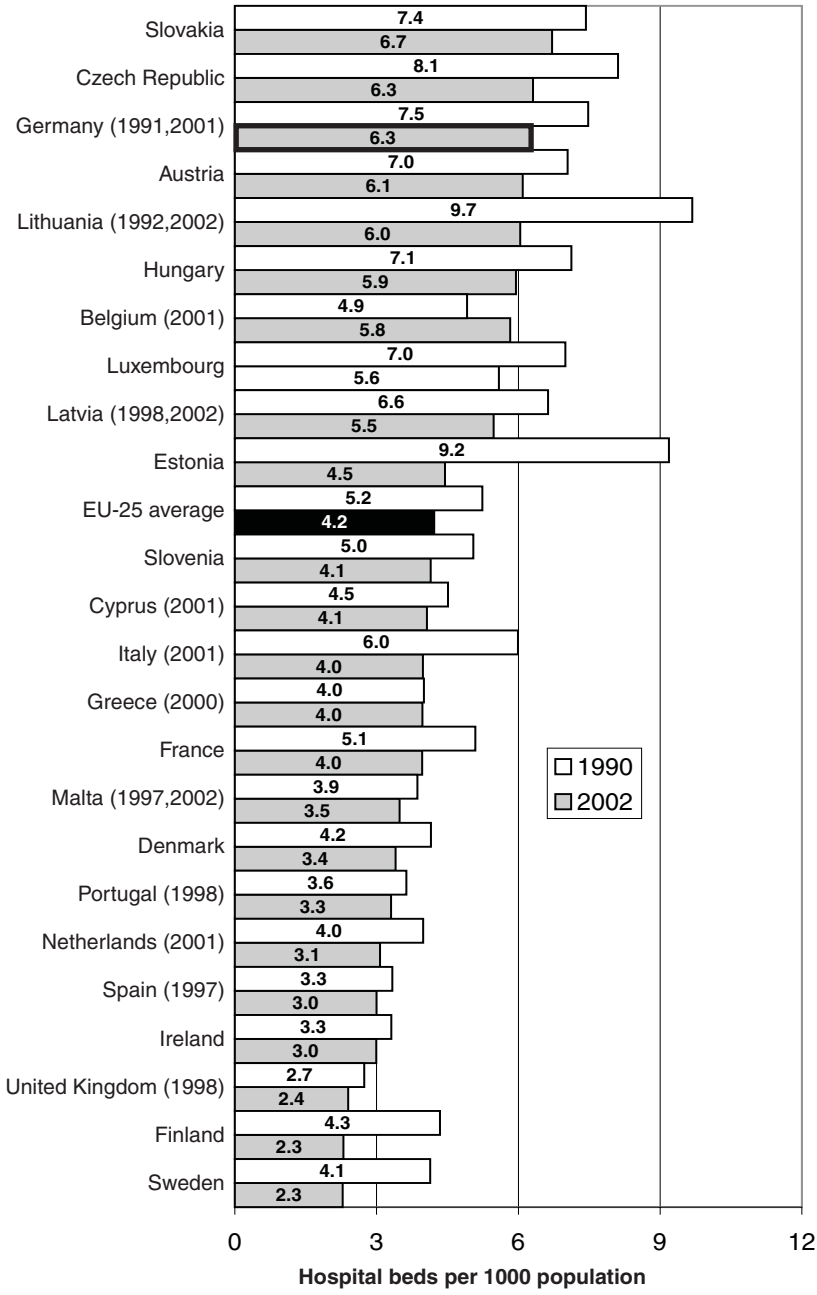
Fig. 12a. Hospital beds in acute hospitals per 1000 population in western Europe, 1990 and 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.

Note: EU: European Union; EU-15 average: for member states prior to 1 May 2004; countries without data not included.

Fig. 12b. Hospital beds in acute hospitals per 1000 population in the European Union, 1990 and 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.

Note: EU: European Union; EU-25 average: for all member states; countries without data not included.

extent, however. These developments in the hospital sector as well as in the preventive/rehabilitative sector are much less visible if data are combined (see Table 17).

Between 1991 and 2001, the average length of stay in general and psychiatric hospitals decreased substantially, from to 14.3 days to 9.8 days in the western part and from 16.1 to 9.7 days in the eastern part (Table 18). In preventive and rehabilitative institutions, it fell only by 22% and 23% respectively (Table 19). During the same period, the number of general and psychiatric hospital cases per 1000 population rose by 11%, to 20 cases per 100 inhabitants in the western part and by 38% to 21 cases per 100 inhabitants in the eastern part, resulting in a decrease in bed days in both parts of the country. Occupancy rates have decreased in the western part and increased in the eastern part (Table 18). In preventive and rehabilitative institutions, occupancy rates in the eastern part had reached the western highpoint of 1995 before occupancy rates in both parts of the country dropped sharply as a result of the Health Insurance Contribution Rate Exoneration Act. In summary, after a remarkably short time, almost all structure, utilization, and expenditure data look very similar in both parts of the country (see East/West-ratios in Tables 18 and 19).

These data exclude cases admitted only for a few hours. If these short-term cases are included, as has become standard since 2002, the number of admissions to general or psychiatric hospitals has increased from 1822 per 10 000 inhabitants in 1991 to 2104 in 2001 and 2114 in 2002. Despite the increase of admissions and the decrease of beds (from 83.2 per 1000 to 67.1 and 66.4) the occupancy rate decreased from 84.1% to 81.1% and 80.1% which is largely due to a decrease in the average length of stay from 14.0 days to 9.4 days and 9.2 days respectively *(52)*.

Similar to most EU countries, the admission rate to acute (general) hospitals has increased during the last two decades. The rate of 20.5 per 100 population, documented in 2001, however, ranks above the EU-15 average of 18.1 admissions per 100 population. At the same time, average length of stay (9.3 days) and occupancy rates (80.1%) are still higher than in most other EU countries with an average of (7.0 days and 77% respectively) (Table 20).

Hospital outpatient care

Except for university hospitals, hospitals have traditionally provided inpatient care only. But their scope to provide ambulatory care has been extended increasingly in the past decade. Since 2003, hospitals may treat patients with diseases requiring highly specialized treatment on an ongoing basis. Since 2004, hospitals may also provide care in specialties for which underprovision of care

Table 18. Inpatient structure and utilization data I: general and psychiatric hospitals in western and eastern parts of Germany, 1991–2001

	beds/1000			cases/1000			length of stay (days)			occupancy rate (%)		
	West	East	E/W ratio	West	East	E/W ratio	West	East	E/W ratio	West	East	E/W ratio
1991	8.19	8.89	1.09	179.3	151.1	0.84	14.3	16.1	1.09	86.0	74.9	0.87
1992	8.02	8.08	1.01	180.4	159.4	0.88	13.9	14.2	1.02	85.3	76.0	0.89
1993	7.80	7.50	0.96	180.3	162.9	0.90	13.2	13.0	0.98	83.9	77.4	0.92
1994	7.68	7.16	0.93	181.9	169.0	0.93	12.7	12.2	0.96	82.7	79.0	0.95
1995	7.55	7.03	0.93	185.4	175.9	0.95	12.2	11.7	0.96	82.0	80.1	0.98
1996	7.30	6.98	0.96	186.8	181.9	0.97	11.5	11.2	0.97	80.3	79.6	0.99
1997	7.12	6.87	0.96	189.4	187.5	0.99	11.1	10.8	0.97	80.7	80.5	1.00
1998	7.01	6.78	0.97	194.4	194.9	1.00	10.8	10.5	0.97	81.8	82.3	1.01
1999	6.91	6.76	0.98	197.5	201.2	1.02	10.4	10.1	0.97	81.7	82.7	1.01
2000	6.84	6.68	0.98	199.9	204.1	1.02	10.2	9.9	0.97	81.3	82.9	1.01
2001	6.70	6.72	1.00	199.6	208.8	1.05	9.8	9.7	0.99	80.4	82.2	1.02

Source: based on data from the Federal Statistical Office 2003 *(52).*

Note: From 2002, data include short-time stays and are no longer comparable to previous data presented here.

Table 19. Inpatient structure and utilization data II: preventive and rehabilitative institutions in western and eastern parts of Germany, 1991–2001

	beds/1000			cases/1000			length of stay (days)			occupancy rate (%)		
	West	East	E/W ratio	West	East	E/W ratio	West	East	E/W ratio	West	East	E/W ratio
1991	2.06	0.66	0.32	21.4	5.0	0.23	31.0	31.7	1.02	88.4	65.9	0.75
1992	2.09	0.82	0.39	22.0	8.1	0.37	31.1	29.6	0.95	89.8	79.4	0.88
1993	2.13	0.92	0.43	22.4	9.3	0.42	31.1	29.5	0.95	89.5	81.4	0.91
1994	2.28	1.39	0.61	23.3	13.9	0.60	31.3	30.2	0.96	88.0	82.5	0.94
1995	2.34	1.66	0.71	24.3	17.6	0.72	31.1	30.5	0.98	88.7	88.6	1.00
1996	2.39	1.96	0.82	24.1	19.9	0.83	30.2	29.9	0.99	83.2	83.1	1.00
1997	2.33	2.15	0.92	19.4	18.4	0.95	27.5	26.0	0.95	62.6	60.9	0.97
1998	2.30	2.44	1.06	21.1	22.2	1.05	26.5	25.9	0.98	66.4	65.0	0.98
1999	2.27	2.52	1.11	23.1	24.7	1.07	26.0	26.1	1.00	72.5	70.1	0.97
2000	2.25	2.58	1.15	24.5	26.7	1.09	25.7	26.3	1.02	76.5	74.4	0.97
2001	2.24	2.59	1.16	24.8	28.7	1.16	25.5	25.7	1.01	77.4	77.8	1.01

Source: based on data from the Federal Statistical Office 2003 *(52).*

Note: From 2002, data include short-time stays and are no longer comparable to previous data presented here.

is stated by law (for example, pneumology and rheumatology), as recommended in the Advisory Council's report on over-, under- and misuse in health care *(16)*. Furthermore, ambulatory care for patients with certain rare diseases and special forms of disease progression as well as highly specialized services have been declared areas of hospital activity by the SHI Modernization Act. The Federal Joint Committee named a few genetic liver diseases and inborn metabolic disorders in children, and will present criteria on which the selection

Table 20a. Inpatient utilization and performance in acute hospitals in the WHO European Region, 2002 or latest available year

	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Western Europe				
Andorra	2.8	10.1	6.7[c]	70.0[c]
Austria	6.1	28.6	6.0	76.4
Belgium	5.8[a]	16.9[c]	8.0[c]	79.9[d]
Denmark	3.4	17.8*a*	3.8[a]	83.5[b]
EU-15 average	4.1	18.1[c]	7.1[c]	77.9[d]
Finland	2.3	19.9	4.4	74.0[g]
France	4.0	20.4[c]	5.5[c]	77.4[c]
Germany	6.3[a]	20.5[a]	9.3[a]	80.1[a]
Greece	4.0[b]	15.2[d]	–	–
Iceland	3.7[f]	15.3[d]	5.7[d]	–
Ireland	3.0	14.1	6.5	84.4
Israel	2.2	17.6	4.1	94.0
Italy	4.0	15.7[a]	6.9[a]	76.0[a]
Luxembourg	5.6	18.4[h]	7.7[d]	74.3[h]
Monaco	15.5[g]	–	–	–
Netherlands	3.1[a]	8.8[a]	7.4[a]	58.4[a]
Norway	3.1[a]	16.0[a]	5.8[a]	87.2[a]
Portugal	3.3[d]	11.9[d]	7.3[d]	75.5[d]
Spain	3.0[e]	11.5[d]	7.5[d]	76.1[d]
Sweden	2.3	15.1	6.4	77.5[f]
Switzerland	4.0	16.3[d]	9.2	84.6
United Kingdom	2.4	21.4[f]	5.0[f]	80.8[d]
Central and south-eastern Europe				
Albania	2.8	–	–	–
Bosnia and Herzegovina	3.3[d]	7.2[d]	9.8[d]	62.6[c]
Bulgaria	7.6	14.8[f]	10.7[f]	64.1[f]
Croatia	3.7	13.8	8.7	89.6
Cyprus	4.1[a]	8.1[a]	5.5[a]	80.1[a]
Czech Republic	6.3	19.7	8.5	72.1
Estonia	4.5	17.2	6.9	64.6
EU-10 average	6.0	20.1	7.7	72.6
Hungary	5.9	22.9	6.9	77.8
Latvia	5.5	18.0	–	–
Lithuania	6.0	21.7	8.2	73.8
Malta	3.5	11.0	4.3	83.0
Slovakia	6.7	18.1	8.8	66.2
Slovenia	4.1	15.7	6.6	69.0
The former Yugoslav Republic of Macedonia	3.4[a]	8.2[a]	8.0[a]	53.7[a]
Turkey	2.1	7.7	5.4	53.7
CIS				
Armenia	3.8	5.9	8.9	31.6[a]
Azerbaijan	7.7	4.7	15.3	25.6
Belarus	–	–	–	88.7[h]
CIS-12 average	8.2	19.7	12.7	85.4
Georgia	3.6	4.4	7.4	82.0[a]
Kazakhstan	5.1	15.5	10.9	98.5
Kyrgyzstan	4.3	12.2	10.3	86.8
Republic of Moldova	4.7	13.1	9.7	75.1
Russian Federation	9.5	22.2	13.5	86.1
Tajikistan	5.7	9.1	12.0	55.1
Turkmenistan	6.0[e]	12.4	11.1[e]	72.1[e]
Ukraine	7.2	19.2[e]	12.3	89.2
Uzbekistan	–	–	–	84.5

Source: WHO Regional Office for Europe health for all database, June 2004.

Notes: [a] 2001; [b] 2000; [c] 1999; [d] 1998; [e] 1997; [f] 1996; [g] 1995; [h] 1994; CIS: Commonwealth of independent states; EU: European Union; EU-10 average: for new member states after 1 May 2004; EU-15 average: for member states prior to 1 May 2004. Countries without data not included.

Table 20b. Inpatient utilization and performance in acute hospitals in the European Union, 2002 or latest available year

	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Austria	6.1	28.6	6.0	76.4
Belgium	5.8[a]	16.9[c]	8.0[c]	79.9[d]
Cyprus	4.1[a]	8.1[a]	5.5[a]	80.1[a]
Czech Republic	6.3	19.7	8.5	72.1
Denmark	3.4	17.8*a*	3.8[a]	83.5[b]
Estonia	4.5	17.2	6.9	64.6
EU-25 average	4.2	18.1[a]	7.0[a]	77.1[a]
Finland	2.3	19.9	4.4	74.0[g]
France	4.0	20.4[c]	5.5[c]	77.4[c]
Germany	6.3[a]	20.5[a]	9.3[a]	80.1[a]
Greece	4.0[b]	15.2[d]	–	–
Hungary	5.9	22.9	6.9	77.8
Ireland	3.0	14.1	6.5	84.4
Italy	4.0	15.7[a]	6.9[a]	76.0[a]
Latvia	5.5	18.0	–	–
Lithuania	6.0	21.7	8.2	73.8
Luxembourg	5.6	18.4[h]	7.7[d]	74.3[h]
Malta	3.5	11.0	4.3	83.0
Netherlands	3.1[a]	8.8[a]	7.4[a]	58.4[a]
Portugal	3.3[d]	11.9[d]	7.3[d]	75.5[d]
Slovakia	6.7	18.1	8.8	66.2
Slovenia	4.1	15.7	6.6	69.0
Spain	3.0[e]	11.5[d]	7.5[d]	76.1[d]
Sweden	2.3	15.1	6.4	77.5[f]
United Kingdom	2.4	21.4[f]	5.0[f]	80.8[d]

Source: WHO Regional Office for Europe health for all database, June 2004.

Notes: [a] 2001; [b] 2000; [c] 1999; [d] 1998; [e] 1997; [f] 1996; [g] 1995; [h] 1994; EU: European Union; EU-25 average: for all member states. Countries without data not included.

of hospital-based outpatient care is to be based by 2005. The list of disease conditions will be reviewed every two years.

The share of hospitals offering pre-inpatient or post-inpatient care has increased steadily, to 71% in 2002, since their introduction in 1993 *(33).* More hospitals in the eastern part (89%) than in the western part (68%) offered this kind of care in 2002. While hospitals have been allowed to offer surgery on an ambulatory or day-case basis only since 1993, day-case surgery is not new in Germany. Due to the separation of the hospital and the ambulatory care sectors, surgeons, ophthalmologists, orthopaedic surgeons and other specialists in private practice have performed minor surgery for a long time. Since the 1980s, this has been supported through the introduction of new items in the Uniform Value Scale, both to cover additional costs of the operating physician (equipment, supporting staff etc.) and to cover necessary anaesthesia. In 1991, day surgery accounted for almost 2% of sickness funds' expenditure in the ambulatory care

sector. In 1993, additional items for post-operative care were introduced. The frequency of these items may be used to estimate the extent to which ambulatory surgery is taking place in Germany, although they do not allow a distinction between hospital-based and office-based day surgery since remuneration is done under the same norms, of the ambulatory care sector.

From 2004, ambulatory surgery is expected to further expand since the German Hospital Organization and the various federal associations of sickness funds negotiated a contract widening the range to more than 400 interventions. For 150 diagnoses ambulatory surgery has become obligatory, unless a physician explicitly argues for inpatient care. It is estimated that about one third of operations may be shifted to outpatient care. Ambulatory surgery in hospitals as well as physicians' practices is currently evaluated in benchmarking projects on a pilot basis. From 2006, ambulatory surgery will be evaluated on a routine basis by the Federal Office for Quality Assurance as part of an anonymous benchmarking project with feedback to individual hospitals.

Integrated care

The sectorization of the delivery, financing and decision-making structures of German health care has increasingly been perceived as a barrier to change. Since 1993, the legal framework allowed for intersectoral pilot projects (paragraphs 63–65, Social Code Book V), thus giving sickness funds and providers an opportunity to test new integrated models of care. Although these regulations were expanded in each following health care reform, they did not result in viable concepts or measures. All initiatives in the area of improved cooperation between individual practices or between the sectors, such as practice networks, group practices, practice alliances and health care networks, are almost fully based on pilot projects.

New provisions for so-called integrated care (paragraphs 140 a–h, Social Code Book V) were therefore introduced as part of the Reform Act of SHI 2000. The aim of these provisions was to improve cooperation between ambulatory physicians and hospitals on the basis of contracts between sickness funds and individual providers or groups of providers belonging to different sectors. Due to legal and financial barriers, only a few initiatives were established on the basis of these legal provisions. The Act to Reform the Risk Structure Compensation Scheme provided new incentives for trans-sectoral care in the context of disease management programmes from 2002.

With the SHI Modernization Act, in force from 2004, integrated care has been further strengthened and the rules of accountability have been clarified.

The SHI Modernization Act removed barriers to starting integrated care models which had been enacted when the integrated care was first introduced in 2000: Integrated care contracts do not need to extend across sectors now, but have to involve at least different categories of providers within a sector, for example, family physicians and long-term care providers. Integrated care contracts do not require the approval of the regional physicians' associations. Other sickness funds or providers may only join the integrated care models if all contract partners agree. In October 2000, the federal associations of sickness funds and the Federal Association of SHI Physicians had concluded a general agreement allowing any fund to join an integrated care model at the beginning of the third year, but this was perceived by individual sickness funds as a disincentive to invest in innovative models of care in a competitive market.

Differing also from the 2000 legislation, it stipulates that the principle of contribution rate stability does not apply to integrated care contracts negotiated by December 2006. Additionally, sickness funds now have a clear right (from 2004–2006) to deduct 1% of the resources for ambulatory physicians and hospital care once integrated care contracts have been concluded. These resources may only be used for integrated care purposes in the respective region of the physicians' association and have to be paid back if not fully used. In addition, expenditures on drugs and medical aids will be adjusted, considering the morbidity of the patients taking part in integrated care.

Thus, integrated care now represents a separate sector for which financial resources have to be set aside. It requires that sickness funds negotiate selective contracts with single providers or a network of providers, i.e. physicians, hospitals, rehabilitative institutions (see Table 7). While all of them need to be accredited within their sector, they may provide services across sectors within the scope of the integrated care contract, e.g. a hospital may provide outpatient services if it has a joint contract with an ambulatory physician. In addition, the contracting parties of an integrated care contract may decide to take over the guarantee of service provision for the insured population from the regional physician's association(s). The guarantee of service provision may be shifted to the participating sickness funds and/or to the contracted network of preferred providers.

Under the new regulations and incentives, integrated care has attracted substantial interest among hospitals, most of which have been hesitant up to now to join disease-management programmes. Integrated care contracts concern for example disease-centred programmes at the interface between acute hospital care and rehabilitative care, involving office-based specialists physiotherapists and family physicians.

Social care

Social care is delivered by a broad variety of mainly private organizations that complement family and lay support for the elderly, children with special needs, mentally ill and the physically or mentally handicapped. The *Länder* are responsible for planning (and guaranteeing the provision) institutionalized care and schools for children with special needs. Most providers of institutional care belong to the six members of the Federal Alliance of Voluntary Welfare Organizations (see *Organizational structure and management*). Welfare organizations have established about 60 000 autonomous institutions with about 1.1 million employees. In social care, they run 50% of old age homes, 80% of homes for the handicapped and nearly 70% of institutions for youth.

Other typical features of social care in Germany are:

- a nearly universal mandatory social insurance for long-term care administered by sickness funds and private health insurers;
- special schools for children with severe learning deficits and behavioural disorders;
- a legal right for children with social problems to personal and family support services;
- a legal quota for employment of the disabled;
- a social code book, enforced in 2002, strengthening the individual and collective rights of disabled and clarifying responsibilities, interrelations and cooperation of the various payers and providers;
- a traditional priority of welfare organizations over for-profit providers, except for the long-term care sector where non-profit and for-profit providers have equal status to enhance competition;
- traditionally, a strong focus of specialized, comprehensive care for the severely handicapped in institutions separate from the community;
- increasing access to integrated schooling and community-based services, however with substantial geographic differences among *Länder* and urban vs. rural areas.

Statutory long-term care insurance

Statutory long-term care insurance was introduced in 1994 – as Book XI of the Social Code Book – following a 20 year debate about how to secure financing and access to long-term care in an ageing society with an increasing burden on municipalities to support elderly care. The statutory long-term care insurance typically consists of the mandatory social long-term care insurance

and the mandatory private long-term care insurance. Before the introduction of the statutory long-term care insurance there were certain benefits in the SHI package for ambulatory long-term care (these were cancelled after the introduction of the new scheme). However, they were not very generous and the bulk of long-term care services were financed by social welfare, a public welfare programme. Significantly, these services were not entitlement-based on an insurance-relationship, but subject to a means-test and therefore only paid if the individual or family members could not afford to pay. Private health insurance schemes also offered insufficient nursing benefits

Starting in 1995, all members of statutory sickness funds (including pensioners and the unemployed) as well as all people with full-cover private health insurance were declared mandatory members. This was the first time to introduce mandatory membership for private health insureds – making it the first statutory insurance with nearly population-wide membership. In January 2003, 70.6 million were covered by mandatory statutory long-term care insurance and about 8.6 million by mandatory private long-term care insurance *(7)*. The long-term care insurance scheme is administered by the sickness funds (as a separate entity but without any separate associations) and private health insurers.

The requirement to pay contributions began in January 1995 with ambulatory benefits available from April of that year. Benefits for care in institutions were available from July 1996. According to the SHI principles, members and their employers jointly contribute 1.7% (until June 1996, only 1%) of monthly gross income, that is, 0.85% each. In order to compensate the employers for the additional costs, a public holiday was turned into a working day. As an exception, the *Land* of Saxony retained the holiday, and the contribution is split between employee and employer 1.35% to 0.35%. Since 2004, pensioners have to contribute the entire 1.7% from their pension.

Benefits

In contrast to statutory health insurance, benefits are available upon application only. The Medical Review Boards (operated jointly by sickness funds and long-term care funds) evaluate the applicants and place them into one of the three categories (or deny care). Most of the private health insurers purchase this service from them. Entitlement to insurance benefits is given when care is expected to be necessary for at least 6 months (hence "long-term" care), while short-term nursing care continues to be funded by the sickness funds, and private insurers if included in the package. Beneficiaries with a care dependency then have a choice of receiving monetary benefits or professional nursing care while staying at home or to receive professional nursing services in nursing homes.

The benefits of long-term care insurance are graded according to type, frequency and duration of the need for nursing care:

- grade I: support is necessary for at least two activities in the areas of body care, eating and mobility (at least once daily) as well as housekeeping (at least several times a week) with an overall average duration of at least 90 minutes daily;
- grade II: support is necessary at least three times daily with an overall average duration of at least 3 hours daily;
- grade III: support is necessary around the clock including nights with an overall average duration of at least 5 hours daily.

Monetary support is intended to cover home care delivered by family members at the following rates: Grade I, €205; Grade II, €410; Grade III, €665 (plus a professional substitute for up to €1432 a year to cover holidays). The limits for professional ambulatory services delivered on an in-kind basis are €384, €921, and €1432, respectively. In addition, family members serving as care-givers at home can attend training courses free of charge, and short-term care is provided during holidays of care-givers. The care-giver is also covered by statutory accident insurance and statutory retirement insurance, financed by the sickness fund administering the long-term care insurance of the person in need. For people choosing institutionalized nursing care, benefits are available for day or night clinics as well as old age or special nursing care homes. Monthly benefit limits are €1023, €1279 and €1432 respectively. Higher benefits may be granted in exceptional cases.

A new development is the option of personal budgets for recipients of professional ambulatory long-term care. From July 2004, they may spend their budgetary resources on the provider and service of their choice. The nominal level of payment has not been changed since the introduction of the statutory long term care insurance (applying the regular exchange rate from DM to €), which in fact means a real decrease in cash-benefits and provider reimbursements.

Of the 813 932 new applications processed by SHI Medical Review Boards in 2003, 595 045 were approved (73%), 190 005 (27%) were declined and 28 882 were dealt with in another way. Applicants have a right to challenge the decision at their sickness fund and may also file a case at social courts. Altogether, 1.9 million (2.3% of the population) were entitled to benefits from social long-term care insurance in 2003. Entitlement to social long-term care concentrated on the elderly but younger age groups were affected as well. Of the persons entitled to social long-term care, 5% were below 20, 11% between

20 and 55, 6.5% between 55 and 65, 14.7% between 65 and 75, 32.5% between 75 and 85 and 30.7% above the age of 85. Of all entitled persons, more than two thirds (1.3 million) were cared for at home and less than one third (613 274) received institutionalized care. 49% of entitled persons (calculated from days of granted benefits) choose monetary benefits only, 9% choose benefits in-kind (professional care at home) only, 10% choose a combination of both, 27% choose professional long-term care in nursing homes, 3% choose inpatient nursing care in homes for disabled, and only 1.7% of the benefit days were used in form of short-term care, care during holidays or care during day or night only. The low utilization was partly due to limited capacities, especially in rural areas *(53).*

Of the people cared for at home, nearly three quarters (968 289) received cash benefits only and were cared for by family members. More than 90% of care-givers were women. Recipients of care in nursing homes tended to be older and have more nursing care needs: 38% were classified grade I, 42% grade II and 20% grade III, with the most intensive need for nursing care. The share of entitled people increased with age, with fewer than 0.6% of entitled people below the age of 50, 1.7% between 60 and 65, 4.7% between 70 and 75, and 30% 80 and older *(54).*

Providers and infrastructure

The introduction of long-term care insurance was also associated with an increase in the number of active nurses and professional old age care-givers, especially in the ambulatory sector. In 2001, 475 368 employees worked in accredited nursing homes and 189 567 in ambulatory institutions accredited for long-term care. Between 1996 and 1999, staff in ambulatory care and inpatient care increased by 25%, between 1999 and 2001 by 5%. The 70% share of part-time work in ambulatory institutions was higher than the 55% in nursing homes, nearly half of it in minor part-time jobs *(21).* The number of people cared for increased to 48 per ambulatory institution and 69 per nursing home in 2001.

The increase of personnel went along with an increase in nursing homes but – due to mergers – a decrease of ambulatory institutions providing long-term care. Between 1995 and 2001, the number of institutions providing inpatient long-term care increased from 9.7 to 11.1 per 100 000; the number of ambulatory providers decreased from 14.3 to 12.8 per 100 000 *(56).* Of all 674 292 nursing home beds available for nursing care in 2001 (819 per 100 000; Table 17), 511 028 were available only for long-term care, 2950 only for short-term care and 6963 only for day-care. Other beds were used for multiple functions so that

altogether 618 927 beds were available for long-term care, 107 906 beds for short-term care, and 91 017 for day care *(56)*. Other structures have developed much more slowly: there were only 11 ambulatory geriatric rehabilitation clinics and 10 mobile teams for geriatric rehabilitation for the whole country in 2000. In addition, the number of specific geriatric beds in acute hospitals or rehabilitation hospitals doubled from 7 200 in 1993 to 16 100 in 2000 (19 per 100 000) *(57)*. Although slower, the provision of geronto-psychiatric beds, homes and day clinics has also increased. Overall, the ambulatory care possibilities for demented and mentally ill seniors is still widely perceived as insufficient (*58*), and subject to current reform debates.

Similar to other social care (not health care) sectors, Social Code Book XI applies the principle of subsidiarity to long-term care, implying that private non-profit organizations have priority over public institutions to deliver care. However, the preference for private-for-profit providers over public providers is an innovation of the statutory long-term-care insurance, and one of several measures intended to increase competition among providers.

Although the share of privately owned nursing homes has increased at the expense of public providers since 1994, non-statutory welfare organizations dominate long-term care services. Of the 9200 nursing homes accredited in December 2001 to provide nursing care under long-term care insurance (including day care centres), 56% were owned by non-profit organizations, 36% by private for-profit providers and 8% by public providers, usually municipalities. Of the 674 000 places in nursing homes, 62% were provided by non-profit providers, 28% by private for-profit providers and 11% by public providers *(59)*.

Payment

The duty to guarantee access to professional ambulatory long-term care has been legally entrusted to statutory sickness funds that are responsible for administering the statutory long-term care scheme (so-called long-term care funds), while the *Länder* guarantee access to institutionalized care. In the case of long-term care, the principle of "dual financing" means that investment expenditures are paid by *Länder* have to cover investment costs for institutions and partly for ambulatory suppliers, while social or private long-term insurers pay recurrent costs. In contrast to health care (where private providers depreciate their investments via recurrent costs), the *Länder* may also finance investments for long-term care in the ambulatory sector. The *Länder* are also responsible for planning but they are prohibited from limiting the number of providers in the ambulatory sector, thus competition is enhanced. Professional care in the

ambulatory sector is paid on a fee-for-service basis while institutionalized care is based on per diem charges. The prices are negotiated at *Länder* level between long-term care funds and associations of providers delivering nursing care.

Expenditures

Table 21 shows the allocation of resources within statutory long-term care insurance. In 2003, 32% of expenditures were spent on cash-benefits: to recipients and to care-givers in form of contributions to statutory insurance schemes. Compared to 1996, expenditures on cash payments showed a decreasing trend, expenditures on professional services a rising trend. Virtually 50% of expenditures were for professional care in homes, 15% for professional nursing care at home, and 3% for other in-kind benefits.

The income of the long-term care funds exceeded their expenditures during the first three years by €3.4 billion in 1995, €1.2 billion in 1996 and €0.8 billion in 1997 – mainly because funding began earlier than benefit provision – but reached almost a steady state in 1998. Since 2000, expenditures have exceeded revenues increasingly, amounting to €0.7 billion in 2003 (Table 21). Reserves are large enough to cover these deficits for the near future, but the discussion of how to finance long-term care insurance in a sustainable way has started. The introduction of the statutory long-term insurance led to a substantial decrease in municipalities' expenditures on long-term care. Yet, social welfare still is required to support the elderly in homes, mainly to finance accommodation costs not covered by statutory long-term care insurance.

Mental health care

Since a parliamentary committee report in 1975 criticized the institutionalization and low quality of care for long-term mental illness, mental health care in the western part shifted gradually to offering community-integrated services. The situation of mental health care in the eastern part in 1990 was similar to conditions in the western part before the psychiatric reforms in the 1970s. The lack of specialized community-integrated services was further aggravated by staff shortages. Thus, big institutions with 300 to 1800 beds provided relatively low quality care. Sixty per cent (60%) of inpatients were judged as not needing hospital care in 1990.

During the process of dehospitalization, the number of hospitals providing care only for patients with psychiatric and/or neurological illness was decreased substantially up to the mid of 1990s. Acute psychiatric inpatient care was shifted to a large degree to psychiatric wards in general (acute) hospitals with beds for

Table 21. Expenditures and revenues of statutory long-term care insurance in billion Euro[a], 1996–2003

	1996	1997	1998	1999	2000	2001	2002	2003
Expenditures on benefits	10.3	14.3	15.1	15.6	15.9	16.0	16.5	16.6
– Cash-benefits	4.4	4.3	4.3	4.2	4.2	4.1	4.2	4.1
– Social insurance contri butions for caregivers	0.9	1.2	1.2	1.1	1.1	1.0	1.0	1.0
– Professional care during holidays of caregivers	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
– Short-term care	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
– Day-/ Night care	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
– Nursing aids and support technologies	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4
– Ambulatory care benefits in-kind	1.5	1.8	2.0	2.1	2.2	2.3	2.4	2.4
– Nursing care in homes	2.7	6.4	6.8	7.2	7.5	7.8	8.0	8.2
– Nursing care in homes for disabled	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Expenditures of the medical review board (50%)[b]	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Administration	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Total expenditures	10.9	15.1	15.9	16.4	16.7	16.9	17.4	17.6
Total revenues	12.0	15.9	16.0	16.3	16.6	16.8	17.0	16.9
Saldo[a]	+1.2	+0.8	+0.1	-0.0	-0.1	-0.1	-0.4	-0.7

Source: Federal Statistical Office 2004 *(38)*; Federal Ministry of Health and Social Security 2004 *(39)*.

Note: [a] statutory reserves not included; [b] the other 50% of medical review board costs are paid from statutory health insurance contributions.

the mentally ill reduced from 150 000 in the western part of Germany in 1976 to 69 000 in the whole of Germany in 1995 and to 53 916 in 2002. During the same period the duration of stay in sychiatric hospitals specialized in psychiatry, psychotherapy and/or neurology was decreased from an average of 152 days in 1976 (western part of Germany only) to 44 days in 1995 and 27 days in 2002 (western and eastern part). Altogether, 396 hospitals (of a total of 2221) had departments for psychiatric and psychotherapeutic care in 2002. Most of them (375) also offered day clinics, an option which has been legally available to non-university hospitals only since 2000. The dehospitalization of long-term care psychiatric patients was accompanied by an increasing number of hospitals for preventive/rehabilitative care which lie outside the Länder hospital plans. Often owned (often owned by private for-profit providers) these institutions specialized particularly on the care for patients with addiction problems and psychosomatic disturbances.

Ambulatory care for the mentally ill children and adults is also supported by the increasing number of office-based psychiatrists, neurologists, other physicians with psychotherapist qualifications and psychological psychotherapists (see *Primary and secondary ambulatory care*). Since 2000, psychiatrists have been made coordinators of a new set of benefits called sociotherapeutic care to encourage SHI-insured chronically mentally ill to utilize necessary care and to avoid unnecessary hospitalization. Dehospitalization has led to an increase of specially attended flat-sharing communities and ambulatory psychosocial centres for crisis intervention, counsseling and social support, often delivered by non-profit organizations. In addition, public health offices provide socialpsychiatric services including counsseling, social work, home visits and crisis intervention, directed particularly at the most disadvantaged people among the mentally ill. The quantity, comprehensiveness and quality of ambulatory services varies largely between different local communities and federal states. Despite advances, psychosocial facilities are often less well resourced than institutions for somatic care (access to telephone etc.), and access to occupational rehabilitation and comprehensive social integration is still considered under-developped.

Care for physically and mentally disabled

Social care for physically and/or mentally disabled is characterized by well-equipped and highly specialized institutions and schools. Although these comprehensive services are increasingly offered within communities on an outpatient basis, institutionalized care still plays a major role, especially for severely disabled people with multiple handicaps.

As with services for the mentally ill, there are a broad variety of private organizations and local community initiatives offering support for the handicapped and their families. Yet because of unclear financial responsibilities, those affected do not have a concrete right to specific community-integrated services, including kindergartens and schools. This again leads to great regional differences and under-provision in rural areas.

The reform of Social Code Book IX on rehabilitation in 2001 has increased the individual and collective rights of the disabled. Personal budgets have been introduced and coordination centres provide information to the insured, simplify administrative procedures and coordinate the many actors involved in financing medical, professional and social rehabilitation as well as disability benefits. A commissioner for the disabled has been named by the Federal Assembly and is situated at the Ministry of Health.

Human resources and training

Health care is an important employment sector in Germany, with 4.2 million residents working in the health sector, accounting for 10.6% of total employment at the end of 2002, 300 000 in health industries and 3.9 million in health care. Of these, 1.8 million worked in inpatient care or day-care, 1.7 million in ambulatory care, 0.2 million in administration and 0.2 million in other institutions. While 1.5 million (37%) worked part-time, 2.6 million (63%) worked full-time. Since 1997 the health care work force has remained virtually stable in numbers of people but decreased in full-time equivalents *(21)*. While part-time jobs increased, the full-time job quota decreased from 70% to 66% until 2001, more than the parallel decrease from 76% to 74% in other economic sectors during the period. Full-time jobs, mainly in medicine and nursing, started to increase only in 2002, mainly for physicians and nurses in inpatient care. Table 22 outlines trends in human resources and training in different professions.

Physicians

Over the past 50 years, the number of physicians has increased steadily. The average increase, however, has been reduced from 3% in the 1980s and 2% in the 1990s to 1% since 2000 *(61)*. The number of qualified general practitioners, on the other hand, has decreased, both in relation to the population and especially in relation to all physicians. However, since an increasing number of internists and paediatricians followed incentives to focus on practising primary care, in 2003, 52% of the 116 065 SHI-accredited physicians worked as "family physicians", while 48% were practising as specialists in ambulatory care (see *Primary and secondary ambulatory care*).

Of a total of 388 200 physicians in 2003, 304 100 were active – a rate of 369 per 100 000 population or one physician per every 271 inhabitants. Of all active physicians, 145 500 practised in hospitals, 132 400 in ambulatory care (117 600 as SHI-accredited physicians, 8200 as employed physicians and 6600 purely for private patients), 10 200 in public health services, administration or corporatist bodies and 16 000 in other areas, such as the pharmaceutical industry. According to WHO health for all data, which exclude the latter two groups, the 275 167 physicians active in health services accounted for a ratio of 3.4 per 1000 (Table 24), similar to France and the Netherlands (Fig. 14) as well as the EU-25 average (Fig. 15). Access to medical and dentist studies became more restricted at the end of 1980s leading to a decrease in graduates from 1994.

According to §§ 99–105 of Social Code Book V, needs-based plans have to be developed to regulate the number of SHI-affiliated office-based physicians. Originally, the intention was to guarantee that the less common specialties would also be available in rural areas. Since the 1980s, however, the focus has been on avoiding over-supply. Since 1993, the Social Code Book has stipulated that

Table 22. Health care workforce 1992–2002 (per 100 000 population)

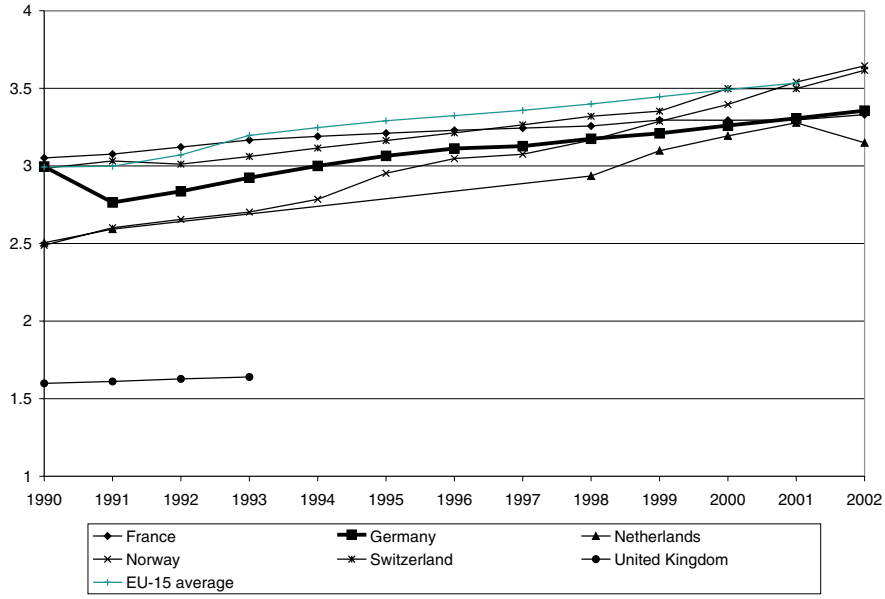
	1992	1994	1996	1997	1998	1999	2000	2001	2002
Physicians	284	300	311	313	318	321	326	330	336
– general practitioners	118	121	115	110	108	106	107	106	106
Dentists	70	73	75	76	76	76	77	78	79
Pharmacists	53	54	56	57	58	58	58	58	59
Nurses	–	–	–	924	938	949	962	973	–
Midwives	11	11	11	11	11	11	11	12	–
Physicians graduated	13	17	15	11	11	10	10	8.5	–
Dentists graduated	2.4	2.2	1.9	2.0	2.0	2.0	2.0	1.6	–
Pharmacists graduated	2.9	2.9	2.7	2.0	1.9	1.8	1.9	1.5	–

Source: WHO Regional Office for Europe health for all database, June 2004 *(5)*.

new practices may not be opened in areas where supply exceeds 110% of the average number for a given specialty. Accordingly, the Federal Committee of Physicians and Sickness Funds developed directives defining these limits. Since 2004, this task has been transferred to the Sub-Committee on Ambulatory Care of the new Federal Joint Committee (see *Planning, regulation and management*). The directives classify all planning areas into one of 10 groups – ranging from large metropolitan areas to rural counties, and define the need per group as the actual number of physicians working in counties of that group in 1990, divided by the population. Thus, over-supply is defined as 110% of that figure. Factors such as age, gender, morbidity or socioeconomic status of the population or the supply of hospital beds are not taken into account. Due to this definition, the "need" for certain specialties varies widely – up to a factor of 9 in the case of psychotherapists – since differences are frozen (Table 23).

In early 2003, out of a total of 406 planning areas, 395 were closed to new surgical practices, 373 to dermatologists, 371 to paediatricians and 399 to specialist internists. However, only 137 areas were closed to family physicians, meaning that two thirds of all planning areas had not reached the defined maximum, an increase from the 50% in 1999. In fact, the density of SHI-affiliated physicians varies greatly between metropolitan areas, lead by Hamburg, and rural areas. Of the 16 federal states, Hamburg has the highest and Brandenburg – a largely rural state surrounding Berlin – has the lowest rate of family physicians and specialists alike.

Fig. 13. Number of physicians in Germany, selected European countries and EU-15 average per 1000, 1990–2002



Source: WHO Regional Office for Europe health for all database, June 2004 *(5).*

Nurses and other health professions

The number of nurses has increased substantially in the past decades, especially during the 1990s, when long-term care insurance was introduced and provided more jobs in ambulatory care (see *Social care*) *(62)*. From 1997 until 2002, the number of nurses and midwives together increased from 689 000 to 705 000, that is 8.5 per 1000 population in physical persons. When taking into account part-time work, 635 000 nursing posts in full-time equivalents were filled *(21)*. According to WHO data *(5),* the number of nurses (9.7 per 1000) ranks well above the average of both the EU-25 average (7.7) and the EU-15 average (6.8 in 2001) respectively (Fig. 14). Similar to nurses, the number of all other allied health professionals have increased since 1997, except in health handcraft professions *(21).*

An interesting instrument was included in the Health Care Structure Act of 1993, namely the introduction of nursing time standards, through which a daily documentation of nursing activities put every patient in one of nine categories with a standardized required nursing time between 52 and 215 minutes per day. The total number of minutes per ward and per hospital could be calculated into

the nursing staff needed by the unit. Nursing time standards were introduced to end a period of perceived nursing shortages, on the assumption that new jobs would be created. However, the Second SHI Restructuring Act abolished the regulation for the official reason that the standard had led to almost 21 000 new nursing positions between 1993 and 1995, when the law-makers had anticipated only 13 000.

The conditions for independent health care professionals other than physicians – such as physiotherapists or speech and language therapists – to be reimbursed for treating SHI-insured patients are regulated in the Social Code Book. Section 124 regulates the accreditation of SHI providers, who must fulfil certain prerequisites (training, practical experience, practice equipment, contractual agreements) if they want to participate in the care of the insured.

Training

The training of health care professionals is a shared responsibility of the federal government, state governments and professional associations. Most current debates arise out of the tension between the various stakeholders.

Table 23. Needs-based population ratios defined as covering 100% of need per specialty – highest and lowest ratios (defined as one physician per X population; data from 2003)

	Highest district ratio	Lowest district ratio	Relative difference highest/ lowest
Family physicians[a]	1/1 474	1/2 134	1.45
Specialist internists	1/9 574	1/44 868	4.69
Anaesthetists	1/18 383	1/137 442	7.48
Dermatologists	1/16 996	1/60 026	3.53
Ear-nose-throat physicians	1/16 419	1/42 129	2.57
Gynaecologists	1/6 711	1/14 701	2.19
Neurologists/ Psychiatrists	1/11 909	1/47 439	3.98
Ophthalmologists	1/11 017	1/25 778	2.34
Orthopaedists	1/13 009	1/34 214	2.63
Paediatricians[b]	1/12 860	1/27 809	2.17
Psychotherapists	1/2 577	1/23 106	8.97
Radiologists	1/24 333	1/156 813	6.44
Surgeons	1/21 008	1/62 036	2.95
Urologists	1/26 017	1/69 695	2.68

Source: own calculations based on Federal Association of SHI Physicians, 2004 *(49).*

Note: [a] including general practitioners, practitioners, and family internists; [b] including family paediatricians.

According to the federal structure, the 16 *Länder* are generally responsible for regulating and financing education as well as for registering and supervising professions, including health professions. However, health professions differ traditionally from other professions due to the national regulations for their primary education and the virtual autonomy of the bodies regulating their specializations (secondary professional education) and continuing education. National standards for curricula and examinations were introduced in 1871 for medical studies, 1875 for faculties of pharmacy and 1907 for the nurse training. Today, uniform curricular frameworks defined by federal law exist for 17 of 23 non-academic health care professions, for example, paediatric nursing, assistant nursing, midwifery, physiotherapy, speech therapy, technical assistance or emergency and rescue care. National legislation was also introduced to harmonize the primary education of elderly care-takers in 2002. In addition, a new profession, podology, was established by federal law in 2001.

Primary professional education and registration

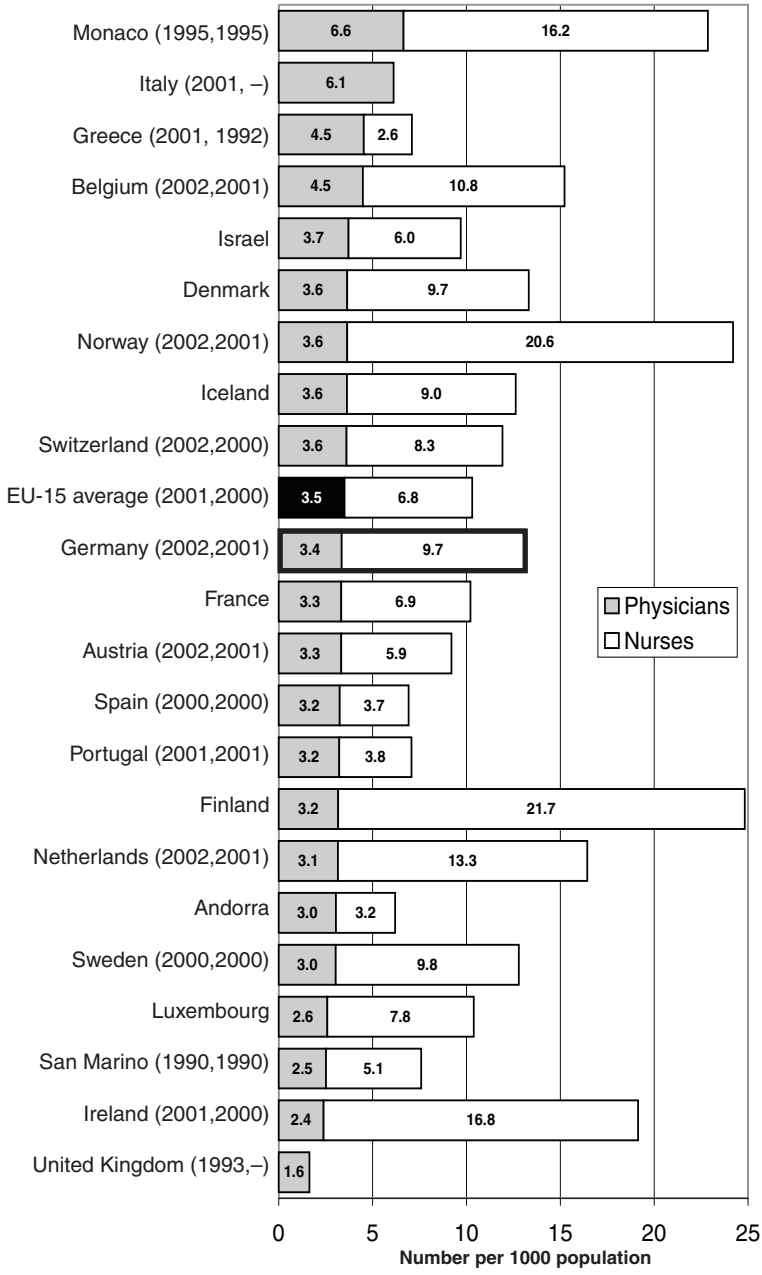
Primary training of non-academic and academic professionals is basically free of charge in Germany. However, private schools with course-based training for therapeutic professions demand fees of about €300 to €700 per month. Participants of practice-based training in health care institutions such as nurses-in-training receive a basic income. University education is financed by the states while practice-based training at hospitals is basically funded by sickness funds as part of their financial contracts with individual hospitals.

Many German universities offer a degree in medicine (36), dentistry (31) and/or pharmacy (23); veterinary medicine is taught at 5 faculties. There are also many publicly financed facilities for the primary training of nurses and child nurses, elderly care-takers, who are trained on the job with additional blocks or days for course-based learning. At the same time, schools for physiotherapists, masseurs, midwives, dieticians and speech and language therapists are often private and require fees.

Primary training of most non-academic health professionals requires an advanced degree after secondary school and usually takes three years. Access to German universities is usually limited to people with an A-level equivalent (12 or 13 years of school). Academic health education is among the subjects for which places are distributed centrally according to academic records, waiting times and special quotas (for example, foreigners or the disabled). Fifteen per cent (15%) of medical students are accepted by means of interviews at universities. University studies last between 4 years (pharmacy) and 6 years (medicine).

The curriculum for academic health care professions used to be highly standardized and organized around three or four main examinations. In 1999, a

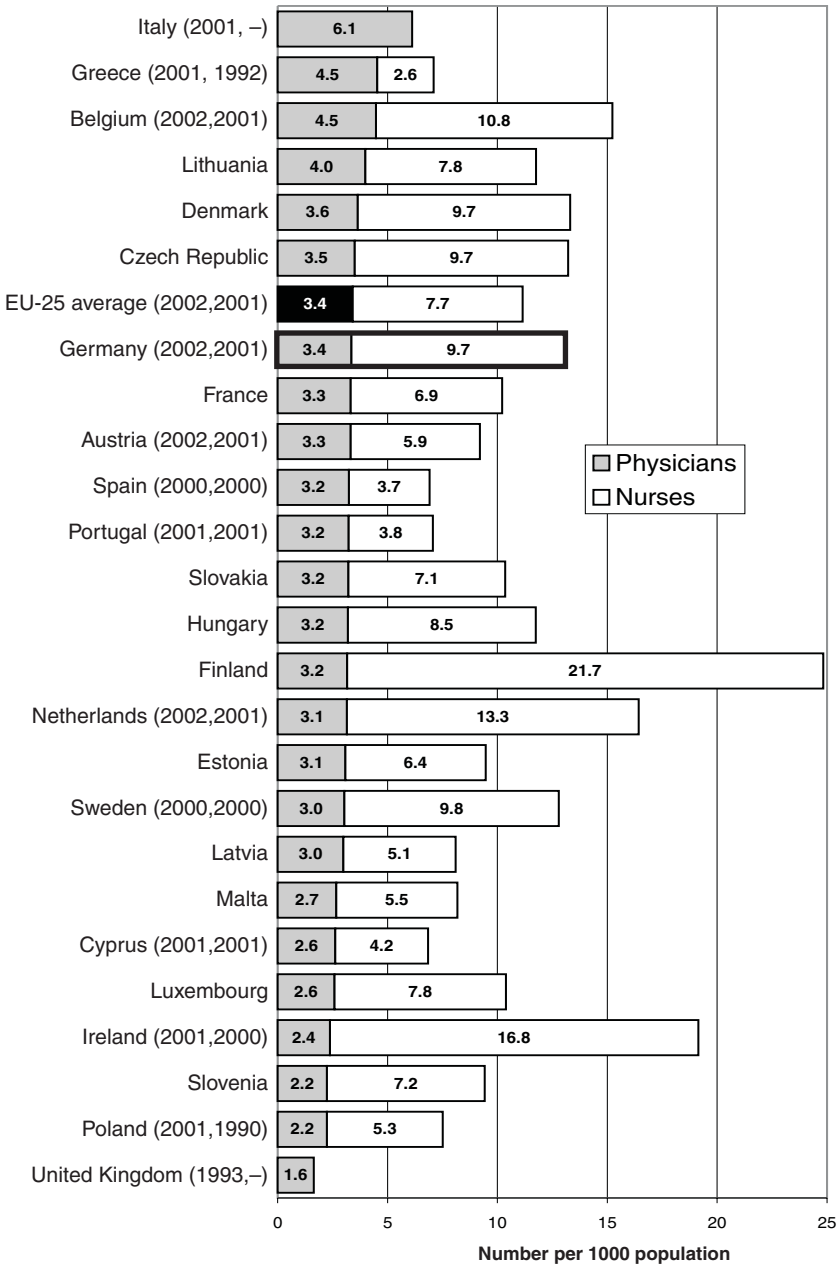
Fig. 14a. Number of physicians and nurses per 1000 population in western Europe, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.

Note: EU: European Union; EU-15 average: for member states prior to 1 May 2004; countries without data not included.

Fig. 14b. Number of physicians and nurses per 1000 population in the European Union, 2002 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, June 2004.
Note: EU: European Union; EU-25 average: for all member states.

long-sought clause was integrated into the national ordinance for medical studies allowing individual medical faculties to offer curricula reform while preserving basic national standards, such as two centralized final examinations. The first reformed medical curriculum started as a second track at Berlin Humboldt University in 1999. In autumn 2003, the ordinance was completely changed, with the political aim of facilitating profound innovations in favour of bedside teaching, community-based teaching, problem-solving skills and the integration of basic science and clinical subjects.

Since the beginning of the 1980s cost considerations have motivated health policy-makers to try to reduce university places for health care studies, while educators have not generally agreed. Since the early 1990s the number of graduates in medicine, dentistry and pharmacy has decreased (Table 22).

After graduation, health care professionals are eligible for registration at the *Länder* ministries responsible for health. A regulation that medical graduates receive full state recognition only after having worked in clinical practice for 18 months was abolished in 2004.

The recent reforms of nurse training (2002), child nursing (2002) and elderly care-taking (2001) modernized curricula and enhanced elements of preventive and psychosocial care and community-based practice. The primary training for elderly care-takers was harmonized for the first time at the federal level while training standards and requirements had previously varied by state. The traditionally strong emphasis on social work has been complemented by more training in nursing skills and sickness-related knowledge, although experience in geronto-psychiatric nursing has still not become an obligatory part of elderly care-takers' training. Despite initiatives to unify the nursing professions, the traditional profound dichotomy between them has been preserved by the recent reforms of primary professional training. Physician assistants and dental assistants continue to be trained separately in a vocational-type of training based at physicians' practices. Their training was recently broadened by introducing obligatory rotation and modernized to account for changes in patient information, practice management and information technologies. The responsibility for financing nursing schools at hospitals used to be the state governments', but was shifted largely to sickness funds in 2000. Nurse training in the future will be financed as a surcharge on DRGs from an inter-hospital fund (see *Payment of hospitals*).

Neither a system for monitoring nurses on the basis of professional qualifications and job positions nor a systematic planning of human resources according to future needs are in place.

Secondary professional training (specialization) and continued education

Medical and veterinary graduates are obliged to specialize if they want to work as office-based SHI-affiliated physician, while specialization is optional for the other health care professions. The different federal states recognize a maximum of 8 specialties in pharmacy, 3 in dentistry, 48 in veterinary medicine, 7 in psychology and 12 in nursing.

The number of medical specialties increased from 14 in 1924 to 37 in 2003, supplemented by another 52 sub-specialties or additional qualifications. Based on decisions of the assembly of physician representatives from regional physician assemblies, the Federal Physicians' Chamber issues a model advanced training regime which is further detailed by the physicians' chambers at *Länder* level. For each of these qualifications a minimum length of training, a catalogue of procedures and skills is detailed in the training regime which may be adjusted by the physician assemblies at *Länder* level. Subsequent to the advanced training period, physicians must pass an examination of skills and knowledge in the target qualification.

Practice-based specialization usually takes two or three years in non-academic and four to six years in academic health care professions. The duration of specialization in general medicine was increased from three to five years in 1998 in order to strengthen the quality and professional status of future family practitioners. Yet, general practitioners amounted to only about 20% of the physicians receiving their specialty diplomas from physicians' chambers during the 1990s. The low generalist/specialist ratio has been interpreted as a result of lower income prospects (see *Payment of physicians*), but also of a lack of training facilities in ambulatory care and lower prestige due to the socialization of medical doctors in secondary and tertiary hospital care. Therefore, sickness funds, private health insurers and regional physicians' associations have been obliged since 1999 to finance half of the GP-trainees' salaries during the office-based training period (minimum two out of five years). However, in practice, the subsidy often is the trainee's only income, which may explain why in 2003, of the 12 107 physicians obtaining a specialist degree, only 13% were general practitioners while specialist internists were the largest group (15%) *(61)*.

A high drop-out rate in non-academic professional training and practise has been interpreted as a result of the employment situation for women, the relatively low job satisfaction in hierarchical systems and limited prospects for professional development and social mobility. The shortage of nurses was another factor motivating the introduction of course-based specialization facilities at universities of applied sciences during the 1980s. Nursing sciences are offered by 11 universities for applied sciences and one private university. Part-time or

full-time courses are increasingly offered for other non-medical professions as well (for example, physiotherapists, speech and language therapists or elderly care-takers). Polytechnics and private institutions also offer a variety of courses in areas such as health promotion and hospital management.

Public health was an exclusively medical specialty until 1989, when post-graduate courses were gradually introduced at nine universities, predominantly in medical faculties. The two-year part-time courses are free of charge and offer about 300 places to university and polytechnic graduates in medical and non-medical disciplines. Quality management is another part-time qualification that has been introduced in recent years at five physicians' chambers, private institutions and some polytechnics.

Since 2004, continuing education has been made obligatory for all health professionals; evidence of appropriate professional development has to be presented every five years. In the case of SHI-affiliated physicians, lack of adequate evidence may lead to a reduction of reimbursement. For other physicians, psychologists, dentists and pharmacists the responsibility of regulating, promoting and supervising continuing education lies with the professional chambers.

Some general issues

Current debates on the education of health care professionals in Germany reflect the tensions between and within education, health care and professional self-regulation; some issues have been raised for decades. For example, interpersonal skills and the ability to synthesize knowledge are perceived as under-represented in nearly all types of health care education compared to factual knowledge, which has been increased in response to developments and specializations in medicine. While the practice-based training of health professionals is criticized as lacking broader educational and pedagogic support for trainees, course-based education at universities is criticized as preparing students insufficiently for their future work either in research or in general health care practice.

Some quantitative and qualitative issues have gained particular political importance during recent health care debates and reforms. The constitutional right and strong professional and political imperatives to offer free choice of profession have made restricting access to university education or professional practice a highly contentious issue. There is now broad agreement in Germany that health care professionals should be better qualified in primary care, health promotion, rehabilitative care and interdisciplinary cooperation. However, it has proved insufficient to add these to the course syllabi while the majority of health trainees are still nearly exclusively based, trained and specialized in secondary and tertiary hospitals for acute care. One of the major challenges in health care

training will therefore be to increase the role, funding and infrastructure of community-based education.

Pharmaceuticals

Pharmaceutical policy seeks to balance targets of health care and industrial policy. Health care policy is primarily concerned with safeguarding quality and safety, improving health and containing costs for SHI. At the same time, industrial policies seek to protect national labour markets and industries and their international competitiveness. Regulations concerning the pharmaceutical market therefore present a dichotomy: On one hand, regulations concerning pharmaceutical pricing and proof of efficacy remarkably liberal; on the other hand, the surcharges on ex-factory pharmaceutical prices are extremely regulated. Only recently have the structure and price regulations in the pharmaceutical distribution chain been addressed by health policy. Cost-containment has concentrated on the SHI market and has relied especially on indirect price controls through reference prices since 1989 and on regional spending caps (1993–2001). Since then, the pharmaceutical market has been reorganized stepwise, starting with ad hoc price cuts and rebate measures to counterbalance the lifting of spending caps which were replaced by practice-specific prescription targets from 2002, coupled with prescription feedback for individual physicians since 2003. Furthermore, surcharges in the distribution chain were amended and the pharmacy market was liberalized.

The following sub-sections give an overview of the pharmaceutical market in 2002, the latest year for which complete data are available. They also outline the progress of drugs from licensing via distribution, price-regulation to SHI coverage (an issue which was dealt with under *Health Technology Assessment* in the previous version of the HiT (*1*)). The further sub-sections then concentrate on regulations such as rebates, reference prices and spending caps which only apply to the SHI market.

The entire pharmaceutical market

The pharmaceutical industry in Germany is among the most powerful in developed countries and contributes significantly to the export market. Around 1100 pharmaceutical companies with 114 800 workers operate in Germany (2002). Of the pharmaceutical industry's total turnover of €23.2 billion in 2002, €11.4 billion was gained in the domestic market and €11.8 billion from exports (especially the other European Union countries, Japan, Switzerland

and the United States) *(63)*. The globalization of the German pharmaceutical market is indicated by the tripling of import and export turnover (€13.1 billion in 2001) since 1992. While imported drugs accounted for about 20% of the pharmaceutical market in Germany in 1992, it accounted for just above 40% in 2002 *(2)*.

Of the €36.6 billion spent on drugs in 2002 (according to national figures), €31.4 was spent on pharmacies in ambulatory care and €3.0 on acute hospital care *(21)*. Of the €33.3 billion spent on drugs in pharmacies in 2002, €29.0 billion were spent on prescription drugs and €4.2 billion on over-the-counter (OTC) medication *(2)*. In real prices, expenditure on OTC drugs increased until 1997 and has decreased since, while prescription drug costs rose continuously. Private households spent one quarter of their out-of-pocket payments on drugs in 2001, less than in the mid-1990s when the share was around 30%.

The pharmacy surcharge and tax are among the highest in western European countries. Of a theoretical end-user price of €100 in 2003 within SHI, drug manufacturers received about €54.10, wholesalers €5.80 and pharmacists €14.30; tax accounted for €13.80 and the rebate for sickness funds for €12.50. While value added tax ranks 2nd lowest among EU-15 countries, value-added taxes levied upon drugs rank 3rd among EU-15 countries since many governments provide a reduced tax rates *(64)*. In 2002, the figures based on €100 were: drug manufacturers €55.90, wholesalers €7.80, pharmacists €17.40, tax €14 and the rebate of pharmacies to sickness funds to €5.10 *(40)*.

An analysis of prescriptions is undertaken annually by a sickness fund affiliated institute. Although this report does not provide patient data which could be used to evaluate appropriateness, it is nevertheless of value for assessment of trends in physicians' prescription behaviour. The report is based on virtually all drug prescriptions in the ambulatory care sector (*GKV-Arzneimittelindex*), and is jointly maintained by several corporatist associations. It does not include prescriptions paid by private health insurance, drug supply in hospitals or OTC drugs. The classification of different substances is based on the ATC standard of the World Health Organization. Until 2000, the report was only based on a representative sample of 0.4% of all prescriptions covered by sickness funds. On the basis of expenditure, panel data is projected to 100% of prescriptions. This methodical change has to be considered when comparing data between periods before and after 2000.

The gross turnover of pharmacies with SHI prescriptions was €24.9 billion in 2002. Of this, €2.2 billion (9%) was spent on hand-made pharmaceutical substances or dressings, nursing care and other products, and €22.7 (91%) was spent on industrially produced drugs. SHI-insureds were prescribed an average of 10.9 packages with 430 defined daily doses (DDDs). The prescription rate

varied by age between 100 DDDs in the age group 20–25 throughout the year 2002 and 1379 DDDs in the ages 85–89. Children under 4 received 209 DDDs and people over 90 received 1272 DDDs per year (*40*).

The gross turnover of prescribed medicines per insured was €363 in 2003, of which €25 was financed by co-payments and €46 by rebates from pharmacies to sickness funds (but not private insurers), as required by law. Thus, sickness funds reimbursed an average of €292 per insured in 2003 according to the physician prescription database called *(65).* The end-user cost of a prescribed package in 2003 was €32 on average for SHI-insured people. The average price was €18 for generics, €17 for reference-priced drugs, €70 for re-imported drugs, €82 for me-too drugs, and €356 for so-called special preparations which are high-cost medications for certain indications.

SHI-affiliated physicians prescribed an average of 5880 "ready preparations" in 235 000 DDDs, with an average turnover of €175 000. The greater part of prescriptions were issued by general practitioners (54%) and internists (18%) followed by gynaecologists, ophthalmologists and paediatricians. The turnover was on average €30 per prescription. The average cost of prescription varied by specialty between €11 from paediatricians, €27 from general practitioners, €40 from internists, and €68 from urologists, neurologists, psychiatrists and psychotherapists *(40).*

Table 24 shows trends in pharmaceutical expenditures of sickness funds, private health insurers and private households. Of the total pharmaceutical expenditures in 2002, 70% were spent by statutory health insurance, 6% by private health insurance, 18% by private households (and not-for profit organizations), and the remaining 5% by other sources. Most pharmaceutical expenditures were in ambulatory care. Pharmaceutical cost-containment measures buffered the rising trends of SHI expenditures on drugs, leading to a nominal decrease only in 1993 and 1996. As a result of cost-sharing measures, private household expenditures on pharmaceuticals increased throughout the 1990s, accounting for up to 26% of pharmaceutical expenditures in 1998 but decreased again to 18% in 2002 (see *Out-of-pocket payments*).

Licensing

Licensing for new drugs became mandatory only with the 1976 Pharmaceutical Act (effective from 1978), after it became clear that a significant proportion of drugs were of unproved effectiveness, and is the most regulated area of medicine in Germany. The admission of pharmaceuticals for humans onto the market is the responsibility of the Paul Ehrlich Institute (blood, blood products, sera and vaccines) and the Federal Institute for Pharmaceuticals and Medical Devices

(all other drugs). The Pharmaceutical Act mandates licensing processes, along with a set of guidelines issued by the Ministry of Health. Before the act, drugs had only to be registered with the (former) Federal Health Office. Registration regulations called for only minor assessments concerning possible toxic effects and the quality of the preparation. While registered drugs may not be labelled for specific indications, licensed drugs have to be tested and labelled for certain indications.

Since 1978, when the Pharmaceutical Act came into effect, approximately 19 000 drugs have been licensed and about 1800 homeopathic remedies have been registered. A substantial number of drugs registered before the enforcement of the Pharmaceutical Act are still on the market. These had to apply for licensing by 30 April 1990 or be removed from the market, which happened to 70 000 drugs by January 1993. Since a substantial number of drugs did not have a chance to prove their efficacy, another deadline (31 December 1999) for submitting licensing applications was established. If a manufacturer renounces its application for licensing a certain drug, the drug may be marketed until the end of 2004 without any proof of therapeutic benefit. The Pharmaceutical Act Amendment (1994) extended the deadline for licensing to December 2005. Altogether 10 800 applications for licensing 7300 chemically defined pharmaceuticals and 3500 homeopathic remedies with indication were handed in. Of these, 2378 of the former and 955 of the latter had not been evaluated by June 2004. In addition, 4700 applications for re-registration of homeopathic drugs without labelling for certain indications were received. These do not fall under European Union regulation but are performed in Germany.

Licenses are granted to various doses and application forms of drugs, leading to more than 40 000 items on the drug market. The Red List registry contains 9449 preparations, yet 90% of prescriptions relate to 2300 drugs. Seventy-seven per cent (77%) of the drugs contained on the Red List were chemically defined preparations, 11% were phytotherapeutics, 8% homeopathics, and 4% other drugs in 2003 *(63)*.

The criteria for licensing pharmaceuticals are: scientifically proven safety and efficacy. This includes a stepwise testing in studies with health humans (phase I and II) and controlled clinical trials in persons affected by the target disease (phase III). Based on the EU-wide standard on "good clinical practice" an extensive formalization and documentation of study procedures is required. However, only a marginal beneficial effect needs to be demonstrated with a small sample in order to fulfil the efficacy criteria, and cost-effectiveness is of no importance. This has led to the admission of active substances with merely minor modifications rather than real product innovations. Licensing is, in any case, limited to five years, after which one needs to apply for an extension.

Table 24. Expenditures[a] on pharmaceuticals, 1992–2002

	1992	1993	1995	1997	1999	2000	2001	2002
Total expenditures on pharmaceuticals (billion €)	25.9	24.4	27.0	28.8	31.4	32.4	35.0	36.6
by SHI	18.7	16.2	18.3	18.7	21.0	22.0	24.2	25.6
by private health insurance	1.9	1.0	1.1	1.2	1.7	1.8	1.9	2.1
by private households[b]	4.7	5.7	6.1	7.3	6.9	6.6	6.8	6.7
by other sources[c]	0.6	1.5	1.5	1.6	1.8	2.0	2.1	2.2
on drugs in acute hospitals (billion €)	2.3	2.5	2.6	2.7	2.8	2.9	2.9	3.0
on drugs from pharmacies (billion €)	22.5	20.8	23.2	24.5	27.0	27.7	30.2	31.4
Expenditures on drugs from pharmacies[d] (billion €)	22.5	21.1	23.7	25.2	27.8	28.5	31.0	32.2
– as % of GDP	1.40	1.27	1.32	1.34	1.40	1.40	1.49	1.53
by SHI (billion €)	16.6	14.2	16.1	16.4	18.5	19.3	21.4	22.5
– as % of GDP	1.03	0.86	0.89	0.87	0.94	0.95	1.03	1.07
– as % of total SHI expenditures	16.8	14.4	14.2	14.2	15.2	15.5	16.6	16.9
by private health insurance (billion €)	0.8	0.9	0.9	1.0	1.5	1.6	1.8	2.0
by private households[b] (billion €)	3.9	4.8	5.4	6.3	6.1	5.9	6.1	6.0
– on co-payments (a)	0.7	1.2	1.5	2.3	2.0	1.8	1.8	1.8
by other sources[c] (billion €)	1.2	1.0	1.3	1.3	1.7	1.7	1.7	1.7

Source: Federal Statistical Office 2004 *(12)*; Federal Ministry of Health and Social Security 2004 *(60)*.

Note: [a] data on pharmaceuticals include dressings; [b] includes expenditures from not-for-profit organizations but negligible; [c] includes expenditures from statutory retirement insurance,

Besides regular admission, an accelerated admission process is also possible, intended for drugs that generate considerable public interest on the basis of their potential therapeutic value, but lack sufficient data to judge their therapeutic efficacy. In such cases, it can be decreed that within a certain period data should be systematically collected on the drug's efficacy in order to reappraise its therapeutic value. However, this procedure is very rarely adopted.

The accelerated licensing procedure for orphan drugs (those used to treat very rare diseases) is more often used, and since 2000 may only be initiated at the European Agency for the Evaluation of Medicinal Products (EMEA). The mutual recognition procedure is an increasingly used strategy for approval, in accordance with EC directive 75/319, which came into effect in Germany on 1 January 1995. Based on this directive, a manufacturer whose drug has been admitted in another country may also apply for the drug's admission to Germany which may only be refused by the Federal Institute for Pharmaceuticals

and Medical Devices if a public danger exists. In this case, EMEA enforced arbitration would be initiated, and eventually adjudicated by the European Commission.

Homeopathic and anthroposophic drugs are exempted from the licensing procedures under the Pharmaceutical Act and are subject to registration only. Registration requirements refer mainly to the quality of the basic products and the manufacturing process as well as to the durability of the final products. Registered homeopathic drugs do not need to prove their therapeutic efficacy unless they are to be licensed for a specific purpose. In this case, a manufacturer has to apply through the regular admission procedure. The characteristics of the admission of homeopathic and anthroposophic drugs and fixed combinations of phytotherapeutics are regulated explicitly in Ministry of Health guidelines. An exception to this are prescription drugs produced and sold in pharmacies in quantities of up to 100 units per day and homeopathic drugs produced in quantities of less than 1000 units per year and drugs currently being tested in phase III clinical trials.

Market admission is not linked to obligatory comprehensive and systematic post-marketing surveillance. However, physicians and other professionals are requested to report problems they or their patients encounter with drugs and medical devices to the Federal Institute, which is required to maintain a database of all side effects, contraindications and other drug problems. Records are assessed by medical, pharmacological and toxicological experts, and appropriate actions are taken, up to withdrawal of the market license.

Distribution of pharmaceuticals

Pharmaceuticals may be dispensed by hospital, institutional and public pharmacies and, if they are not labelled "pharmacy-only", by drug stores and supermarkets. Public pharmacies are clearly dominant in the distribution: of the 1647 million packages sold in 2002, 93% were sold in pharmacies and only 7% in drug stores and supermarkets, which accounted for less than 1% of the total turnover in the pharmaceutical market. Drug stores and supermarkets mainly sell vitamins, minerals and some phytotherapeutic products, while nicotine replacement items, homeopathic drugs and anthroposophic drugs, for example, have to be sold in pharmacies (pharmacy-only OTC).

The average package in 2002 cost €30. Prescription-only medicines accounted for 79% of the total turnover but only 44% of the packages. The 922 million (56%) OTC sales accounted for 21% of the turnover. Only a small part, 116 million OTC packages (7% of total packages) were sold in drug stores and

supermarkets while 806 million were sold in pharmacies. Of the 806 million, 560 were self-medication and 278 were prescribed by physicians, some reimbursed by statutory health insurance, some not *(40)*.

The density of pharmacies is relatively high by international standards and has slightly increased over the last decade to 26 pharmacies per 100 000 inhabitants in 2002. Public pharmacies are actually all privately owned, operated by self-employed pharmacists who are mandatory members of pharmacists' chambers, and had a monopoly over drug dispensing in ambulatory care until 2003 and the introduction of e-commerce and extended allowances to hospital pharmacies, which may also give medications to SHI-insureds if their funds have negotiated an agreement with the hospital. From August 2002, hospital pharmacies had already received an allowance to deliver certain medications, especially chemotherapies, directly to office-based physicians. Office-based physicians may not dispense medications, with few exceptions. Until 2003, pharmacists were only allowed to own one pharmacy. Since 2004, they may run a maximum of four, and the three branch pharmacies must be in the same or a neighbouring county as the main pharmacy.

Since enforcement of the SHI Modernization Act in 2004, the structure of the pharmaceutical sector has changed substantially. The market was "liberalized" for pharmaceuticals, for example, e-commerce with pharmaceuticals has been allowed under strictly regulated conditions, pharmacists may operate more than one pharmacy, and over-the-counter drugs were taken out of the requirement to charge uniform prices. The internet trade in OTC drugs grew substantially in the first few months. From January until July 2004, about 600 pharmacies had obtained licenses to trade drugs via the internet. About 5000 pharmacies take part in the largest network of internet-based pharmacies (Aponet), which was established by the Federal Association of Pharmacists' Organizations. By July 2004, 5% of the 3.5 to 5 million client contacts with pharmacies per day were taking place via the internet. With 175 000 to 200 000 drug orders per day, this network is by far the largest provider, while the others together account for 5000 orders per day. Extrapolated, this would account for 4% of total packages sold in 2002. Yet, in the first months, the liberalization of the pharmacy market did not lead to price reductions. Although reductions are seen in travel packages, some lifestyle drugs and selected expensive drugs (to compete with hospital pharmacies), the overall price level has not (yet) decreased. Likewise, the removal of fixed prices in the OTC sector did not reduce but rather often increased prices.

Price regulation for the entire pharmaceutical market

The regulation of pharmaceutical prices differs between the inpatient sector and the ambulatory sector. While hospitals may negotiate prices with wholesalers or manufacturers, the distribution chain and prices are much more regulated in the pharmacy market. In both sectors, ex-factory prices are basically determined by manufacturers without either negotiations involving governmental agencies, direct price controls or profit controls. However, price setting by companies takes into consideration (price) regulations in other parts of the market, for example indirect price regulations in form of reference prices, legal minimum sales from parallel imports. Drug companies have also been obliged to pay lump sums or give rebate to sickness funds.

The cornerstones of price regulation were hardly changed between 1980 and 2003, but substantially revised with effect from 2004. From 1980 to 2003, pharmacists and wholesalers were paid by degressively scaled margins as detailed in the Pharmaceutical Price Ordinance. As the absolute size of the margin still increased with a product's price, there was little incentive for a pharmacist to dispense a less expensive medicine. The margins for wholesalers and pharmacists were decreased in 2002. In 2004, the payment of pharmacists was substantially revised by the SHI Modernization Act (which in this respect also affected non-SHI patients). This entailed the liberalization of OTC medication prices and a revision of the price-setting regulations for prescription-only drugs. The new "Pharmaceutical Price Ordinance for Prescription-only Pharmaceuticals" applies to the entire prescription-only market independent of the source of payment. It applies to human and animal drugs and to public pharmacies, but not to institutional pharmacies or to vaccines, blood replacement and dialysis-related drugs, for which sickness funds negotiate prices with manufacturers. (Additionally, the competencies of sickness funds to negotiate volumes and prices for certain other drugs by circumventing pharmacies and/or wholesalers have been extended since 2004.)

For prescription-only drugs, pharmacists are now paid through a flat-rate payment of €8.10 plus a fixed margin of 3%. The user price contains an additional 16% VAT. The margin of 3% is calculated from the manufacturer's price plus the relevant maximum margin for wholesalers (excluding VAT). The flat-rate was calculated to maintain pharmacists' profits. The pharmacists are happy with this, particularly since price-reducing regulations at manufacturer and wholesaler level would otherwise have decreased their income in 2004.

For OTC drugs, pharmacies may now freely determine prices, with the exception of those still reimbursed by sickness funds, listed among the Federal Joint Committee's exemptions. For SHI-reimbursed OTC preparations, the previous price-regulations (valid from 2002 until December 2003) with digressive margins still apply.

Statutory health insurance coverage of pharmaceuticals

The coverage of drugs in the SHI benefit basket is not a straightforward affair. Unlike many other countries, Germany does not have a "positive list" of SHI-reimbursable pharmaceuticals. The Health Care Structure Act of 1993 had included a mandate for a positive list to be developed by the Federal Ministry of Health. This regulation, however, was dropped only weeks before it was supposed to be put into effect on 1 January 1996. The Federal Minister of Health decided not to pursue the idea of a positive list and justified this by citing the successful cost-containment measures in the pharmaceuticals sector, the otherwise rising costs for chronic patients due to OTC purchases and, most importantly, the threat to smaller pharmaceutical companies. While this decision was welcomed by the pharmaceutical industry, it was criticized by both the sickness funds and the Social Democratic Party. The SHI Reform Act of 2000 again introduced the mandate for a positive list, which the Federal Ministry of Health, supported by an expert commission, consequentially submitted to the Federal Council at the end of 2002. However, the opposition, having the majority in the Council, threatened to reject the proposal. Following opposition and government negotiations for the SHI Modernization Act, the ministry's mandate for compiling a positive list was withdrawn again.

Until 2003, market entry for most drugs meant SHI coverage, but there were a few but important exceptions that were gaining attention:

- Drugs for "trivial" diseases (common colds, drugs for the oral cavity with the exception of antifungals, laxatives and drugs for motion sickness) are legally excluded from the benefits' package for insureds over 18 years (§ 34(2) SGB V).
- The Social Code Book allows the Minister of Health to exclude "inefficient" drugs, that is, those not effective for the desired purpose or combined more than three drugs, the effect of which cannot be evaluated with certainty (§§ 2, 12, 34(3) and 70 SGB V). The evaluation of these drugs takes into account the peculiarities of homeopathic, anthroposophic and phytotherapeutic drugs. A negative list according to these principles came into effect on 1 October 1991, has been revised several times and contains about 2400 drugs. The Federal Committee of Physicians and Sickness Funds published the brand names for these substances.

- The coverage of drugs was also regulated in the pharmaceutical directives of the Federal Committee, which are legally binding and limit the prescription of some drugs to certain indications (for example, anabolics to cancer patients), specify that they may only be used after failed non-pharmaceutical treatments or in a few cases, disallow any prescription on the account of sickness funds (for example, drugs to stop smoking).

In mid-1998, the Federal Committee amended its pharmaceutical directives to exclude drugs for the treatment of erectile dysfunction or improvement of sexual potency such as Viagra. The Committee argued that varying individual behaviour does not allow the determination of a standard of disease upon which to base economic considerations. In its opinion, the responsibility of the sickness funds ends where personal lifestyle is the primary motive for using a drug, thus so-called lifestyle drugs are excluded from the benefits package. This case demonstrated that the criteria for exclusions were less explicit than for medical technologies (see *Health technology assessment*), so that decisions depend on consensus. Accordingly, the Federal Social Court disapproved of the general exclusion of drugs for the treatment of erectile dysfunction and instead demanded measures against their misuse. In early 1999, the Federal Committee passed pharmaceutical directives explicitly stating that the licensing of pharmaceuticals is a necessary but not sufficient precondition for SHI coverage. Yet, following various court cases motivated by pharmaceutical manufacturers, these regulations were never enforced with sanctions, but were rather recommended as prescription guidelines and updated from time to time.

Since 2004, the SHI Modernization Act has brought substantial changes to the coverage by adding two other groups of excluded drugs:

- So-called lifestyle drugs have been legally excluded from the benefit catalogue. The Federal Joint Committee is responsible for defining the exact extent of this regulation in its pharmaceutical directive.
- OTC drugs may no longer be reimbursed by sickness funds except for children below the age of 12. The task to define exceptions to this general exclusion has also been delegated to the Federal Joint Committee which lists OTC drugs and the indications for which they may be prescribed it its pharmaceutical directive.

The addition of the two groups also affected the two negative lists (for drugs for "trivial" diseases and "inefficient" drugs) and the work of the Federal Joint Committee. While the two negative lists still exist, they are now considerably smaller as they are only applicable for prescription-only drugs.

Another issue that has received increasingly attention is the prescription and SHI coverage of drugs for off-label use, raising concerns about access to

innovations as well as pharmacovigilance and liability. Generally, drugs not licensed at all for the German pharmaceutical market or not licensed for the respective indication may not be prescribed by any physician except under clinical trial conditions. Sickness funds may not fund clinical research and may basically not cover prescriptions of unlicensed drugs or for unlicensed indications. The SHI Modernization Act took internationally a pioneering role by introducing an expert committee to clarify rules for off-label use. The committee is affiliated to the Federal Institute of Pharmaceuticals and Medical Devices and consists of nominated representatives from the Institute, from scientific medical societies, physicians' associations, manufacturers, sickness funds, SHI medical review boards, and representatives of pharmacists and patient interest groups. Based on a jurisdiction from the Federal Social Court on criteria for the access to off-label use drugs, the committee started with defining rules and conditions for the prescription and SHI-financing of oncological medications that are not yet licensed for the required indication.

Price regulation for pharmaceuticals covered by statutory health insurance

Besides the price regulations along the distribution chain that apply to the entire ambulatory pharmaceutical market, special regulations are in force for sickness funds, as SHI constitutes the major customer in the pharmacy market. The main instruments, which are described in turn, are: rebate, reference prices, aut-idem substitution, and parallel imports.

Pharmacies are obliged to give a *rebate*, which was 5% until 2001 and was increased to 6% in 2003. In addition, wholesalers and manufacturers also were required to give a rebate to SHI since 2002. The rebates of 2003 for SHI from manufacturers, wholesalers and pharmacists amounted to €3.1 billion or 11.6% of pharmacy turnover and slowed down the growth of drug expenditures to 2% but did not decrease overall drug expenditures, as expected *(64)*.

The SHI Modernization Act modified the pharmacy rebate to a flat rate of €2 per prescription-only drug. From 2005, the rebate will be negotiated between the federal associations of sickness funds and the Federal Association of Pharmacists' Organizations. For those OTC drugs still paid by SHI (based on the Federal Joint Committee's exemption list), pharmacies have to give a rebate of 5%. The rebate for manufacturers was transiently set at 16% for SHI-covered drugs in 2004 and contributed substantially to the savings generated for sickness funds in that year. From 2005, it shall be reduced again to 6% which is expected to re-induce a substantial increase of drug expenditures.

Reimbursement of pharmaceuticals has been further regulated by *reference prices* since 1989, as a means of exerting indirect price control. The reference price system establishes an upper limit for sickness fund reimbursements, based on § 35 SGB V, which stipulates that reference prices be defined for drugs with the same or similar substances or with comparable efficacy. While the Federal Joint Committee is responsible for the identification and classification of drugs, the federal associations of sickness funds do the actual reference price-setting. Reference prices mean that sickness funds only reimburse pharmacies up to a predefined ceiling and patients pay the difference between the reference price and the market price. Between 1989 and 1992 no fixed fee co-payment had to be paid on top of the price differential for the affected drugs. Since 1993 flat-rate co-payments have to be paid on top of the price differential. It is noteworthy that because of competition within the reference-price groups and the legal obligation for physicians to inform patients that they are liable for the price difference, very few drugs now exceed the reference price.

The Act to Strengthen Solidarity in SHI introduced tighter regulations for the setting of reference prices, prohibiting them from being higher than the highest price in the lowest third of the market. For 202 out of a total of 446 drug groups with reference prices, prices were supposed to be lowered from 1 April 1999 for a saving of approximately €280 million. However, this reduction was blocked and reference prices altogether came under legal threat. The pharmaceutical industry filed several court cases arguing that sickness funds were not authorized to set (indirect) price controls for patented drugs by including them in the reference price scheme. Therefore, the Federal Assembly passed the Reference Price Adjustment Act to transfer the function of adjusting reference prices to the Ministry of Health. Yet, the Federal Constitutional Court (December 2002) and the European Court of Justice (early 2004) approved the sickness funds' role in influencing prices in the SHI market, as institutions acting in a publicly delegated function.

The reference price scheme for pharmaceuticals proved to be an effective measure for cost-containment. Because of patients' attempts to circumvent co-payments, demand for pharmaceuticals below the reference price ceiling has increased, leading to increased competition in the pharmaceutical industry. The industry has also partly compensated for the lower prices for drugs formerly above the reference price with above-average increases for non-reference-priced drugs.

The annual savings for sickness funds from the reference price scheme gradually increased from €1.2 billion in 1996 to €2.1 billion in 2002 *(63).* In 2003, 61% of SHI prescriptions and 37% of pharmaceutical expenditures were

for drugs under the reference price scheme *(40)*. The share of prescriptions and turnover of reference price schemes varied by regional physicians associations, with turnover ranging from 29% in Hamburg to 38% in the Pfalz region *(65)*.

The Institute for Quality and Efficiency may support the Federal Joint Committee and federal associations of sickness funds by classifying new pharmaceuticals according to their degree of innovation and effectiveness with comparative pharmaceuticals. If the efficacy or safety is superior to existing drugs, manufacturers will continue to be free to set the prices without regulatory interference. If they are equal to those of products already on the market, the new product would be classified into the reference price system, that is, a patent would no longer secure a reference-price free marketing period. Similar legislation was abolished in 1996 due to pressure from the pharmaceutical industry, and was blocked again, as part of the 12th Social Code Book V Modification Act, by the Federal Council in April 2003 when the Act came into force. In contrast to earlier government plans, price negotiations for truly innovative drugs were not introduced; evaluation of drugs is not explicitly based on cost-effectiveness (but on "benefit") and will not provide the basis for a yes-no decision on SHI coverage but rather on inclusion in the reference price scheme. The first decisions of the Federal Joint Committee were taken in July 2004 and enforced in August 2004, referring to statins, sartans, triptans, and proton-pump inhibitors.

The Pharmaceutical Expenditure Limitation Act had obliged the members of the Association of Research-Based Pharmaceutical Companies to pay a lump sum of approximately€200 million (the "solidarity contribution") in 2003 after industry had effectively protested against the planned reintroduction of reference prices for certain patented drugs. Furthermore, the Act sought to promote the prescription of generics by demanding an update of the price comparison list's 1992 prices.

Until 2001, pharmacists were allowed to substitute for prescribed preparations only if the physician explicitly allowed or asked for it. The Pharmaceutical Expenditure Limitation Act (February 2002), following the lifting of the pharmaceutical budgets, obliged pharmacists to substitute (*aut idem* regulation) lower-priced preparations unless the physician explicitly opposed it. From July 2002 until April 2003, 184 of 680 generic substances (in 15 542 preparations) were included stepwise into the *aut idem* regulation, accounting for 35% of the prescriptions in the generic market and for 29% of the generic market turnover (*40*).

In practice, these regulations for substitutions led to savings of only €48 million, since they mainly applied to the generic market, and the industry influenced the (upper) price spectrum with dummies. Pharmacists, still receiving

a percentage per package price, had no financial incentive to substitute. Furthermore, the Contribution Rate Stabilization Act of 2002 introduced direct negotiations between sickness funds and manufacturers for further rebates. Yet, instead of the aspired nominal decrease of €1.4 billion, expenditures increased, mainly due to the shift to other substances.

In response to these barriers, the SHI Modernization Act simplified the *aut idem* regulation and linked it with the reference price system for those substances for which substitution is possible. Products with replaceable active ingredients are grouped and the substitution price line is calculated. Subsequently, the reference prices for those drugs with replaceable active ingredients are amended and automatically set below the substitution price line.

The Pharmaceutical Expenditure Limitation Act also obliged pharmacists to generate at least 5.5% of their turnover in 2002 and 7.0% in 2003 by officially listed *parallel imports* that can be sold at a lower price than the domestic equivalent. Although the price difference between domestic products and parallel imports is shrinking with increasing European Union price convergence, this regulation is expected to create significant savings for the sickness funds. As a first result, the market share of parallel imports increased significantly in 2002 (Table 25). In 2003, the turnover from re-imported drugs was 6.8%, ranging from 5.7% in Bavaria to 8.9% in Berlin. The share of re-imported products was 20% of the turnover in the re-import market, ranging from 16% in the South Württemberg region to 24% in Hamburg and the North Rhine region *(65)*.

Spending caps

Spending caps of varying strictness were a prominent measure to contain pharmaceutical expenditures from 1993 basically until 2001 (see Table 27). Since 2002, spending caps have been abolished and replaced by negotiated targets of cost-control and appropriate prescription. The new initiative is supported by a long-overdue introduction of a uniform feedback system for drug prescription, which came into operation for the use of individual ambulatory physicians only in March 2003.

The spending caps, introduced in 1993, imposed a real reduction in pharmaceutical expenditure, accounting for €13.7 billion in 1992 (West). Based on the 1991 expenditure of €12.5 billion, it reduced future spending to a maximum of €12.2 billion per year. From 1994 to 1997, every single regional physicians' association (West and East) was formally liable for any overspending with no upper limit, even if total pharmaceutical spending remained below the cap. At the same time as introducing the spending cap, the reform act imposed a price cut of 5% for existing drugs not covered by reference pricing and a price freeze for new drugs, applicable to 1993 and 1994.

The result of all three cost-containment measures in the Health Care Structure Act of 1993 – i.e. a price moratorium, new cost-sharing regulations and the expenditure cap – in their first year of operation was a reduction of 18.8% in sickness funds' costs for pharmaceuticals. This figure represented a reduction for the sickness funds of €2.6 billion from 1992's expenditure or €1.2 billion more than had been required. Of these savings, around €0.5 billion was attributable to price reductions. Almost another €0.5 billion was the result of the new cost-sharing regulations. About 60% of the total reduction was attributable to changes in physicians' prescription behaviour. Physicians reduced the number of prescriptions by 11.2% and increased their prescriptions for generics instead of the original products.

Between 1994 and 1997, the spending cap levels were subject to regional negotiations between the associations of sickness funds and the 23 regional physicians' associations in both parts of Germany. Regional caps were exceeded in some of the 23 regions in 1994 even though national figures remained within the total (hypothetical) spending cap. Some of the regions also exceeded the 1995 budget and therefore, in September 1996, the sickness funds instigated proceedings to claim back money from nine regions which have overspent their budget by up to 11.3%. The regional physicians' associations resisted payment, arguing that they could not effectively manage overall or physician-specific drug expenditure, due to untimely and unspecified data. Despite the rises in pharmaceutical expenditure in 1996 – when nation-wide spending exceeded the cap, leading to agreements in several states to even out the overspending in coming years – the spending cap proved to be an effective method of short-term reduction and long-term modification of pharmaceutical expenditure *(66)*.

With the Second SHI Restructuring Act, the regional spending caps for pharmaceuticals were abolished from 1998 and were replaced by practice-specific target volumes. Physicians exceeding 125% of the prescription target were required to compensate the respective sickness fund unless they could document "special requirements of the surgery" (*Praxisbesonderheiten*) including certain high-cost drugs and certain patient groups for example patients requiring post-transplantation care or terminally ill patients. If physicians could proof by documentation that prescriptions were necessary from a medical point of view and prescribed at a possibly low price they could evade sanctions altogether or reduce their amount. These prescription targets for individual practices have basically been maintained since then while the context for collective responsibilities for drug expenditures was amended by subsequent reforms.

The Act to Strengthen Solidarity in SHI reintroduced regional spending caps for pharmaceuticals at the regional level from 1999, initially strictly capped at

a legally set limit (Table 27). Regional physicians' associations became liable for any over-spending up to 105% of the cap. As a kind of compensation, debts resulting from the former spending cap were waived. To protest against the reintroduction of collective liability, several physicians filed constitutional complaints. The Federal Constitutional Court declined to debate their case until the threat of collective sanctions for overspending a regional drug budget had been realized. In fact, collective sanctions have never been executed due to legal uncertainties to charge persons without individual infringement. Yet, regional spending caps for pharmaceuticals continued to be met with substantial resistance.

The Pharmaceutical Budget Redemption Act, enacted at the end of 2001, re-abolished the legally required spending caps for pharmaceuticals and the collective liability of physicians for exceeding the regional budgets. Despite this, the regional physicians' associations and the associations of sickness funds are still required to negotiate a yearly "budget" and use target volumes for individual practices. The contractual partners are requested to negotiate an adequate level of drug budgets since otherwise they can be over-ruled by the self-governance of statutory health insurance actors at the federal level and finally by the Federal Assembly. According to the law, negotiations shall take into consideration among others expected changes due to legal or negotiated cost-containment measures, regional needs, and shifts in the market including the entry of innovative drugs or generics. Sanctions for exceeding drug budgets are not obligatory but the self-governingactors are free to make use of them as a contractual component. The Act made the introduction of negotiated target volumes for individual practices and related data management obligatory. The associations of sickness funds which previously had insisted on regional spending caps became now obliged to accept the target volumes and – lately – to provide prescription feedback to SHI affiliated physicians.

As a first step toward achieving the individual target volumes, each physicians' association subtracts certain types of drugs and drugs for patients with certain indications from the yearly gross budget. Subsequently it allocates the remaining budget to different medical specialties, usually on the basis of prescription volumes of the year before. In most regions the budget of each specialty is again divided into two sub-budgets, one for the treatment of retirees and non-retirees, based on the respective prescription volumes of the previous year. These sub-budgets are finally divided by the number of cases of retirees and non-retirees, resulting in a target of how much can be prescribed per retired and non-retired person for each specialty. The targets for individual physicians for the current year are calculated ex-post by multiplying the total number of treated cases (retirees and non-retirees) for each physician by the target of each specialty *(66).*

Prescription controls and information

Physicians who exceed their individual target by more than 15% are advised in written form to critically reconsider their prescription behaviour. The legal limit for over-prescribing and paying-back has been set at 125% of the individual target. Those physicians who exceed the target by 25% are asked to justify the over-prescription. If their arguments are rejected, they are subject to recourse and usually pay back the difference between the over-prescribed amount and 115% of the target. The amounts paid back by physicians are allocated to the sickness funds according to the number of cases treated by the physician in question. For example, in Berlin, 4% of all physicians exceeded their target by 15% to 25%, while 12% of all physicians exceeded their target by more than 25% in 2002. The recourse procedures usually take years. In Berlin for examples, claim controls relating to prescriptions in 1998 and 1999 were accomplished only in 2003. Overall amounts of €2.2 million (1998) and €2.4 million (1999) have been claimed back by the sickness funds, representing 0.3% of the overall pharmaceutical expenditure in Berlin *(66)*.

Besides the (never realized) threat of collective sanctions and besides the partly realized threat of individual sanctions for exceeding target volume controls of individual physicians, two other types of prescription controls influence physician behaviour: Regular efficiency controls based on a physician's average amount of prescriptions and sickness funds' reclaims from individual physicians based on so-called "other damage". The latter amounted to 25 000 annually in recent years and refer mainly to the non-compliance with the Pharmaceutical Directives of the Federal Committee for example due to prescribing drugs excluded from the benefit catalogue or not licensed for the respective indication (off-label use).

While controls were enhanced, physicians also received increasingly prescription feed-back and information from their regional physicians' association, from sickness funds and through their accredited commercial practice software. Together with the revised target volumes an early information system was provided to physicians, containing a representative sample of pharmacies in each region so physicians' associations could forecast the prescription volumes of certain specialist groups and individual physicians. Those physicians who exceeded the target received the information as an early warning. Since 2000, every SHI affiliated physician has been informed about the real prescription behaviour of physicians in the region, based on a federal information system about SHI-covered prescriptions, abbreviated as GAmSI (65). Since 2003, they have also received three monthly overviews of the aggregate prescription volume of their specialist group in the region and their individual prescription volume. Thus physicians are able to adjust their

future prescription behaviour according to the provided data. The prescription feed-back system GAmSI monitors the attainment of negotiated goals. It is based on indicators that have been agreed at federal level and have up to now focussed merely on cost-containment purposes rather than on quality, safety or equity: An increase in the share of prescriptions as well as turnover from generics and parallel imports and a decrease in the share of disputed drugs and me-too drugs. In addition, the share of "special preparations" reflects access to high-cost drugs for certain diseases.

SHI expenditure and prescription behaviour

Table 25 shows that the above mentioned indicators and a few others have changed substantially, already since 1992. While prescription volumes reflect prescription behaviour as well as patients' need, figures on SHI turnover additionally reflect changes in the type and cost of drugs available in the ambulatory drug market covered by SHI.

While the total number of prescriptions remained at a constant level or even increased before the introduction of drug budgets in 1993, it clearly decreased afterwards. The reason is to be found partly in larger packages, induced by cost-sharing mechanisms (with the overall amount of prescribed daily doses remaining stable), and partly in a decrease in prescriptions for drugs with disputed effectiveness between 1992 and 2002. Physicians obviously amended their prescription behaviour to the new situation due to budgets, sanctions and prescription information as well as cost-sharing regulations for patients. They differentiated between drugs of disputed and undisputed effectiveness.

In the period after the introduction of regional spending caps with collective liability (1993 to 1997), the number of prescribed drugs was reduced at a compound annual growth rate of -9.8% per year. In the second period of drug budgets, from 1998 to 2001 – allowing a substitution of spending caps by target volumes with individual liability – the number of drugs with disputed effectiveness did not fall as much in nominal terms as in the first period, but the yearly reduction according to the compound annual growth rate was even higher, at -10.3%. In the third period of drug budgets – allowing only target volumes as budgetary regulation – the number of prescribed drugs with disputed effectiveness was again reduced by -7.6% in 2002 *(66)*.

The discouragement of "trivial" and "controversial" drugs and the extension of the negative list is reflected in an absolute and sector share decrease of OTC between 1997 and 2001, mainly due to price decreases while the number of packages sold remained remarkably stable throughout these years. A real price stability for sales of physician-prescribed over-the-counter medications could

Table 25. Trends in prescription behaviour for SHI insureds and turnover in the SHI-pharmacy market, 1992–2003

	1992	1994	1996	1998	1999	2000	2001	2002	2003
Prescriptions (million packages)	1063	915	939	807	783	749	760	761	749
Defined daily doses (in billion per year)	30	28	29	28	28	28	30	30	31
Value per prescription (€)	16	17	19	23	24	26	28	30	32
Disputed drugs (% of all prescriptions)	36	32	30	26	23	20	19	18	16
Generic prescriptions (% of potential generic prescriptions)	60	61	63	66	68	71	73	75	75
Turnover (billion €)	17.1	15.8	17.7	18.2	18.8	19.3	21.3	22.7	24.1
Disputed drugs[a]	28	23	20	15	13	10	9	8	7
Reimported drugs[a] (a)	–	–	–	1.8	2.2	3.1	4.8	7.1	–
Reference-priced drugs[a]	–	–	–	54	51	50	47	41	34[b]
Generics[a]	29	32	32	31	31	32	30	30	30.3
– as % of potential generic turnover	44	48	51	56	59	64	66	68	68
Ex-patented originals[a]	62	66	49	41	40	36	31	32	31
Patented substances (group A + B + C)[a]	9	12	19	28	29	32	39	38	39
Me-too preparations (group C)[a]	6	8	10	15	16	17	19	20	19
Therapeutically relevant substances (group B)[a]	1	1	4	5	6	7	11	8	9
Truly innovative substances (group A)[a]	2	3	5	8	7	8	9	10	11
Special preparations[a]	–	3	8	12	13	15	15	17	18

Source: Nink & Schröder, 2004 *(64);* Schwabe, 2004 *(69);* (a) Association of Research-based Pharmaceutical Companies, 2003 *(63).*

Note: [a] as percent of turnover in the SHI market for pharmaceuticals (excluding the negligible turnover from handmade substances); [b] figure from July 2003.

also be observed from 1987 to 2001 *(67)*, while other data indicate a decrease in absolute terms from €4 to €3 billion *(63).*

The changed prescription behaviour of physicians and the following reduction of drugs with disputed effectiveness also have a significant impact on SHI expenditures. Data also reveal an increasing readiness of physicians to prescribe generics, amounting to 75% of all potential generic prescriptions in 2003 (Table 25), one of the highest shares among EU countries and the OECD. The tendency to prescribe more generics is also expressed in the increasing turnover of generics as a percentage of their potential market (Table 25). Due to new product launches, market segments with generic competition decreased, so

that generic prescription as percentage of the total market remained at around 30% of turnover and even decreased in recent years (Table 25).

The presented results suggest that the introduction of drug budgets in 1993 was associated with decreased prescription of drugs with disputed effectiveness and increased substitution of generics until 2001, a trend that did not go on after the legally set spending cap was lifted. These savings were used to replace former drug therapies by patented therapies, truly innovative substances (group A), other therapeutically relevant substances (group B) and copies me-too preparations with no or little additional therapeutic value (group C). Yet, the shift toward patented substances came at the price of rising drug expenditures. The value per prescription doubled to €32. The turnover from patented drugs increased more than turnover from generics or savings related to the omission of disputed drugs or to the substitution of ex-patented brands aut-idem or by generics. Turnover from me-too preparations (group C) exceeded turnover from therapeutically relevant innovations (group A and group B) except for the years 2000 and 2002 (Table 25).

Despite substantial improvement in appropriate and cost-efficient prescribing, ideal efficiency reserves were estimated for 2002 at €4.1 billion which is 18% of total SHI spending on ready preparations, of which €1.1 billion was for the omission of or substitution for disputed drugs, €1.6 billion for the substitution of analogous preparations of the cheapest brand or generic in the substance category (group C) and €1.4 billion was for the prescription of 100% generics (*68*). A similar overall amount of financial resources was calculated by the Federal Association of SHI Physicians to be required for avoiding current estimated under-provision with drugs for certain chronic and rare diseases.

Health technology assessment

Regulation and control of health technologies in Germany was not a major issue in the past. Although German regulations, especially licensing for pharmaceuticals (see *Pharmaceuticals*) and medical devices, meet international standards, other types of technologies did not receive the attention they deserved. Since the regulation of health technologies in Germany depends on the structure and organization of the health care system, when analysing the status quo, the health care sector, type of technology and the level of regulation have to be taken into account. While certain aspects are dealt with in other sections as well (especially regarding pharmaceuticals), a summary of the main issues follows.

Registration (Licensing) of medical devices

Since 1 January 1995, the Medical Devices Act (MPG), translating European Union directives into German law, has been in effect. In conformance with European Union directives 90/385 (concerning active implant devices such as pacemakers) and 93/42 (medical products other than those active implant devices and *in vitro* diagnostic devices), devices marketed in Germany must meet the requirements of the Medical Devices Act. In contrast to drugs, medical products and devices are defined as instruments, appliances, materials and other products that do not produce their main effect in a pharmacological, immunological or metabolic way. The licensing of medical devices is the responsibility of authorized institutions ("notified bodies"), which require accreditation through the Federal Ministry of Health. The safety and of technical suitability of a device are the primary criteria for their market admission. As opposed to drugs, medical devices do not need to prove that they are beneficial in terms of potential health gain in order to be marketed. Devices marketed in Germany are reviewed for safety, and for whether they technically perform as the manufacturer claims *(70).*

The European Union Medical Devices Directive 93/42 established a four-part classification system for medical devices. The rules for classification take into account the risk associated with the device, its degree of invasiveness, and the length of time it is in contact with the body. A device's classification determines the type of assessment the manufacturer must undertake to demonstrate conformance to the relevant directive's requirements. Coverage decisions about medical devices and mechanisms to steer their diffusion and usage differ depending on whether they are used directly by patients ("medical aids") or as part of medical or surgical procedures in the ambulatory or hospital sector.

Statutory health insurance coverage of medical aids

Medical aids comprise devices directly used by patients, such as prostheses, glasses, hearing aids, wheelchairs or respirators. As in care provided by allied health professionals, insureds are entitled to medical aids unless they are explicitly excluded from the benefit package through a negative list issued by the relevant ministry. The Federal Ministry of Labour and Social Affairs (responsible for SHI at that time) explicitly excluded aids with small or disputed therapeutic benefit or low selling price (for example, wrist bands). The regulations for the coverage of non-excluded medical aids are complex and therefore are only briefly described. The federal associations of the sickness funds publish a medical aids catalogue, which includes:

- a list of who may be entitled to SHI-paid medical aids
- an alphabetical catalogue of all medical aids
- a list of the medical aids that can be provided at SHI expense, as decided by the federal sickness funds' associations.

Since 2004 the federal associations are also responsible for selecting the types of medical aids and prostheses that shall be submitted to reference prices and define the price limits. Until the end of 2004, reference prices were set at *Länder* level and varied accordingly. Similarly to reference prices of pharmaceuticals, sickness funds reimburse the cost of covered medical aids up to the reference price for the specific type of aid. Similarly to reference prices for drugs, physicians have to inform patients that they are required to pay costs beyond a reference price limit for the respective type of medical aid or prosthesis.

Diffusion and usage of medical aids and prostheses is regulated by the Federal Joint Committee, which issues directives that limit the prescription of medical aids to the following cases: assuring the success of medical treatment, prevention of threatened health damage, preventing the health endangerment of a child, and avoidance or reduction of the risk of long-term care.

Expensive medical devices

Agreements upon the diffusion of expensive medical devices ("big ticket technologies") and their distribution between the ambulatory and hospital sector has been called a "never-ending story". This judgement is the result of various attempts of corporatist and legislative bodies to improve planning of expensive medical devices in the light of increasing costs and new types of devices such as extra corporeal shock-wave lithotripsy. Until 1982, when the Hospital Cost-containment Act came into effect, no regulations concerning expensive medical devices existed. With this law, it became mandatory for expensive devices to be subject to hospital planning. Devices that were not part of an agreement could not be considered in the per diem charges and thus could not be refinanced. In contrast, notified to the relevant physicians' association was sufficient for expensive devices in the ambulatory care sector. This unequal situation remained essentially unchanged until the Health Care Reform Act of 1989.

Between 1989 and 1997, regional distribution of expensive medical equipment for the SHI-covered population was controlled intersectorally by state-level committees consisting of representatives of the hospitals, physicians' associations, sickness funds and a state representative, who negotiated aspects of the joint use of devices by third parties, service requirements, population

Table 26. High medical technologies per million inhabitants, 1992–2001

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Computed tomography	10.4	12.9	14.7	15.6	16.4	17.1	–	–	–	–
ambulatory sector	3.7	4.7	6.1	6.7	6.9	7.5	–	–	–	–
hospital sector	7.3	8.2	8.6	9.0	9.5	10.0	11.0	11.7	12.7	13.3
Magnetic resonance imaging	2.6	3.6	4.1	4.8	5.7	6.2	–	–	–	–
ambulatory sector	1.4	2.2	2.3	2.6	2.9	3.0	–	–	–	–
hospital sector	1.2	1.4	1.8	2.3	2.8	3.2	3.7	4.4	4.9	5.5
Positron emission tomography	0.07	0.12	0.16	0.21	0.26	0.30	–	–	–	–
ambulatory sector	–	–	–	0.01	–	0.04	–	–	–	–
hospital sector	–	–	–	0.20	–	0.28	0.44	0.46	–	–
Coronary angiography units	3.1	3.4	3.8	4.1	4.4	4.7	–	–	–	–
ambulatory sector	–	–	–	0.4	–	0.6	–	–	–	–
hospital sector	–	–	–	3.8	–	4.1	5.4	5.1	–	–
Lithotripter (hospital sector)	1.6	1.7	1.8	1.9	2.0	2.2	2.5	2.8	3.0	3.3

Source: OECD Health Data, 2004 *(2);* Federal Statistical Office 2002 *(11).*

density and structure, as well as the operators' qualifications. After the Health Care Structure Act of 1993, the Minister of Health could determine which devices fell under the committees' auspices (§ 122 SGB V), but did not do so and the committees defined expensive medical equipment. On 30 June 1997, the following devices fell within this definition in almost all states: left heart catheterization units, computer-tomographs, magnetic resonance imaging devices, positron-emission tomographs, linear accelerators, tele-cobalt-devices, high-voltage therapy devices and lithotripters. The 2nd SHI Restructuring Act abolished the committees effective July, 1997; thus the self-governing bodies are obliged to guarantee the efficient use of expensive equipment via remuneration regulations. In effect, this has led to even steeper increases in the number of expensive medical devices (at least in the hospital sector for which data are available), since previous site-planning procedures have been annulled.

Table 26 shows the increase in capacities of expensive diagnostic and therapeutic medical technologies before and after the abolishment of intersectoral planning of high technologies. Besides increasing capacities in hospital care, a high density is also found in ambulatory care, reflecting the density of specialists in secondary ambulatory care in private surgery whose technology investments

are depreciated by reimbursement from statutory and private health insurers or private households via recurrent services. In the early 1990s, the density of magnetic resonance imaging was even higher in the ambulatory sector than in the inpatient sector.

Ambulatory medical treatment

The regulation of access to medical interventions and technologies in the ambulatory care sector is delegated to joint committees of SHI affiliated physicians and sickness funds at federal level. Since 2004, the responsible coverage body is the Federal Joint Committee and its Committee on Ambulatory Care (see *Planning, regulation and management*). This Committee has several sub-committees, one of which is responsible for assessing reimbursable medical technologies. The predecessor of this was the for Federal Committee's Working Committee on New Diagnostic and Therapeutic Procedures which decided on the effectiveness of new technologies. Since 1 July 1997, it had also been responsible for the evaluation and re-evaluation of technologies that were already covered by statutory health insurance in ambulatory physician care. Until 1997, the Working Committee worked according to a set of criteria outlined by the Federal Committee of Physicians and Sickness Funds. New technologies could only be proposed when they were perceived to be "necessary" from a physician's point of view and when enough data were available for their evaluation. The right to propose was confined to the regional physicians' associations, the Federal Association of SHI Physicians and the federal associations of sickness funds.

Approval required at least one randomized controlled trial, case-control study, cohort study, or two from the following: time series comparisons, non-controlled clinical trials, studies showing a change in relevant physiological parameters, or expert statements based on scientific evidence. This system could be influenced by a number of factors, not necessarily based on sound scientific evidence, but rather on interest and opinion. After critiques concerning the existing procedure and the extension of the committee's mandate to evaluate existing technologies, new directives were passed in October 1997. They were reviewed in 2004 and now relate not only to services provided by physicians but also by psychologist psychotherapists, requiring that evaluations be based on criteria of benefit, medical necessity and efficiency. In addition, the Sub-Committee on Medical Procedures of the Federal Joint Committee now performs an explicit prioritization of technologies to be evaluated. The results are announced publicly and medical associations and possibly individual experts are invited to submit evidence concerning the three mentioned criteria. The Sub-Committee then examines the quality of the evidence presented by the applicant, the medical association(s) and individual experts as well as the

results of its own (literature) searches. Therapeutic procedures were classified according to five categories following internationally recognized schemes of evidence-based medicine:

I randomized controlled trials

IIa other prospective studies

IIb well-designed cohort or case-control studies

IIc temporal or regional comparisons

III other studies and opinions.

Diagnostic procedures are arranged in four categories:

Ia studies demonstrating a benefit in patient outcome

Ib controlled study under routine conditions, allowing the calculation of sensitivity, specificity and predictive value

II other studies allowing at least the calculation of sensitivity and specificity

III other studies and opinions.

For both classes of procedures, at least one study with level I evidence is necessary. Somewhat illogically, however, lower evidence is still accepted for existing technologies if no level I evidence was available.

Based on the more or less evidence-based assessment of the evidence, the Federal Joint Committee's Sub-Committee on Medical Procedures recommends whether the technology should be included in the SHI benefit package. In addition, its predecessor took another type of decision in 2001, when it concluded that evidence for the efficacy, safety and everyday effectiveness of acupuncture was not sufficient to decide on SHI coverage, but that a comprehensive evaluation of these in relation to chronic low back pain, chronic headache and chronic painful arthrosis of large joints was required. While SHI may not finance clinical efficacy research, many sickness funds consecutively launched three major acupuncture pilot projects to evaluate the three indications on an ongoing basis.

Once a positive decision has been taken to include a technology into the benefit catalogue of ambulatory physician care, another joint committee at federal level determines reimbursement issues and requirements for physicians who want to want to claim reimbursement for the delivery of this technology from statutory health insurance. This Valuation Committee consists of representatives from sickness fund associations and the Federal Association of SHI Physicians. It is charged with determining the relative value of a technology compared to other technologies in the Uniform Value Scale. Another important task of the Valuation Committee is the exact definition of a technology and its indications

for use. However, currently only a few of all procedures listed in the Uniform Value Scale are indication-specific. The committee also determines requirements that physicians have to fulfil to be eligible for claiming reimbursement, i.e. specialist qualifications, additional qualifications, technical safety standards, target groups, frequency of delivery, or documentation requirements.

A re-evaluation of an existing technology may be initiated when frequency statistics provide evidence for over-utilization or under-utilization of services, in which case the service in question may be devalued financially in order to rebalance utilization rates by incentive. In the Valuation Committee, financial interest and intra-professional distribution conflicts can play a dominant role. The fee distribution system of the physicians' associations partly led to outcomes unintended by the Federal Committee.

Hospital treatment

Until recently, the introduction of new procedures and technologies was managed by individual hospitals in the context of budget negotiations with sickness funds or of applications for capital investment from the *Länder*. In 2000, the then new Committee for Hospital Care was charged with decision-making on hospital coverage based on health technology assessments. In contrast to its counterpart for the ambulatory sector, which decides on benefit inclusions and exclusions, it had to decide only on benefit exclusions. Until 2004 the committee took only few decisions, affecting mainly rare services. Since 2004, these tasks are performed by the Hospital Care Committee of the Federal Joint Committee. The introduction of DRGs as a de facto payment requires a positive definition of reimbursable benefits. As long as innovations are not integrated into the DRG system under special reimbursement rules, the reimbursement of innovations continue to be subject of contracts between individual hospitals and sickness funds. The demand for sound and rapid assessment of health technologies, especially of innovative and high cost technologies, is therefore expected to increase substantially. The SHI Modernization Act stipulates that the Institute for Quality and Efficiency shall provide evidence at the request of the Federal Joint Committee or the Federal Ministry of Health.

Discussion

There are still inconsistencies in the various health care sectors with regard to coverage decisions and the managing of diffusion and usage of health technologies in Germany. In general, the ambulatory sector still appears to be much more regulated than the hospital sector. Services provided by allied health

professionals, such as physiotherapy, are explicitly excluded by the government or are covered through collective contracts.

One initiative, funded by the Federal Ministry of Health, stimulated HTA activities in Germany from the viewpoint of decision-making at the federal and corporatist level. As a result of this initiative, the German Scientific Working Group on Technology Assessment for Health Care produced a set of HTA reports. The SHI Reform Act of 2000 charged the German Institute for Medical Documentation and Information (DIMDI) with establishing a database of relevant HTA results and supporting decision-making processes by the Federal Committee and other actors.

The establishment of the Institute for Quality and Efficiency in 2004 provides a further step towards the timely and coordinated use of health technology assessment and evidence-based medicine. It is to commission health technology assessments and make recommendations for the inclusion of technologies in the SHI benefit package, but has no decision-making powers. Decision-making on benefit inclusion is performed by the plenary group of the Federal Joint Committee or one of its five committees (see *Planning, regulation and management*). The institute may, but does not have to, delegate tasks in health technology assessment to the German Institute for Medical Documentation and Information.

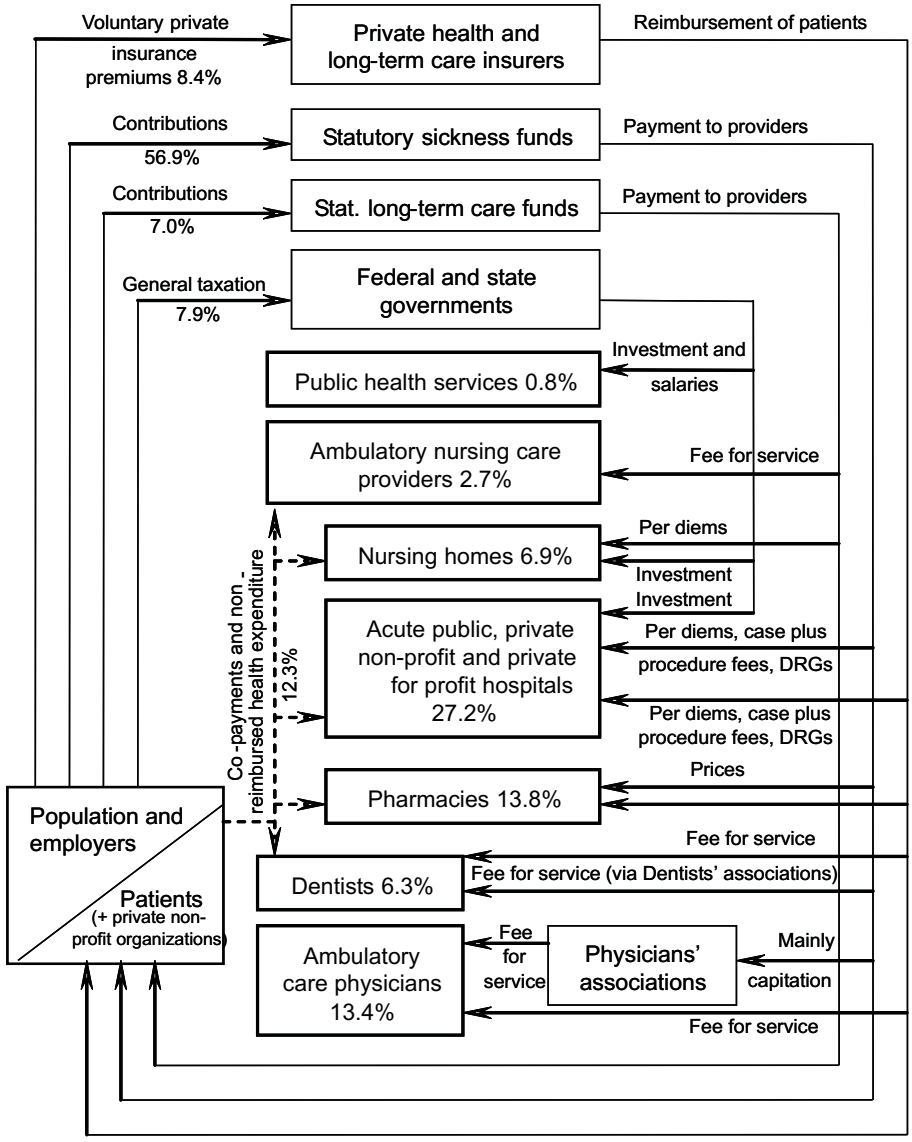
Financial resource allocation

Third-party budget setting and resource allocation

The German system of health care finance is characterized by multiple sources, decentralized negotiated allocation and refined, performance-oriented incentives, differing between the ambulatory and inpatient sectors. The overall flow of finances is outlined in Fig. 15; most of it has been addressed in previous sections. The main sources of finance are summarized in Table 9 and discussed in the chapter *Health care financing and expenditure*. The pooling of resources and redistribution among sickness funds is discussed in the section *Main source of financing*. In 2003, for example, 10.9% of statutory health insurance revenues were redistributed among funds (Table 11). SHI budget-setting will be discussed in further detail below (Table 27), while trends in the allocation of resources by sector have been addressed in the section *Health care expenditure* (Table 16). The payment of pharmaceuticals and medical aids has been discussed in the respective sections of the chapter *Health care delivery*. The last end of the flow of finances, the methods of provider payments and service purchasing are discussed in further detail in the sections below.

Germany does not have one budget for health care. Instead, (the few) resources available for health care are derived from different ministries. The same applies to the 16 *Länder*. In addition, sickness funds, currently 292, operate their own budgets autonomously, not counting other social insurance budgets, or reimbursement through private health insurance companies etc. All tax-based budgets, at federal as well as *Länder* level, are determined by legislatures acting on proposals from their governments. On the federal level, health care-related financing is part of the budgets of the Ministries of Health, Defence (military health care), Interior (police officers and permanent public employees) and Education and Research. On the *Länder* level, health-care financing mainly

Fig. 15. Financing flow chart of the German health care system, 2002



Source: own compilation based on Federal Statistical Office *(12).*

Note: Sources of finance not presented in the chart: employers, 4.1% of total expenditure on health; statutory retirement insurance, 1.8% and statutory accident insurance, 1.7%. Providers not presented: practices of non-physicians, 2.6% of total expenditure; health sector trade handicraft, 7.0%; other ambulatory providers, 0.5%; preventive and medical rehabilitative care institutions, 3.2%; occupational and social rehabilitation providers, 0.6%; transportation providers, 1.0%; administration, 5.8%; investments, 2.8% and all other providers, 5.0%.

flows from the budgets of the Ministries of Health and Science; the ministries of interior is involved in the provision of emergency care. The health ministries cover, for example, capital investments for hospitals – which vary greatly among *Länder* (see below) – as well as public health services. The science ministries are responsible for investments, research and medical and dental education at university hospitals (see *Taxes*).

Sickness funds do not have fixed predetermined budgets, but have to cover all the expenses of their insureds. They may not incur deficits and do not generally receive tax subsidies (except minor ones for elderly farmers and artists and for so-called "non-insurance" benefits such as maternity care, since 2004). Sickness funds carry full financial liability. If expenditures exceed revenues in a given years, sickness funds are obliged by law to increase their contribution rate, a decision for which they have autonomy by law (see *Main sources of financing*). Only if a fund runs into severe financial problems which threaten its viability, its respective association is obliged to support it financially.

As mentioned in the section *Historical background*, the main political goal in health policy has been to restrict the sickness funds' expenditure to a level where it matches income (or – more precisely – to limit expenditure growth to the rate of growth of contributory income in order to keep contribution rates stable). To that end, sectoral budgets or spending caps were introduced at the end of the 1980s (Table 27).

Several issues should be kept in mind with respect to resource allocation:

- All these SHI "budgets" are on the providers' side, not the payers' side. While some budgets *de facto* also limit the expenditure of individual funds (for example, capitation payments to the regional physicians' associations for ambulatory care), others do not have – nor intend to have – that effect, since, for example, expenditure under a hospital budget or a pharmaceutical spending cap is divided between funds according to the actual utilization of their members. In addition, if private patients are also taken into account, then the providers' budgets are not budgets in the strict sense.
- The "budgets" are based on historical expenditure patterns and not on needs-based formulas. To the end of limiting expenditure, growth rates were limited by law, or budgets and spending caps were based on actual expenditure in a previous year (often the year before the legislative act, so as to avoid any changes after proposing or passing the act). In either case, regional differences in expenditure remained untouched. The public discussion mainly concerned caps on pharmaceutical expenditures.
- Collective contracting remains the dominant form of purchasing in SHI ambulatory and long-term care. In 2003, the government had planned to introduce selective contracting for all ambulatory physician specialists,

Table 27. Cost-containment through budgets and spending caps, 1989–2005

	Ambulatory care	Hospitals	Pharmaceuticals
1989 to 1992	negotiated regional fixed budgets	negotiated target budgets at hospital level	no budget or spending cap
1993	**legally set regional fixed budgets**	**legally set fixed budgets at hospital level**	**legally set national spending cap**
1994			negotiated regional spending caps
1995			
1996	negotiated regional fixed budgets		
1997		negotiated target budgets at hospital level	
1998	(target volumes for individual practice)[a]		negotiated target volumes for individual practices
1999	**negotiated regional fixed budgets with legally set limit**	**negotiated target budgets at hospital level with legally set limit**	**legally set regional spending caps**
2000			negotiated regional spending caps
2001			negotiated regional spending caps[b]
2002			negotiated target volumes for individual practices at regional level
2003	**legally set regional fixed budgets**	**legally set target budgets at hospital level[c]**	
2004	**negotiated regional fixed budgets with legally set limit**	**negotiated target budgets at hospital level with legally set limit**	
2005			

Note: The darker the background, the more strictly regulated the sector.
[a] legally, but not implemented (1997 status was kept);
[b] due to the ministerial lifting of spending caps in January 2001, they did not exist for 2001;
[c] except for hospitals introducing DRGs already on a voluntary basis.

but this was rejected by the opposition and the medical profession. The SHI Modernization Act has introduced selective contracting with selected providers within the framework of family physician and integrative care models.

Payment of hospitals

Since 1993, and more dramatically since 2004, the German hospital sector has experienced considerable changes due to fixed budgets, the possibility of deficits and profits, the introduction of prospective payments methods and increased opportunities to offer ambulatory treatment. From January 2004, the German modification of the Australian DRG system is the sole system of financing recurrent expenditures of acute hospitals except especially for psychiatric care and certain defined services. It replaces the mix of reimbursements per diem, per case (mainly elective surgery) and for expensive procedures that existed between 1993 and 2003.

Investments and planning

Since the 1972 Hospital Financing Act, hospitals are financed by two different sources: "dual financing" means financing investments through the *Länder* and running costs through the sickness funds (plus private health insurers). In order to be eligible for investment costs, hospitals have to be listed in the hospital plans set by the *Länder.* These plans also list the specialties which are necessary, and even the number of beds per specialty for every hospital. The numbers of hospitals and beds are planned at a trilateral committee consisting of representatives from state government, hospitals and sickness funds. The sickness funds have to contract with any hospital accredited in the hospital plan. In general sickness funds only pay for acute services of plan-listed hospitals or university hospitals. With the listing in the hospital plan comes the right to be paid by sickness funds, although not coverage of full costs.

Investments are in principle covered through taxes and are thus not contained in the reimbursement. Investments in long-term assets require a case-by-case grant measure and are classified as: construction of hospitals and initial procurement or replacement of other assets. According to the Hospital Financing Act, a hospital acquires a legal claim to subsidy only insofar and as along as it is included in the hospital plan of the *Land*. The inclusion in the hospital plan means, on the one hand, that there is a claim to a flat-rate grant for short-term assets (3–15 years economic life), and on the other, that the sickness funds have to finance the hospital care provided by the hospital. It is noteworthy that listed hospitals do not have a right to have the financing of specific investments secured. That depends also on the budgetary situation of the responsible ministry and on political decisions.

Should a hospital not be included in the hospital plan, it still has the possibility to contract with sickness funds, but no claim to *Land* investment

financing. Hospitals not fully publicly subsidized can, within a very narrowly defined framework, refinance investment costs via sickness fund reimbursement *(25)*.

The share of public investment in hospitals has decreased continuously from 0.24% of GDP in 1992 to 0.15% in 2002, with roughly two thirds spent in the the western part and one third in the eastern part. Hospitals in the western part received in average 0.19% of the western GDP in 1991 and 0.12% in 2002. During the same period, hospitals in the eastern part received comparably more of the eastern GDP (0.90%–0.39%) due to higher grants from the federal government to upgrade the infrastructure of inpatient facilities, per the reunification treaty (see *Historical background*).

Approaches to hospital plans, capacities and investment vary widely among *Länder* (Table 28). Between 1991 and 2001, Berlin reduced its highest-per-capita bed numbers by more than 40%, and Mecklenburg-Western Pomerania reduced its capacities from slightly above to well below average. On the other hand, due to only modest reductions, Bavaria has moved from well below average to slightly above per capita, and Bremen and Hamburg have stayed well above the average.

In international data, "preventive and rehabilitative institutions" are often included in hospital data. These institutions, however, are not listed in hospital plans and receive no *Land* investment, and have to rely solely on reimbursement through negotiated contracts (monistic financing).

Recurrent expenditures and cost-containment measures

Sickness funds finance operating costs including medical goods and all personnel costs, as hospital physicians are salaried employees. They also finance the replacement of assets with an average economic life of up to three years or maintenance costs unless parts of the building, operational facilities, and fittings or external facilities are completely or largely replaced. To cover the operating costs, wherever possible the individual hospital agrees a budget in advance for one calendar year with the *Länder* associations or representations of the sickness funds. The heads of medical departments usually have the right to charge private patients for medical services on top of the hospital charges. Patients are required to contribute €10 per day for a maximum of 28 days, mainly for covering part of the hotel services.

Until 1992, the "full cost cover principle" meant that whatever the hospitals spent had to be reimbursed. The actual remuneration was done through per-diem charges retrospectively calculated by the *Länder* for each hospital. However, within each hospital all per diems were equal. The original Hospital Financing

Table 28. The German *Länder* – hospital bed numbers 1991–2001 and capital investment 2001

Land	General and psychiatric beds per 1000 population (ratio to German average)		Change	Capital investment in €/ bed
	1991	2001	1991–2001	2001
Baden-Württemberg	6.97 (0.84)	6.04 (0.90)	-13.3%	5 296
Bavaria	7.63 (0.92)	6.74 (1.01)	-11.7%	7 688
Berlin	11.57 (1.39)	6.68 (1.00)	-42.3%	7 737
Brandenburg	8.95 (1.08)	6.22 (0.93)	-30.5%	10 239
Bremen	10.66 (1.28)	9.17 (1.37)	-14.0%	4 628
Hamburg	9.16 (1.10)	7.38 (1.10)	-19.4%	7 933
Hesse	7.53 (0.91)	6.34 (0.95)	-15.8%	5 265
Mecklenburg-Western Pomerania	8.39 (1.01)	6.33 (0.94)	-24.6%	11 301
Lower Saxony	7.51 (0.90)	6.02 (0.90)	-19.8%	4 793
North Rhine-Westphalia	9.19 (1.10)	7.47 (1.11)	-18.7%	3 444
Rhineland-Palatinate	7.65 (0.92)	6.56 (0.98)	-14.2%	5 416
Saarland	8.80 (1.06)	7.07 (1.06)	-19.7%	5 716
Saxony	9.06 (1.09)	6.76 (1.01)	-25.4%	10 085
Saxony-Anhalt	8.98 (1.08)	7.02 (1.05)	-21.8%	10 512
Schleswig-Holstein	6.90 (0.83)	5.87 (0.85)	-14.9%	4 693
Thuringia	8.79 (1.06)	7.15 (1.07)	-18.7%	10 988
GERMANY	8.32 (1.00)	6.70 (1.00)	-19.5%	6 130

Source: Federal Statistical Office 2003 *(52);* last column from German Hospital Association, 2004 *(71).*

Act remained the main legal basis for the hospital sector until 1992 and was hardly affected by federal cost-containment policies. This was partly due to the power of the federal states, which had to agree to all decisions affecting hospitals. Thus, only minor legislation on hospital services was included in the Health Insurance Cost-containment Amendment Act of 1981, restricting post-natal hospital stay to six days except in the case of medical need, and requiring hospitals to agree with ambulatory physicians on purchases of "large (high cost) medical technology" (see *Health technology assessment*). The Hospital Restructuring Act of 1984 introduced negotiated per-diem charges based on expected costs. Coverage of excess costs was limited *de jure*, but hospitals received de facto full compensation through charge adjustments. In addition, the Act opened up the possibility of including capital costs in per-diem charges if investments would lower running costs in the medium or long term. From that time onwards, "dual financing" also meant "dual planning", with the number of hospitals and hospital beds planned at *Land* level, while staff numbers and hospital day numbers were subject to per-diem charge negotiations between hospitals and sickness funds.

Since the Health Care Reform Act of 1989, hospital and sickness fund associations have been obliged to negotiate contracts concerning quality assurance. In addition, the sickness funds gained the right to contract with additional hospitals and to drop or terminate a contract with a hospital. The latter process is, however, complicated – and therefore happens rarely – since first, the funds have to agree to do it jointly and second, it needs the approval of the *Land* government.

The Health Care Structure Act of 1993 was the first major cost-containment law to affect the hospital sector. This reform was possible since the Social Democratic Party, which was the opposition in the Federal Assembly but the ruling party in most states at that time, had agreed to it. The hospital sector was affected by several new regulations. First of all, increases in sickness fund expenditure for inpatient treatment were tied to the increase in contributory incomes for 1993 to 1995. To facilitate this, the full cost-cover principle was abolished, so the hospitals were allowed to make both profits and run deficits, and fixed budgets were calculated for each hospital (for budgets see below). The budgets' growth rates were to be based on estimates published in advance by the Federal Ministry of Health, and retrospectively adjusted for the actual growth rate. In addition, however, the law allowed several exceptions for higher growth rates that led to expenditure increases well above what was intended. Second, nursing time standards were introduced (see *Human resources and training*). Since it was calculated that new nurses would have to be employed as a result of this innovation, a budget exception was allowed. Hospitals were allowed to offer ambulatory surgery and inpatient care for a few days before and after the inpatient treatment (see *Health care delivery system*). The incentives for these services were initially weak, however, since remuneration was included in the fixed budgets.

Due to above-average increases in hospital expenditure until 1998, this sector has been a policy concern for a long time. While expenditure per bed and day has continued to rise, expenditure per case actually declined in the late 1990s, indicating that technical efficiency is likely to have increased (Table 29). The East/West ratios of hospital utilization in Tables 18 and 19 are further indicators that the health care system in the eastern part has been rapidly assimilated. Yet, in recent years, hospital expenditures have hardly increased due to legally set limits for the target budgets. In 2003, budgets were even frozen at 2002 level except for hospitals which used the option to introduce DRGs already in 2003 and, to a certain degree, for those who introduced working time models to keep to the European Court rule and corresponding German legislation for on-call shifts for health care personnel.

Table 29. Expenditure data for general and psychiatric hospitals in western and eastern parts of Germany, 1991–2001

	Expenditure/ bed			Expenditure/ day			Expenditure/ case		
	West[a]	East[a]	E/ W ratio	West[a]	East[a]	E/ W ratio	West[a]	East[a]	E/ W ratio
1991	62 309	31 160	0.50	199	114	0.60	2 849	1 833	0.64
1992	68 232 +9.5%	43 571 +39.8%	0.64	219 +10.0%	157 +37.3%	0.72	3 032 +6.5%	2 210 +20.5%	0.73
1993	72 158 +5.8%	52 708 +21.0%	0.73	236 +7.8%	187 +19.2%	0.79	3 120 +2.9%	2 429 +9.9%	0.78
1994	75 477 +4.6%	61 672 +17.0%	0.82	250 +6.1%	214 +14.6%	0.85	3 188 +2.2%	2 614 +7 6%	0.82
1995	80 569 +6.7%	68 249 +10.7%	0.85	269 +7.6%	233 +9.2%	0.87	3 281 +2.9%	2 729 +4.4%	0.83
1996	83 368 +3.5%	71 834 +5.3%	0.86	284 +5.4%	246 +5.6%	0.87	3 260 –0.7%	2 758 +1.1%	0.85
1997	85 624 +2.7%	75 174 +4.7%	0.88	291 +2.5%	256 +3.8%	0.88	3 218 –1.3%	2 755 –0.1%	0.86
1998	88 395 +3.2%	78 955 +5.0%	0.89	296 +1.8%	263 +2.7%	0.89	3 187 –1.0%	2 747 –0.3%	0.86
1999	91 181 +3.2%	81 218 +2.9%	0.89	306 +3.3%	269 +2.4%	0.88	3 191 +0.1%	2 731 –0.6%	0.86
2000	93 769 +2.8%	84 343 +3.9%	0.90	315 +3.1%	278 +3.3%	0.88	3 207 +0.5%	2 762 +1.1%	0.86
2001	97 400 +3.9%	87 743 +4.0%	0.90	332 +5.3%	292 +5.2%	0.88	3 269 +2.0%	2 823 +2.2%	0.86
Average rate of change 1991–2001	+4.3%	+10.9%		+5.3%	+10.3%		+1.4%	+4.4%	

Source: calculation based on Federal Statistical Office, 2003 *(55).*
Note: [a] in € and % change to the previous year.

The mix of payment methods

As of the year 1993 hospital services were reimbursed by a two-tier system of per diem charges: the first component consisted of a hospital-specific basic per diem covering non-medical costs and a department-specific per diem covering medical costs including nursing, pharmaceuticals and procedures. The second component was made mandatory as of 1996: case fees (covering the costs for a patient's entire hospital stay) and procedure fees (paid on top of slightly reduced per diems) were introduced in order to get a more performance-related payment method for hospitals. However, case fees and procedure fees accounted for the reimbursement of less than one quarter of all hospital services until 2002.

Case fees were based on a combination of a certain diagnosis (4-digit ICD-9, partly separated into "elective" and "emergency") and a specific intervention (for example, open appendectomy received a case fee different from that for laparoscopic appendectomy). The case fees were unevenly distributed among specialties: On the one hand, there were none for medical, paediatric and psychiatric patients, and on the other hand, more than 50% of gynaecology and obstetrics cases and approximately two thirds of ophthalmologic cases were reimbursed via case fees. Procedure fees were only based on an intervention and more than one procedure fee could be remunerated per case. The more than 70 case fees and the almost 150 procedure fees were originally set through an ordinance by the Federal Ministry of Health, while the monetary conversion factor was negotiated at *Land* level. However, when the number of points was fixed by the ministry, it assumed a point value of approximately €0.50.

Case fees, procedure fees and per diem charges were all part of the budget for each particular hospital. These German-style budgets were not budgets in the sense that the hospital would get an amount of money independent of actual activity. Instead, the budgets were targets established during the negotiations between the sickness funds and the hospital until 2003, establishing service numbers for cases to be reimbursed by case and procedure fees and per diems, as well as the rate of the latter. If the hospital reached exactly 100% of its target activity then no financial adjustment had to be made; if actual activity was higher than the target, it had to pay back a certain part of the extra income – 50% of case fees for transplantations, 75% of other case and procedure fees and 85–90% of per diems. In other words, activities above the target were only reimbursed at 50%, 25% and 10–15% respectively. If actual activity was lower than the target, the hospital received 50% of the difference until 1999, and 40% of the difference from 2000. This sum was divided according to utilization among the funds, i.e. actual case fees, procedure fees and per diems are then higher than originally negotiated.

The introduction of prospective case payments in conjunction with hospital budgets was expected to induce an increase in technical efficiency and possibly encourage risk selection by avoiding admission of patients in need of complex care and early referrals or discharges. Scientific evidence is rather scant with respect to the impact of the payment method mix on the quality of care. There is evidence that the overall technical efficiency of the hospital sector improved after the introduction of appropriate measures: average length of stay decreased from 13.9 days in 1992 to 12.1 days in 1995 and more substantially from 1996, when case fees were introduced, to 9.8 days in 2001. Despite substantial decreases in East as well as West German hospitals (Table 18), patients still stayed a relatively long time in German hospitals in 2001 (Table 20). As Table 18 shows, the overall average length of stay decreased during the whole period

covered and was particularly pronounced in the years in which fixed hospital budgets (1993) and prospective case fees (1996) were introduced. Table 29 shows that costs per case decreased in the period 1996–1998; however, nothing can be said about the important question of whether the quality of the output measure (cases) remained constant. There is some evidence that patients were transferred more frequently and earlier to rehabilitation clinics and that costly patients were transferred more frequently to university hospitals, which themselves have virtually no possibility to transfer costly patients. The average length of stay decreased disproportionately more in departments where case fees were applied.

By the end of the 1990s, the existing case payment method – with its lack of risk adjustment and its inherent (though not conclusively documented) incentive for risk selection – came to be regarded as an insufficient basis for expansion to other, more complex fields of care. Also, the ongoing coexistence of case payments, fee for special services and per diems was regarded as a barrier to further efficiency since hospitals could compensate the financial disadvantages of one payment method by combining it with another.

DRG payment

The government's intention in 1992 to gradually extend the scope of services reimbursed via case fees to 100% per cent was not realized. The introduction of a new payment system based on diagnosis-related groups (DRGs) was the most important reform in the hospital sector since the introduction of the dual hospital financing in 1972. The SHI Reform Act of 2000 obliged the self-governing bodies (the German Hospital Organization and the associations of the statutory sickness funds and private health insurers) to select a universal, performance-related prospective case fee payment system that takes into account the clinical severity (case-mix) based on DRGs. It defined the basic characteristics of the German-type of DRG payment system for acute hospitals: DRGs cover 100% of (recurrent) cost, are paid by uniform flat-rates and are applied to all services in acute hospitals with the major exceptions of psychiatry and psychosomatic medicine. The Act outlined a stepwise approach to making DRGs the only system, with uniform prices at state level.

The stepwise introduction represented an innovative approach to policy implementation, which has been characterized as a "learning spiral", outlining long-term roles, objectives and time-frames but allowing governmental actors and corporatist organizations within the self-governance of SHI to issue and refine regulations based on the evaluation of the available data and experience. To a hitherto unforeseen degree, the Federal Ministry of Health was given – and indeed carried out – the explicit capacity of substitutive execution if

self-governing corporatist bodies did not fulfil the tasks delegated to them by law within the defined time schedule. The self-governing bodies opted for the Australian Refined DRG system 4.1 in June 2000, but could not come to a consensus on the basic characteristics for the future DRG system, which where subsequently defined by the Federal Ministry of Health through the Case Fees Ordinance (based on the Case Fees Act).

According to the First Case Fees Amendment Act of 2003, the introduction of the DRG-based payment system was to be performed gradually with a stepwise withdrawal of the mixed payment system (convergence phase). Thereby, hospitals were given the opportunity to adjust to the transition from individual budgets based on historical expenditures to a uniform price system at the state level. The full implementation of the DRG-only price system was planned for 2007 but was postponed further to 2009 by the Second Case Fees Amendment Act.

In the pilot phase, selected hospitals introduced the Australian Refined DRGs without any changes. Based on the experience of about 20 hospitals, DRGs were recalculated by the Institute for the Payment System in Hospitals. This technical body was financed jointly by the federal associations of sickness funds and the German Hospital Organization during the development phase until 2003. Since 2004, the institute is financed by a surcharge on each DRG documented by hospitals. This new version was tested by hospitals opting voluntarily for an early conversion to DRGs in 2003, attracted by the incentive to forego the required zero-growth of hospital budgets. Since 2004, all general hospitals are obliged by law to document their activity in the form of DRGs, while they are still being financed on the basis of negotiated hospital budgets – except that in 2004 the calculated units of reimbursement are DRGs (at a hospital-specific base rate) and no longer per diems.

The German type of DRGs are used in all acute hospitals for all types of services except for certain defined services and for care in departments of psychiatry and psychosomatic medicine, where per diem charges continue to apply for inpatient services as well as pre- and post-hospital care. A DRG takes into account the diagnosis and its clinical severity, comorbidity and age of the patient admitted as well as the intervention performed. Due to this diversification, the number of DRGs increased over the Australian version to 824 in 2004 and 878 in 2005.

The relative weights for the various DRGs are determined on a national level by presenting the average cost expenditure in relation to a set weight of 1.0. The sum of all relative weights can be added together and divided by the number of cases, thus establishing the hospital-specific case-mix index. Once the DRG system is fully implemented, the equation will be as follows:

the case-mix times the state-wide base rate times the number of cases equals the hospital reimbursement. In 2004, however, the equation is as follows: the negotiated budget divided by the product of case-mix times the number of cases equals the hospital-specific base rate. Currently, hospital-specific base rates vary substantially, reflecting the large historical funding differences of hospitals, which will be gradually diminished by the new payment system. For 2004 for example, the average basic case fee was calculated at €2593, varying from hospitals with a base rate of less than €1000 to hospitals with a base rate of more than €4000. The base rate of most hospitals ranged between €2000 and €3200.

During the so-called convergence phase, the base rate is adjusted incrementally from the current hospital-specific rate to a state-wide rate which will be negotiated in every *Land* from 2005. According to the regulations following the Second Case Fees Amendment Act, the base rates in 2005 will be determined through a 15–85 mix of state-wide and hospital-specific base rates, followed by a 35–65 mix in 2006 and a 45–55 mix in 2007 and a 25–75 mix in 2008, so that a uniform price system at *Länder* level will be in force only from 2009. Furthermore, hospitals and sickness funds may negotiate reimbursement for additional costs in the form of a certain share of the respective DRG. The Act has again increased the options and clarified the rules for hospitals providing ambulatory specialist care. In addition, it seeks to improve the situation for hospitals expected to profit least from the introduction of DRGs: large public multidisciplinary hospitals and especially university hospitals. Also, surcharges for training to reduce disadvantages for all training institutions have been revised. Until 2008, the contracting parties on the *Land* level must guarantee the basic principle of contribution rate stability when determining the base rate. Until the contracting can be shifted to a uniform price, the legal framework of the price system still requires refinement to shape the incentive effects of the DRG system (for example, fixed versus ceiling prices and a possible role of volume rebates).

In addition to the basic DRG rate, the Case Fees Ordinance of the Ministry of Health of 2002 also defined situations when the DRG is to be modified or when additional surcharges or deductions apply:

- Exceeding the defined upper length of stay will accrue a daily surcharge, while discharges or referrals to other wards or institutions before the defined lower length of stay will incur reductions.
- The DRG shall also be modified if part of the hospital stay is shortened by delivering services as part of day-care before a hospital stay or following a hospital stay (pre-and post-hospital care).

Additional remunerations may be obtained for certain interventions:

- The parties contracting on a federal level can agree on payments for services, service complexes or pharmaceuticals, such as the treatment of patients with bleeding disorders requiring (expensive) coagulation factors or intercurrent dialysis.
- For services not yet covered by DRGs or supplementary payments, case or day-related payments have been locally agreed in 2003 and 2004.
- For payments for new examination and treatment methods, the partners at federal level issue recommendations, on which local parties will negotiate from 2005.

Hospitals may also qualify for surcharges or deductions depending on their infrastructure and functions:

- A surcharge for training facilities and training payments as of 1 January 2004: on the *Länder* level, a compensation fund administered in trust will be financed by a surcharge per case by all hospitals in the *Land*. From these funds, the teaching hospitals receive contributions for their teaching facilities.
- Other activities incurring surcharges or deductions under federal regulation as of 1 January 2005 include emergency services, admission of accompanying people, securing the necessary provision of services or excessively limited demands for care.

Additional obligatory surcharges have been levied on each DRG for two systemic activities, quality assurance and the continuous development of the DRG payment system (at the federal level a surcharge of €0.27 was negotiated for 2004).

The Case Fees Act and its amendments provide for certain precautions, for example that hospital operators are obliged to avoid unnecessary hospitalization and premature transfers for economic reasons and to guarantee correct accounting. These obligations will be monitored by the SHI Medical Review Boards which may process samples of current and completed cases. In case of gross negligence double penalties may apply. Disputes will be dealt with in joint arbitration committees at the *Länder* level.

Up to now, the introduction of DRGs has stimulated intense activities not only at the federal level but also in hospitals. The number of hospitals documenting their activities (without being reimbursed) on a DRG-basis increased during the voluntary period – from 284 in January 2003 to 1035 in December 2003, a bit more than half of all general hospitals. Since then their number increased only slightly to 1326 in September 2004, i.e. not all hospitals documented DRGs as required by law. The preparations required substantial investments

in information technologies and controlling activities. Hospitals have gained more transparency on the range and prices of their services, which probably affected their output and increased their technical efficiency. Disputes between hospitals and sickness funds increased during the introduction phase and are one of the reasons for sickness fund delays in reimbursing hospitals, according to a survey of the German Hospital Organization (2003), which cites reimbursement deductions, especially due to referrals and readmission.

Quality assurance and minimal volumes

Traditionally, personnel, technical and physical capacities, professional self-regulation and the control of technical and hygienic security had been perceived as sufficient to secure quality. The Social Code Book outlines basic quality requirements of hospitals to be accredited for the hospital plan and to qualify for reimbursement. Quality assurance in hospitals has changed substantially during the last decade, shifting from voluntary activities to obligatory tasks. Requirements for safeguarding quality of processes, and recently of outcomes, have gradually been increased as outlined in the Social Code Book. Quality assurance of processes based on documentation was first introduced in the form of registries in the early 1970s, depending on state legislation concerning registries for perinatal care and general surgical interventions, for example. Later registries for high-tech interventions and the use of medical devices became more common. Their role in actually improving quality of care is not known, however.

Quality-relevant documentation of case fee procedures, associated with the introduction of prospective case fees, became a task to be negotiated at the *Länder* level. Since physicians' chambers, previously involved in registry quality measures, were initially not involved, negotiations were delayed and implementation was weak. A federal working group for quality assurance, consisting of sickness funds, physicians' associations, hospital organizations, the Federal Physicians' Chamber and the German Nursing Council, sought to improve communication and cooperation in quality initiatives across professional sectors. The working group built an information system on quality projects and organized various meetings, but was dissolved in 2004. Its tasks were delegated to the Federal Joint Committee, where decisions on quality assurance can be linked more closely to more powerful instruments of contracts, regulations and reimbursement.

Since 2000, hospitals have been obliged to run internal management programmes and to negotiate contracts with sickness funds on external quality assurance measures. Social Code Book V stipulates that quality be an object of

the contracts between purchasers and providers (§137). In the contract, providers are committed to participate in quality assurance measures with special emphasis on documenting quality indicators in a standard way that allows for comparative analysis. An independent institute has been established for the inpatient sector (Federal Office for Quality Assurance, BQS), which assists the contract partners in choosing and developing the quality indicators to be monitored and collects the data and presents them in a comparable way. As of now, the contracts oblige the providers to document quality for a set of surgical procedures (such as hip replacement and hip fracture surgery, hernia surgery, cataract surgery) and invasive medical procedures (PTCA, pacemaker implantation). The contract partners are charged by the legislature to further develop the list of areas for which quality documentation should be a contractual requirement. The contract stipulates sanctions for incomplete documentation, that is, for discrepancies between the number of cases claimed for reimbursement and the number of cases documented for quality assurance *(72)*.

Publication of the results of quality assurance initiatives became obligatory in 2000 for nosocomial infections on an anonymous basis. The benchmarking system with feedback for the participating hospitals and ambulatory surgery institutions is coordinated by the Robert Koch Institute, and is only slowly gaining acceptance. From 2005, hospitals are obliged by law to include the range and volumes (but not outcomes) of their services on their internet homepages.

From 2000, hospitals were encouraged to take part in certification procedures by joint initiatives of associations of sickness funds and various hospital organizations. Two systems of certification combining self-assessment and visitor assessment were developed, based on the EFQM and European quality award system, Cum Cert for religious-based hospitals and KTQ (*62*).

From 2002, minimum services volumes were legally enacted. Contract partners, i.e. the associations of sickness funds, the German Hospital Organization and the Federal Physicians' Chamber, were required by law to develop a list of elective services in which there is a clear positive relationship between volume and quality. For those services, delivery of a predefined minimum volume will be the condition to become (or to stay) "contractable." Minimum volumes per institution and per individual physician were passed for the surgical treatment of oesophagus and pancreatic cancer as well as for kidney, liver and stem cell transplantations in December 2003. From 2004, hospitals may only be reimbursed for selected interventions if they can show they have provided the minimum number of these interventions in the previous year *(72)*.

Payment of physicians

Physicians and other health professionals working in hospitals or institutions for nursing care or rehabilitation are paid salaries. Public and non-profit providers usually pay public tariffs, while for- profit providers may pay lower or higher wages or additional payments. From autumn 2004, junior doctors are granted the full licensure ("approbation") immediately after medical studies, which goes along with a substantial increase of about €29 000 in the annual gross income for those working under public service tariffs. Between 1988 and 2003, junior doctors had been granted a preliminary approbation with restricted competencies (for example, excluding signing death certificates and medical opinions) and higher requirements to document continuing education.

Services in ambulatory SHI care or by private physicians, dentists, pharmacists, midwifes and many other health professionals are subject to predetermined price schemes or price ranges. The most strictly regulated and sophisticated reimbursement catalogues have been developed for physicians and dentists. There are two fee schedules per profession, one for SHI services and one for private treatments.

Physician payment in statutory health insurance settings

The payment of physicians by SHI is not straightforward, but is subject to a process involving two major steps. First, the sickness funds make total payments to the physicians' associations for the remuneration of all SHI-affiliated doctors, in lieu of paying the doctors directly. The total payment is usually negotiated as a capitation per member or per insured person, covering all services by all SHI-affiliated physicians of all specialties. Since 2003, sickness funds pay capita grants to the regional physicians' associations depending on the population of insureds in the region. Until the end of 2002, sickness funds paid capitations for all their insureds only to one regional physicians' association, namely at the fund's headquarters. The regional physicians associations then settled the reimbursement among themselves. Capitations vary among funds within a *Land* and among *Länder*. While most substitute funds pay higher than average capitations, general regional funds and guild funds usually pay lower than average capitations; capitations of company-based funds vary but – taken together – are around average. Second, the physicians' associations have to distribute these total payments among their members according to a "Uniform Value Scale" and additional regulations. Prior to payment, the physicians' associations have to check, record and sum up the data that comprise the basis of these calculations.

All approved medical procedures are listed in the Uniform Value Scale (EBM). While the coverage decision is made by the Ambulatory Care Committee of the Federal Joint Committee (see *Health technology assessment*), a separate joint committee at the federal level, the Valuation Committee, is responsible for the Uniform Value Scale. The scale lists all services that can be provided by physicians for SHI remuneration. Besides the current 147 "basic" services (consultations, visits, screening, etc.), the services are ordered by specialty. The chapter on surgery and orthopaedic surgery currently lists 355 services, the chapter on ear, nose and throat 97, the chapter on internal medicine 87, etc. Each service is allocated a number of points and lists certain preconditions for claiming reimbursement, such as particular indications for use or exclusions of other services during the same visit (Table 30). At the end of each quarter, every office-based physician invoices the physicians' association for the total number of service points delivered. While physicians receive monthly payments based on previous figures, their actual reimbursement will depend on a number of factors:

- The total budget negotiated with the sickness funds is divided by the total number of delivered and reimbursable points for all services within the regional physicians' association, such that the monetary value of each point cannot be predicted as it depends on the total number of points. The monetary value is then used to calculate the physicians' quarterly remuneration.
- The actual reimbursement may be further modified through the Remuneration Distribution Scale which is different for every physicians' association. Through this measure, minimum and/or maximum point values for the different specialties or service categories are regulated to adjust for large variations between specialties.
- Between 1997 and 2003, the number of reimbursable points per patient was limited, varying among specialties and *Länder*. These so-called practice budgets were originally introduced as a measure against the "hamster wheel" effect of relative (rather than absolute monetary) point values under fixed budgets; but had to be abolished following a ruling of the Federal Social Court which criticized the data basis for the calculations.

Thus, the payment per service may differ from region to region, from quarter to quarter, and often between specialties within one *Land*.

The Uniform Value Scale is the backbone of the fee-for-service system for ambulatory physician services. Some medical interventions are given a specific number in this tariff list, for example, chiropractic procedures. Many other interventions, however, may be delivered and then charged under a broader category of this payment scheme, for example, counselling on a healthy lifestyle. Not every physician may claim reimbursement for all types of procedures listed

in the Uniform Value Scale; there are specific requirements for reimbursement of many procedures. Table 30 shows physicians' services that contribute a large part to their reimbursement from SHI.

An analysis of the development of physician reimbursement between 1995 and 2001 shows that – due to both higher numbers of physicians and higher levels of service provision per physician under prospective spending cap conditions – reimbursement remained almost constant per physician and remained almost constant per service delivered (Table 31).

The above-mentioned limit of points per patient was a partial solution to these problems. The average annual income from SHI varies from a little more than €64 000 for dermatologists and surgeons to €96 000 for internists (Table 32). However, in spite of the moderate growth rates in remuneration per physician, the income of office-based physicians has remained rather high, partly due to the additional income from sources other than SHI (not included in Table 32). Particularly, reimbursement from private health insurance (see *Private health insurance*) and out-of pocket payments of patients have increased substantially. Physicians' incomes are therefore estimated to be three to five times higher then the average wage of blue-collar workers and two to three times higher than the average salary of white-collar workers.

Probably in April 2005, a revised version of the Uniform Value Scale, the *EBM 2000plus*, will be introduced. Based on previous experiences with fee-for-service payments and complex fees, it distinguishes clearly between services of family physicians and specialists. A new feature is that the reimbursement for services is based on a time value, to better control the plausibility of claims. The calculated value for the physician's part of the service, set by the Valuation Committee in December 2003 at €0.77 per minute, is multiplied by the estimated time required for the physician to provide the service. This amount is added with a calculatory value for the technical side of the service (€/Min x Min). This value allows for the depreciation of investments and still provides a comparably strong incentive to provide technical interventions. The EBM 2000plus has been subject to repeated revisions and negotiations, mainly concerning incentives for over-provision or under-provision of care but also concerning the balance of certain specialties and (underprovided) sub-specialties like rheumatological internal medicine.

According to the SHI Modernization Act, the era of predetermined fixed budgets is to end in 2006. From 2007, physicians' associations will negotiate morbidity-oriented service volumes with the sickness funds, so that higher morbidity (probably in the previous year) would increase total remuneration and therefore the money available per specialty and physician.

Table 30. SHI physician fees: top 20 by turnover, with number of points per service, 2002

Rank	Service	Number of points	% of payment for all SHI physicians
1	Basic fee per patient per 3 months	family physicians: 265 (475 for retired insureds); specialists: 40–420	20.8%
2	Explanation, planning and coordination	180	5.0%
3	Consultation fee	50	4.8%
4	Family physician basic payment per 3 months	90	2.9%
5	Intensive counselling on the impact of and coping with illness	300 (600 if more than 30 min)	2.2%
6	Home visit	300 (600 if immediately)	1.9%
7	Cost-efficient provision and/or initiation of lab services	5-240 depending on speciality	1.9%
8	Whole body examination	320	1.6%
9	MRI of head, joints of extremities	1 150	1.5%
10	Night, week-end, official holiday fee	200–300	1.4%
11	Ultrasound of urogenital organs	400	1.2%
12	MRI of body regions other than head and joints of extremities	1 150	1.1%
13	Ultrasound of abdomen	520	1.1%
14	CT of body regions other than head and joints of extremities	80	0.9%
15	Electrocardiography	100–250	0.8%
16	Laboratory basic fee	5–110	0.8%
17	Psychotherapy (long-term, individual)	1 450	0.8%
18	Cancer screening women	310 (men: 260) (+140 cytologic examination)	0.8%
19	Ante-natal care	1 850	0.8%
20	Clinical-neurological basic examination	170	0.7%

Source: Federal Association of SHI Physicians, 2004 *(49)*; Federal Associations of SHI Physicians and federal associations of sickness funds, 2002 *(73)*.

Note: MRI: Magnetic resonance imaging, CT: Computed tomography.

Quality aspects of purchasing

In order to offer special services, mostly invasive procedures or medical imaging procedures, providers need to fulfil certification requirements, in addition to being licensed as specialists. This is the case for about 30% of services listed

Table 31. Indicators for the ambulatory care by SHI-affiliated physicians – changes in the number of physicians, services provided, and remuneration 1980–2001 (in current prices)

	number of SHI-affiliated physicians	remune-ration for all physicians (billion €)	remune-ration per physician (€)	Cases (in million)	expenditure per case[c] (€)	number of cases per SHI insured and year	expenditure per insured member (€)
1980[a]	55 743	7.4	132 932	252.1	29.4	4.6	209.8
1985[a]	63 056	9.6	152 404	268.3	35.7	4.8	264.9
1990[a]	71 218	12.5	175 237	320.8	38.9	5.5	329.0
1995[a]	88 165	16.7	189 644	400.8	41.7	6.7	412.4
1996[b]	107 071	20.1	188 100	508.8	39.6	7.1	396.3
1997[b]	108 734	20.5	188 074	523.2	39.0	7.3	401.9
1998[b]	110 339	20.6	186 788	532.2	38.7	7.5	406.7
1999[b]	122 604	21.7	176 830	551.3	39.3	7.7	425.7
2000[b]	128 670	22.5	174 866	558.1	40.3	7.8	440.7
2001[b]	128 333	23.2	180 780	564.6	41.1	8.0	455.5
Change (%) 1996–2001	+20%	+15%	-4%	+9%	+4%	+13%	+15%

Source: Federal Association of SHI Physicians, 2004 *(49)*; Wörz, Busse, 2005 *(8)*.

Note: [a] western part of Germany, [b] Germany, from 1999 including psychological psychotherapists; [c] a case is defined as one or more patient contacts with one and the same physician per quarter.

in the Uniform Value Scale. Certification is obtained when the facilities fulfil minimal technical requirements and the providers have undergone additional training, defined as a minimal number of cases done under supervision. Organizational requirements are also considered for certification. For example, a binding cooperation agreement with a heart surgery unit within a certain area (measured as time to access) is required to obtain certification for ambulatory PTCA. Specific certificates are required for arthroscopy, dialysis, pacemaker supervision, ultrasound and laboratory testing, for example. The performance of other services not only requires a specific qualification, but also evidence of sufficient experience, indicated as a minimum number of services in the preceding year, for example 200 colonoscopies or 350 PTCAs (*74*).

Recertification is needed in order to retain eligible for sickness fund reimbursement for providing special services within the contracts. Recertification requirements are fixed in the contracts and vary depending on the service in question. The different approaches include minimum volumes of procedures done in a year, or case-verification and evaluation of skills (with thresholds for sensitivity, for example). Furthermore, the contracts also include agreements that physicians involve themselves in quality improvement interventions, such as auditing or supervision with significant event reviews. These requirements are defined by the Federal Association of SHI Physicians and are contract items between the sickness funds and the regional physicians' associations.

Table 32. Remuneration and income from SHI of SHI-affiliated physicians[a] in ambulatory practice, 2001

	SHI remuneration (€)	Costs for personnel and equipment (€)	Surplus = income from SHI before tax (€)
Dermatologists	171 100	106 766	64 334
Ear-nose-throat physicians	192 900	111 882	81 018
Gynaecologists	190 600	110 357	80 243
Internists	236 900	140 956	95 944
Neurologists and psychiatrists	151 300	80 643	70 657
Ophthalmologists	203 300	120 964	82 336
Orthopaedists	241 700	148 162	93 538
Paediatricians	188 100	102 138	85 962
Radiologists[b]	421 200	347 068	74 132
Surgeons	194 300	129 987	64 131
Urologists	204 900	126 014	78 886
All specialists (incl. other specialists)	205 200	124 556	80 644
General practitioners and practitioners	171 700	94 435	77 265
Total[a]	**192 500**	**113 190**	**79 310**

Source: Federal Association of SHI Physicians, 2004 *(49).*

Note: [a] excluding physicians in joint practices with different specialists and psychological psychotherapists; [b] including nuclear medicine specialists.

The reimbursement is further subject to control mechanisms to prevent over-utilization or false claims. A physician may be subject to a utilization review at random or if levels of service provision or hospital referrals per capita are higher than those of colleagues in the same specialty under comparable circumstances. To escape financial penalties, the physician has to justify the higher rates of utilization and referral, which may be due to a higher number of severely ill patients. Utilization review committees and utilization review arbitration committees with an equal number of physicians and sickness fund representatives are responsible for these controls.

Private settings

In private delivery settings, payment of health personnel is organized differently. For physicians and dentists *(75)*, the catalogues for private tariffs are valid in ambulatory as well as inpatient care, and for patients paying out-of-pocket

as well as private health insurers. They are based on fee-for-service and are determined by the Federal Ministry of Health and Social Security which is advised by Federal Physicians' Chamber. In the *Catalogue of Tariffs for Physicians* (*Gebührenordnung für Ärzte, GOÄ*) for example, each procedure is given a tariff number and a certain number of points. In addition, the single charge rate and the maximum charge rate are indicated, the latter is usually set 2.3-fold higher than the single rate, but for certain services physicians may charge only a 1.7-fold rate. In addition, the catalogue lists the requirements for reimbursement, such as the duration, performance, documentation or limits concerning the combination of several tariff numbers. However, the catalogue does not reflect daily practice very well. For reimbursement purposes, many services are subsumed under more general items, such as counselling on preventive self-medication and lifestyle (No. 34; single charge rate: €17.39 and 2.3-fold rate: €40.23) *(76).*

The list of "individual health services" (IGEL) presents a selection of "services deliverable on demand of patients". Services presented there may be offered to patients paying out-of-pocket in addition to the comprehensive range of SHI benefits. The provision of private services by other health professions is not regulated specifically by the state. Rather, professional bodies of other health professions including for example physiotherapists and complementary therapists issue model tariff lists that patients and therapists can refer to and that apply if no other prices have been agreed ahead of service delivery *(76).*

Health care reforms

The last fifteen years have seen many interventions of the federal government in health care. A narrative overview of health reforms in the context of the German reunification is given in the section *Historical development*. The following sections give a more detailed account of the political objectives and contents of health care reform acts since 1989. Another section reports on reforms planned in the near future. The Christian Democratic-Liberal government (1982–1998) as well as the Social Democratic-Green government (since 1998) have both adhered to the basic SHI structures and the corporatist mode of regulating the health care sector. They partly delegated more competencies to self-governance. Both governments promoted competition among sickness funds and intervened increasingly to improve the quality of health care and innovate its structural division in the delivery, administration and financing: The Christian Democratic-Liberal government with pilot projects and structural treaties and the Social Democratic-Green government with integrated care and the Disease Management Programme. The red-green government has introduced several reforms and regulations on the modernization of professional training and infectious diseases that were thought overdue. Besides that, prime issues of recent major health reforms are nearly all related to the statutory insurance system. Yet, if one wants to summarize health care policy in the period from 1988 to 2004, cost containment has been the major objective. Major political intervention in health care occurred primarily when the SHI had financial deficits.

Objectives of health reforms

The major objective: cost containment

The sickness funds and health care providers have been required to pursue a goal of cost-containment through a policy of contribution rate stability. This requirement is defined as holding contribution increases level with the rate of increase of contributory income. The era of cost-containment started in 1977 with the introduction of the "Health Insurance Cost-Containment Act", ending a period of rapid growth in health care expenditure, especially in the hospital sector. This growth was intentional on the part of politicians in order to overcome infrastructural deficits and shortcomings caused by the destruction during the Second World War and an inadequate method of financing hospital investment.

The basic principle behind "German style" cost-containment was an "income-oriented expenditure policy" to guarantee stable contribution rates. This was an important objective in a time of economic restructuring and growing international competition, since the contributions are jointly paid by employers and employees. Rises in contribution rates therefore became a question of international competitiveness. A series of cost-containment acts employing various tools were used, including:

- budgets or spending caps for sectors or individual providers
- a gradual increase of prospective payment elements in ambulatory and hospital care
- reference prices for pharmaceuticals, extension of a negative list, introduction (and abolishment) of a positive list, educational approaches to enhance generic and rational prescribing, and ad hoc price reductions for manufacturers, wholesalers and pharmacies
- reducing the number of hospital beds (rather than hospitals), restrictions on the number of ambulatory care physicians and on high cost technology equipment
- increased co-payments (both the level and number of services)
- exclusion of benefits.

These acts led to a moderation of health care expenditure growth and stabilized sickness funds' expenditures as a proportion of GDP per capita (in the western part between 6% and 7% since 1975). However, this stability has still not been adequately acknowledged in discussions about health care expenditure, since the factor being used by both politicians and employers (and to a much

lesser extent, the employees/insured) has been the average contribution rate. This is increasing slowly but regularly (from 10.4% on average in 1975 to 14.3% in 2004), with cost-containment measures having relatively minor and transient effects. These effects were often even further moderated by exceptional increases after the publication of new cost-containment proposals and in the period before the reforms were enforced. The equivalent expenditure curve in late 1988 became known as "Blüm belly" and in late 2003 as "La Ulla wave", named after the acting ministers of health.

The budgets have been of varying forms and efficacy but have been generally more successful in containing costs than any of the other supply or demand-side measures. Table 27 provides an overview of the rise, fall and resurrection of budgets and spending caps.

While cost-containment was successful in stabilizing expenditures in ambulatory medical care and dental care since the 1980s, successes in other sectors varied: the hospital sector was successfully contained only in the late 1990s. Pharmaceutical expenditures were better contained from 1993 to 2000 than in the ensuing years until strict price and rebate measures were introduced. Other sectors, such as medical aids or transport/emergency services, were less effectively curbed.

Since the last Health Care Systems in Transition Profile *(1)* was published, the average contribution rate has increased quite steeply, from 13.5% of gross earnings in 2001 to 14.3% in 2003 and 2004. The last such increase (from 12.4% to 13.2% between 1991 and 1993) was followed by the Health Care Structure Act of 1993, the largest – and strictest – reform act of the 1990s *(26)*. The problem is that the contribution rate is not based on the total economy but only on that part on which statutory health insurance contributions are based (i.e. salaries and wages of people liable to mandatory statutory health insurance). Over the last 20 years, this income base has increased more slowly than health expenditure of sickness funds, which has caused debts and consecutively an increase in the contribution rate.

Other reform objectives

One of the major reforms was the introduction of mandatory insurance for long-term care in 1995 in order to meet the needs of an increasingly ageing society and relieve private and municipal resources. In addition, some benefits were legally included into the SHI ambulatory benefit package to address prevention, patient education, or sociotherapy for the mentally ill. In pursuit of the policy of "rationalization before rationing", access to providers was hardly restricted and few benefits were excluded, except for the transient exclusion of dentures

(1997–1998) for persons born after 1978 and the somewhat more substantial cuts of the SHI Modernization Act in 2004.

An increase in technical efficiency was sought through budgets and other cost-containment measures, prospective payment methods (see *Payment of hospitals* and *Payment of physicians*) and introducing competition between funds or between hospitals and ambulatory services for elective ambulatory surgery (1993), highly specialized services (2000) and underserved specialties (2004). This went along with increasingly comprehensive and obligatory measures to increase the continuity of care and coordination between the hospital and ambulatory care sectors, and between SHI and rehabilitation. Reforms also sought to modernize and professionalize the management of sickness funds (1993) and physicians' associations (2005).

To moderate negative effects on equity in financing and access, cost-shifting measures were accompanied by exemptions for the chronically ill, children and poor. To decrease adverse effects of fund competition on equity and quality, repeated reforms were required to improve the risk structure compensation and adjust the regulatory framework. By introducing increasingly demanding obligations for quality assurance (inscribed in the Social Code Book in 1989) policy-makers sought to decrease below-standard care by issuing clinical guidelines, to strengthen the continuing education of professionals and quality-oriented management in hospitals (1993) and ambulatory physicians' practices (2000). In addition, external quality assurance was made obligatory for hospitals (2000, accessible to the public from 2004) to provide transparency concerning any detriment to the quality of care due to new forms of reimbursement.

Health targets and "health for all"

The German discussion of the World Health Organization's "Health for all by the Year 2000" programme was initially rather short. An extensive book on the urgent health needs of the population in (West) Germany and subsequent objectives and targets did not lead to a change in health policies, possibly since they were published at a time when both the public and the politicians were preoccupied with unification-related problems. The only visible outcome of the debate was the mandate contained in the Health Care Reform Act of 1989 that sickness funds should undertake health promotion activities.

Health objectives and targets gained renewed attention early in 1997 when the sickness funds were looking for new ways of competing. With health promotion having been legally abolished at the end of 1996, health care targets were the only remaining area in which the benefit packages differed between funds. Health system analysts supported the sickness funds' use of health care targets,

but argued for common targets by which their performance could be judged. Only one *Land* (North Rhine-Westphalia) set public health targets, passing a set of ten in 1994 that followed some of the WHO Health for All targets, but with more detailed responsibilities of specific institutions and groups. Other *Länder* have initiated their own targets since 1997–1998 *(77.78).*

The first encompassing initiative at the federal level to develop and implement health targets was the 2001 federal ministry's delegation of a coordinating role to the Society for Social Security Policy and Research (GVG), a consultative body representing the key actors of the private and social insurance branches. The multi-stake-holder committees agreed on health targets and clarified the responsibilities of actors and the means of evaluating progress. The following major health targets were formulated and published in 2003: to prevent and treat diabetes, to increase life quality and reduce mortality from breast cancer, to reduce tobacco consumption, to raise children in a healthy way (nutrition, exercise and stress management), and to increase the autonomy of patients and the health competency of citizens *(79).*

Content of reforms and legislation

Table 33 shows important health care reforms between 1988 and 2004 in chronological order. Legislation passed since the previous HiT Profile *(1)* was published in 2000 is described in more detail. However, it is important to note that, besides these health care reforms prepared by the Federal Ministry of Health, numerous acts affected health care.

In fact, health reforms have focused on expenditure control and reorganization in statutory insurance schemes or the introduction of long-term care. Health care reforms have until now hardly rarely targeted the revenue side of statutory health insurance, except e. g. for the SHI Modernization Act that declared all types of pensions liable to SHI contributions. The income of statutory health insurance was much more influenced by other social reforms or broader political and economic reforms that were not initiated by the Ministry of Health, especially the treaties of German reunification, the introduction of small part-time jobs, and reforms of statutory unemployment insurance and statutory retirement insurance.

The treaties of German reunification from 1990 and subsequent legislation involved statutory insurance schemes in contributing to the attainment of the overall goal to adapt living standards in the eastern part to those in the western part. The West-East transfer through SHI was for example increased

Table 33. Chronology of health reforms, 1988–2004

Year passed	Name of the act
1988	Health Care Reform Act of 1989
1992	Health Care Structure Act of 1993
1994	Social Code Book XI (Statutory Long-Term Care Insurance)
1996	Health Insurance Contribution Rate Exoneration Act
1997	First and Second Statutory Health Insurance Restructuring Acts
1998	Act to Strengthen Solidarity in Statutory Health Insurance
1999	Statutory Health Insurance Reform Act of 2000
	Act to Equalize Statutory Provisions in Statutory Health Insurance 2001
2000	Infection Protection Act
2001	Social Code Book IX (Rehabilitation and Participation of Disabled People)
	Reference Price Adjustment Act
	Pharmaceutical Budget Redemption Act
	Act to Reform the Risk Structure Compensation Scheme in Statutory Health Insurance
	Act to Newly Regulate Choice of Sickness Funds
2002	Pharmaceutical Expenditure Limitation Act
	Case Fees Act
	Contribution Rate Stabilization Act
2003	Twelfth Social Code Book V Amendment Act
	First Case Fees Amendment Act
	Statutory Health Insurance Modernization Act
2004	Act to Adjust the Financing of Dentures
	Second Case Fees Amendment Act

by transferring the contributory income level in 1999, the introduction of the nation-wide risk structure compensation, and the legal obligation to complete the stepwise adaptation of the quasi-budget for the reimbursement of SHI-affiliated office-based physicians by 2007. Based on these items, the west-east transfer increased from €0.6 billion in 1999 to €2.9 billion in 2003. In August 2004, the average contribution rate of sickness funds in the eastern part was lower than in the western part (14.03% versus 14.27%).

While most of these social, political or economic reforms have reduced resources or increased tasks for SHI, some legislation has led to an increase of revenues for statutory health insurance. The introduction of minor part-time jobs (“mini-jobs”) in 1999, led initially to an increase in contributions, yet the amendment of the act has led to a decrease of revenues for statutory insurance schemes.

Health Care Reform Act of 1989

Many of these reforms built upon cost-containment strategies introduced by the Health Care Reform Act that came into force on 1 January 1989 in the western part of Germany. Besides renewing the 1911 social insurance legislation, it introduced the following:

- choice of sickness funds or opting out for blue-collar workers above the income limit (putting them on par with white-collar workers);
- a right for sickness funds to selectively contract with hospitals outside the hospital plans;
- new SHI benefits for home-based nursing care;
- health promotion and new preventive services;
- differentiation of co-payments for dentures, depending upon regular dental examinations
- "no claim" bonus models;
- reference prices for pharmaceuticals and medical aids;
- a negative list for pharmaceuticals based on inefficiency;
- public committees to regulate expensive medical technologies jointly in the ambulatory and hospital sectors;
- quality assurance measures;
- increased scope for the medical review boards of the sickness funds by including hospital treatment reviews.

Health Care Structure Act of 1993

The major health care reform of the 1990s, the Health Care Structure Act was passed through a compromise between the governing Christian Democratic-Liberal coalition and the opposing Social Democrats in 1992 ("Lahnstein Compromise"). The act pursued two different strategies to increase clear-cut cost-containment measures and to introduce more competition to enhance efficiency, especially between sickness funds and in the hospital sector.

The key elements of the Act were to:

- introduce competition between sickness funds with freedom to choose for most of the insured population (from 1996);
- introduce a "risk compensation scheme" to redistribute contributions among sickness funds (from 1994);
- abolish the full cost cover principle for hospitals;

- introduce a partial prospective payment system for hospitals (case fees and procedure fees for selected treatments from 1996);
- lessen the strict separation of the ambulatory and hospital sectors (making ambulatory surgery in hospitals possible);
- introduce a positive list of pharmaceuticals (from 1996; but the regulation was abolished in 1995);
- introduce fixed budgets or spending caps for the major sectors of health care (originally limited until 1995);
- more tightly restrict the number of ambulatory care physicians;
- introduce a random review of ambulatory care physicians' reimbursement claims;
- introduce a "smart card" instead of paper documentation for the insured population;
- increase co-payments and introduce them for reference-priced pharmaceuticals, differentiated by price (1993) or package volume (from 1994).

The "Third Step" of health reform (1996–1997)

After a draft bill failed, the government proceeded with a small-scale act embedded in a more general act supporting economic growth. The so-called Health Insurance Contribution Rate Exoneration Act (the majority of which came into force on 1 January 1997) contained the following measures:

- exclusion of dental surgery and dentures from the benefits package for people born after 1978 (abolished in 1998)
- reduction of all contribution rates by 0.4% on 1 January 1997
- reduction of benefits for rehabilitative care
- increased co-payments for pharmaceuticals and rehabilitative care (partly lowered in 1999 and 2000)
- reduction of health promotion benefits (partly reintroduced in 2000).

The First and Second SHI Restructuring Acts, which followed and came into force on 1 July 1997 and 1 January 1998, respectively, represented a shift away from strict cost-containment. The new policy restricted employers' contributions on the one hand and expanded market mechanisms on the other, and increased the share of private money in the system. In this respect, co-payments were presented as a means to put new money into the system (and no longer as a means to decrease utilization). Other measures included the cancellation or modification of anti-market instruments such as budgets and collective contracts.

The measures introduced in these two acts included:

- the right of patients to negotiate services and ultimately prices for dental surgery and dentures with dentists and receive only a flat rate from their sickness fund (from 1998)*
- linkage of sickness fund contribution rate increases to an increase in the fund's co-payments*
- the option for sickness funds to introduce "no claim" bonuses, deductibles and higher co-payments*
- the option for insureds to choose private treatment with reimbursement by the sickness fund at the contract rate*
- cancellation of ambulatory care budgets and pharmaceutical spending caps (from 1998)*
- increased possibilities for non-collective contracts between sickness funds and providers
- transfer of the responsibility for the catalogue of prospective payments from the Ministry of Health to sickness funds and hospital organizations
- abolition of public committees for expensive medical devices
- introduction of an annual €10 per insured (not shared with employers) for restoration and repair of hospitals*
- increased co-payments for inpatient care, pharmaceuticals, medical aids, ambulance transportation and dentures (for those still covered) (partially abolished in 1998)
- a new hospice care benefit
- new requirements for HTA in ambulatory care

(Note: * = measures abolished in 1998 (effective 1 January 1999).)

In effect, the 1996/1997 acts broke several traditional rules of the system such as:

- uniform availability of benefits
- contributions shared equally between employers and employees
- financing depending only on income and not on risk or service utilization
- provision of services as benefits-in-kind.

The abolition of these reforms – as well as reversal of the trend toward shifting costs onto patients to the advantage of providers – became the most important part of the health policy programme of the then opposition Social Democrats. In anticipation of such a policy reversal after the elections, the sickness funds undermined implementation of the *de jure* limitation of provider income for

the sake of cost-containment. They refused to sign contracts but agreed they would reconsider this standpoint after the election if the government remained in power. Regarding the instruments addressing the relationship between the insured and the funds, however, the picture was less clear: some sickness funds exercised the right to introduce "no claims" bonuses while deductibles or higher co-payments were not introduced. Due to public dissatisfaction and the expected variation in co-payment rates, the government itself postponed enforcement of its proposal to link increases in contribution rates to higher co-payments.

Act to Strengthen Solidarity in Statutory Health Insurance (1998)

After the change of government in autumn of 1998, the Act to Strengthen Solidarity in SHI reversed the above-mentioned changes that were not in line with traditional approaches (marked with an asterisk above). In addition, co-payment rates for pharmaceuticals and dentures were lowered and budgets or spending caps re-introduced for the relevant sectors of health care – and in the case of dental care defined more strictly than ever before. Dental care had received particular attention in 1998: even though charges were legally limited for an initial period of three years after privatization of dental care, a large number of dentists overcharged from the beginning. This behaviour, together with the restrictions on the benefits package and the offers of new policies by private insurers contributed to a growing level of public dissatisfaction.

Reform Act of Statutory Health Insurance 2000

After the short-term Act to Strengthen Solidarity in SHI, the government introduced a new medium- to long-term reform into parliament in June 1999, which was passed in a modified form in December 1999. The Reform Act of SHI 2000 took effect in January 2000. Its key features were as follows:

- Removal of ineffective or disputed technologies and pharmaceuticals from the sickness funds benefits catalogue: A number of measures were introduced, including strengthening health technology assessment through a new DIMDI unit to inform decision-makers (especially those in the corporatist institutions) about the effectiveness and cost-effectiveness of health technologies. The regulations concerning the – more or less inactive – Federal Committee of Dentists and Sickness Funds were tightened. This meant that the ministry could set deadlines for the evaluation of technologies for inclusion or exclusion from the benefits catalogue. In addition, decision-making under corporatist arrangements was extended to the hospital sector via a Committee for Hospital Care and a Coordinating Committee.

The measures addressing the benefits' catalogue were accompanied by mandatory treatment guidelines and new quality assurance regulations. For Pharmaceuticals, the Act re-introduced a "positive list" of reimbursable drugs, which was opposed by the pharmaceutical industry, especially the smaller companies with a high percentage of disputed products. The Federal Ministry of Health was authorized to issue a positive list upon approval by the Federal Council. A nine-person commission consisting of experts in clinical medicine and pharmacology was charged with its preparation.

- The co-operation of general practitioners, ambulatory specialists and hospitals contracts between sickness funds and providers which cross the line between the ambulatory and the inpatient sectors: For example, a group of providers could contract with funds to provide both kinds of care. To promote a (voluntary) gatekeeping function amongst general practitioners, the act allowed sickness funds to give their members a bonus if they access specialists via their general practitioner.
- Budgets and reimbursement: The financing and reimbursement aspects of this reform received by far the largest public attention. The Act retained sectoral budgets which were reduced by the expenditure necessary to finance care delivered under trans-sectoral contracts. The original proposal to change to monistic hospital financing failed in the Federal Council. As far as the reimbursement of the running costs of hospitals was concerned, the Act included a mandate to introduce a new payment system based on uniform case fees taking "complexities and co-morbidities" into account (see *Payment of hospitals*). The ambulatory care budgets were to be divided between primary care physicians and specialists, as determined by the Valuation Committee.

Change and continuation of policies (2000–2003)

Since the last version of the Health Care Systems in Transition Profile was published, in 2000, a broad variety of legislative and regulative measures have been implemented (Table 33). Primary aims were to cope with increasing sickness fund deficits, adverse effects of their competition and perceived quality shortcomings. Also, legal means were required to prepare for the introduction of diagnosis-related groups (DRGs) in hospitals.

Reforms of the risk structure compensation scheme

The Risk Structure Compensation Mechanism, which redistributes money among sickness funds to compensate for disparity in members' income and expenditure levels, was transformed fundamentally by two laws. The Act to

Equalize the Law in Statutory Health Insurance, passed in 1999, standardized the risk structure compensation mechanism for the whole of Germany from 2001. This led to an increase of the West-East transfer of financial resources. On the other hand SHI's income basis in the eastern part was broadened by adjusting the limits for contributions, mandatory membership, and exemption from co-payment to levels in the western part. Both measures sought to reduce the high health insurance contribution rates in the eastern part, thereby reducing obstacles to employment and economy.

The Act to Reform the Risk Structure Compensation Scheme in Statutory Health Insurance was passed in 2001, following increasing criticism of the redistribution mechanism of sickness fund revenues as insufficient or unfair. The impetus for the reform came from two reports from expert groups that examined the function of the risk structure compensation scheme. Both came to the conclusion that in principle the scheme was performing well, but there were still incentives for sickness fund risk selection, since the scheme did not directly compensate differences in the morbidity structure of the insurance clientele of a certain sickness fund, but only differences in age, sex, disability, and income. Therefore the Act added further categories for risk adjustment, namely the enrolment of chronically ill insureds in specifically regulated disease management programmes (see *Main sources of finance and coverage*). The Act also introduced a high-risk pool effective in 2003 and outlined steps to introduce a morbidity orientated risk structure compensation scheme as of the year 2007.

Pharmaceuticals and hospitals: Cost containment and change

In January 2001 the Minister of Health from the Green Party, Andrea Fischer, resigned over the BSE-crisis, ending a two-year Green tenure in the post.

One of the first things new Social Democratic Minister Ulla Schmidt introduced was the so-called round-table, consisting (from 2001 to 2002) of representatives of the physicians, patients, sickness funds, hospitals and industry, meant as a platform for joint preparation of structural reforms. Perhaps in an effort to seek consensus, she also announced the cancellation of pharmaceutical spending caps. Legally, this was done through the Pharmaceutical Budget Redemption Act, passed late in 2001, which abolished the regional caps in the ambulatory sector and freed physicians retrospectively from collective liability for exceeding drug budgets in the previous years. Cost guidelines negotiated regionally by the self-governing bodies replaced the spending caps. However, as SHI pharmaceutical expenditures rose by 11% in the first quarter of 2001 alone, the Pharmaceutical Budget Redemption Act had to be accompanied by

the counter-acting Pharmaceutical Expenditure Limitation Act, with its *aut idem* regulation obliging pharmacists to choose the cheapest active substance in a class of pharmaceuticals. This regulation led to lower-than-calculated savings, first because pharmaceutical companies partly introduced "dummy" drugs (with high prices to increase the lower third on paper) and second because they often disobeyed the regulation. In a controversial incident, the Association of Research-Based Pharmaceutical Companies obliged itself to pay a lump sum of €204.5 million to the sickness funds. In return the government announced a suspension of general price cuts on certain pharmaceuticals.

The pharmaceutical industry had already filed several court cases arguing that sickness funds were not authorized to set indirect price controls for patented drugs by including them in the reference price scheme. Therefore the Federal Assembly passed the Reference Price Adjustment Act in 2001 to transfer that function to the Federal Ministry of Health for two years. Meanwhile, however, both the Federal Constitutional Court (December 2002) and the European Court of Justice (early 2004) have approved the sickness funds' role in determining reference prices in the SHI market since they act in a publicly delegated function, and setting reference prices has been redelegated to the federal associations of sickness funds from 2004.

The Case Fees Act of 2002 specified the regulatory framework and schedule for the introduction of the DRG reimbursement system, which was to take place in three phases. In the first phase – 2003–2004 – the new case fees were introduced on a "budget neutral" basis. This phase was to familiarize hospitals with the new system, the case fees were not effective as a pricing system, but rather as units to make up the hospitals' negotiated target budgets. In the second phase – 2005–2006 – the individual hospital budgets were gradually to become adjusted to the case-fee budgets. As of 2007, the case fees were planned to become effective as a pricing system. The Second Case Fees Amendment Act prolonged the second phase by two years and postponed the final step to 2009. The introduction of the DRG-payment system is the most important reform in the hospital sector since the introduction of dual financing in 1972.

Another element – the only lasting one – was an increase of the threshold determining mandatory SHI membership to lower the flight to private health insurance. This led to a decoupling of the thresholds determining membership and contributions (the latter remained lower). The 12th SGB V Amendment Act froze ambulatory and hospital care budgets for 2003, except for hospitals opting already for documenting according to the DRG system.

Just three months after the government was re-elected in September 2002, it introduced two reform bills with ad hoc austerity measures to reduce

expenditure. However, the government agreed to strive for more structural changes, in its coalition agreement (passed in October 2002 and covering the legislative period 2002–2006) *(81).*

The Contribution Rate Stabilization Act, passed by the Federal Assembly in 2002, mainly targeted pharmaceutical prices by increasing the rebates that pharmacists have to give to sickness funds for non-reference priced drugs from 5% to 6%. Rebates for SHI were also introduced for manufacturers (6%) and wholesalers (3%). In addition, direct negotiations between sickness funds and manufacturers for further rebates were introduced. Yet, instead of the aspired nominal decrease of €1.4 billion, expenditures increased, mainly due to the shift to other, often costlier substances. Further elements of the Act were a freeze on ambulatory and hospital care budgets for 2003, except for hospitals opting for the DRG system. Another element – the only lasting one – was an increase of the threshold determining mandatory SHI membership to lower the flight to private health insurance. This led to a decoupling of the thresholds determining membership and contributions (the latter remained lower).

The Statutory Health Insurance Modernization Act (2004)

The passage of the SHI Modernization Act in 2003 ended a one-year decision-making process and a five-year polarization of the two biggest political parties, the Social Democratic Party (SPD) and the Christian Democratic Party (CDU), over health policy *(26).* There was a general feeling that reform was needed, most of all because of increasing expenditure of the SHI contribution rates (on average from 13.5% of gross income in 2001 to 14.3% in 2003) and perceived deficiencies in the quality of health care. The Act was a result of a compromise between the incumbent Social Democratic-Green government and the Christian Democratic opposition which held a majority in the Federal Council. Its stated objectives were to improve the efficiency and quality of health care, and to stabilize SHI contribution rates in order to avoid disincentives for employers to invest in job-creating activities without rationing.

The legislation was supposed to generate substantial savings for SHI that were calculated to increase from an expected €9.8 billion in 2004 (about 7% of the likely expenditure of the sickness funds) to €23 billion by 2007. In 2004, the bulk of expected savings (4% of current SHI expenditures) shall be achieved by shifting costs to users and SHI insureds. In comparison, the anticipated savings from measures targeting health care providers and the pharmaceutical industry total €1.5 billion in 2004, rising progressively to €3 billion in 2007.

The main elements to achieve the savings or costs-shifts are:

- Some benefits, especially OTC drugs (see below) have been excluded from the SHI package.
- The co-payment requirements have been restructured by (1) introducing new co-payments, (2) standardizing co-payment levels across sectors, and (3) revising exemption rules: (1) Co-payments have been newly introduced for physician contacts in ambulatory care, namely €10 per quarter for the first contact at a physician's or a dentist's office and each contact with other physicians without referral during the same quarter. (2) Cost-sharing is now 10%, with a minimum of €5 and a maximum of €10 per good or service, which is generally higher than previously (for details see *Complementary sources of financing*). (3) While children under age 18, antenatal care and preventive services are still exempt from co-payments, the general exemption of poor people was abolished. Annual co-payments are now limited for every SHI insured to 2% of annual gross household income at the (documented) request of the insured; for the chronically ill, the annual financial burden of co-payments is limited to 1%. Deductions for spouses and children apply.
- From 2005, the SHI Modernization Act sought to exclude dentures from the jointly funded SHI benefit package. As the result of a compromise between the government and opposition, an additional insurance for dentures was introduced on a mandatory basis for SHI insureds, paid only by SHI members (and not by employers), with two options: SHI coverage at a flat per capita rate including free co-insurance for family members, after in-kind benefit principles (for example pre-authorization by sickness funds and administration by regional dentists' associations) or private coverage at rates of the insurer's choosing. By the mid-2004, however, the relatively cheap extra insurance was felt to incur excessive transaction costs, so a law was passed in the Federal Assembly to keep it inside the SHI benefit package, financed entirely by the insured through a 0.4% "special contribution", and to cancel the right to the private coverage. According to the SHI Modernization Act, a "special" contribution of 0.5% was to be levied on all SHI members (but not employers) from 2006, roughly equalling the amount of savings that would be generated by excluding sick pay from SHI benefits package. A related proposal was dropped early in the policy process due to controversies.
- After the changes regarding dentures, the two special contributions will be combined into one of 0.9% which will be due from July 2005. At the same time, the general contribution rate will be lowered by the equivalent percentage, i.e. employers will save 0.45 percentage points while employees and other SHI members will face an increase of 0.45 percentage points. Thus, the longstanding 50–50 parity in financing will be changed to approximately

46–54 for employers and members, respectively.

- In addition, new sources of income for SHI have been generated, i.e. a subsidy from the federal budget to cover several benefits relevant to family policies (see *Complementary sources of finance*) and by making additional pensions liable to SHI contributions.

Beyond these highly-publicized cost-containment measures, the SHI Modernization Act entailed an array of less publicly discussed organizational reforms to increase the quality of care, efficient coordination and patient participation.

Especially in the pharmaceutical sector, the Act introduced an array of different cost-containment measures and substantial structural changes, including:

- the already-mentioned co-payment increases and revision of the exemption rules;
- exclusion of OTC medications from SHI reimbursement, except for certain named drugs;
- reintroduction of reference prices for patented drugs with no or little therapeutic benefits (as determined by the Federal Joint Committee on the basis of the evaluation by the Institute for Quality and Efficiency);
- increase of rebates that manufacturers have to grant for patented drugs dispensed to SHI-insured outpatients as long as these are not included in the reference-price scheme;
- the possibility for sickness funds to directly negotiate contracts with drug manufacturers;
- liberalization of price-setting for OTC (leaving fixed prices on prescription drugs);
- introduction of e-commerce;
- the possibility for pharmacists to operate three branches of their main pharmacy within a reasonable distance;
- change of the pharmacists' surcharge from digressive percentage margins to a fixed dispensing fee of €8.10 per pack of prescription-only drugs.

To improve the coordination of decision-making across sectors, the Federal Joint Committee was introduced, taking over functions of the Federal Committee of Physicians and Sickness Funds, the Federal Committee of Dentists and Sickness Funds, the Committee for Hospital Care and the Coordinating Committee. The Federal Joint Committee was also delegated tasks of the multi-stake-holder body for quality assurance to integrate quality measures into administrative decisions and to better link them to incentives and sanctions (for

details see *Planning, regulation and management*). The Federal Joint Committee will be assisted by the Institute for Quality and Efficiency, which will evaluate benefit and risk (but in contrast to previous plans, not cost-effectiveness) of drugs and other interventions, support the committee in other aspects of its work and provide evidence-based patient information.

Another aspect of the Act is strengthening the individual and collective rights of patients by introducing a patients' commissioner and giving accredited organizations representing the rights of the chronically ill a seat in the joint self-governing structures at the *Länder* level, and most visibly in the Federal Joint Committee, where nine non-voting delegates have the right to participate in consultations and propose issues.

Various measures of the Act are expected to lead to a diversification of ambulatory care models via the introduction of a right to establish so-called medical centres, i.e. multidisciplinary institutions providing ambulatory care. Under the regulation of regional physicians' associations and in competing with physicians' practices, these health centres can offer services in family medicine, specialist ambulatory care and integrated care. Up to now, only a few health centres exist in Berlin and Brandenburg as successors of the German Democratic Republic's polyclinics (see *Historical development*). All sickness funds are required to offer "family practitioner models" to better coordinate services and may include various forms of gatekeeping. Members may, but are not required to participate.

Integrated care – offered by providers of different sectors under a single contract with a sickness fund – has become easier and more attractive. This shall be financed, at least for 2004 to 2006, by subtracting 1% of the funds available for ambulatory physician and hospital care. In contrast to the government's original plans, selective contracting does not apply to all ambulatory specialist physicians, but only to participants of integrated care projects.

By 2005 smaller regional physicians' associations are to be reorganized into larger units and, more importantly, need to employ full-time managers instead of the current boards of practising physicians (for sickness funds, this has been mandatory since 1993). The government's original plan to reorganize the payers' side was withdrawn during the course of negotiations to avoid destabilization of the institutional framework while funds are charged with increased tasks to intervene in provision and coordinate care.

A large number of the Act's paragraphs implemented European Union directives or jurisdiction, for example, the European Union health smart card, the financing of on-call shifts as working time in hospitals, and information duties with regard to the geographical origin of dentures. Following the Müller-Fauré/van Riet decision of the European Court of Justice (C- 385/99) from May

2003, any insured person may now be reimbursed for ambulatory care received in any European Union country even if pre-authorization is not sought or if the provider is not contracted by the respective health service or health insurance. To avoid discrimination against people seeking care in Germany, these rules now also apply to all insured (not only the voluntarily insured) within the country. However, the Act provides several precautions, for example, sickness funds may apply deductions for administration or shortfalls in co-payments and efficiency controls before reimbursing their insured. The Act also opens the way for single sickness funds to contract selectively with providers in other EU-15 countries within the legal framework for SHI on integrated care models.

The SHI Modernization Act is part of a broader package of fundamental economic, social and educational reforms called "Agenda 2010". The financial success of the act is being closely monitored by public opinion in Germany, but also – and probably more than ever before – by the other European Union member states. The European Council and the Commission have criticized the raising of social (health) insurance contributions as a barrier to spurring the national economy and to reducing the federal government deficit to below 3% of GDP, as agreed in the Maastricht Treaty.

While the benefit cuts, the co-payments and exemption rules received substantial sceptical publicity during the first months of the act's implementation, other more organizational clauses of the reform have received less publicity. By October 2004, about 170 contracts for integrated care had been negotiated. Since January 2004, sickness funds have gained substantial savings particularly due to the increase of co-payments, the reduction of benefits, and rebates in the drug sector. Yet, contribution rates have not been reduced as much as expected by federal government, and only a few sickness funds have announced to reduce the rate in 2005. While the government demands publicly that sickness funds shall transfer a part of savings to employees and employers, most sickness funds argue that they need to pay off debts and that expenditures are expected to rise again in the future to an yet unknown extent.

Since the community-rated flat-rate insurance for dentures, as foreseen by the SHI Modernization Act for 2005, were considered too expensive concerning administrative costs and unfair, the governing parties introduced a new Act to Adjust the Financing of Dentures to the Federal Assembly which was passed in October 2004. From July 2005 employees will have to pay a "special contribution" of 0.4% of their gross income that shall cover expenditures of dentures, while employers do not have to contribute. In addition, the original "special contribution" of 0.5% shall be introduced already in July 2005, making it a 0.9%-"special contribution". At the same time, sickness funds shall become legally obliged to reduce contribution rates by 0.9 percentage points.

Future reforms

Further reforms are already under way: The federal government has presented a framework for a bill to strengthen prevention and better coordinate activities of the various actors involved. Initiated by the governing coalition the act shall summarize existing legislation on prevention, clarify responsibilities, reduce legal barriers, and improve coordination of various actors involved. It shall become a special section of the Social Code Book besides the social code books on rehabilitation or statutory health insurance. According to the reform milestones agreed by the working group, sickness funds, statutory retirement insurance and statutory accident insurance shall be responsible for financing the preventive measures envisaged by the bill, i.e. mainly personal services directed at personal lifestyle with consideration of setting-related approaches. The bill raised controversy, especially among the actors of the self-governing structures in statutory health insurance, since federal and state governments are not required to contribute financially but shall participate in the foundation's governance. One fifth of finances shall be used for population-wide prevention programmes and given to a federal foundation.

For long-term care insurance the Federal Constitutional Court has demanded that members with children should pay smaller contributions than members without children. Two expert commissions dealt with wider questions of reforming long-term care insurance in the mid of 2003, both suggesting building a capital stock to achieve sustainable funding. The government-installed Rürup Commission proposed charging pensioners an extra contribution. The opposition's Herzog Commission, however, suggested an increased employer contribution, with employers compensated by the elimination of another public holiday. In addition, the Herzog Commission wanted to extend the funding base to all types of income. Otherwise they presented similar recommendations: long-term care insurance should be maintained as a social insurance financed by contributions from employers and employees, and should continue to provide benefits up to a limited amount. These upper limits should be equal regardless of whether the recipient receives ambulatory or inpatient care (thus replacing the currently higher limits for inpatient care). Benefits should be adjusted to inflation and changes in labour costs. People with dementia should qualify equally for benefits, which would require an extension of the currently somatic orientation of the definition of need, and the range of services provided.

Another option, suggested in a draft bill by the Ministry of Health, demanded an extra contribution from insured people without children, combined with an increase of entitlements and services for demented people. However, in January 2004, the Chancellor's office refused that proposal as unpopular. Thus, many of the measures are currently being discussed again. Other long-standing

recommendations of providers and consumer organizations are currently discussed at the political level, especially ways to strengthen prevention and rehabilitation within long-term care. A small solution to the court's demands was passed by the Federal Assembly in 2004 but a wider reform will be postponed until 2005.

Furthermore, the Federal Assembly has asked federal and state governments to review the existing risk compensation scheme and develop concepts for institutional reform on the financing side, including plans that were rejected during the negotiations for the SHI Modernization Act to facilitate mergers of the 292 sickness funds, to enable funds to leave their association and join another one, and to ban new sickness funds until 2007 (after which the risk structure compensation mechanism is supposed to be based on morbidity criteria). It is also expected that institutional reforms on the delivery side, especially alternatives to the current modification of the ambulatory monopoly of regional physicians' associations, will be discussed.

Since 2003 a broad consensus has evolved that the financing of social insurance branches requires fundamental changes. For health insurance, the concepts currently vary between broadening the contribution base to all residents and other types of income (citizen insurance) as supported by the governing parties and community-rated per-capita premiums, similar to the Swiss model as favoured by the opposing Christian Democratic Union. Current political programmes are based on the results of the Rürup Commission, established by the Chancellor in early 2003 and composed of experts as well as representatives of employers, trade unions and other groups, and charged with developing reform proposals for the sustainable financing of the social insurance systems, including SHI.

As the Commission could not agree on a single proposal, its final report contained two options. The first one ("flat-rate health premiums") recommended the following elements for SHI:

- SHI contributions financed irrespective of income by means of a flat-rate health premium model (around €200 a month for all adults, with dependant children still insured without charge);
- Taxable payment of the present employers' contribution for all employed people and pensioners irrespective of the form of their health insurance status as gross wage;
- Social compensation as premium subsidies for low-income earners via the tax system.

The other model, a contribution-based insurance for the entire population, also known as "citizens' insurance", seeks to broaden the SHI contribution base by:

- extending the contribution assessment basis by further types of revenue (e.g. rents and interest);
- raising the contribution assessment limit by about one third, to the level of the statutory old age pension insurance, currently around €5100 gross salary per month;
- extending mandatory SHI to more groups (civil servants, self-employed and farmers) by the abolishing the mandatory insurance limit.

For both models, the actual redistributive effect will depend on the extent of tax subsidies or the threshold for contributions, respectively. According to original calculations of the Rürup Commission, the citizens' insurance model is projected to provide relief for those with household incomes between €10 000 and €40 000 while their suggested model of per-capita premiums would lead to savings for households earning between €40 000 and €120 000 per year; higher incomes would not gain due to the necessarily higher taxes. Equal per-capita premiums would require substantial social transfers and income redistribution from taxes.

The major political parties are at odds with each other about the future funding of the health care system. The governing Social Democrats and Greens are in favour of the citizens' insurance scheme and included it into their programme in autumn 2003. The Free Democratic Party wants to transfer all SHI funds to private health insurance in a complete privatization of the system. The Christian Democratic Union (CDU) passed a modified version of flat rate health premiums at their party congress in December 2003 that would base reserves for old age on capital cover. The CDU will advocate this model in the next elections in 2006. However, there is substantial controversy within the parties, for example, the Christian Socialist Party from Bavaria opposes per-capita premiums in favour of a premiums which are still related to income. On the other hand, the Chancellor has shown substantial reservations about citizens' insurance, as a threat to the private health care industry, which currently insures 9% of the population with comprehensive substitutive insurance and another 9% with supplementary insurance, and a burden to governmental schemes for officials raised to finance the required social transfers.

Conclusions

The German system has put more emphasis on free choice, ready access, high numbers of providers and technological equipment than on cost effectiveness or cost containment per se (in spite of all the cost-containment acts that have been passed). The public has supported these priorities and, if they are used as criteria for assessment, the health care system appears to work well. Formal waiting lists and explicit rationing decisions are virtually unknown. These priorities are further supported by the complicated decision-making processes. While the SHI framework and co-payment levels are set by federal law, most decisions on the actual contents of the uniform benefits package and the delivery of curative health services are made through joint negotiations between the physicians' associations and the sickness funds at both regional and national levels. Cuts therefore require some support from the sickness funds and the providers.

Although the absolute amount of total health care expenditure has increased by nearly one half since 1992, it increased by about one tenth as a percentage of GDP (from 9.9% to 10.9% in 2002) *(21)* while real annual growth of health care expenditures ranked below most other OECD countries. This is even more remarkable, since the statutory long-term care insurance and a number of new SHI benefits have been introduced. Furthermore, SHI expenditures have remained relatively stable, increasing from 6.14% of the GDP in 1992 to 6.32% in 2002. This was due to reforms that primarily sought to prevent sickness fund expenditure from increasing faster than the income. This goal has led to efforts to contain costs and the policy of income-oriented expenditure, with the aim of stabilizing contribution rates. The various stake-holders have managed to maintain comprehensive health care coverage despite the economic challenges of reunification, decreasing SHI revenues, and ongoing cost-containment policies. SHI still covers 88% of the population comprehensively with 57% of total expenditure. People with social and private health insurance basically

have ready and equal access to services at all levels, although to a lesser extent in rural areas.

Substantial changes have been implemented during the last decade to allocate resources more appropriately to meet the health needs of the population. Long-term care was strengthened most by introducing a branch of social insurance offering new benefits (though insufficient for dementia) and a rise in the number of nurses and elderly care-takers as well as ambulatory and in-patient capacities. New SHI benefits were introduced for patient education, patient information, sociotherapy for the mentally ill as well as hospice care.

Another achievement is that health and care inequities between the eastern part and the western part have been reduced substantially since reunification. Health care of the former German Democratic Republic (GDR) in the eastern part of Germany was quickly transformed basically by adopting the system of financing, delivery, decision-making and planning of the old Federal Republic of Germany (FRG) in the western part. Also, most of the relative eastern deficits in equipment, building and maintenance standards and nursing home capacities have been compensated by substantial government investment. Staff capacities and reimbursement in institutions and ambulatory care have also been increased close to western levels.

In the last 15 years, life expectancy and most indicators available for health have improved substantially. This trend was observable in most countries of the EU, yet the eastern part of the country has experienced one of the most remarkable increases in life expectancy anywhere in the world. While many factors have contributed to this success, health care is definitely one of the important factors. Although several official reports have recently highlighted the improvements in health status and increase of capacities in the eastern part, these are still not really appreciated as a success story within Germany. Rather, the high costs of unification and the disappointment that the economic situation has not improved as much as initially promised have tended to be the focus of debate. There may, however, be a reluctance to address these issues because of the negative connotations among the population in the eastern part of the dominance in the reform process of western actors and interests, to whom acceptance of the uniform health insurance or the polyclinic system of the former GDR would have posed a considerable threat. It is, of course, unknown whether such acceptance would have produced outcomes as good or better than those of the current system. The introduction of multi-disciplinary treatment centres in all parts from 2004 and current debates about a citizens' insurance were received with a kind of satisfaction in the eastern part at certain characteristics of the GDR health care system not having been completely wrong.

There is increasing doubt whether the high level of spending on health translates into good quality care and cost-efficient use of resources. This discussion was largely stimulated by the World Health Report 2000, which ranked Germany only at number 25 in health system performance (the efficiency of goal attainment to financial resources spent). Even though the report was criticized for its methodological weaknesses, the general conclusion in regard to Germany appears to be valid *(82)*.

Also the Advisory Council for the Concerted Action in Health Care identified substantial scope for efficiency gains and quality improvement. Based on a survey of all major stake-holders in health care including payers, providers, self-help groups and government agencies, the expert committee found evidence of over-use and economic inefficiencies but also for under-use and avoidable harm from medical care in most common chronic diseases *(16)*. It also demanded that medical errors be put higher on the agenda and policies be improved *(35)*. In agreement with many respondents of the survey, the Advisory Council argued that the sectorization of not only health care delivery but also of financing and regulation was a major barrier to improving adequacy and efficiency of care.

The following sub-sections, not necessarily sorted by relevance, address some of the main issues facing the German health care system.

Cost-containment and reimbursement. The gap between expenditures and income of sickness funds and the future viability of the pay-as-you-go principle are major political concerns. Germany has the highest level of health care expenditure in the European Union. It was always comparatively high, but in 1960, its 4.2 % of GDP was closer to the level of the other European Union countries. Unification was accompanied by a sharp increase from 9.3% of GDP in 1990 to 10.4% in 1995. This can mostly be explained through a lower level of income in the eastern *Länder*. The high level of expenditure is also reflected in a nearly steady increase in contribution rates, from around 12% in 1990 to 14.2% in 2004. While cost-containment was successful in stabilizing expenditures in ambulatory medical and dental care and also hospital care after 1998, spending on care provided by allied health professionals, medical devices and transport/emergency services was less effectively curbed. Expenditure on pharmaceuticals increased rapidly in the early 1990s, was effectively controlled through budgets until 2000, and has increased again.

Cost-containment will therefore remain high on the political agenda. Another focus will be on the impact of the DRG payment system in hospitals and the development of appropriate and cost-conscious reimbursement mechanisms for ambulatory physicians. Particular attention will have to be paid to the interplay of incentives across levels of care. Increasing capitated elements in primary

care and new performance-oriented payments in secondary ambulatory care may hinder utilization at the lowest level of care.

Self-governing structures, accountability and participation. The German health care system is based on decentralized decision-making and the democratic legitimization of established actors. Its self-governance has been regarded as a sound basis for effective negotiations, public trust and safeguards against unwanted government interference. However, self-governing structures of professions, providers and sickness funds have increasingly come under scrutiny to lack transparency and public accountability.

Strengthening the financial income basis. It has been widely recognized by now that – even when cost-containment policies are continued – the financing crisis on the income side would somehow overshadow expenditure crisis. Three facts are especially relevant to this matter: First, the high level of unemployment narrows the financial basis of SHI contributions. Second, labour is responsible for an ever-decreasing share of the national income, while the share of capital is increasing. These factors result in a relative reduction in the financial flow to the social insurance system. Third, civil servants and the self-employed are currently not covered by statutory health insurance.

In conjunction with the other social insurance components (predominately pensions, long term insurance, unemployment insurance), this has been one of the primary problems of the German health care system. The particular construction of the system with solidarity financing, given the demographic and socioeconomic trends, has led to an increasing proportion of wages contributed to social insurance, which threatens to increase unemployment and jeopardize economic growth. Both proposals for a future financing system, i.e. the health premiums and the citizens' insurance, try to tackle this problem, albeit with differing emphasis on the various components. While the first aims at decoupling insurance contributions from cost of labour, the latter aims at extending the contribution base beyond the shrinking contributory basis of employed persons. More than 120 years after the establishment of a statutory health insurance at national level the question of a universal coverage of the population is discussed for the first time. At the same time, in current debates about reforming the revenue basis, the likely substantial impact on self-governing structures has hardly been discussed.

Crossing sectoral boundaries of care and allocative efficiency. One weakness of the German system, the fragmentation of care across sectors, has been addressed by several recent reforms, such as coordination of SHI, long-term care insurance and the Social Retirement Insurance (which covers the majority of rehabilitative care). The separation of ambulatory care and inpatient care have also been addressed by specific measures including highly specialized

hospital outpatient clinics, ambulatory surgery at hospitals, dispensing of drugs for ambulatory care by hospital pharmacies and integrated care models.

The exact extent of the duplication of services and the number of inappropriate referrals that are either made too early (due to sectoral budgets) or too late (due to difficulties in communication) are not exactly quantifiable. There is, however, a broad consensus that there are, at least potentially, negative consequences for patients. The weak role of primary care and the absence of gatekeepers to steer the patient through the system are also products of the separation issue. The sickness funds are ambiguous about this; on the one hand, they claim to support gatekeeping by family physicians, on the other hand, many of their disease management programmes and other models may be intended to increase their own gatekeeping role. The Reform Act of SHI 2000 has addressed these issues by allowing contracts between the sickness funds and "intersectoral" groups of providers and giving the funds the option to introduce gatekeeping on a voluntary basis. The SHI Modernization Act requires that all funds have to offer integrated care and spend 1% of their budget on this new sector. In addition, they now have to offer the option to adapt to a gatekeeping model that may be combined with various bonus incentives for members.

The future direction of reform is to increase the role of general practitioners, which requires a strengthening of their position vis-à-vis office-based specialists, improvement of training for guiding patients through the system and increased public awareness of the ability of the general practitioners to guide them. Office-based specialists, on the other hand, will increasingly have to face competition with the hospital sector, which is gradually allowed to provide more ambulatory treatment. While this will open new opportunities for the hospitals to compensate losses from further reduced inpatient capacities, it will also aggravate the problem of large, often duplicate capacities for specialized ambulatory care. Also, it is expected that earlier discharges from acute care will pose substantial challenges to the ambulatory sector and e.g. institutions for rehabilitation. Future health care reforms will probably have to deal with this issue, which will require a consensus of all actors including the *Länder*.

Technical progress and health technology assessment. The handling of innovations is an important question in all sectors of care, and should be an important target when developing health technology assessment. Some recent measures to improve quality and expenditure control are associated with decreased innovation, for example, DRGs and disease management programmes. The role of HTA can be expected to increase substantially in supporting decision-making and informing providers and users. While decision-making has been integrated on the administrative level in the new Federal Joint Committee in 2004, the actual coordination of regulations across sectors still

shows considerable inconsistency in various health care sectors, especially the licensing, coverage, diffusion and use of technologies. It also remains to be seen if the new Institute for Quality and Efficiency can play a decisive role which requires both producing high-quality evidence and being accepted by the decision-making actors in the Federal Joint Committee and beyond.

Collectivism and competition. Throughout the history of the German SHI, regulations have become much more uniform. In the late nineteenth century, individual sickness funds contracted with individual physicians. Later, individual sickness funds contracted with physicians' associations. Then, certain sickness funds negotiated together but differences remained between the so-called primary funds and the substitute funds. The Health Care Reform Act of 1989 was an attempt to strengthen the purchasers' side by standardizing and centralizing all negotiating procedures while at the same time standardizing the benefits package. By introducing a risk compensation mechanism, the Health Care Structure Act of 1993 led to a narrowing of differences in contribution rates. The Act also introduced free choice of funds for members and therefore competition among funds. True market competition is not possible, however, since the sickness funds have to offer nearly the same benefits for very similar contribution rates; in addition, the range of providers is also the same since they are contracted collectively. In this situation it is not surprising that funds – particularly the more successful ones in terms of gaining new members – are demanding greater flexibility for selective contracting.

Health policy-makers are cautiously supporting selective contracts while trying to retain a system with equal access and service quality for all the insured population. Possibilities for selective contracting are therefore increasing only gradually, as in the latest SHI Modernization Act, enforced from 2004. The issue will remain a subject for debate.

Health policy with European dimension. At least since the decisions of the European Court of Justice in May 2003, it is clear that the free choice of ambulatory health care goods and services also applies to the German statutory health care system. Changes in the utilization of cross-border ambulatory care services are expected to be hardly noticeable to the country's economy as a whole, and the few increases will remain restricted to border regions. However, dental care, elective treatments and certain high-cost drug treatments in EU countries with lower prices may exert some influence on health expenditure. In the hospital sector, the treatment of European and international patients is expected to further increase, especially those from countries with waiting lists. National health policy-making is expected to increasingly take EU regulations into account and shape health policy at EU level proactively.

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Weblinks

Institution	Website
Health care actors at federal level	
Federal Assembly	http://www.bundestag.de
Federal Ministry of Health and Social Security	http://www.bmgs.bund.de
Federal Institute for Communicable and Non-Communicable Diseases	http://www.rki.de
Federal Institute for Pharmaceuticals and Medical Devices	http://www.bfarm.de
Federal Centre for Health Education	http://www.bzga.de
German Institute for Medical Documentation and Information	http://www.dimdi.de
Federal Insurance Authority	http://www.bva.de
Federal Authority for Financial Services Supervision	http://www.bafin.de
Federal Joint Committee	http://www.g-ba.de
Federal Association of SHI Physicians	http://www.kbv.de
Federal Association of SHI Dentists	http://www.kzbv.de
German Hospital Organization	http://www.dkgev.de
Federal Association of General Regional Funds	http://www.aok-bv.de
Federal Association of Substitute Funds	http://www.vdak.de
Federal Association of Company-based Funds	http://www.bkk.de
Federal Association of Guild Funds	http://www.ikk.de
Federal associations of sickness funds	http://www.g-k-v.com
German Council of Disabled Persons	http://www.behindertenrat.de
Federal Association Consumers' Centres	http://www.vzbv.de
Association of Private Health Insurance	http://www.pkv.de
German Nursing Council	http://www.deutscher-pflegerat.de
Federal Physicians' Chamber	http://www.baek.de
Federal Psychotherapists' Chamber	http://www.bundespsychotherapeutenkammer.org

Institution	Website
Federation of Pharmacists' Organizations	http://www.abda.de
Association of Research-based Pharmaceutical Companies	http://www.vfa.de
Federal Association of Pharmaceutical Manufacturers	http://www.bah-bonn.de
Federal Alliance of Voluntary Welfare Organizations	http://www.bagfw.de
Association of the Scientific Medical Societies	http://www.awmf-online.de
Federal Office for Quality Assurance	http://www.bqs-online.de
Health targets initiative	http://www.gesundheitsziele.de
German Diagnosis-related Groups	http://www.g-drg.de
Other national information sources	
Federal Health Reporting Database	http://www.gbe-bund.de
Federal Statistical Office	http://www.destatis.de
Advisory Council for Evaluating the Development in Health Care	http://www.svr-gesundheit.de
Gesundheitspolitik.net	http://www.gesundheitspolitik.net
Dept. Health Care Management, Technische Universität Berlin	http://mig.tu-berlin.de
International information sources	
European Observatory on Health Systems and Policies	http://www.observatory.dk
WHO Regional Office for Europe health for all database	http://www.euro.who.int/hfadb
Organization for Economic Cooperation and Development	http://www.oecd.org
Health Policy Monitor of the Bertelsmann Foundation	http://www.healthpolicymonitor.org/

Glossary

English name	German name	German abbreviation
1st Case Fees Amendment Act	1. Fallpauschalen-Änderungsgesetz	1. FPÄndG
2nd Case Fees Amendment Act	2. Fallpauschalen-Änderungsgesetz	2. FPÄndG
1st Statutory Health Insurance (SHI) Restructuring Act	1. GKV-Neuordnungsgesetz	1. NOG
2nd Statutory Health Insurance (SHI) Restructuring Act	2. GKV-Neuordnungsgesetz	2. NOG
12th Social Code Book V Amendment Act	12. Sozialgesetzbuch-V-Änderungsgesetz	
Act to Adjust the Financing of Dentures	Gesetz zur Anpassung der Finanzierung von Zahnersatz	
Act to Equalize Statutory Provisions in Statutory Health Insurance	Gesetz zur Rechtsangleichung in der gesetzlichen Krankenversicherung	
Act to Newly Regulate Choice of Sickness Funds	Gesetz zur Neuregelung der Krankenkassenwahlrechte	
Act to Reform the Risk Structure Compensation Scheme in Statutory Health Insurance	Gesetz zur Reform des Risikostrukturausgleichs in der GKV	
Advisory Council for Evaluating the Development in Health Care (previously: Advisory Council for the Concerted Action in Health Care)	Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen (früher: für die Konzertierte Aktion im Gesundheitswesen)	SVR
Alliance of German Nurses' Associations	Arbeitsgemeinschaft Deutscher Schwesternverbände	ADS
Association of Independent Voluntary Welfare Organizations	Deutscher Paritätischer Wohlfahrtsverband	DPW
Association of Private Health Insurance	Verband der privaten Krankenversicherung	PKV
Association of Protestant Welfare Organizations	Diakonisches Werk	

English name	German name	German abbreviation
Association of Research-based Pharmaceutical Companies	Verband forschender Arzneimittelhersteller	VfA
Association of the Scientific Medical Societies	Arbeitsgemeinschaft Wissenschaftlich-Medizinischer Fachgesellschaften	AWMF
Basic Law (= constitution)	Grundgesetz	
case fee	Fallpauschale	
Commissioner of the Federal Government for the Concerns of Disabled People	Beauftragter der Bundesregierung für die Belange behinderter Menschen	
Commissioner of the Federal Government for the Concerns of Patients	Beauftragter der Bundesregierung für die Belange der Patientinnen und Patienten	
Commissioner of the Federal Government for the Elections in Statutory Insurance	Beauftragter der Bundesregierung für die Sozialversicherungswahlen	
(the former) Committee for Hospital Care	Ausschuss Krankenhaus	
company-based (sickness) funds	Betriebskrankenkassen	BKK
(the former) Concerted Action in Health Care	Konzertierte Aktion im Gesundheitswesen	KAiG
Contribution Rate Stabilization Act	Beitragssatzsicherungsgesetz 2003	BSSichG
(the former) Coordinating Committee (between Committee for Hospital Care and Federal Committee of Physicians and Sickness Funds)	Koordinierungsausschuss	
(regional) dentists' association	Kassenzahnärztliche Vereinigung	KZV
(regional) dentists' chamber	Zahnärztekammer	
directive (issued by the Federal Joint Committee)	Richtlinie (des Gemeinsamen Bundesausschusses)	
farmers' (sickness) funds	Landwirtschaftliche Krankenkassen	LKK
Federal Authority for Financial Services Supervision	Bundesanstalt für Finanzdienst-leistungsaufsicht	BAFin
Federal Alliance of Patient Centres and Initiatives	Bundesarbeitsgemeinschaft PatientInnenstellen	BAGP
Federal Alliance of Voluntary Welfare Organizations	Bundesarbeitsgemeinschaft der Freien Wohlfahrtspflege	
Federal Assembly (Lower Chamber of Parliament)	Bundestag	
Federal Association of Pharmaceutical Manufacturers	Bundesfachverband der Arzneimittel-Hersteller	BAH
Federal Association of SHI Dentists	Kassenzahnärztliche Bundesvereinigung	KZBV
Federal Association of SHI Physicians	Kassenärztliche Bundesvereinigung	KBV
Federal Association of the Pharmaceutical Industry	Bundesverband der Pharmazeutischen Industrie	BPI
Federal Centre for Health Education	Bundeszentrale für gesundheitliche Aufklärung	BZgA
(the former) Federal Committee of Physicians and Sickness Funds	Bundesausschuss der Ärzte und Krankenkassen	

English name	German name	German abbreviation
Federal Council (Upper Chamber of Parliament)	Bundesrat	
(the former) Federal Health Council	Bundesgesundheitsrat	
(the former) Federal Health Office	Bundesgesundheitsamt	BGA
Federal Highway Research Institute	Bundesanstalt für Straßenwesen	BAST
Federal Hospital Reimbursement Ordinance	Bundespflegesatzverordnung	
Federal Institute for Communicable and Non-Communicable Diseases (Robert Koch-Institute)	Robert Koch-Institut	RKI
Federal Institute for Health Protection of Consumers and Veterinary Medicine	Bundesinstitut für gesundheitlichen Verbraucherschutz und Veterinärmedizin	BgVV
Federal Institute for Pharmaceuticals and Medical Devices	Bundesinstitut für Arzneimittel und Medizinprodukte	BfArM
Federal Institute for Sera and Vaccines (Paul Ehrlich-Institute)	Paul Ehrlich-Institut (Bundesamt für Sera und Impfstoffe)	
Federal Insurance Authority	Bundesversicherungsamt	BVA
Federal Joint Committee	Gemeinsamer Bundesausschuss	G-BA
Federal Ministry of Health	Bundesministerium für Gesundheit	BMG
Federal Ministry of Health and Social Security (abbreviated in the text: Federal Ministry of Health)	Bundesministerium für Gesundheit und Soziale Sicherung	BMGS
Federal Office for Quality Assurance	Bundesgeschäftsstelle für Qualitätssicherung	BQS
Federal Physicians' Chamber	Bundsärztekammer	BÄK
Federal Psychotherapists' Chamber	Bundespsychotherapeutenkammer	
Federal Republic of Germany (official name for the "old" federal states until 1990, since 1990 unified with the "new" federal states in the eastern part of Germany)	Bundesrepublik Deutschland	
Federal Statistical Office	Statistisches Bundesamt	
(the former) Federal Supervisory Office for the Insurance Sector	Bundesaufsichtsamt für das Versicherungswesen	
Federation Consumer Centres	Verbraucherzenterale Bundesverband	VZBV
Federation of Pharmacists' Organizations	Bundesvereinigung Deutscher Apothekerverbände	ABDA
Foundation for the Testing of Consumer Goods (and Services)	*Stiftung Warentest*	
general regional (sickness) funds	Allgemeine Ortskrankenkassen	AOK
German Alliance Self-Help Groups	Deutsche Arbeitsgemeinschaft Selbsthilfegruppen	DAG-SH
German Caritas (= Catholic Welfare) Organization	Deutscher Caritasverband	
German Council of Disabled People	Deutscher Behindertenrat	DBR

English name	German name	German abbreviation
(the former) German Democratic Republic	Deutsche Demokratische Republik	DDR
German Family Physicians' Organization	Deutscher Hausärzteverband (früher: Berufsverband der Allgemeinärzte Deutschlands – Hausärzteverband)	
German Forum Prevention and Health Promotion	Deutsches Forum Prävention und Gesundheitsförderung	
German Generics Association (previously: Association of Active Pharmaceutical Companies)	Deutscher Generikaverband (früher: Verband aktiver Pharmaunternehmen)	
German Hospital Organization	Deutsche Krankenhaus-Gesellschaft	DKG
German Institute for Medical Documentation and Information	Deutsches Institut für medizinische Dokumentation und Information	DIMDI
German Nursing Association	Deutscher Berufsverband für Pflegeberufe	DBfK
German Nursing Council	Deutscher Pflegerat	DPR
German Organization for Physiotherapy	Deutscher Verband für Physiotherapie - Zentralverband der Physiotherapeuten/ Krankengymnasten	ZVK
German Pharmacists' Organization	Deutscher Apothekerverband	
German Psychotherapist Organization – Professional Organization of Psychological Psychotherapists	Deutscher Psychotherapeutenverband – Berufsverband Psychologischer Psychotherapeuten	DPTV
German Red Cross	Deutsches Rotes Kreuz	
guild (sickness) funds	Innungskrankenkassen	IKK
Health Care Reform Act (of 1989)	Gesundheitsreformgesetz	GRG
Health Care Structure Act (of 1993)	Gesundheitsstrukturgesetz	GSG
Health Insurance Contribution Rate Exoneration Act	Krankenversicherungs-beitragsentlastungsgesetz	
Health Insurance Cost-containment Act	Krankenversicherungs-kostendämpfungsgesetz	KVKG
Health Insurance Cost-containment Amendment Act	Krankenversicherungs-Kosten-dämpfungsergänzungsgesetz	
Hospital Cost-containment Act	Krankenhaus-Kostendämpfungsgesetz	
Hospital Financing Act	Krankenhausfinanzierungsgesetz	KHG
Hospital Restructuring Act	Krankenhausneuordnungsgesetz	
Infection Protection Act	Infektionsschutzgesetz	IfSG
Imperial Insurance Regulation	Reichsversicherungsordnung	RVO
Institute for Quality and Efficiency	Institut für Qualität und Wirtschaftlichkeit	
Institute for the Payment System in Hospitals	Institut für das Entgeltsystem im Krankenhaus	INEK
list of pharmaceuticals prescribed in SHI	GKV-Arzneimittelindex	
Marburg Union of Employed (Hospital) Physicians	Marburger Bund - Verband der angestellten und beamteten Ärztinnen und Ärzte	

English name	German name	German abbreviation
Mediation Committee (between Federal Assembly and Federal Council)	Vermittlungsausschuss	
Medical Devices Act	Medizinproduktegesetz	MPG
Medical Devices Ordinance	Medizinprodukteverordnung	MPV
miners' (sickness) fund	Bundesknappschaft	
Narcotic Drug Commissioner of the Federal Government	Drogenbeauftragte der Bundesregierung	
ordinance (issued by ministries)	Verordnung (von Ministerien)	
Organization of Democratic Physicians	*Verein Demokratischer Ärztinnen und Ärzte*	VDÄÄ
Organization of Ergotherapists	Verband der Ergotherapeuten	
Organization of German Doctors – Hartmann Union	*Verband der Ärzte Deutschlands – Hartmannbund*	
Organization of German Primary Care Physicians – General Practitioners' Union	Berufsverband der Allgemeinärzte Deutschlands – Hausärzteverband	
Organization of German Psychologists	Berufsverband deutscher Psychologen	BDP
Organization of SHI-affiliated Psychological Psychotherapists	Vereinigung der Kassenpsychotherapeuten	
Pharmaceutical Act	Arzneimittelgesetz	AMG
Pharmaceutical Budget Redemption Act	Arzneimittelbudgetablösungsgesetz	ABAG
Pharmaceutical Expenditure Limitation Act	Arzneimittelausgaben-Begrenzungsgesetz	AABG
Pharmaceutical Price Ordinance	Arzneimittelpreisverordnung	AmPreisV
(regional) pharmacists' chamber	Apothekerkammer	
Physicians' Approbation Ordinance	Ärztliche Approbationsordnung	ÄAppO
(regional) physicians' association	Kassenärztliche Vereinigung	KV
(regional) physicians' chamber	Ärztekammer	
procedure fee	Sonderentgelt	
(regional) psychotherapists' chamber	Psychotherapeutenkammer	
Reference Price Adjustment Act	Festbetragsanpassungsgesetz	FBAG
Reform Act of SHI 2000	GKV-Gesundheitsreform 2000	
Remuneration Distribution Scale	Honorarverteilungsmaßstab	HVM
sailors' (sickness) fund	Seekrankenkasse	
SHI Medical Review Board	Medizinischer Dienst der Krankenversicherung	MDK
Social Code Book V (Statutory Health Insurance)	Sozialgesetzbuch V (Gesetzliche Krankenversicherung)	SGB V
Social Code Book IX (Rehabilitation and Participation of Disabled People)	Sozialgesetzbuch IX (Rehabilitation und Teilhabe behinderter Menschen)	SGB IX
Social Code Book XI (Statutory Long-term Care Insurance)	Sozialgesetzbuch XI (Soziale Pflegeversicherung)	SGB XI
State(s)	Land (Plural: Länder)	

English name	German name	German abbreviation
statutory health insurance (SHI)	Gesetzliche Krankenversicherung	GKV
Statutory Health Insurance (SHI) Modernization Act	GKV-Modernisierungsgesetz	
Statutory long-term care insurance	Soziale Pflegeversicherung	SPV
substitute funds	Ersatzkassen	
Uniform Value Scale	Einheitlicher Bewertungsmaßstab	EBM
Valuation Committee	Bewertungsausschuss	
Welfare Organization of the Jews in Germany	Zentralwohlfahrtsstelle der Juden in Deutschland	
Workers' Welfare Organization	Arbeiterwohlfahrt	
(the former) Working Group Quality Assurance	Arbeitsgemeinschaft Qualitätssicherung	AQS

Note: For reasons of international comparability, the names of institutions used in the ensuing text do not necessarily reflect the English names that institutions use themselves. This glossary updates and extends the glossary of the HiT Germany 2004.

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