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Health system review

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Preface

The Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each profile is produced by country experts in collaboration with the Observatory's staff. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a profile.

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

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

Compiling the profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health 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

World Health Organization (WHO) Regional Office for Europe Health for All database, national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, the International Monetary Fund (IMF), the World Bank, and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.

A standardized profile has certain disadvantages because the financing and delivery of health care differ across countries. However, it also offers advantages, because it raises similar issues and questions. The HiT profiles 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 systems. This series is an ongoing initiative and material is updated at regular intervals.

Comments and suggestions for the further development and improvement of the HiT series are most welcome and can be sent to info@obs.euro.who.int.

HiT profiles and HiT summaries are available on the Observatory's web site at www.healthobservatory.eu.

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Regional Office for Europe, the Governments of Belgium, Finland, Ireland, the Netherlands, Norway, Slovenia, Spain, Sweden and the Veneto Region of Italy, the European Commission, the European Investment Bank, the World Bank, UNCAM (French National Union of Health Insurance Funds), the London School of Economics and Political Science (LSE), and the London School of Hygiene & Tropical Medicine (LSHTM).

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List of abbreviations

ADL	Association of Suppliers of Drugs and Medical Devices
CT	computerized tomography
DRG	diagnosis-related group
EC	European Commission
ECG	electrocardiogram
EESM	Evaluation of Economic and Social Measures Project
EHIC	European Health Insurance Card
EMA	European Medicines Agency
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ESA	European system of accounts
EU	European Union
EU10	the 10 countries that joined the EU in 2004
EU12	the 12 countries that joined the EU in 2004 and 2007
EU15	countries that belonged to the EU before May 2004
EU27	the 27 current EU states
FDI	foreign direct investment
FTE	full-time equivalent
GDP	gross domestic product
GENAS	Association of Generic Producers
GFCF	gross fixed capital formation
GP	general practitioner
HALE	health-adjusted life expectancy
HCSA	Health Care Surveillance Authority
HIC	health insurance company
HPI	Health Policy Institute
IMF	International Monetary Fund
IT	information technology
KDH	Krest'anskodemokratické hnutie (Christian Democratic Movement)
Most–Híd	Hungarian–Slovak understanding Bridge
MRI	magnetic resonance imaging
NATO	North Atlantic Treaty Organization

NCHI	National Centre for Health Information
NGO	non-governmental organization
OECD	Organisation for Economic Co-operation and Development
OTC	over-the-counter
PET	position emission tomography
PHA	Public Health Authority
PHARE	Poland and Hungary: Assistance for Restructuring their Economies
PP	percentage points
PPP	purchasing power parity
QALY	quality-adjusted life year
SAFS	Slovak Association of Pharmaceutical Societies
SaS	Sloboda a Solidarita (Freedom and Solidarity)
SDKÚ-DS	Slovenská krest'anská a demokratická únia – Demokratická strana (Slovak Christian and Democratic Union – Democratic Party)
SHI	social health insurance
SIDC	State Institute for Drug Control
SK-MED	Slovak Association of Medical Device Suppliers
Smer	Direction – Social Democracy (Smer – Socialna demokracia)
SNS	Slovenská národná strana (Slovak National Party)
VH-A	type A viral hepatitis
VHI	voluntary health insurance

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Abstract

The HiT profiles are country-based reports that provide a detailed description of a health system and of policy initiatives in progress or under development. HiTs examine different approaches to the organization, financing and delivery of health services, and the role of the main actors in health systems; describe the institutional framework, process, content and implementation of health and health care policies; and highlight challenges and areas that require more in-depth analysis.

The Slovak health system is a system in progress. Major health reform in the period 2002–2006 introduced a new approach based on managed competition. Although large improvements have been made since the 1990s (for example in life expectancy and infant mortality), health outcomes are generally still substantially worse than the average for the EU15 but close to the other Visegrád Four countries. Per capita health spending (in purchasing power parity [PPP]) was around half the EU15 average. A large share of these resources was absorbed by pharmaceutical spending (28% in 2008, compared to 16% in OECD countries). Some important utilization indicators signal plenty of resources in the system but may also indicate excess bed capacity and overutilization. The number of physicians and nurses per capita has been actively reduced since 2001 but remains above the average of the EU12 (i.e. the 12 countries that joined the EU in 2004 and 2007). An ageing workforce and professional migration may reinforce a shortage of health care workers. People have free choice of general practitioner (GP) and specialist. Their services are provided without cost-sharing from patients, with the notable exception of dental procedures. Inpatient care and specialized ambulatory care are provided in general hospitals and specialized hospitals. Pharmaceutical expenditure per capita accounts for one-third of public expenditure on health care. Long-term care is provided by health care facilities and social care facilities. Slovakia has a progressive system of financing health care. However, the health reforms of 2002–2006 led to an

increase in the number of households that contributed more from their income and the distributive impacts were not equitable. This was mainly caused by the introduction of a reference pricing scheme for pharmaceuticals. Some key challenges remain: improving the health status of the population and the quality of care while securing the future financial sustainability of the system.

Executive summary

Introduction

The Slovak Republic is located in the heart of Europe, with an area of 49 035 km^2. Until 1993, the Czech Republic and present-day Slovakia formed one state (Czechoslovakia). In 2008, 2.4 million inhabitants lived in provincial municipalities, that is, 45% of the total population of 5.4 million people (Infostat, 2010). Slovakia has been a member of the United Nations and its agencies since 1993, a member of the OECD since 2000, and a member of the North Atlantic Treaty Organization (NATO) and the EU since 2004. Since 1990, the formerly centrally planned economy has been transformed into a market economy. Economic performance in terms of gross domestic product (GDP) per capita (PPP) in 2008 has reached approximately 66% of the average performance of OECD countries (OECD, 2010). The Slovak Republic is a parliamentary democracy with separation of legislative, judicial and executive powers. Its unicameral Parliament consists of 150 members. They are elected by proportional representation for a four-year period. The president is the Head of State and has limited legislative power. Average life expectancy at birth in Slovakia is increasing and has reached 78.7 years for women and 71.3 years for men. The child mortality rate has been continuously decreasing from 2.4 per thousand in 1993 to 1.5 in 2009. A continuing unfavourable mortality rate among men of middle age (30–55 years) is observed, which is almost three times higher than that of women of the same age. Generally, progress has been made for most relevant health indicators and Slovakia is comparable to or better than the EU12 average. Yet Slovakia still falls substantially behind when compared to EU15 countries.

Overview of the health system

The health care system in Slovakia is based on universal coverage, compulsory health insurance, a basic benefit package and a competitive insurance model with selective contracting and flexible pricing. Health care, with exceptions,

is provided to those insured free at the point of service as benefits-in-kind (paid for by a third party). After fulfilling certain explicit criteria, there are no barriers to entry to the health care provision and health insurance markets.

Based on the quality of their services, health insurance companies compete for insured individuals. Health care purchasing creates room for competition. Health insurance companies are obliged to ensure accessible health care to those they insure according to provisions laid down by law. Health insurance companies fulfil this obligation by contracting health care providers. The Health Care Surveillance Authority (HCSA) is responsible for monitoring health insurance, health care provision and the health care purchasing markets. Since 2005, all health insurance companies are joint stock companies, that is, they were transformed from (public) health insurance funds to health insurance companies operating under private law. As of 2010, three health insurance companies operate in the market, one of which is state-owned (66% of insured) and two privately owned.

Different ownership structures characterize health care providers and health insurance companies. The state, represented by the Ministry of Health, is the owner of the largest health insurance company. Furthermore, the state owns the largest health care providers, including university hospitals, large regional hospitals, highly specialized institutions, and almost all psychiatric hospitals and sanatoria. The majority of them are contributory organizations, a Slovak form of legal entity that is established by a government (including regional and municipal governments), to which part of the entity's budget is linked; that is, they may have other revenue sources. In 2006, five state-owned health care facilities were transformed into 100% state-owned joint stock companies. Since 2007, the health care facilities in state ownership must be contracted by health insurance companies. The government in power in the period 2006–2010 saw these care facilities as crucial in guaranteeing geographical accessibility, but critics argued that this may also have given an unfair competitive advantage to these hospitals. Health departments of the Ministry of Defence, Ministry of Transport, Ministry of the Interior and Ministry of Justice also manage several health care facilities.

Pharmacies and diagnostic laboratories, as well as almost 90% of outpatient facilities are in private hands. Some outpatient specialists are employed by hospitals and provide ambulatory care in polyclinics attached to hospitals. Providers of emergency health care services are either in private or state ownership; four-year operating permits are issued by the Ministry of Health based on a successful tender.

State bodies (the Ministry of Health, HCSA) and self-governing regions, which have regional competences mainly in outpatient care, administer the system and issue permits to health care providers. Organized interest groups also participate in health policy-making. Although they are invited to comment on legislative proposals, their recommendations carry relatively little political weight. Representatives of employees and employers meet with government representatives at the Tripartite Economic and Social Council, but their mutual agreement is not needed to continue the legislative process. Professional associations (known as "chambers") keep registers of health professionals and they issue or revoke licences. They cooperate in monitoring the management of health care facilities and issue opinions on ethical issues concerning the medical profession. The membership in chambers is not compulsory.

Financing

After the establishment of the Slovak Republic in 1993, the Bismarck system of social health insurance (SHI) was reintroduced through the establishment of the National Insurance Fund. In 1994, the Act on Health Insurance was passed, which allowed the establishment of multiple health insurance funds. Since its inception in the early 1990s the system has suffered from financial instability. The 2002–2006 reforms sought to remedy this by tightening budgetary restrictions, increasing effectiveness in utilizing resources as well as identifying internal reserves of the system. The reform included a transformation of health insurance funds into joint stock companies.

Total health expenditure as share of GDP was 7.8% in 2008, well above the EU12 average but still significantly lower than the EU15 average. In 2008, total health expenditure per capita reached US$ 1717 PPP, significantly more than neighbouring Visegrád Four countries Hungary and Poland, and slightly more than the Czech Republic (WHO Regional Office for Europe, 2010).

As of 2010, the Slovak SHI system provides universal coverage for a broad range of benefits, guarantees an annual free choice of one of three nationally operating health insurance companies and is based on solidarity. The main sources of revenue in the health system are contributions collected by the health insurance companies, which are formally profit-oriented joint stock companies that, in the period 2008–2011, were only allowed to use their profit for health care purchasing. The contributions are collected from: (1) employees and employers; (2) the self-employed; (3) the voluntarily unemployed; and (4) the "state-insured". The "state-insured" is a term used for the group of mostly

economically inactive people for whom the state pays contributions (one-third of the total resources from SHI contributions). The collected resources are risk adjusted for two demographic predictors, age and gender, and, since 2010, for the characteristic "state-insured". Payments to the providers are subject to a contract that determines the amount of payments, the nature and quality of services, and the payment system. In outpatient care a system of capitations and fees is applied for primary care, whereas outpatient specialists are paid using capped fee-for-service payments. Inpatient care is reimbursed using a case-based system. Finally, cost-sharing mainly takes place through a system of small fees to users for prescriptions and health services, and co-payments for pharmaceuticals and spa treatments introduced in 2003. Because of the broad definition of the SHI benefit package voluntary health insurance (VHI) plays only a very marginal role.

Apart from funding the state-insured, the central government budget finances the activities of several ministries, most notably the Ministry of Health. The Ministry of Health, for example, funds the Public Health Authority (PHA) and a state-run Slovak Health University. Self-governing regions and municipalities often invest additional money in their health facilities and usually bear the investment costs in these hospitals and outpatient centres.

Physical and human resources

There are three steps involved in entering the Slovak health care provision market. First, health care professionals have to obtain a licence from the Slovak Medical Chamber. Second, the provider has to obtain a permit from the self-governing region or the Ministry of Health, depending on what type of provider it is. Third, providers need to submit a request for a contract with a health insurance company. It should be noted that meeting the first two conditions does not guarantee obtaining a contract, and that providers may provide services without a contract with a health insurance company.

The technical infrastructure of hospitals is outmoded; on average, Slovak hospitals are 34.5 years old. Capital investments from the Ministry of Health budget were abolished in 2003. Instead, these resources were allocated to health insurance companies to include amortization in their payments to providers. Acute beds, psychiatric beds and long-term beds have seen a gradual decline in relative and absolute terms since 2000, although the number of acute beds is still among the highest in Europe. An active bed reduction plan provided the basis for adjustments in the structure of both inpatient and outpatient care

providers: 6000 acute beds were eliminated or transformed into chronic care beds; three acute care hospitals were closed and several others transformed into almost exclusively chronic (long-term) care facilities. A decline in the number of beds per 1000 population and the occupancy rate can be explained by the aforementioned active reduction policy, a simultaneous decline in the average length of stay in acute hospitals and a gradually decreasing number of admissions. Substitution by one-day surgery procedures lags behind, although a dynamic growth of facilities with one-day surgery has been observed in the past years.

Compared to other countries, the number of physicians and nurses was similar to that of Germany and the EU15 until 2001. After 2001, Slovakia witnessed a continuous fall in the number of physicians and nurses in relation to the population, although their numbers remain above the EU12 average. These changes are closely linked with the migration of doctors and nurses abroad and the restructuring of health care facilities. National data show that, since 2006, the health workforce has begun to increase again. Yet the ageing workforce, combined with the migration of health care workers, may exacerbate the shortage of health care workers. Although exact data on migration are lacking, this is considered common knowledge. Health care workers may receive professional qualifications in four ways. They may either complete (1) a Bachelor's or Master's degree in an accredited university programme, or (2) higher vocational training, (3) full secondary vocational training, or (4) secondary vocational training in degree programmes of secondary health schools.

Provision of services

Public health is supervised by the PHA, which concentrates predominantly on the monitoring of communicable diseases. The PHA organizes an immunization programme that is carried out by GPs and financed by health insurance companies. Ambulatory care is provided predominantly by privately organized physicians. People have free choice of their GP. Also, for specialized care, there is a free choice of specialist. Their services are provided without cost-sharing from patients, with the notable exception of dental procedures, which often involve direct payments from the patient. Inpatient care is provided in general hospitals (including university hospitals) and specialized hospitals, owned publicly or privately. Hospitals usually provide specialized ambulatory care as well. Emergency medical services are provided by a dense network of

private and public providers operating in a total of 264 areas and accessible to patients within 15 minutes. Compared to EU15 countries, Slovakia has low pharmaceutical expenditure per capita in absolute terms; nevertheless, such expenditure accounts for one-third of public expenditure on health care – the highest share of all OECD countries. The provision of pharmaceutical care is monitored by the State Institute for Drug Control (SIDC). Distributors and pharmacies are virtually all private. There is a lack of coordination between the health care and social care frameworks in the long-term care sector. Similar services provided in health care facilities and in social care facilities are subject to different regulations and financing arrangements. Complementary and alternative medical services are predominantly provided in private specialized outpatient departments or specialized facilities. These are not covered by SHI.

Principal health reforms

Since 1990, Slovakia has witnessed a turbulent reform trajectory, with periods of sweeping reforms alternating with calmer periods. The early 1990s were characterized by the reintroduction of the Bismarck model and privatization of providers. The institutional and regulatory framework was quite weak and plagued by corruption. This led to rapidly increasing debts and bankruptcies in the health insurance market. The late 1990s were in turn quite calm, although debt was accumulating quickly. In the period 2002–2006, a shock-type reform replaced all relevant health care legislation and imposed a new approach based on individual responsibility. The health insurance companies were transformed into joint stock companies, hard budget constraints were introduced, and a new regulatory and institutional framework created. User fees were introduced with the aim of making patients more aware of their health care utilization. The health system was based around managed competition, which was expected to leave enough room for the market (liberalized prices, easier entrance to market, liberalized payment mechanisms), albeit under strict regulation (minimum network requirement, solvency criteria, licensing). The model sought to create an environment in which societal goals are met through setting the right incentives for market players.

The government that entered into power after the 2006 elections brought a shift in paradigm. The pro-market reforms effort and individual responsibility were discarded in favour of more direct state involvement and responsibility. Although the institutional and regulatory framework remains largely intact,

health insurance companies were no longer allowed to make a profit and selective contracting was restricted. Furthermore, user fees were scaled down or completely abolished. The 2010 elections brought to power a government that is politically more closely aligned with the government of 2002–2006. The manifesto of the new government declared that health insurance companies would again be allowed to make profits, that the halted transformation of hospitals into joint stock companies would resume, that the independence of the HCSA would be increased, that a DRG payment system would be introduced and that market mechanisms in health insurance would be increased.

Assessment

Compared to the international benchmark, Slovakia has a progressive system of financing health care. Indirect taxes and out-of-pocket payments have increased regressivity in the period 2002–2005, but this trend was offset by rising progressivity of direct taxes and SHI contributions in the same period. This does not capture all distribution effects, however. The health reforms of 2002–2006 led to an increase in the number of households that contributed more from their income. In addition, the distributive impacts were not equitable and the highest increase was reported for people in the second and third income quintiles. This was mainly caused by the introduction of a reference pricing scheme for pharmaceuticals, which substantially increased co-payments.

Per capita health spending (in PPP) in Slovakia was fairly low in 2008 and around half the EU15 average. A large share of these resources was absorbed by pharmaceutical spending (28% in 2008, compared to 16% in OECD countries), effectively making spending on other components of care even lower. Compared to OECD averages, relatively high hospital bed availability, relatively low occupancy rate in hospitals, high hospital discharge rates and a high number of consultations signal that there are plenty of resources in the system but may also indicate excess bed capacity and overutilization. In terms of human resources, the number of physicians and nurses is below the EU15 average, but still above the EU12 average. Although large improvements have been made, most notably in life expectancy and lower infant mortality, Slovakia's health outcomes are still generally substantially worse than the averages for the EU15 and OECD, but close to those of the other Visegrád Four countries.

1. Introduction

1.1 Geography and sociodemography

Slovakia is located in the heart of Europe, with an area of 49 035 km^2. Its longest border is with Hungary to the south, with a length of 654.9 km. Slovakia borders Austria to the west (for 107.1 km), Poland to the north (541.1 km), and has its shortest border to the east with the Ukraine for 97.9 km. The border with the Czech Republic in the northwest is 251.8 km long. The Czech Republic used to form one state (Czechoslovakia) together with present-day Slovakia until 1993. The average population density in Slovakia is 110 inhabitants per 1 km^2. In 2008, 2.4 million inhabitants lived in provincial municipalities, which is 45% of the total population of 5.4 million (Infostat, 2010). The Slovak Republic became part of the Schengen Area on 21 December 2007. An agreement on a border crossing between the Slovak Republic and the Ukraine with a simplified procedure for residents was signed on 30 May 2008 in Bratislava. Slovakia has been a member of the United Nations and its agencies since 1993, a member of the OECD since 2000, and a member of NATO and the EU since 2004.

The territory of the Slovak Republic (Fig. 1.1) is administratively divided into eight self-governing regions (Bratislava, Trnava, Trenčín, Nitra, Žilina, Banská Bystrica, Košice, Prešov) and 79 districts. In 2008 there were altogether 2891 municipalities, of which 2581 (89%) were provincial municipalities.

Of the total population of Slovakia, 85.5% declare their nationality as Slovak. Hungarians, Roma and other nationalities account for 9.7%, 1.6% and 1.8%, respectively (Statistical Office of the Slovak Republic, 2008). With regard to religious affiliation, in 2001, 68.9% of the population of Slovakia were Roman Catholics, 6.9% were members of the Evangelical Church of the Augsburg Confession, 4.1% were Greek Orthodox and 7.1% belonged to other religions; 13% of the population does not have any religious affiliation (Statistical Office of the Slovak Republic, 2002).

Fig. 1.1
Map of Slovakia

Source: United Nations Cartographic Section, 2004.

The population of Slovakia in 2008 was 5.4 million, women making up 51.4% of that number. Compared to 1993, the population had increased by 75 799 (1.4%) (Table 1.1). A significant decrease of population in the late 1990s was observed due to a decrease in live births, while the mortality rate has dropped at a slower rate. In 2000, natural population growth had decreased to one-tenth of its value in 1990. A negative trend in natural population growth was observed between 2001 and 2003. It has since returned to positive values from 2004 onwards; but, with a decreasing tendency (population growth was 4 196 in 2008).

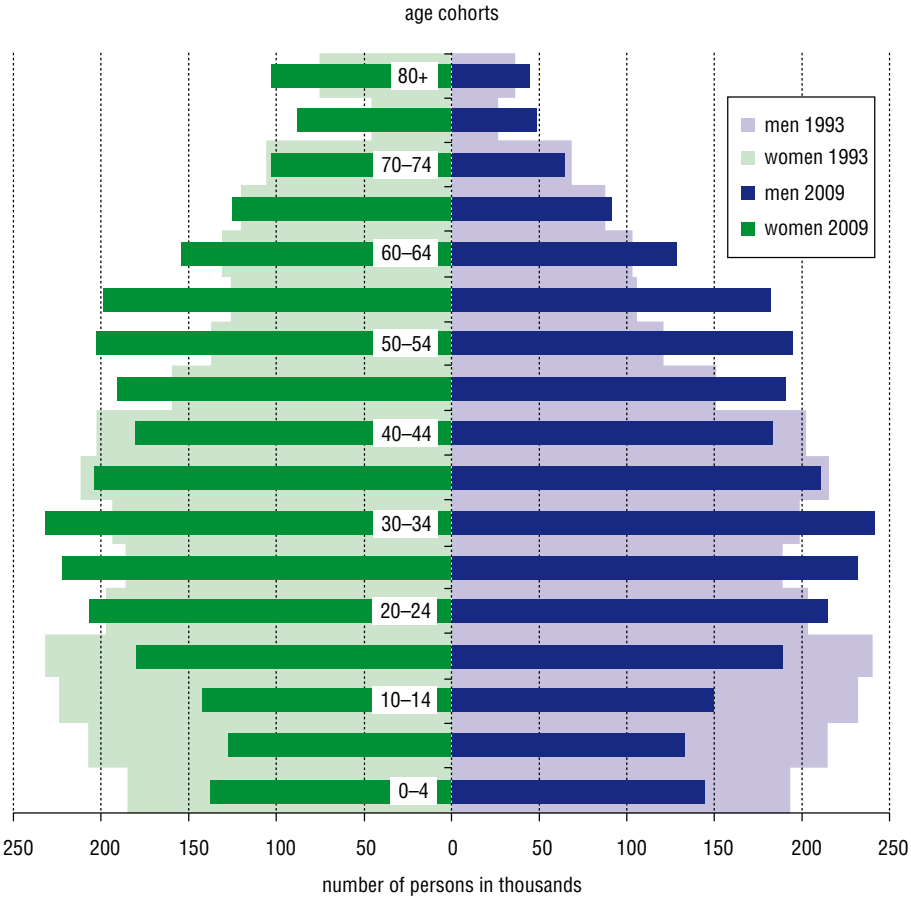
Between 1993 and 1995, as a result of changes in the social environment, the fertility rate decreased by 21.2%. It fell to 1.32 live births per 1 000 women of reproductive age in 2007, placing Slovakia among the countries with the lowest fertility rate in Europe. This fact is associated with the shift in the average age of women at delivery, which was 28.3 years in 2008. This has increased by 2.65 years since the late 1970s. The average age of women giving birth to their first child has increased by 3.73 years, and was 26.42 in 2008 (Infostat, 2010). Two factors have influenced the higher age of women giving birth to their first child:

(1) a changing socioeconomic environment as a result of the transformation of society (the break-up of existing economic relations, general deterioration of the economic situation, decline of social security, and so on) as well as (2) cultural–psychological factors resulting from, for example, changing attitudes towards family planning. According to the 1997 survey (FOCUS, 1997), more than 70% of women with a university degree in 1995 were inclined to postpone having children and considered the age of 24 the optimal age for having children.

Population migration has been influenced by two historical milestones. First, the peaceful split of Czechoslovakia into Slovakia and the Czech Republic in 1993 induced higher migration between its successor states. Second, the accession of Slovakia to the EU in 2004 gave citizens of other Member States easier access to permanent residency in Slovakia. Until 2006, migration predominantly took place between the Czech Republic and Slovakia. Since EU enlargement in 2007, the largest number of legal immigrants comes from Romania (20% in 2008), followed by the Czech Republic (13%), Hungary and Germany (both 9%). According to official statistics, Slovakia has positive net migration, which peaked in 2008 (+7060). However, this indicator is unreliable because of the under-reporting of permanent emigrants (an estimated 10% of emigrants are reported). For example, the statistical offices of both Slovakia and the Czech Republic report positive net migration between their countries. Yet, combining immigration data on Slovak emigrants from target countries suggests that Slovakia has negative net migration (Divinský, 2005, 2009).

In 2008, the population percentages of people in pre-productive age (0–14 years) and post-productive age (65+ years) were 15.4% and 12.1%, respectively (see Table 1.1). Looking at the Slovak population pyramid for 1993 and 2009 (see Fig. 1.2), two facts become apparent: the ageing of the population and its irregular age structure. The irregular age structure results from past demographic developments. Population growth after the Second World War (first surge) and favourable social policy during the communist period in 1975–1985 (second surge) combined with a relatively stable mortality level led to disparities in the birth rate over the years. In 2008, 50 000 children were born annually as compared to 100 000 children born annually in the 1970s (Hanus & Daniška, 2008). The population pyramid of Slovakia is contracting, but to a lesser degree than the population pyramids of western and northern European countries. This means that the number of people of post-productive age has been increasing significantly, while at the same time the number of people of pre-productive age has been continuously decreasing. In the long term Slovakia will follow the even stronger contracting trends observed in western Europe.

Fig. 1.2
Population pyramid of Slovakia, 1993 and 2009



Source: Health Policy Institute (HPI) based on Infostat data, 2009.

The economic dependence index was at its lowest value in the modern history of Slovakia in 2008. There were 100 people of productive age for every 38 people of non-productive age. The number of people of pre-productive age, who will form the future economic base of Slovakia, has significantly decreased (from 24.1% in 1993 to 15.4% in 2008). By 2050, the age structure will have changed significantly according to the middle variant of a demographic prognosis by Infostat (2002). Whereas in 2002 there were two people aged 17 for each person aged 65+, in 2050 the proportion will be almost the opposite as there will be almost two people aged 65+ for each person aged 17 years.

Table 1.1
Demographic indicators

	1993	1995	2000	2005	2008	2009
Total population	5 336 455	5 367 790	5 378 783	5 389 180	5 412 254	5 424 925
Population, female (% of total)	51.3	51.3	51.4	51.5	51.4	51.4
Population aged 0–14 (% of total)	23.5	22.3	19.4	16.6	15.4	15.3
Population aged 65 and above (% of total)	10.7	10.9	11.3	11.7	12.1	12.3
Population aged 80 and above (% of total)	2.1	2.1	1.8	2.4	2.7	2.7
Population growth (rate per 1 000)	4.19	2.16	0.72	0.81	2.08	2.34
Fertility rate, total (births per woman)	1.93	1.52	1.29	1.25	1.32	1.41
Birth rate, crude (per 1 000 people)	13.76	11.45	10.21	10.10	10.61	11.30
Death rate, crude (per 1 000 people)	9.90	9.82	9.76	9.93	9.83	9.77
Age dependency ratio	51.96	49.73	44.31	39.54	38.00	38.09
Population density (per km^2)	108.83	109.47	109.69	109.90	110.38	110.63

Source: Infostat, 2010.

1.2 Economic context

Since 1990, the formerly centrally planned economy has been transformed into a market economy. Economic performance in terms of GDP per capita (according to PPP) in 2008 has reached approximately 66% of the average performance of OECD countries (OECD, 2010).

The development after 1990 was heterogeneous. Periods of considerable pro-reform policy alternated with periods of slump. The first elementary market reforms were launched by the shock method in the period 1990–1992. The main measures adopted were the liberalization of prices and foreign trade, the introducion of privatization, macroeconomic stabilization, tax reform and implementation of basic legislation for entrepreneurship. This difficult set of reforms was implemented at a time of unfavourable developments in the economy. Real GDP decreased, price levels rose dramatically, real wages decreased and unemployment rose. A large trade deficit and recurring currency devaluation reflected the low competitiveness of the economy.

After the establishment of Slovakia in 1993, economic policy changed significantly until 1998. The government aimed to find "the Slovak way of transition". This model led to a standstill in reforms, the strengthening of state involvement and paternalism, and political pressure on economic decisions. Despite this, economic growth recovered (due to an expansive fiscal policy and growing external demand), the inflation rate declined and real wages grew.

Although the growth in the economy was rapid, it was accompanied by large deficits and debts in the public sector, a current account deficit and low levels of foreign direct investment (FDI).

This emphasized the necessity for further reforms. In the period 1999–2001, the economy returned to a reform trajectory and macroeconomic stability was achieved. The recovery and privatization of the banking sector brought an end to political influence on credit allocation; public finances and privatization methods became more transparent; and an FDI-friendly business environment attracted foreign investors, which contributed significantly to economic restructuring. Furthermore, Slovakia joined the ranks of the OECD in late 2000. Achieving macroeconomic stability led to a temporary decline in economic growth and a rise in unemployment and inflation. Yet this macroeconomic operation provided a basis for subsequent economic and social reforms.

The reform of public finances (including tax reform), pension reform and health care reform were the most significant components of the reform strategy in the period 2002–2006. A new set of measures supported investment and continued deregulation and privatization (for example, of public utilities and the energy sector), while the role of the state in the economy decreased. The macroeconomic parameters improved gradually: the acceleration of economic growth was accompanied by a decreasing unemployment rate, acceptable rates of inflation and current account deficit, and a consolidation of public finances. EU accession in 2004 further harmonized the institutional economic framework with EU Member States.

In 2006, the government declared the creation of a welfare state to be one of its aims. The coalition of centre-left parties brought into government by the 2006 elections has increased the role of the state in both society and the economy, with the aim of building a modern welfare state (combining high economic competitiveness with social security). In the period 2006–2008, positive macroeconomic trends continued. Strong economic growth (up to 10.6% in 2007, see Table 1.2) was accompanied by a satisfactory state of macroeconomic stability. Moreover, in 2008, Slovakia met the euro convergence criteria and replaced the domestic currency with the euro in 2009. The impact of global recession has been noticeable since the fourth quarter of 2008. After a record growth of GDP in 2007 (10.6%), this percentage slowed to 6.2% in 2008. In 2009, Slovakia moved decisively into recession (-4.7%). Although the GDP outlook for 2010 was positive (+3.9%), unemployment is expected to rise from 9.6% in 2008 to 14.2% in 2010 and deficits in public finances are rapidly increasing (6.8% of GDP in 2009 and 7.8% of GDP in 2010).

Since the transition years in the early 1990s, the structure of production has changed markedly. The traditional branches of heavy industry collapsed. FDI helped to expand the automotive industry, the electronics industry and the financial services sector. Three large automobile companies and their supplier network formed the basis of the economy. The dependence on the car industry and the lack of diversification turned out to be a burden for the economy when the global economic crisis led to a recession in 2008. The competitiveness of the economy is still, to a large extent, determined by low labour costs.

Table 1.2
Macroeconomic indicators, 2005–2010

Indicator	2005	2006	2007	2008	2009	2010[e,d]
GDP (€ billion, current prices)[a]	49.3	55.1	61.6	67.0	63.1	65.7
GDP (US$ billion PPP)[c]	87.1	99.1	112.0	125.4	121.6	126.2
GDP annual growth rate (%, constant prices)[a]	6.7	8.5	10.6	6.2	-4.7	3.9
Average GDP annual growth rate for the last 10 years (%, constant prices)[a,d]	4.3	4.5	5.0	5.1	4.7	4.9
GDP per capita (US$ 1 000 PPP)[c,d]	16.1	18.4	20.7	23.2	22.5	23.4
GDP per capita (€1 000 according to official exchange rate)[a]	7.1	8.3	10.2	12.0	11.7	11.9
Growth rate of the final consumption of households (%, constant prices)[a]	6.5	5.9	7.1	6.1	-0.7	-1.2
Growth rate of the final consumption of public administration (%, constant prices)[a]	3.9	9.7	0.1	5.3	2.8	0.1
Growth rate of gross fixed capital formation (%, constant prices)[a]	17.5	9.3	9.1	1.8	-10.5	1.0
Net export (% of GDP, current prices)[a,d]	-4.6	-4.0	-1.0	-2.3	-0.2	1.2
Value added in agriculture (% of GDP, current prices)[a,d]	3.2	3.2	3.2	2.8	2.4	2.6
Value added in industry and construction (% of GDP, current prices)[a,d]	32.4	35.2	34.9	34.5	31.2	30.5
Value added in services (% of GDP, current prices)[a,d]	53.2	51.8	52.0	53.5	57.3	57.5
Public administration balance (ESA[e] 95) (% of GDP)[a]	-2.8	-3.5	-1.9	-2.3	-6.8	-7.8
Year-on-year inflation rate (%)[a]	2.7	4.5	2.8	4.6	1.6	1.5
Gross foreign debt (US$ million)[b]	27 053	32 206	44 309	52 527	65 314	60 500
Unemployment, total (% of labour force)[a]	16.2	13.3	11.0	9.6	12.1	14.2
Growth of average nominal wage (%)[a]	9.2	8.0	7.2	8.1	3.0	2.8
Year-on-year change in the real wage (%)[a]	6.3	3.3	4.3	3.3	1.4	1.3
Change in the number of employed (%)[a]	2.1	3.8	2.4	3.2	-2.8	-2.5
Labour force (000s)[a,d]	2 644	2 655	2 649	2 691	2 690	2 688
Income or wealth inequality (Gini coefficient)[a]	26	28	24	24	–	–
Risk of poverty rate (% of population below 60% of median income)[a]	13.0	12.0	11.0	11.0	–	–

Sources: Data from: [a] Ministry of Finance; [b] National Bank of Slovakia; [c] OECD; [d] HPI estimate, 2010.
Note: [e] European system of accounts.

1.3 Political context

Slovakia is a parliamentary democracy with separation of legislative, judicial and executive powers. Its unicameral Parliament consists of 150 members. They are elected by proportional representation for a four-year period. If a political party receives at least 5% of the electoral vote, it may receive seats in Parliament. The president is the Head of State, with significantly restricted legislative power. He is elected in direct two-round elections by the people. Presidential elections and elections for self-governing regions last took place in 2009. Parliamentary elections and local government elections last took place in 2010.

Political developments since the late 1980s have been quite turbulent. They include the end of the communist era (1989), the creation of an independent Slovak state (1993), and the establishment of a democratic state. Reform periods with less state control have alternated with periods of stronger state intervention.

A wide range of political parties is active in Slovak politics. In addition to the standard political parties, some parties for Hungarian minority voters play an important role, accounting for approximately 10% of the votes. Since the last parliamentary elections in 2010, the party Direction – Social Democracy (Smer – Socialna demokracia) has the strongest representation in Parliament (62 seats). However, it could not gain a majority and therefore a centre-right coalition government was formed by four smaller liberal and conservative parties: the Slovak Christian and Democratic Union – Democratic Party (Slovenská kresťanská a demokratická únia – Demokratická strana SDKÚ-DS, 28 seats), the liberal Freedom and Solidarity (Sloboda a Solidarita SaS, 22 seats), the Christian Democratic Movement (Kresťanskodemokratické hnutie KDH, 15 seats) and the party of Hungarian–Slovak understanding Bridge (Most–Híd, 14 seats). The smallest party in Parliament is the Slovak National Party (Slovenská národná strana SNS, 9 seats).

In the period 2000–2005, some competences of the central government were shifted to regional and local government level. Competences in legislation and taxes remained more or less centralized. The self-governing regions are responsible for social, economic and cultural development. Furthermore, they are involved in environmental protection, create conditions for the development of education (mainly in secondary schools), coordinate development of tourism and care for adolescents. The municipalities have competences in areas such as the local road network, environmental issues, water management, landscape planning, local development, housing, schools, social institutions, emergency rooms, some hospitals, and local taxes.

Important interest groups in Slovakia include the Federation of Employers' Associations of Slovakia, the National Union of Employers, the Association of Towns and Municipalities of Slovakia, and the Confederation of Trade Unions. During the economic transformation, the social dialogue between representatives of employers and employees was in crisis. Trade union activities declined and organizations representing employers and employees were becoming marginalized. The previous government of 2002–2006 leaned towards the trade unions and granted some of their requests (for example, minimum wage growth, stronger status for unions).

The state's institutional framework was influenced by the European integration process. On 1 January 2009 Slovakia joined the euro. In addition, Slovakia is a member of various other global and regional organizations (including the World Trade Organization, WHO, the International Monetary Fund [IMF] and the Council of Europe). Slovakia has ratified important international agreements related to human rights as well as children's rights (Convention on the Rights of the Child, European Convention on Human Rights and so on).

According to the 2008 Freedom House report, Slovakia is a free country (listed in the "free" category). *The Economist* Intelligence Unit rated Slovakia in 2008 as a flawed democracy. According to the EU, Slovakia ranks relatively low in political culture (only 5 points out of 10). The election process and pluralism has favourable rates (9.58 points out of 10). Corruption has been a long-standing problem in Slovakia. According to Transparency International, Slovakia ranked 56th among 180 countries in the 2009 Corruption Perception Index – with a rating of 4.5 (0 being the worst, 10 being ideal); this had improved from 3.9 in 1998 to 4.9 in 2007. Transparency International has been critical of Slovakia in terms of insufficient government efforts to deal with corruption.

1.4 Health status

The trend in average life expectancy at birth in Slovakia shows an increase. Female life expectancy at birth has increased by 2.0 years since 1993 and reached 78.7 years in 2009. During the same period, male life expectancy at birth has increased by 3.0 years and reached 71.3 years. This leaves a significant difference of 7.4 years in 2009 in average life expectancy in favour of women. The child mortality rate has been continuously decreasing from 2.4 per 1000 in 1993 to 1.5 in 2009 (see Table 1.3). A continuing unfavourable mortality rate among men of middle age (30–55 years) is observed, which in 2008 was almost three times higher compared to the rate among women (not shown in Table 1.3,

see Infostat, 2010). In 2007, the health-adjusted life expectancy (HALE) in Slovakia was 67 years, with large differences for men (64 years) and women (70 years) (Table 1.4).

Table 1.3
Mortality and health indicators

	1993	1995	2000	2005	2008	2009
Life expectancy at birth, female (years)	76.7	76.3	77.2	77.9	78.7	78.7
Life expectancy at birth, male (years)	68.3	68.4	69.1	70.1	70.9	71.3
Mortality rate, adult, female (per 1 000 female adults)	8.8	8.9	8.9	9.1	9.1	9.1
Under 65 mortality rate, adult female (per 1 000 female adults under age 65)	2.1	2.0	1.8	1.9	1.9	2.0
Mortality rate, adult, male (per 1 000 male adults)	11.1	10.8	10.7	10.8	10.7	10.4
Under 65 mortality rate, adult male (per 1 000 male adults under age 65)	4.9	4.7	4.6	4.6	4.7	4.6
Mortality rate, children under 5 (per 1 000 live births)	2.4	2.2	1.9	1.8	1.5	1.5

Source: Infostat, 2010.

Table 1.4
HALE at birth in years

Gender	2003	2007
Female	69	70
Male	63	64
Total	66	67

Source: WHO, 2010.

Infant mortality is an important indicator associated with quality of health care. Infant mortality was roughly halved from 12.0 per 1 000 births in 1990 to 5.7 in 2009 (Table 1.5). Perinatal mortality has also declined by around 50% to 5.8 per 1000 live births in 2009, mainly as a result of decreasing neonatal mortality (Table 1.5). All indicators related to child mortality are demonstrating a long-term decline. Although progress has been made for most indicators, and Slovakia is comparable to or better than the EU12 average, Slovakia still falls significantly behind when compared to EU15 countries. For a more detailed international comparison see section 7.3.

Induced abortions have declined substantially. While there were 606 abortions per 1000 live births in 1990, there were only 216 in 2009. Slovakia's liberal legislation allows an abortion up to the 12th week of pregnancy without stating a reason. Until 2008, legislation allowed abortion up to the 24th week of pregnancy in case of a fetal genetic malformation. The number of children born to mothers under the age of 18 has been in a continuous decline. Calculated per 1000 live births, the level decreased from 57 in 1990 to 41 in 2009 (Table 1.5), while this level peaked at 71 children per 1000 live births in the early 1990s (not shown in Table 1.5). According to a survey (FOCUS, 1997), more than one-third of 17-year-old girls and half of 18-year-old girls have engaged in sexual activity. One-third of girls and women used a contraceptive during their first sexual encounter. The likelihood of using a contraceptive during their first sexual encounter increases significantly with education. The education of a girl's mother and her role in explaining planned parenthood issues is also an important factor.

Table 1.5

Selected indicators of maternal and neonatal health

	1990	1995	2000	2005	2008	2009
Infant mortality rate (per 1 000 births)	12.0	11.0	8.6	7.2	5.9	5.7
Perinatal mortality rate (per 1 000 births)	11.7	9.4	7.5	6.4	6.3	5.8
Neonatal mortality rate (per 1 000 births)	8.4	7.9	5.4	4.1	3.4	3.1
Postneonatal mortality rate (per 1 000 births)	3.6	3.1	3.2	3.1	2.4	2.6
Stillbirth rate (per 1 000 births)	5.0	3.9	3.9	3.6	3.9	3.7
Liveborn	79 989	61 427	55 151	54 430	57 360	61 217
Abortions	56 176	35 879	23 593	19 332	18 452	17 935
– induced	48 437	29 409	18 468	14 427	13 394	13 240
– spontaneous	7 739	6 470	5 125	4 905	5 058	4 695
Induced abortion ratio (induced abortions per 1 000 liveborn)	606	479	335	265	234	216
Liveborn to women aged 0–18	4 582	3 699	2 872	2 487	2 542	2 506
Liveborn to women aged 0–18 per 1 000 liveborn	57	60	52	46	44	41

Source: Infostat, 2010.

The most frequent causes of death in Slovakia are lifestyle-related, mainly non-communicable diseases (Table 1.6), including cardiovascular diseases (52.9%), cancer (22.1%), gastrointestinal diseases (5.9%) and respiratory diseases (5.5%).

Table 1.6
Main causes of death (ICD-10 classification)

	1993	1995	2000	2005	2008	2009
Infectious and parasitic diseases (A00–B99)	n.a.	n.a.	171	231	314	n.a.
– of which: Tuberculosis (A17–A19)	n.a.	n.a.	5	3	0	n.a.
Circulatory diseases (I00–I99)	27 543	29 023	28 985	29 131	28 502	28 265
Malignant neoplasms (C00–C97)	10 655	10 947	11 871	11 794	11 891	11 831
– of which: Neoplasms of larynx and lung (C32–34)	2 426	2 428	2 451	2 287	2 243	2 227
Diabetes mellitus (E10–E14)	796	668	758	722	625	674
Mental and behavioural disorders (F00–F99)	n.a.	n.a.	22	11	1	n.a.
Respiratory diseases (J00–J99)	4 188	3 643	2 912	3 114	2 981	3 179
Digestive diseases (K00–K93)	n.a.	n.a.	2 669	2 787	3 033	n.a.
– of which: Chronic liver disease (K70–K74)	1 369	1 307	1 394	1 461	1 602	1 544
External causes (V01–Y89)	3 849	3 642	3 115	3 132	3 174	2 957
– of which: Transport accidents (V01–V99)	931	923	850	764	764	535
Unknown, ill-defined causes by age (R96–R99)	198	190	451	523	548	621
Total number of deaths	52 707	52 686	52 724	53 475	53 164	52 913

Source: Infostat, 2010; NCHI, 2010b.

The Slovak population has 100% access to drinking water. Regarding infrastructure, up to 86.3% of the population has a drinking water service connection. Throughout 2002–2006 this share has risen by 2.4 percentage points (see Table 1.7). Also 56.4% of the population is connected to the public sewerage system. A large proportion of households have their own sewage tank.

Table 1.7
Access to safe water (%)

	2002	2003	2004	2005	2006
Access to fresh water	100.0	100.0	100.0	100.0	100.0
Supply by public water main	83.9	84.2	84.7	85.4	86.3
Houses connected to public sewerage network	55.3	55.4	56.3	56.3	56.4

Source: Statistical Office of the Slovak Republic, 2008.

2. Organization and governance

2.1 Overview of the health system

The health care system in Slovakia (see Fig. 2.1) is based on universal coverage, compulsory health insurance, a basic benefit package and a competitive insurance model with selective contracting and flexible pricing. Health care, with exceptions, is provided to insured individuals for free as benefits-in-kind (paid for by a third party). After fulfilling certain explicit criteria, there are no barriers to entry to the health care provision and health insurance markets.

Based on the quality of their services, health insurance companies compete for insured individuals. Health care purchasing creates room for competition. Health insurance companies are obliged to ensure accessible health care to their insured according to provisions laid down by law. Health insurance companies fulfil this obligation by contracting health care providers. The HCSA is responsible for monitoring health insurance, health care provision and health care purchasing markets. Since 2005, all health insurance companies are joint stock companies, that is, they were transformed from (public) health insurance funds to health insurance companies operating under the Business Code. As of 2010, three health insurance companies operate on the market, one state-owned and two privately owned.

Different ownership structures characterize health care providers and health insurance companies. The state, represented by the Ministry of Health, is the owner of the largest health insurance company. Furthermore, the state owns the largest health care providers, including university hospitals, large regional hospitals, highly specialized institutions and almost all psychiatric hospitals and sanatoria. The majority of them are contributory organizations. This is a Slovak form of legal entity that is established by a government (including regional and municipal governments), to which part of the entity's budgets are linked; that is, they may have other revenue sources (for example, payments by health insurance companies). In 2006, five state-owned health care facilities

were transformed into 100% state-owned joint stock companies. Since 2007, the health care facilities in state ownership must be contracted by health insurance companies. The then government saw them as crucial in guaranteeing geographical accessibility but critics argued that this also gave these hospitals an unfair competitive advantage. Health departments of the Ministry of Defence, Ministry of Transport, Ministry of the Interior and Ministry of Justice manage several health care facilities of their own.

Pharmacies and diagnostic laboratories, as well as almost 90% of outpatient facilities, are in private hands. Some outpatient specialists are employed by hospitals and provide ambulatory care in polyclinics attached to hospitals. Providers of emergency health care services are either in private or state ownership. Four-year operating permits are issued by the Ministry of Health based on a successful tender.

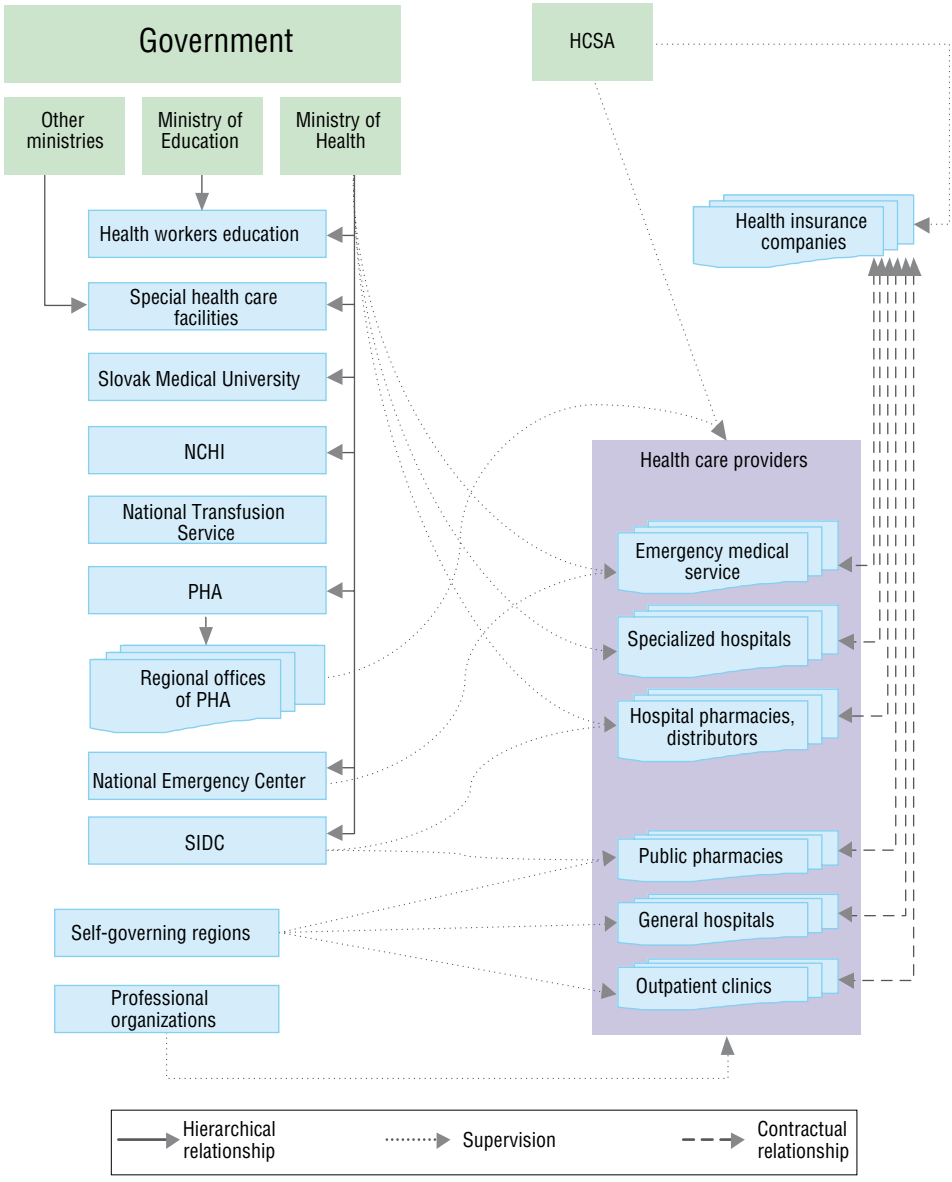
State bodies (Ministry of Health, HCSA) and self-governing regions, which have regional competences, mainly in outpatient care, administer the system and issue permits to health care providers. Organized interest groups also participate in health policy-making. Although they are invited to comment on legislative proposals, their recommendations carry relatively little political weight. Representatives of employees and employers meet with government representatives at the Tripartite Economic and Social Council, but their mutual agreement is not required to continue the legislative process. Professional organizations keep registers of health professionals and they issue or revoke licences. They cooperate in monitoring the management of health care facilities and issue opinions on ethical issues concerning the medical profession. Membership of these professional organizations is not compulsory.

A more elaborate description of the various actors in Slovak health care can be found in section 2.3.

2.2 Historical background

The tradition of the Bismarck system of social and health insurance dates back to the 19th century. The territory of Slovakia was a Hungarian part of the Austro-Hungarian Empire until 1918. Hungary was one of the first European countries to introduce compulsory health insurance in 1891. The First World War resulted in the break-up of the Austro-Hungarian Empire and the founding of Czechoslovakia. The eastern, former Hungarian part of the country (Slovakia and Carpathian Ruthenia) was less developed than the

Fig. 2.1
Organizational overview of the health system



western part. Low accessibility of health services, shortage of health workers, lack of health education, low standards of hygiene, as well as a high incidence of communicable diseases created new challenges for health policy-makers.

After Czechoslovakia became independent in 1918, the Bismarckian health system inherited from the Empire was expanded and refined. In 1919, legislation was adopted that extended compulsory sickness insurance coverage to the family members of blue-collar workers and to all wage-earners, thus including agricultural workers for the first time. In 1924, landmark social insurance legislation led to the creation of the Central Social Insurance Fund (Ústřední sociální pojišťovna; ÚSP), which consolidated the hitherto fragmented system of social insurance into a single institution. The Central Social Insurance Fund was responsible both for administering a new old-age and invalidity insurance scheme for workers and for supervising the sickness funds. The 1924 legislation also limited the number of sickness funds to approximately 300 and increased the depth of benefits, particularly with regard to sick pay (Bryndová et al., 2009). At the same time, the sickness funds were reclassified as health insurance funds, a change in nomenclature that reflected a shift in expenditure from an emphasis on sick pay to health care benefits. Although they remained self-governing in character, the health insurance funds were required by law to perform a range of duties on behalf of the Central Social Insurance Fund, such as collecting contributions for old-age and invalidity insurance (Bryndová et al., 2009). In 1925, sickness insurance, which included medical benefits, was introduced for public employees. By 1938, more than half of the population of the Czechoslovak Republic was covered by compulsory health insurance (Niklíček, 1994; Nečas, 1938). Investment in education and improvement in standards of hygiene and hygiene education resulted in a continuous decline of communicable diseases. In 1934, cardiovascular diseases became the leading cause of death in Czechoslovakia (Niklíček, 1994).

2.2.1 The period 1945–1989

The Yalta Conference on the post-war arrangement of Europe in February 1945 signified a virtual division of Europe. Following the Second World War, Czechoslovakia fell under strong economic and political influence of the USSR, which had important repercussions for the health system. Legislation from 1948 on national insurance unified all types of insurance, under the Central National Insurance Fund. The Ministry of Social Care took over the stewardship role, in cooperation with the Ministry of Health and the Ministry of Finance. Sickness and health benefits were adjusted in a Treatment Order, issued by the Central National Insurance Fund.

Legislation adopted in 1951 continued to implement a Semashko-type health care system. The state assumed responsibility for health care coverage and financed it through general taxation. Health care was no longer provided as benefits-in-kind based on SHI. At the same time, all health care providers were nationalized and incorporated into Regional and District Institutes of National Health. Every district had a District Institute of National Health, and every region had a Regional Institute of National Health. District Institutes of National Health consisted of small or mid-sized hospitals, polyclinics and health care centres for outpatient care, along with pharmacies, centres of hygiene, health care centres for the workplace, divisions of emergency and first aid services, and nurseries. Regional Institutes of National Health consisted of larger hospitals, regional health care centres and – in most cases – blood transfusion centres (Bryndová et al., 2009).

Legislation adopted in 1966 completed the process of socialist changes in the health system. Health care facilities were unified in district, regional and local national institutes of health. The state took over full responsibility for financing, planning, management and provision of health care. All citizens were granted health care free of charge.

Improving the population's health status became a priority in health care and the focus was on combating communicable diseases, mainly tuberculosis. Preventive measures in the 1950s and 1960s proved successful due to intensive promotion and education activities, as well as strict organization of the state and society. The availability in the post-war period of new chemotherapies resulted in a significant improvement in the results of treatment (Solovič et al., 2008).

Primary care was provided by a team of health professionals, GPs, paediatricians, gynaecologists and dentists in a district allocated according to place of residence or workplace. Outpatient and inpatient care was integrated in three types of hospitals with polyclinics. Type I hospitals with a polyclinic with four basic departments (internal medicine, surgery, gynaecology, paediatrics) provided health services to populations of up to 50 000. Type II hospitals, with a larger range of services, provided care for populations of up to 200 000. Type III hospitals with polyclinics, including university hospitals, with complex medical services covered up to 1–1.5 million people.

In 1968, Czechoslovakia became a federal state of the Czech and Slovak Socialist Republics. The Ministry of Health of the Slovak Republic was established and took over responsibility for planning and managing Slovak health care. The centrally planned economy led to inaccurate resource allocation decisions in health care. During the first decades after the Second World War,

the system was not able to deal with the growing incidence of lifestyle diseases resulting from improved living standards and standards of hygiene, and success in combating communicable diseases.

In the second half of the 1970s, the technology of health care facilities was becoming outdated. The socialist health system sought to compensate for this by increasing the number of health workers and the number of hospital beds. In other words, focus was laid on the improvement of structural indicators, such as the number of hospital beds and graduated physicians and nurses. This resulted in a health system with a surplus of ambulatory specialist physicians. The role of the GP declined and they were reduced to dispatchers, referring patients for a specialist consultation.

Lack of a scientific base led to slower adoption of modern diagnostic and therapeutic practices. Poor accessibility of innovative pharmaceuticals was compensated by import of generics from other Eastern bloc countries, often produced while infringing patent protections. The deepening gap between health systems in western Europe and eastern Europe can be illustrated by the trend in life expectancy. While in eastern Europe (here excluding the former USSR) life expectancy stagnated for women and decreased for men between 1970 and 1997, at the same time this figure increased by an average of 4.5 years in western Europe (Marmot & Bobak, 2000).

2.2.2 After 1989

The break-up of the USSR and a wave of non-violent revolutions in central and eastern Europe in 1989 also reached Czechoslovakia. Political and social changes resulted in a transformation from a centrally planned economy into a market economy. At the same time, a reintroduction of a social insurance system was taking place, which continued after the peaceful dissolution of Czechoslovakia and the formation of Slovakia in 1993. The unsuccessful experiment with a Semashko-type health system was followed by a return to the Bismarck system.

In 1993, the National Insurance Fund was established to fund health, social and pension insurance. The Act on Health Insurance was adopted a year later. This piece of legislation introduced multiple health insurance funds and an SHI system financed through a combination of contributions paid by the working population and contributions from the state budget on behalf of the economically inactive. In 1997, the number of health insurance funds had reached 13. Subsequent mergers between health insurance funds aiming to fulfil the condition of having a minimum of 300 000 insured stabilized the market.

Most pharmacies and ambulatory physicians went into private practice during the early 1990s. The hierarchical structure of health care had broken down and so did coordination between the inpatient and outpatient sectors. The health care system became fragmented, with a high number of specialized health care providers. The payment mechanism, which was based on a German model, led to growing health expenditure and finally to the introduction of limits for health care services provided.

Until the early 2000s, nearly all hospitals were in state ownership and were established by the Ministry of Health as state contributory organizations. Hospitals suffered from lack of investment and oversupply of health personnel, as well as ineffective management. Cronyism played a decisive role in appointing people to management positions. The inherited structure of hospital beds did not reflect the needs of modern health care, such as progressive medical technologies and a shortened length of stay. The oversupply of acute beds and lack of chronic beds was difficult to correct. Any attempts to reduce the number of hospital beds were opposed by hospitals facing such a reduction as well as local politicians.

The Ministry of Health was responsible for monitoring health insurance and health care provision. The bankruptcy of the health insurance fund Perspektiva in 1999, due to insufficient monitoring, worsened the situation of indebted health care providers. Measures taken in 1999 to bring the crisis under control, such as restricting the hospitalization of non-acute patients and hospital financing based on prospective budgets with historical costs taken into account, were not enough to bridge the gap between revenue and expenditure in the system. In spring 2001, the World Bank drew attention to the unsustainable broad range of free health care in Slovakia. As pointed out in an evaluation report (World Bank, 2001), the Slovak economy could not afford general free-of-charge health care. According to the recommendations of the World Bank, Slovakia had to define a stricter basic benefit package.

Professionals were paid on the basis of age, qualifications and working years – not merit. Discontent regarding the salaries of health workers in hospitals resulted in strikes and protests. The formal increase in wages in 2001 was not backed up with sufficient resources. The economic situation of hospitals was deteriorating and the debts to suppliers and social security funds increased.

Low salaries nurtured corruption and a declining quality of health care provision. The decreasing quality in health care was reported by the Project of Health Care Modernization, prepared by the Ministry of Health in cooperation with the World Bank in order to acquire an US$ 80 million loan (World Bank, 2003). Furthermore, corruption was perceived as one of the most pressing

problems in health care – 32% of respondents in December 2002 thought this was a problem (FOCUS, 2002).

In the period 1999–2002, 14 health care facilities were transformed from contributory organizations into non-profit-making organizations. This resulted in the state losing control over the management of these organizations. Well-paid medical services in state-owned health care facilities were privatized with the agreement of the Ministry of Health, mainly in the area of biochemistry and dialysis. This caused a further deterioration in the finances of public hospitals. In 2003, the management of the majority of health care facilities was transferred from the state to regional and local governments, with the exception of the biggest hospitals (type III hospitals with polyclinics and university hospitals) as well as specialized institutions.

Clearing the debts by using non-recurring resources from the privatization of national property could not help the situation. Against this background, comprehensive health reform began and culminated in the adoption of six reform acts in 2004. These acts would later form the basis of the current organization of the system (see sections 6.2 and 6.3).

2.3 Organization

Health policy results from the interplay between the Ministry of Health (legislator), the health insurance companies (purchaser) and the HCSA (supervisor). Health policy is influenced by providers, as well as professional organizations. Patient organizations have little influence on the formulation of health policy. Different ownership forms exist among providers and health insurance companies. One of the main owners is the state, which owns the largest hospitals and the largest health insurance company. All the key players in the Slovak health care system are described below.

2.3.1 The role of the state and its agencies

The Parliament has legislative power as well as powers of scrutiny and may carry out parliamentary inspections. The members of the Supervisory Board of the HCSA are elected by the Parliament.

The competences of the government are: adopting legislative measures (defining user fees for services related to health care, setting co-payments, determining accessibility parameters for minimum provider networks), and appointing/removing the Chair of the HCSA.

The Ministry of Health is a central administrative body and its responsibilities include drafting health policy and legislation, regulating health care provision, managing national health programmes, participating in the management of health education, managing national health registers, determining the scope of the basic benefit package, defining health indicators and setting minimum quality criteria. Competences in price regulation were transferred to the Ministry of Health in 2003. Furthermore, the state is an owner of some major health care facilities and the biggest health insurance company (General Health Insurance Company [that is, VŠZP], with a 68% market share in 2010 according to the HCSA). This leads to a conflict of interest because the state regulates providers and health insurance companies it owns.

The organization and funding of social care is the responsibility of the Ministry of Labour, Social Affairs and Family. The social care system and the health care system evolved separately, leading to a different kind of organization and different sources of funding, even though many of the services provided are practically identical. This may pose a barrier to effective solutions in the provision of long-term social care and health care. The management and supervision of health education and the curriculum is shared between the Ministry of Health and the Ministry of Education, the latter being responsible for the financing. The Ministry of Health coordinates health research in universities and the Academy of Sciences. This shared competence often leads to confusion. In addition, the Ministry of Finance has strong influence on the health budget development process.

The Ministry of the Interior, Ministry of Defence and Ministry of Transport have established health care facilities in their sectors which, with the exception of the Military Hospital in Ružomberok, play a marginal role in health care provision.

Health Care Surveillance Authority (HCSA)

In 2004, to prevent further conflicts of interest, the monitoring and supervisory role of the Ministry of Health in the health system was transferred to the HCSA. The HCSA is responsible for the supervision of the health insurance, health care purchasing and health care provision markets (see Fig. 2.2). In the period 2007–2011, the government has the competence to withdraw the Chairman from his office, which reduced the independence of the HCSA. The HCSA's Supervisory Board is elected by Parliament. The HCSA has strong competences and can impose sanctions. This includes banning a health care provider or a health insurance company from the market. Furthermore, the HCSA grants market access to health insurance companies after they have fulfilled certain conditions and supervises the fulfilment of these conditions (solvency, purchasing

of health care services). The HCSA administers the risk-adjustment mechanism of financial resources between health insurance companies and manages several registers. Other competences of the HCSA include administering patients' complaints regarding inadequate health care provision and decisions regarding autopsies to be performed in forensic and pathological anatomy laboratories. The HCSA acts as a liaison body for cross-border health care provision. The annual report describes the HCSA's activities as well as SHI performance and is submitted to the government. An amount of 0.45% of contributions collected by health insurance companies is allocated to funding the HCSA.

Public Health Authority of the Slovak Republic

The PHA is responsible for public health tasks. It is a state budgetary organization, which means that it is fully financed from the state budget. It is managed by the Chief Hygienist, who is appointed by the Minister of Health. The PHA develops the vaccination policy, directly controls radiation protection and issues permits for the sale of cosmetic products. Through its regional offices, the PHA carries out epidemiological monitoring, assesses the impact of environmental factors on health, issues approvals before putting any premises into operation, and monitors the quality of drinking and bathing water. The PHA can impose sanctions if a violation of the regulatory framework is found.

State Institute for Drug Control

The SIDC, a state budgetary organization, is responsible for monitoring medicinal products and medical devices. The SIDC issues approvals of clinical trials, grants marketing authorizations, assesses pharmacies and maintains a pharmacopoeia. The SIDC can also impose sanctions. In the area of patient safety it carries out assessments of reports on adverse drug effects (pharmacovigilance) and medical device failures. It withdraws or suspends medicinal products from the market, or prevents medical devices from entering the market. The SIDC is not involved in reimbursement decisions concerning pharmaceuticals or medical devices.

National Emergency Centre

The National Emergency Centre of the Slovak Republic is a state budgetary organization, which controls all components of emergency medical services. It is responsible for processing all telephone emergency calls as well as cooperation with all other components of the integrated emergency system.

National Centre for Health Information (NCHI)

The Ministry of Health has established the NCHI as a state contributary organization to deal with e-health issues, standardization of health information systems, collection, processing and provision of health statistics as well as

provision of library and information services in the area of medical research and health. The NCHI operates the national health registers.

National Haematology Centre of the Slovak Republic
The National Haematology Centre is a state contributory organization established in 2004 by the Ministry of Health to carry out haemotherapy and tasks related to complex production of blood products.

2.3.2 The role of health insurance companies

Health insurance companies play a key role in the system as purchasers of health care. It is their legal duty to ensure health care to their insured individuals. Purchasing is based on selective contracting; the main criteria are quality indicators and flexible prices. The contractual relations between health insurance companies and health care providers are supervised by the HCSA. All health insurance companies are joint stock companies and obliged to meet certain solvency criteria. Being under hard budget constraints, they are fully responsible for financial shortfalls. Ownership regulation allows both the state and private sectors to be shareholders in the health insurance companies. Although there were seven health insurance companies in 2006, among which there were two new entrants, a wave of mergers led to increased consolidation in the market (see also section 2.8.1 *Regulation and governance of third-party payers*). As of 2010, the state owned one of the three remaining health insurance companies (the General Health Insurance Company) and the private sector owned two. Representatives of health insurance companies are seated on ministerial committees. These committees define the basic benefit package, that is, the health services covered by SHI, and participate in draft legislation.

2.3.3 The role of self-governing regions

Certain local operative competences were transferred from the state to the eight self-governing regions to decentralize power. The self-governing regions' responsibilities include issuing permits for the operation of health care facilities, appointing ethical committees, issuing approvals for outpatient biomedical research, maintaining health documentation of providers that cease to operate, and securing health care provision resulting from a provider's permit or licence being temporarily put on hold. The Ministry of Health deals with appeals against decisions of the self-governing regions. The self-governing regions also assist in improving the network of providers where the accessibility of health services in the region is deteriorating – for example, by appointing a physician when patients have difficulties finding a GP or accessing medical treatment.

Self-governing regions took over the responsibilities for monitoring health care provision and can impose sanctions on health care providers for neglecting their duties. Sanctions include financial penalties and temporary or permanent revocation of a licence. The power to ban a provider from the market is a strong legal instrument. As a rule, self-governing regions will only impose sanctions at the recommendation of the HCSA, based on the results of monitoring and detected shortcomings.

The Chief Physician of the self-governing region is appointed by the Chair of the self-governing region with the approval of the Minister of Health. The Chief Nurse, appointed with the approval of the Minister of Health, is responsible for nursing care provision and midwifery services.

Self-governing regions own some health care facilities and can make decisions on management of these facilities independently. Since transferring responsibility for health care facilities to the self-governing regions in 2003 (see also section 2.4), most hospitals have been transformed into joint stock companies or non-profit-making organizations, or they have been fully privatized into commercial companies. Some of these health care facilities have been rented out to private health care providers. Self-governing regions have been negotiating the entry of other strategic investors into the health market.

2.3.4 The role of political parties and trade unions

Political parties have great influence on the health sector. Politicians manage and make decisions on the majority of resources in health care not only at national level, but also at the regional and municipal levels. The political interests of the parties vary regionally, and they may also be influenced by lobbyist groups. The technical expertise of political parties in the area of health policy is generally low.

The largest trade union, with 40 000 members, is the Association of Health and Social Trade Unions. It negotiates collective contracts with the employers' representatives. The Trade Union of Physicians is a smaller organization, which mainly advocates for the financial interests of its members.

2.3.5 Organizations of health care providers and professional chambers

Organizations of health care providers and professional chambers promote and advocate for the interests of their members in their relations with the state, self-governing regions and health insurance companies. They participate in drafting legislation, in educational programmes and represent their members

in contract negotiations with health insurance companies. They maintain the register of health professionals and provide continuous education. Chambers also have competences such as granting licences and imposing sanctions. Since 2005, membership in chambers is voluntary and the chambers cannot impose obligations on non-members beyond the extent prescribed by law. Despite this fact, the oldest chambers (Slovak Medical Chamber, Slovak Chamber of Dental Physicians, Slovak Pharmaceutical Chamber, Slovak Chamber of Nurses and Midwives) have managed to keep a large member base, and thus constitute influential interest groups. The most significant organizations of providers are the Association of Hospitals of Slovakia, the Association of University Hospitals, the Association of Private Physicians of the Slovak Republic and the Slovak Medical Union of Specialists.

The Slovak Medical Society is an association of professional medical and pharmaceutical societies, regional associations of physicians and pharmacists, with almost 20 000 members. The Society focuses on technical and ethical issues as well as the dissemination of scientific knowledge. Professional societies within the Slovak Medical Society delegate their professionals to different committees (for example, the Reimbursement Committee for Medicinal Products and the Catalogue Committee for medical procedures at the Ministry of Health).

2.3.6 Private sector

Private businesses advocate their interests individually. Their common interests are represented by umbrella organizations, particularly from the pharmaceutical market: the Association of Suppliers of Drugs and Medical Devices (ADL), the Slovak Association of Medical Device Suppliers (SK-MED), the research-oriented Slovak Association of Pharmaceutical Societies (SAFS) and the Association of Generic Producers (GENAS).

2.3.7 Patient/consumer groups

Patient organizations vary in their activities. How active they are often depends on the efforts of dedicated individuals and the level of financial resources. The groups, as well as their interests, are fragmented and they are represented by various umbrella organizations. Successful promotion of their interest is often hindered by the division of competences between health and social care. The issues of people with disabilities belong to the agenda of the Ministry of Labour, Social Work and Family. Most patient organizations, as well as organizations of people with special health care needs, directly approach the responsible Ministry with their problems.

Organizations representing people with chronic conditions are the most active. These include the Union of Diabetics of Slovakia, the Slovak Association of Sclerosis Multiplex, the Slovak Osteotomy Association, League against Rheumatism in Slovakia, the Club of Parents and Friends of Children with Cystic Fibrosis, and the Down Syndrome Association in Slovakia. Numerous educational projects aimed at oncology patients and their relatives as well as the public take place under the auspices of the charitable non-profit-making organization the League against Cancer. Psychiatrists, psychotherapists and patient organizations cooperate within the League for Mental Health to actively advocate for mental health promotion. The Association for Patients' Rights Protection is active in the area of patient rights.

2.3.8 Research organizations

Most research projects are carried out by universities and the Slovak Academy of Science, which administratively belong to the educational sector. The Ministry of Health is responsible for coordinating health research. This shared responsibility has made the coordination and management of health research a complex task and the Ministry of Health is at times criticized as ineffective. In addition, biomedical research facilities need permission from the Ministry of Health in order to operate. The Research Institute of Medicinal Products in Modra, a part of the German hameln group, provides research and a developmental platform for global pharmaceutical companies. The Institute of Preventive and Clinical Medicine, a research centre of the Ministry of Health until 2003, is now part of the Slovak Health University, a public institution managed and monitored by the Ministry of Health.

2.3.9 Media

The professional medical press is disadvantaged by a small market. This results in low demand for published articles of high quality and a higher dependence on medical advertisements. The influence of the media on public opinion is an effective tool, utilized by various actors, to inform, educate or influence health policy. However, only few media have the expertise to cover health policy adequately.

2.3.10 International organizations

The WHO is the most active organization in the health sector in Slovakia and enjoys a high reputation. The WHO has initiated cooperation programmes, including exchanges of information, technical support and experts, as well as providing financial and material support. The WHO has had a substantial

impact on Slovak health policy. Slovakia recognizes the 1998 document *Health for All in the 21st Century*, as well as several WHO strategies (for example the European Strategy for Prevention and Control of Noncommunicable Diseases, the Charter against Obesity and the European Action Plan for Environment and Child Health). In addition, Slovakia is actively involved in the European Commission's Health Security Committee and in the Joint Medical Committee of NATO.

2.4 Decentralization and centralization

State administration was decentralized in 1990 by re-establishing local self-government at the level of the municipalities. In 2002, self-government was also introduced at the regional level by establishing the self-governing regions. Decentralization of competences and finances, and political decentralization followed. Decentralization in the health sector focused on partial delegation of state power to the self-governing regions.

In 2003, ownership of the majority of state health care facilities was transferred to the self-governing regions and municipalities. Large type III hospitals with polyclinics and university hospitals, as well as highly specialized institutions and specialized hospitals, remained under the administration of the Ministry of Health. The ownership and managerial competences of type II hospitals with polyclinics for secondary care were devolved to self-governing regions and type I hospitals with polyclinics for primary care were devolved to the municipalities.

Coordination of health policy between the Ministry of Health and self-governing regions is problematic. This is due to the fact that the interests of the elected regional governments are not always aligned with those of the Ministry of Health. For example, in 2007, the Ministry of Health proposed to reduce the number of beds in hospitals managed by self-governing regions but not those managed by the Ministry of Health. The proposal was not supported, although Chief physicians of self-governing regions are also subordinate to the Minister of Health.

By introducing the SHI system in the early 1990s, the responsibility for health care financing was transferred to health insurance companies, but this move was not accompanied by effective regulatory instruments. These instruments remained with the Ministry of Health, which did not bear direct responsibility for its decisions. This resulted in huge debts in the system. With the 2004 health care reform, health insurance companies were given more influence and became purchasers of health care services instead of mere payers.

By delegating the competences to establish a network of providers from the Ministry of Health to health insurance companies, selective contracting was enabled. The Ministry of Health has maintained the regulatory tool of requiring a minimum network of health care providers.

The 2004 health reform has also shifted monitoring competences over health insurance, provision and purchasing to a new independent authority, the HCSA.

2.5 Planning

Slovakia lacks a long-term strategic planning policy. The state, through its regulatory competences, has influence over health care purchasing, but the information necessary for effective regulation of capacities and allocation of resources is neither collected nor evaluated (see also section 2.7).

To guarantee accessibility of providers, a minimum network requirement is set by the government to influence capacity planning. This network is based on calculations of the minimum number of physicians' posts in outpatient care and a minimum number of hospital beds for each of the eight self-governing regions. Minimum capacities are calculated per capita, but they do not consider specific health care needs of the population and the effective use of resources.

Health insurance companies are responsible for maintaining the minimum network. Both selective contracting and the demand of the market motivate health care providers to adapt to changes in demand. The government can adapt the minimum network requirement and by doing so direct the planning of the health sector. Along with the regulation of minimum technical equipment and personnel requirements of hospitals, this represents a potentially effective tool for health policy planning.

The state, as the owner of the largest health care facilities, does not have a clear policy for long-term coordination and management. In 2002, the management of health care facilities by the Ministry of Health was unsustainable and this has led to decentralization of some health care facilities to self-governing regions or their partial transformation from contributory organizations into non-profit-making organizations.

A lack of regulation is evident in long-term human resource planning. Decisions on the numbers of students and graduates of cost-free education at medical faculties are made by the university, funded by the educational sector and are not based on health sector needs (for more detailed information see

section 2.8.3 *Registration and planning of health workers*). EU accession has strengthened the mobility of health professionals and has resulted in regional shortages in specialists. Expansion of the emergency medical service by requiring the service to employ anaesthesiologists has led to a decrease in the number of hospital-based anaesthesiologists. Rigid territorial planning of GPs until 2004, which made the profession unattractive for new entrants, in combination with the ageing of the workforce, has led to significant shortages in the sector.

The PHA has limited influence on health planning. It is responsible for the monitoring of hygiene standards in health care provision and can influence the scope of prevention covered by SHI. Despite the PHA having adopted several national programmes and national plans, these are not reflected in either the planning or purchasing of health care.

Self-governing regions are responsible for scheduling the 24/7 first aid medical services. If the in- or outpatient network of providers does not meet the minimum network requirements, regions together with the Ministry of Health cooperate to solve such situations. Cross-border capacity planning does not exist.

2.6 Intersectorality

Slovakia participated in the European Commission's (EC's) "Closing the Gap" project conducted from 2004 to 2007, which tackled socioeconomic health inequalities. Health equality issues were included in the National Health Promotion Programme of the Slovak Republic, approved by Parliament and effective from June 2006. The objective of the Ministry of Health is to create conditions that ensure good health for the population. This involves raising public awareness of health determinants and reducing health inequalities. The primary objective of the National Health Promotion Programme is to initiate partnerships in different areas of health in order to promote and improve the level of public health. At the regional level, health equalities are associated with the provision of health services, defined within the scope of social strategy. According to the National Health Promotion Programme, the more health-oriented activities are provided by health clinics in regional public health authorities, the better the health promotion of the whole population and the stronger the partnership.

Since 2008, all employers must offer an occupational health service for employees working in high-risk environments. An occupational health service is a professional counselling service for employers in occupational health

protection. It includes professional health risk assessment and occupational health monitoring. It is provided by health professionals with special qualifications or by external bodies that are authorized by the PHA. For more information on public health programmes see section 5.1.

2.7 Health information management

Slovakia lacks a clear health information policy and, as a consequence, good quality information. This means that assessment of medical treatments is inadequate. The situation in drug policy has been improving. After securing access to current data on drug prices in other countries, a reference pricing system, with groups based on the lowest prices in Europe, has been introduced.

The collection of information on quality, performance of health care providers and health needs of the population leaves much to be desired in terms of management, structure and quality of data. The e-health project is mainly focused on the technical structure rather than content and functionality from the point of view of health policy decision-makers. Information on health insurance performance collected by the HCSA is more relevant and more accessible, but is only used by the HCSA to a small extent.

As a result of selective contracting and their purchasing role, health insurance companies play a key role in the planning process. By monitoring their financial flows, it is easy to collect relevant data. However, since there is no framework for quality benchmarking, health insurance companies are forced to perform their own analyses and surveys. In 2008, three health insurance companies were using information from patient satisfaction surveys for selective contracting.

2.7.1 Health technology assessment

There is no special state institution in charge of health technology assessment in Slovakia. The assessment of both novel and existing technologies is carried out through four independent "categorization" processes, which include: (1) categorization of pharmaceuticals; (2) categorization of medical devices; (3) categorization of dietary foods; and (4) categorization of diseases. For more information on the first two processes see sections 2.8.4 *Regulation and governance of pharmaceuticals* and 2.8.5 *Regulation of medical devices and aids*.

With regard to the categorization of diseases, the reform acts in 2004 created tools to define priority diseases, which have to be fully reimbursed, and the mechanisms for defining cost-sharing requirements or exclusion of non-priority diseases from the basic benefit package. However, these tools have not yet been used because this would be politically controversial. In practice, non-priority diseases are also covered without cost-sharing.

2.7.2 Information systems

Both government and independent analyses have declared that Slovakia is lagging behind in implementing health information technologies as compared to other countries in Europe and the world. Since the late 1990s, numerous plans, programmes and projects, including international cooperation in e-health, have remained at a theoretical level. However, in 2008, establishing a health information infrastructure was declared a health policy priority. The Ministry of Health estimated the expenses for building an e-health infrastructure at €250 million over a period of five years. The objectives of the e-health project will undergo a feasibility study and a proof of concept.

Information from various health sectors is collected by various actors using different methods. Lack of data interconnection imposes an administrative burden on all actors in the Slovak health system, particularly on health care providers. The collected data are not verified, with the exception of those where reporting is based on financial flows. Neither the indicators nor the standards of their reporting methodologies are available.

The law requires all health care providers (public and private), all health insurance companies (state-owned and privately owned), as well as self-governing regions, the PHA and legal entities under the management of the Ministry of Health to provide data in a systematic structure according to standards of the NCHI. In practice, this requirement is not fully met due to: (1) the non-existent unified information system; (2) the outdated data structure and standards; and (3) the fact that the NCHI does not have enough capacity to analyse the data. Hence, the reliability and validity of the data are poor and the data is often full of system errors. The data on health status, quality and performance of health care providers do not meet the needs of policy-makers to make informed decisions.

The NCHI collects information on the population's health, and manages national health and administrative registers of patients and providers. The contents and the scope of the registers are outlined in law (Table 2.1). In accordance with new legislation, the NCHI has been collecting data related to e-health. It has also

been developing a concept of a national health information system, including authorized electronic communication, electronic prescription, electronic patient records, reporting of medical procedures and systematic data collection.

Table 2.1
List of national administrative and health registers

National administrative registers	National register of health care recipients
	National register of health care providers
	National register of health care workers
National health registers	National register of basic health data
	National register of oncological patients
	National register of patients with type I diabetes mellitus
	National register of patients with congenital heart disease
	National register of patients with cardiovascular diseases
	National register of patients vascular brain diseases
	National register of patients with chronic respiratory diseases
	National transplantation register
	National register of patients with tuberculosis
	National register of patients with communicable diseases
	National arthroplastic register
	National register of patients with congenital developmental disorder

Source: Act on Health Care, 2004 as amended in 2010.

Health care providers are reimbursed by health insurance companies according to certain reported indicators. However, the HCSA declared that the reported quality indicators are generally of low validity even though health insurance companies have used increased funding to stimulate effective data collection and electronic reporting. An obligation to report communicable diseases to the PHA applies to all health care providers.

Reporting of health insurance companies is more effective. The HCSA has access to the data of health insurance companies, which it analyses and publishes in annual reports. Information on waiting lists, a requirement since the 2004 reform, is not officially available despite the fact that maximum waiting lists are legally defined. Health insurance companies are responsible for the management of waiting lists. This lack of data makes HCSA monitoring more complicated and obstructs necessary feedback and information on the workings of the system to health policy-makers. The HCSA administers several registers and lists related to SHI (Table 2.2).

Table 2.2
Registers and lists in the HCSA

1.	Central register of insured
2.	List of health insurance companies providing SHI
3.	List of contribution payers
4.	List of health care providers
5.	List of numerical codes of physicians and health care providers
6.	List of people with authorization to perform monitoring
7.	Register of submitted applications for SHI
8.	List of people who have rejected an autopsy

Source: Act on Health Insurance Companies and Surveillance, as amended in 2010.

2.8 Regulation

In terms of regulation, the main actors in the Slovak health system are Parliament, the central government, the Ministry of Health and its subsidiary organizations as well as the self-governing regions. The Parliament as a legislative branch passes acts. The legal environment in health care is significantly influenced by general acts, including the Commercial Code, the Civil Code and the Labour Code. As the executive branch, the government and the Ministry of Health enact secondary legislation (regulations, decrees, rulings, measures, guidelines) with varying scope and different means of enforcement. The HCSA is responsible for monitoring health insurance, health care purchasing and health care providers, and also enforces the regulatory framework. The role of health insurance companies in system regulation results from their competences as purchasers of health care services. This includes maintaining the conditions of selective contracting and flexible pricing.

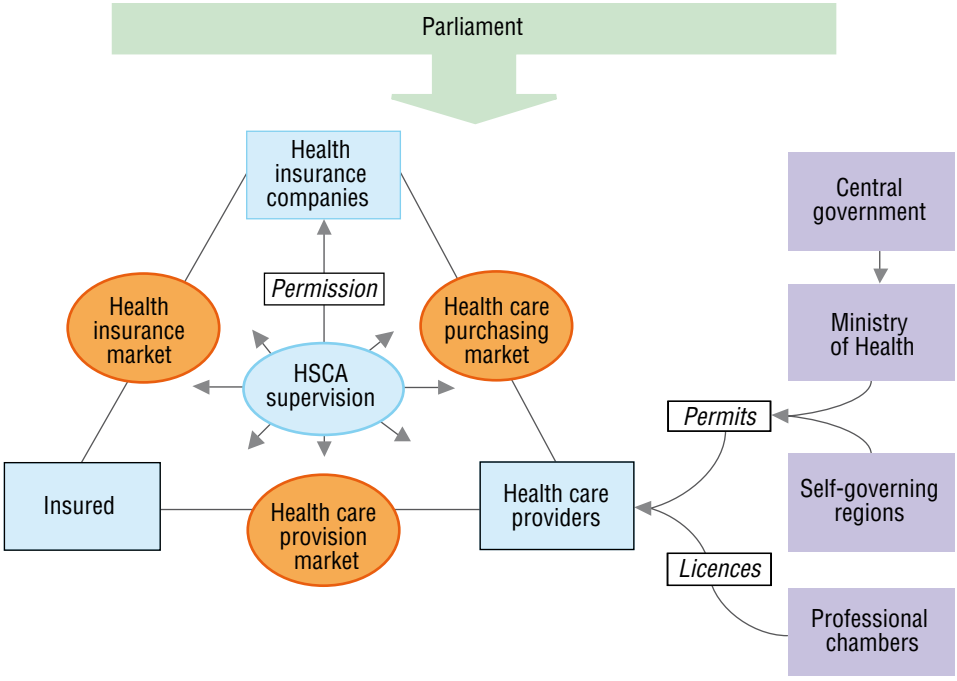
The Constitutional Court of the Slovak Republic rules on whether or not laws conflict with constitutionally established rights. The Constitution of the Slovak Republic stipulates that every person shall have the right to protect his or her health. Through medical insurance citizens have the right to free health care and medical equipment under the terms provided by law. The law sets the scope of free health care in general, subordinate legislation defines specific procedures. The Constitutional Court ruled that user fees for health services, which were introduced in June 2003, are in accordance with the constitutional guarantee of cost-free health care (Constitutional Court, 2005).

Another important ruling in 2008 stated that the scope of covered health care services does not have to be defined strictly by law, but can be defined also by governmental and ministerial decrees (Constitutional Court, 2008a). Later on in 2008, the Constitutional Court ruled that health insurance companies can

operate as joint stock companies and said "that the legislator chose the legal form of joint stock company does not mean that the guarantee for free health care is threatened or excluded, or that such solution is in conflict with the principles of the legal state" (Constitutional Court, 2008b).

Fig. 2.2 schematically depicts the regulatory framework in Slovakia, which will be elaborated upon in the following sections.

Fig. 2.2
Regulation and supervision in the health care system



2.8.1 Regulation and governance of third-party payers

Health insurance companies providing SHI have the role of third-party payers in the Slovak health system. They operate under private law and must be established as joint stock companies. Health insurance companies are responsible for collecting contributions and purchasing health care. All health insurance companies must operate nationwide, although their market shares show significant regional variation. This results in regional differences between health insurance companies in negotiating positions vis-à-vis health care providers.

The HCSA issues licences for health insurance companies. Legal conditions for issuing a licence include an issued share capital of a minimum of €3.3 million and transparent staff relations. The members of the various boards (for example, of directors and trustees) are appointed by their owners. Rules apply to the shareholders, structure, staffing and purchasing policy, as well as the financial management of the health insurance company. The HCSA enforces these regulations and may impose sanctions. This may happen, for example, in cases of poor economic performance, if the health insurance company is seriously indebted or insolvent, or in cases of failure to comply with the public interest. Examples of these sanctions include imposing financial penalties, placing the company under forced management and revoking the operating licence.

Health insurance companies, like all other joint stock companies, are obliged to undergo an audit of their accounting records. The health insurance company can propose an auditor but the HCSA may refuse this and assign another one. The HCSA submits biannual reports on the financial administration of health insurance companies as well as an annual budget proposal to the Ministry of Finance and the Ministry of Health. All health insurance companies must publish annual reports via the Commercial Register.

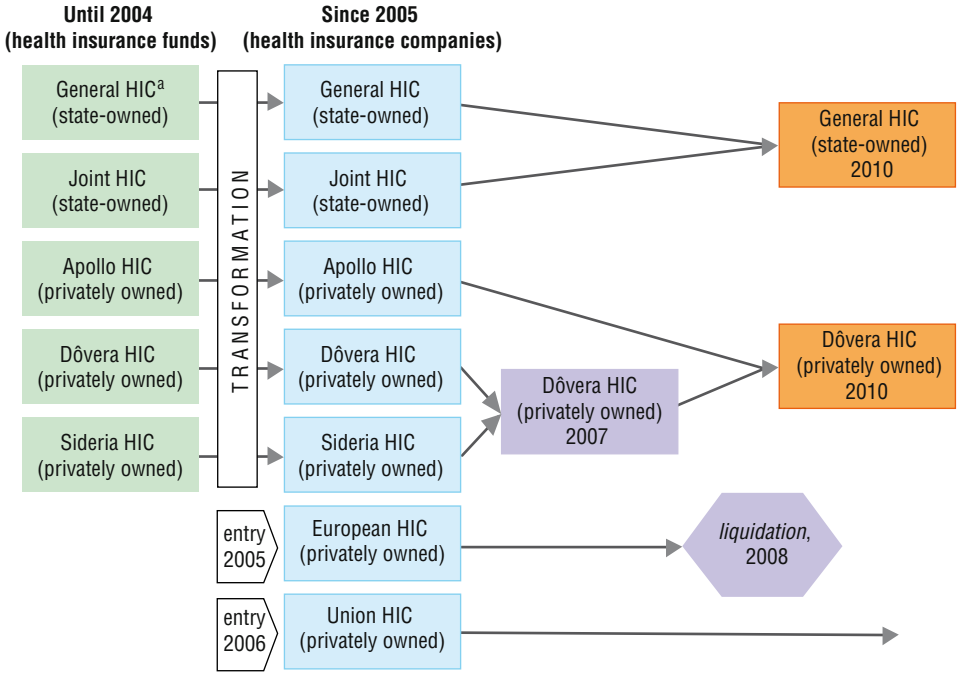
The (central) government plays an important role in regulating health insurance companies. During the preparatory process of the state budget, the government decides on additional financial sources for the system through changing the contribution rate for the state-insured. Through the Ministry of Health, it defines the (minimum) benefit package, minimum provider network, reimbursement policy, whether user fees apply and maximum waiting lists. Lastly, the Ministry of Health is the only shareholder in the largest health insurance company, the General Health Insurance Company. This enables it to influence the company's operating policy. Moreover, due to its size the General Health Insurance Company has a strong influence over the entire health insurance market.

In the 2004 health reform, the public health insurance *funds* that had existed hitherto (operated by the state or industrial sector) were transformed into private health insurance *companies*, that is, joint stock companies, allowed to make profits and pay dividends to shareholders (see section 6.3.2 *Transformation of health insurance funds into joint stock companies*. The health insurance companies must meet all health care needs of their insured before being allowed to pay out profits to shareholders. During the three years after the reform, two profit-making health insurance companies entered the market, two companies merged to consolidate their portfolio and one ceased operations as a reaction

to the changed regulatory framework from 2008. From the beginning of that year, health insurance companies were obliged to use all profits for purchasing health care in the following year. Not only was it no longer allowed for health insurance companies to pay profits to their shareholders, it was also no longer possible to recover losses from previous periods, including those associated with the acquisition campaign after entering the market. In January 2011, the Constitutional Court ruled that the profit restriction was unconstitutional and nullified it. After two more mergers, as of 2010, the market consists of one state-owned health insurance company and two privately owned health insurance companies (see Fig. 2.3). The total market share of state owned companies dropped from 76% in 2005 to 67% in 2009. Despite this, the health insurance market continues to be very concentrated.

Fig. 2.3

The health insurance market structure, 2004–2010



Note: [a]HIC – health insurance company.

Timely access to health care is also regulated by the law. In general, the waiting lists should not exceed 12 months. Empirical findings indicate considerable differences in the length of waiting lists between different health insurance companies. Subordinate legislation issued by the Ministry of Health regulates only three types of waiting lists (implantations of artificial joints, implantations of artificial lenses and heart interventions). This prevents the HCSA from monitoring the overall waiting times.

2.8.2 Regulation and governance of providers

The following conditions need to be met by a health care facility in order to provide health care in Slovakia: (1) a permit to operate the facility; and (2) a licence from the relevant professional chamber for the various professionals working in the facility. Both can be requested if material, technical, staff and qualification requirements are met.

The permits for almost all in- and outpatient facilities are issued by the self-governing region. Possible disputes are settled by the Ministry of Health. The Ministry of Health issues permits for providers of emergency medical services, specialized hospitals, facilities of biomedical research, tissue units, biological banks and reference laboratories. Providers willing to perform their profession in several self-governing regions also fall under the competence of the Ministry of Health.

Permits are granted for an indefinite period of time, during which the provider is obliged to observe the legal conditions of his entry to its market. The facilities of emergency medical services are an exception; they can only obtain a permit for a period of four years based on a tender from the Ministry of Health. After winning a tender, financing from health insurance companies and an identified operating territory are secured.

Independent health care professionals who do not operate any health care facility but function as entrepreneurs may provide health care services based only on their licence to practise medicine independently.

Almost all GPs and the vast majority of specialized physicians provide health care services in their private medical practices. The state is the owner of the largest (mostly university) hospitals, almost all of which are contributory organizations. Five health care institutions were transformed into joint stock companies by the 2004 health reform. The intention to transform the rest of them was dropped after the elections in 2006. The rest are either owned by self-governing regions or private entities.

The legal form of health care providers is deregulated and shows a wide variety, including contributory organizations, non-profit making organizations and commercial companies. Irrespective of their legal form, all need to compete for contracts with health insurance companies based on quality criteria and prices. However, a total of 39 state hospitals, specialized institutions and medical institutions are in a privileged position. Since 2007, they do not have to compete with non-state providers for contracts as the government considered them pivotal in guaranteeing geographical accessibility. Health care providers are not required to be subject to external monitoring, or to publish their financial results or quality indicators.

The Ministry of Health regulates natural healing spas, natural healing resources and natural mineral waters through the State Balneal Committee. Regional public health authorities perform health impact assessments, including radiation protection in health care facilities. Pharmacies must have an expert opinion from the SIDC.

Regulating quality of provided care focuses on three components: structure, processes and results. The first component, regulation of structure, is most clearly defined. The Ministry of Health sets minimum criteria for material and technical equipment as well as qualifications and personal criteria. These criteria are a prerequisite for market entry and must be maintained continuously. Monitoring and enforcement of these criteria are the responsibility of the HCSA, professional chambers and the self-governing regions.

The second quality component, regulation of processes, is very general. The Ministry of Health requires providers to document their quality system in writing, in order to reduce shortcomings in health care provision. However, the Ministry of Health has so far not enforced this requirement. It only issues guidelines, which are neither legally binding nor enforceable. Therefore, quality systems in health care are mostly a formality or do not exist at all.

The third quality component, regulation of results, is limited to issuing quality indicators on health care providers, which serve as criteria for selective contracting. Quality indicators are published and developed by the Ministry of Health in cooperation with professional organizations and health insurance companies as well as the HCSA. The most recent quality indicators were published in February 2009. The list is rather basic and does not provide sufficient information on the quality of health care providers. According to the HCSA's own statement, the data collected by health care providers have low validity, which results in low credibility regarding the providers' ranking.

Suspicions of malpractice are investigated by the HCSA. If malpractice is confirmed, the HCSA can impose sanctions on the health care provider. In case of a suspected crime, the HCSA files a motion to bring the contested issue before a court for a decision. Such incidents are published by the HCSA in case report summaries.

2.8.3 Registration and planning of health workers

Each health professional is obliged to register with the relevant professional chamber and provide updates regarding his or her occupational and educational activities. Upon completion of a university education and having been issued a licence, graduated physicians are authorized to practise as physicians. Health care professionals can be providers themselves (as entrepreneurs) or employees of a provider. As providers they need both permit and licence, as employees they need only a registration from the professional chamber. A licence is also issued by the professional chamber and is a proof of qualification (education and years of practice). In order to operate an outpatient practice, a physician must then submit his or her licence to the Chief Physician of the self-governing region together with the application for a permit to operate an outpatient practice. Upon fulfilling certain requirements regarding qualification and medical equipment (technical and personnel criteria established by law) a physician is authorized to run his or her own practice. There is no system of recertification of licences in the Slovak health system. Furthermore, there is no mechanism for regulating the number of health workers in each category and specialization according to the population's needs.

There is no central workforce planning at ministry level that takes into account future inflows and outflows of health workers in Slovakia. A Decree of the Ministry of Health has laid down the minimum personnel and technical requirements of health care facilities, but leaves it to the discretion of the health care providers to meet these requirements. In other words, human resource planning policy is largely determined through the human resource and wage policies of individual employers. The health insurance companies are formally responsible for the accessibility of health services and must ensure a minimum network of providers to facilitate access to health care services. However, in case of shortages, there are no legal mechanisms to correct the shortcomings.

2.8.4 Regulation and governance of pharmaceuticals

Before entering the market in Slovakia, pharmaceuticals must have an authorization from the European Medicines Agency (EMA), or the national-level SIDC. The SIDC closely monitors the safety of drugs in Slovakia and is the national competent body responsible for pharmacovigilance. The monitoring includes reporting of adverse reactions and requiring reports from pharmaceutical companies, as well pharmaceutical quality. Reports on adverse effects are submitted to the Centre of Adverse Effects Follow-up in the SIDC. The prescribing physician is obliged to report any adverse effects. The number of reports peaked in the 1980s and 1990s (with over 2000 reports annually); in the late 1990s the number of reports fell to below 500 per year, but was well above that number in the early 2000s. In 2009, there were slightly more than 1 000 reports (SIDC, 2010).

Market authorization holders are also obliged to report adverse effects of drugs. Each market authorization holder appoints a person responsible for pharmacovigilance. In addition to physicians, the reporting of adverse effects applies to pharmacists and nurses as well as patients. The SIDC has the right to suspend distribution of a pharmaceutical, withdraw a pharmaceutical from the market and, in more serious cases, suspend the registration for 90 days or terminate the registration.

General public advertising is permitted for drugs free of dazing and psychotropic effects, and over-the-counter (OTC) drugs not covered by health insurance. Advertising aimed at physicians and pharmacists has no such limitations. Vaccination campaigns, with permission of the Ministry of Health, are another exception. The contents of general public advertising may not give the impression that medical examination is not necessary or that pharmaceutical effects are guaranteed. The description of a diagnosis should not mislead or result in self-diagnostics; it should avoid florid, offensive or misleading expressions. Advertisements should not compare a drug to food, cosmetic products or consumer goods. It must be clear that the information is an advertisement, containing clear information on proper use. The SIDC is in charge of monitoring advertisements.

Based on European legislation, as well as the recommendation of the EMA in order to improve the knowledge of patients, the SIDC has created a space for patients on a website: www.sukl.sk. This space publishes a list of patient organizations. However, it has not been updated since 2007, which may reflect an approach that views including the patients' agenda as a formality.

Reimbursement decisions

The decision as to whether a pharmaceutical will be covered by SHI, is the competence of the Ministry of Health and its Reimbursement Committee. This decision is taken after an assessment of the pharmaceutical, called the "categorization" process (see Fig. 2.4). A similar process is used for medical devices and dietary products.

First, the marketing authorization holder must submit comparative data on the pharmaceutical, including effectiveness, safety and pharmacoeconomic data. In line with recommendations from the Ministry of Health, the pharmaceutical is assessed using cost-minimization, cost–effectiveness, and cost–utility analysis. The discount rate for benefits and costs was set at 7%. The recommended threshold of a cost-effective new technology was set at €20 000 quality-adjusted life years (QALY), that is, pharmaceuticals with lower costs per QALY are considered cost-effective. In contrast, pharmaceuticals that exceed €26 500/QALY are considered non-cost-effective. Pharmaceuticals that range between €20 000 and €26 500 per QALY will undergo further evaluation.

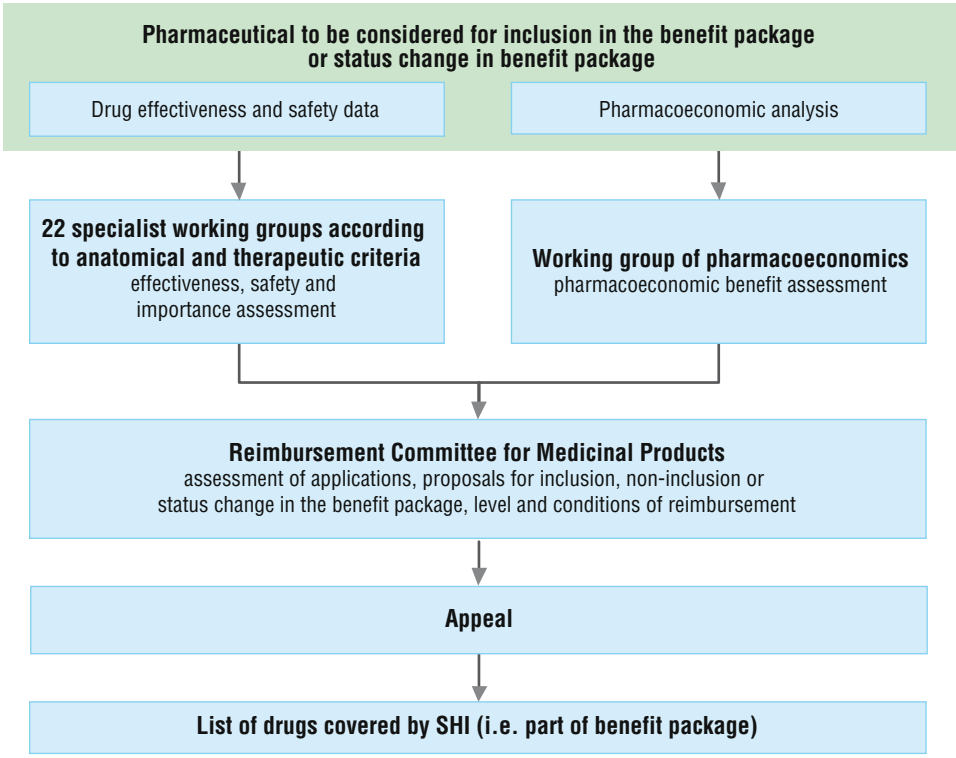
Second, each pharmaceutical is evaluated according to its anatomic and therapeutic classification by one of 22 specialist working groups. The working groups evaluate the effectiveness, safety and importance of pharmaceuticals. One working group evaluates the pharmacoeconomic properties of the pharmaceuticals. The results of the specialist working groups serve as background for decisions of the Reimbursement Committee for Medicinal Products. This Committee has 11 members, 3 of whom are representatives of the Ministry of Health, 5 of whom are representatives of the health insurance companies and 3 of whom are representatives of the professional public.

Third, the Reimbursement Committee evaluates the therapeutic and social value of the pharmaceutical. The therapeutic value includes: (1) effectiveness; (2) safety; (3) cost–effectiveness; (4) whether it is a first or second option or adjunctive treatment; and (5) whether it is causal treatment, prophylaxis or symptomatic treatment. The criteria regarding the social value of the pharmaceutical include: (1) severity of disease; (2) impact on society if not treated (for example, spread of infection and so on); (3) social value (for example, orphan drugs); (4) risk of abuse; and (5) impact on total costs.

Lastly, the Reimbursement Committee elaborates proposals for inclusion, non-inclusion, exclusion or change of status in the benefit package, and proposals for reimbursement level, co-payment and conditions for reimbursement. The results of its decisions are published on the web page of the Ministry of Health

after each meeting of the Reimbursement Committee. The applicant receives written information on the results of the reimbursement decision and the decision may be appealed.

Fig. 2.4
Categorization process of pharmaceuticals



Source: Act on Scope of Health Services Covered by SHI, 2004.

Pricing decisions

Slovakia operates a reference pricing system for pharmaceuticals. SHI reimbursement is set as the maximum price for a standard daily dose in the reference group of the pharmaceuticals. The definition of a given reference group is very narrow. All pharmaceuticals included in the reference group contain the same active substance and are administered uniformly. In certain cases, the Reimbursement Committee may decide to form a separate reference group for pharmaceuticals that are administered in a different form and that have a different amount of active substance per dose. The prices of pharmaceuticals covered by SHI are regulated, both in the ambulatory and inpatient sectors.

After obtaining an authorization to enter the market, the ex-factory price of the pharmaceutical is determined by the Ministry of Health through external reference pricing. The ex-factory price may not exceed the average of the six lowest prices of the same pharmaceutical sold across the EU. The prices of OTC pharmaceuticals and prescription pharmaceuticals not covered by health insurance have been deregulated.

A degressive margin for pharmaceuticals and dietary foods was first introduced in Slovakia in 2004. Initially, the margins were set as a fixed percentage of the pharmaceutical price (11% for the distributor and 21% for the pharmacy). In 2004, a lower margin (10%) was established (4% for the distributor and 6% for the pharmacy) for so-called financially demanding pharmaceuticals, that is, certain high-priced pharmaceuticals that put pressure on the budget. However, what exactly constituted a financially demanding pharmaceutical was never precisely defined. The decision to include a pharmaceutical in this category was made by the Reimbursement Committee during the reimbursement decision. Since 2008, however, a more elaborate degressive system is in place, which sets margins separately for distributors and pharmacies based on the ex-factory price (Table 2.3). VAT on pharmaceuticals has changed several times since 1999. Until 1999, it was 6% after which it rose to 10% in the period 2000–2002. In 2003, VAT increased to 14% and a flat rate of 19% VAT was introduced in 2004. On 1 January 2007, the new government reduced the VAT on pharmaceuticals to 10% again. VAT on the pharmacy margin was introduced on 1 January 2004.

Table 2.3
Retail margins for pharmaceuticals

Bands (€)		Distributor		Pharmacy	
		Cumulative surcharge for preceding bands (€)	+ surcharge as % of the price in the corresponding band	Cumulative surcharge for preceding bands (€)	+ surcharge as % of the price in the corresponding band
1.	0.00–2.66	–	14.10	–	32.90
2.	2.66–5.31	0.37	11.10	0.87	25.90
3.	5.31–7.97	0.67	8.10	1.56	18.90
4.	7.97–13.28	0.88	5.10	2.06	11.90
5.	13.28–23.24	1.16	3.30	2.70	7.70
6.	23.24–39.83	1.48	2.70	3.46	6.30
7.	39.83–73.03	1.93	2.40	4.51	5.60
8.	73.03–165.97	2.73	2.25	6.37	5.25
9.	165.97–331.94	4.82	2.10	11.25	4.90
10.	331.94–663.88	8.31	1.95	19.38	4.55
11.	above 663.88	14.78	1.80	34.48	4.20

Source: Ministry of Health, 2008.

2.8.5 Regulation of medical devices and aids

Medical devices and aids are assessed through a categorization process, which is similar to the process described for pharmaceuticals. This includes the application by the marketing authorization holder of the medical device, evaluations by working groups and a reimbursement proposal prepared by the Reimbursement Committee.

2.8.6 Regulation of capital investment

Until 2004, capital investments were funded from the state budget and allocated by the Ministry of Health. Investment planning was not based on transparent relevant economic or health indicators and, as a result, the allocation of funds was a source of unpredictability. Planning and coordination of resource utilization from the EU structural funds suffer from the same problem to this day. From 2004, funds for capital investment were allocated to health insurance companies so that these could include amortization in their payments to providers. However, self-governing regions and municipalities often invest additional money in their health facilities and usually bear the investment costs in these hospitals and outpatient centres.

For the Slovak economy as a whole, the ratio of gross fixed capital formation (GFCF) as a share of GDP, which is a ratio that measures the investment rate, reaches about 25% annually. To have a stable replacement of older capital (buildings, for example), the GFCF/GDP ratio is often assumed to be at least 15%. In the 2000–2006 period, the GFCF/GDP ratio in the Slovak health care fluctuated only between 7.8 and 15.2% (Morvay, 2006). These numbers confirm that investment in Slovak health care facilities is in general very low, which leads to an outmoded infrastructure (see also section 4.1.1 *Capital stock and investments*).

2.9 Patient empowerment

Advocating patient rights has become a major topic in Slovak health care. To improve the situation, increasing awareness, monitoring and education are important. Currently (2010) there is still no organization to take this forward. Consumer and patient organizations show very different degrees of activity, which is due to their dependence on dedicated individuals and (unstable) external financial funding. Success in advocating for patient rights is often

hindered due to the unclear boundaries between the health sector and the social sector, which are both the domain of patient organizations.

2.9.1 Patient information

Information asymmetry is one of the characteristic features of health systems. In spite of the gradual improvement of health system information, explicitly defined information on services covered by SHI, including which diagnostic and therapeutic procedures this may imply, is missing. This creates room for arbitrary interpretation by health insurance companies as well as health care providers.

As far as access to information is concerned, an individual has the right to information on his or her state of health as well as his or her health documentation. Prior to giving informed consent, a condition before a health service can be provided, health care providers must provide patients with all the necessary information.

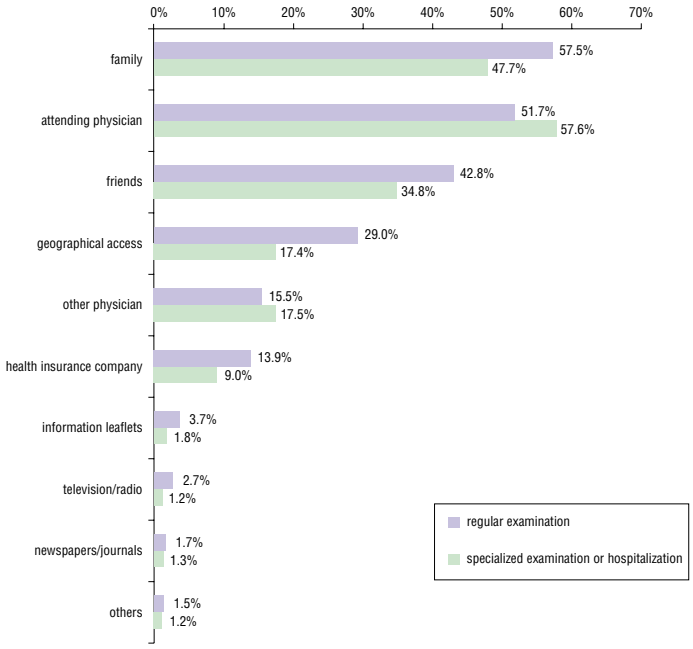
Health insurance companies provide information on health services performed beyond the coverage of SHI. They are obliged to publish the list of their contracted providers (on the Internet for example). Health care providers have to inform patients in advance if the provided health service is subject to cost-sharing. Physicians have an obligation to inform patients about the co-payment of the prescribed medication and to offer a prescription of a generic with a different co-payment. Patients can verify the pharmaceutical prices and co-payments in pharmacies, since pharmacies must provide an updated list of pharmaceuticals.

Information on quality of providers is scarce. Based on their own analysis, the privately managed health insurance company Dôvera published the first quality assessment of hospitals in 2008, followed by the state-owned General Health Insurance Company later that year.

No institution is actively and systematically monitoring awareness of patient rights or accessibility of information in minority languages. This gap is filled by self-supporting patient organizations.

Although the law guarantees all citizens the right to obtain information from the various public institutions, in practice, frequently there is no data. A survey from 2007 showed that patients mainly rely on family members, friends and the attending doctor when making a choice of health care provider (Fig. 2.5).

Fig. 2.5
Which of the following factors influenced your choice of GP or specialist?



Source: Publicis Knut, 2007.

2.9.2 Patient choice

Free choice in health care encompasses free choice of health insurance company and health care provider, as well as the right to choose a therapeutic procedure.

Free choice of health care provider in SHI is restricted to contractual health care providers, irrespective of where they are based. The list of contractual health care providers is published by health insurance companies. An exception is made for GPs; patients are registered with one GP and can only change their GP once every six months. If an insured person insists on choosing a non-contracted provider, the health insurance company may give an authorization to cover the costs. The providers may not refuse patients except in specified cases, for example work overload or a conflict of interests. Furthermore, providers may decline to perform certain procedures if these are irreconcilable with their religious or other beliefs. If this situation arises, the

Chief Physician of the self-governing region identifies a physician who will take care of the patient. If a patient lives in the district where the physician operates, he or she cannot be refused due to work overload.

The 2004 health reform gave health insurance companies tools to compete for clients. The insured may change their health insurance company once a year. They can only be refused if they have applied to more than one health insurance company at the same time. Other administrative barriers that could hinder switching health insurance companies (for example, requiring written notice) were removed. Mobility of the insured has varied significantly over time and is influenced by marketing activities and by the extent to which the insured exercise their freedom of choice (Table 2.4).

Table 2.4
Free choice of health insurance company

	2005	2006	2007	2008	2009
Number of applications for changing health insurance company	50 158	716 467	232 145	178 916	125 723
Share of all insured (%)	1	14	5	4	3

Source: Unpublished HCSA data, 2010.

Patients can decide whether to give informed consent to their health care professionals. In addition, health care professionals are obliged to inform the patients about alternative treatments. When issuing a prescription, the patient may opt for a generic substitution, unless the physician decides that the branded pharmaceutical must be given. Patients have the right to withdraw their informed consent at any time.

The cadaver donation of tissues and organs and autopsies are provided with presumed consent of the donor or autopsied person. Those who wish to protect the integrity of their body after death have to register this in written form at the national register.

The issue of free choice is also frequently associated with abortions. The law on Artificial Termination of Pregnancy of 1986 determines that a pregnancy can be terminated before the twelfth week of pregnancy with prior written application of the pregnant woman. Health care professionals may, based on religious or other beliefs, decline to perform certain procedures related to reproductive health, such as artificial insemination, sterilization or induced abortions.

2.9.3 Patient rights

Awareness of patient rights among patients and health professionals is low. Patient rights in Slovakia are laid down in several acts. The Patients' Charter (Table 2.5) was elaborated in 2000 as a project of the Ministry of Health, which was funded by the EU's PHARE programme. It was ratified by Slovakia on 11 April 2001. A group of international and Slovak experts drafted the Charter according to laws in force and international organizations (United Nations, WHO, Council of Europe) cooperated in the project. The goal of the Patients' Charter was to explain to patients their basic rights in health care. The Charter was approved by the Slovak government in 2001, but the document itself is not legally binding.

Table 2.5
Ten articles of the Patients' Charter in Slovakia

I	Human rights and freedom in health care provision
II	General patient rights
III	Right to information
IV	Patient's consent
V	Consent of patients with legal incompetence
VI	Confidentiality
VII	Treatment and care
VIII	Care for incurable and mortally ill patients
IX	Complaints submitting
X	Compensation of damages

Source: Patients' Charter, Government's resolution No.326 from 11 April 2001.

Furthermore, the European Charter of Patients' Rights was drafted in 2002 by a European network of civil, consumer and patient organizations called the Active Citizenship Network. The goal of the Charter is to encourage patients to play a more active role in health care provision. This Charter is not legally binding either, but the Network successfully earned recognition in many countries, as well as adoption of rights stated in the Charter. The 2004 Slovak health reform incorporated 14 patient rights from the European Charter into the new reform legislation. Most of the rights from both charters can be traced back to the Council of Europe's Convention on Human Rights and Biomedicine, which Slovakia ratified in 1999.

Several programmes funded by various grants were used to promote patient rights. Once the funds were exhausted, promotion activities came to an end. The Ministry of Health established a patient rights unit in 2003. The unit provided consultations for patients and information regarding health care

provision, as well as monitoring public awareness about observing patients, rights. It was relocated to the HCSA in 2005 and later dissolved. In addition, a non-governmental organization (NGO) called the Association of Protection of Patient Rights deals with patients' rights.

In spite of declared formal support from the authorities, vulnerable groups of citizens have difficulties advocating for their rights. There are no patient advocates in health care facilities.

Two patient rights issues in Slovakia that have attracted a great deal of international publicity have been net beds (i.e. beds surrounded by nets) used in social and psychiatric care and alleged involuntary sterilization of Roma women.

In 2003, the WHO expressed concern regarding "continuous use of net beds as restricting means in social institutions or psychiatric facilities" (WHO, 2003). According to the WHO, net beds are undignified, humiliating and unsafe. Although net beds ceased to be used in the social sector in 2004, health care facilities continue to use them. The European Committee for the Prevention of Torture visited Slovak psychiatric facilities in 2005. According to the recommendations in their report drafted for the Slovak government, net beds should not be used as a means of getting patients under control. The requirement was unanimously opposed by Slovak psychiatrists. In their view, net beds are used mainly in psychiatric departments as an inevitable instrument for the protection of acute, delirious adult patients and only in cases of unsuccessful psycho-pharmacological treatment. According to the Ministry of Health, there has not been one case of proven misuse of net beds. According to the Committee for the Prevention of Torture, the discussion on net beds with the Slovak government had reached a dead-end. The Ministry of Health did state, however, that a unified form should be drafted to record the indications for and duration of patients' stay in a net bed in order to prevent the risk of abuse.

NGOs signalled cases of alleged involuntary sterilization of Roma women in 2003. Interviews with more than 110 Roma women resulted in the drafting of a report, *Body and soul* (Center for Reproductive Rights, 2003), which was submitted to the United Nations. Having accepted the report, the United Nations requested an opinion from the Slovak government. According to the report, starting from 1999, Roma women were sterilized for no reason and without prior consent in the hospital in Krompachy and in gynaecology departments of other hospitals. The General Prosecutor's Office, in cooperation with the Ministry of Health and the Ministry of the Interior, started an investigation. The investigation did not confirm the NGOs' findings. Sterilizations were

performed in accordance with existing legislation. Administrative discrepancies did occur in three cases of under-aged women, on whom sterilization was performed without the consent of their legal representatives. However, sterilization was performed according to the Decree of the Ministry of Health from 1972, according to which sterilization due to health indications does not require informed consent.

As a result, the legislation was amended in 2005 so that informed consent and a completed official application form are prerequisites for sterilization. Furthermore, mandatory instruction on the consequences of sterilization and alternative methods of contraception is required. To sterilize a person who is not legally competent, approval of the court along with the informed consent and a request from his or her legal representative is necessary. This restriction should prevent potential misuse on the one hand, and enables sterilization to be performed in special legitimate justifiable cases on the other. A minimum time of 30 days between submitting the application for sterilization and the procedure itself must be maintained. This time interval reduces the possibility of misuse if a person is making a decision under pressure. It also enables a person to evaluate the situation and offers the chance to withdraw the informed consent in time. Sterilization is an elective procedure (and not urgent care) and the 30-day limit does not endanger a person's health.

2.9.4 Patients and cross-border health care

Because Slovakia is a Member State of the EU, members of a Slovak health insurance company are entitled to receive services that are covered by statutory insurance in other EU countries, plus Iceland, Liechtenstein, Norway and Switzerland. Based on EC Regulation 1408/71 (now 883/2004), Slovak policy holders can use the European Health Insurance Card (EHIC) to receive health services abroad, paid for by the Slovak system, when on a temporary stay (for example, as tourists). Furthermore, Slovak insured may ask their health insurance company for pre-authorization when planning to receive treatment abroad.

On producing an EHIC, insured Slovaks on a temporary stay abroad and in need of treatment are entitled to reimbursement of health care under equal conditions and equal tariffs as compared to the nationals of another state under the legislation of that state, including financial participation (co-payments). Health care is provided as required so that the insured does not have to return to his country of insurance sooner than intended. The reimbursement does not cover travelling costs. Additional reimbursement is fully in the competence of the health insurance companies.

The conditions for reimbursement of non-urgent (planned) treatment in another state are as follows: (1) pre-authorization by the health insurance company, (2) expected health improvement, (3) lack of treatment possibilities in Slovakia, or (4) insufficient providers' capacities. In some cases, the health insurance company has the right to identify the health care facility or the state in which the person can seek health care. This applies to the EU Member States as well as countries worldwide. In countries outside the EU the insured may receive reimbursement for urgent health care of the same amount as it would cost in the territory of Slovakia.

In 2007, health insurance companies in Slovakia received 791 applications for authorization of planned health care provision in another EU Member State, of which 743 (94%) were approved. According to HCSA data, since the accession of Slovakia to the EU, there has been a year-on-year increase in the number of people receiving benefits-in-kind abroad. The proportion that the Czech Republic represents in the total of active debts and receivables of Slovakia (47% and 53%, respectively) demonstrates the strong social and professional bonds between the two countries. Table 2.6 shows that especially the number of EU nationals receiving health services in Slovakia has increased significantly over the period 2005–2007, while the number of health services that Slovakians received abroad also increased, albeit this increase is less pronounced. These figures must be interpreted carefully as they may underestimate the true number of people seeking cross-border care. Indeed, they include only those who were treated within the public legal framework provided by EU law or bilateral international agreements. People paying for health care abroad with travel insurance or out-of-pocket payments are not included.

Table 2.6

Number of cross-border health care provision cases and refund claims

Indicator	2005	2006	2007
Benefits-in-kind provided to insured Slovaks in other EU countries (number of cases)	7 135	16 211	22 132
Reimbursement from Slovakia to other EU countries (€ 1 000s)	4 305	9 027	9 381
Benefits-in-kind provided to insured from other EU countries in Slovakia (number of cases)	26 966	52 069	132 072
Reimbursement from other EU countries to Slovakia (€ 1 000s)	1 809	4 047	9 981
Average cost per insured Slovak in other EU countries (in €)	603	557	424
Average cost per insured from other EU countries in Slovakia (in €)	67	78	76

Source: HCSA, 2007, 2008.

To be on the safe side, health insurance companies recommend their insured take out commercial health/travel insurance before travelling abroad. According to a survey on cross-border health conducted by the Gallup Organization (2007),

apart from the citizens of Luxembourg (20%) and the Czech Republic (8%), the Slovaks (7%) belong to the most frequent users of health care in the EU Member States in 2007. Fifty per cent of Slovaks have expressed willingness to travel abroad to seek health care. From treatment abroad, the Slovaks expect higher quality (87%) and help from a renowned specialist (83%). Satisfaction with health care in Slovakia (72%) is higher than the average in other EU12 Member States (59%), but lower than the average in EU15 Member States (89%) (see Table 2.7).

Table 2.7

Factors motivating patients to obtain medical treatment in other EU Member States, or discouraging them (%) in Slovakia, EU12, EU15 and EU27

	Slovakia	EU12	EU15	EU27
Motivating factors				
Faster treatment	46	61	65	64
Cheaper treatment	40	48	48	48
Better quality treatment	87	83	76	78
Treatment from specialist	83	71	68	69
Treatment not available	88	89	92	91
Discouraging factors				
Satisfied with health care in own country	72	59	89	83
Convenience	94	80	88	86
Lack of information	72	59	89	83
Language barriers	72	56	62	61
Financial reasons	60	52	49	49

Source: Gallup Organization, 2007.

Spa treatment and orthopaedic services (total endoprothesis, arthroscopy) are traditionally the most sought health care services in Slovakia, mainly for patients coming from Arab countries. Considering the relatively low prices of dental care, an increased demand for dental services has been observed. Also for in vitro fertilization an increased demand from countries with stricter regulation of reproductive health (Italy, for example) is observed.

2.9.5 Complaints procedures (mediation, claims)

When patients or their relatives presume that a health care service was not adequately provided they can submit a written complaint to the health care provider. If a health care provider does not satisfy this appeal, it is the patient's right to request the HCSA to assess whether adequate health care was provided. Other complaints (for example, regarding user fees, ethics, and organization of

health care) must be submitted to the relevant body (for example, the Ministry of Health, self-governing regions, professional chambers). The law prohibits persecuting a person who is exercising his or her right to file a complaint, claim or start a criminal prosecution against a health care professional or provider.

The HCSA, as an independent body for monitoring health care, has become a credible advocate of patient rights. The HCSA annual reports on health insurance performance include information on the composition of patients' complaints (Table 2.8). In cases of a violation of the law, the HCSA can impose different sanctions and proposals for remedy measures. Surgery was the specialization most penalized in 2008 (42 cases). The total number of cases giving rise to trials submitted by the HCSA in 2008 was 6, which was lower than the preceding years (30 in 2006, 9 in 2007).

Table 2.8

Main causes of cases filed in relation to provided health care

	2007		2008	
Cause	Cases filed, total	%	Cases filed, total	%
Dissatisfaction with the process of health care provision	935	74.9	1 214	74.4
out of which: cases related to death	353	28.3	401	24.6
Non-ethical approach of health care worker	57	4.6	51	3.1
Organization of work	–	–	62	3. 8

Source: HCSA, 2007, 2008.

The HCSA handles the complaints of patients concerning health insurance companies (Table 2.9). The complaints concern, for example, unfair practices in recruitment of the insured by two private health insurance companies (suspicious application submission for switching health insurance companies, misuse of personal data, application submission based on misleading information).

Table 2.9

Patients' complaints and motions regarding individual health insurance companies, 2007[a]

Number of complaints and motions	VšZP	SZP	Apollo	Dôvera	Union	EZP	Total
Substantiated	25	5	3	33	2 146	0	2 212
Pending	0	0	0	5	0	0	5
Unsubstantiated	193	35	16	41	1 148	1 095	2 528
Total	218	40	19	79	3 294	1 095	4 745

Source: HCSA, 2008.
Note: [a] As of 2010 only three health insurance companies remain.

2.9.6 Patient participation/involvement

Patients' participation in formal decisions in health care is very limited. Representing organizations and associations have an opportunity to comment on new legislation, but they can only make recommendations. They are too fragmented and frequently lack adequate funding. Patient organizations can advocate for their interests by lobbying legislators and by influencing public opinion. By allowing real competition in health insurance the insured have the possibility of influencing purchasing policy indirectly. Negative publicity surrounding complaints may result in an outflow of insured, which motivates health insurance companies to make a settlement.

So far, surveys on patients' satisfaction with providers are rare. They are mainly conducted by health insurance companies. Two health insurance companies (the state-owned General Health Insurance Company and privately owned Dôvera) published their results and used them as one of the criteria when purchasing health care services in 2008. In general, the level of satisfaction with providers was evenly spread. The results of the patients' satisfaction survey in 2008 indicated that patients consider the level of additional (hotel) services less satisfactory than the quality of health care (Table 2.10).

Table 2.10

Patients' satisfaction survey, 0 (lowest)–100 (highest)

Regarding services provided in our department, what was your level of satisfaction with:	
the behaviour of physicians?	91.9
the care provided by physicians?	91.5
the care provided by nurses?	91.2
the behaviour of nurses?	90.9
the health care provided?	90.9
the information given by your attending physician on continuation of your treatment at home?	89.5
the information given by your attending physician?	89.2
the cleaning services?	89.1
the information given by nurses on continuing your treatment at home?	86.2
the improvement of your health upon hospital discharge?	85.7
the accommodation?	78.1
the food quality?	72.8

Source: Data from General Health Insurance Company and the Institute for Public Affairs, 2008.

2.9.7 Patient safety and compensation

Apart from the reporting of adverse drug reactions, risk reduction of iatrogenic harm to patients is not subject to legislation. Health care providers are obliged to have liability insurance for damages related to health care provision to patients. Liability insurance is provided by commercial insurance companies.

Filing an appeal to health care facilities or physicians for compensation for non-financial damage is uncommon. The amount of required financial compensation for unsuccessful operations or death due to negligence is rarely more than €100 000. To receive compensation a patient is advised to submit a complaint to the HCSA. The HCSA will then start an investigation. If the law was violated, the claimant has the burden of proof in a civil legal dispute with a health care professional. A health professional cannot be exempted from this liability. Criminal prosecution is considered only if a health professional has committed a crime according to the definition of Criminal Law. This applies to crimes against life and health. No intentional cases have been reported in the past 15 years; only cases of crime due to negligence have been reported (reckless homicide, harm to health, withholding aid).

Since 2005, the HCSA has been publishing case reports of irregularities with health care providers, most of them with a tragic end. According to evaluation by experts, the failures concerned timely and correct diagnosis, or treatment procedures. The most severe cases are evaluated by an expert committee of the Chair of the HCSA. The case reports help to extend the education of health professionals and are intended to promote patient safety by preventing such situations.

Advertising of private practices, health care facilities and diagnostic and therapeutic procedures is allowed. As stated in the Ethical Codex of a health care professional, the advertisement should be moderate, informative and should not bear signs of unfair competition. The advertising text and its publicity should not discredit the health care professional. For pharmaceutical regulation aimed at protecting patients (for example, pharmacovigilance and advertising), see section 2.8.4 *Regulation and governance of pharmaceuticals*.

2.9.8 Physical access

A Ministry of Health decree obliges both outpatient and inpatient health care facilities to ensure a barrier-free environment for patients with restricted movement and orientation. Patient organizations claim that this is not in accordance with reality and keep expressing the need for action. A conflict of

competences and a lack of coordination between the Ministry of Health and the Ministry of Social Affairs is a barrier to an effective solution. The agenda of people with special health care needs is the competence of the Ministry of Social Affairs. This Ministry lacks some of the needed competences in health care to effectively solve the situation. Therefore, organizations of people with disabilities have been lobbying for the adoption of the revised European Social Charter. Article 15 of this Charter binds the subscribers to provide technical support in order to overcome barriers in communication and movement.

In 2004 and 2005, the Slovak Union of People with Physical Disabilities (2005) conducted a nationwide survey on the accessibility of public buildings. The survey indicated a higher proportion of barrier-free buildings and better accessibility in general in the Bratislava region as compared to more rural areas. Physical access was also one of the parameters evaluated within the rating of health insurance companies in 2008. None of them met the condition of a barrier-free environment during mystery shopping (Szalayová et al. 2008).

Lastly, new buildings and renovated existing buildings are obliged to ensure that there is barrier-free access. Organizations of people with disabilities report increased requests for their consultations from investors and contractors.

3. Financing

After the establishment of Slovakia in 1993, the Bismarck system of SHI was reintroduced through the establishment of the National Insurance Fund. In 1994, the Act on Health Insurance was passed, which allowed the establishment of multiple health insurance funds. Since its inception in the early 1990s the system has suffered from financial instability. The 2002–2006 reforms sought to remedy this by tightening budgetary restrictions and increasing the effectiveness of utilizing resources as well as identifying internal reserves of the system. The reform included a transformation of health insurance funds, which were public institutions, into joint stock companies, now called health insurance companies.

Total health expenditure as share of GDP was 7.8% in 2008, well above the EU12 average but still significantly lower than the EU15 average. In 2008, total health expenditures per capita reached US$ 1717 PPP, significantly more than neighbouring Visegrád Four countries Hungary and Poland and slightly more than the Czech Republic (WHO Regional Office for Europe, 2010). As of 2010, the Slovak SHI system provides universal coverage for a broad range of benefits, guarantees free choice of one of three nationally operating health insurance companies and is based on solidarity.

The main sources of revenue in the health system are contributions collected by the health insurance companies, which are profit-making joint stock companies. The contributions are collected from (1) employees and employers, (2) self-employed people, (3) voluntarily unemployed, and (4) "state-insured". The latter is a term used for the group of mostly economically inactive people for whom the state pays contributions (one-third of total resources from SHI contributions). The collected resources are risk adjusted for two demographic predictors, age and gender, and, since 2010, for the characteristic "state-insured". Payments to the providers are subject to a

contract that determines the amount of payments, the nature and quality of services and the payment system. In outpatient care, a system with capitations and fees is applied for primary care, whereas specialists are paid using capped fee for service. Inpatient care is reimbursed using a case-based system. Lastly, cost-sharing mainly takes place through a system of small fees for prescriptions and health services, and co-payments for pharmaceuticals and spa treatments introduced in 2003. Because of the very broad definition of the SHI benefit package, VHI plays only a very marginal role.

Apart from the state-insured, the central government budget finances the activities of several ministries, most notably the Ministry of Health. The Ministry of Health, for example, funds the PHA and a state-run Slovak Health University. Self-governing regions and municipalities often invest additional money in their health facilities and usually bear the investment costs in these hospitals and outpatient centres.

3.1 Health expenditure

In 2009, total health expenditure as share of GDP was 7.6% according to national sources (Table 3.1). This high GDP share was rather exceptional. Before 2009, the share was around 6.5% of GDP for three consecutive years. Since 2002, total health expenditure has followed a simple rule. In the first half of the political term, it is at a lower level, followed by higher levels in the last two years of the term (see Table 3.1). The peaks in the periods 2004–2005 and 2009–2010, with expenditure significantly rising over 7%, are the result of bail-outs and year-on-year rises in private expenditure. In 2009–2010, the increase in state contributions on behalf of the economically inactive population presented an additional factor.

Table 3.1

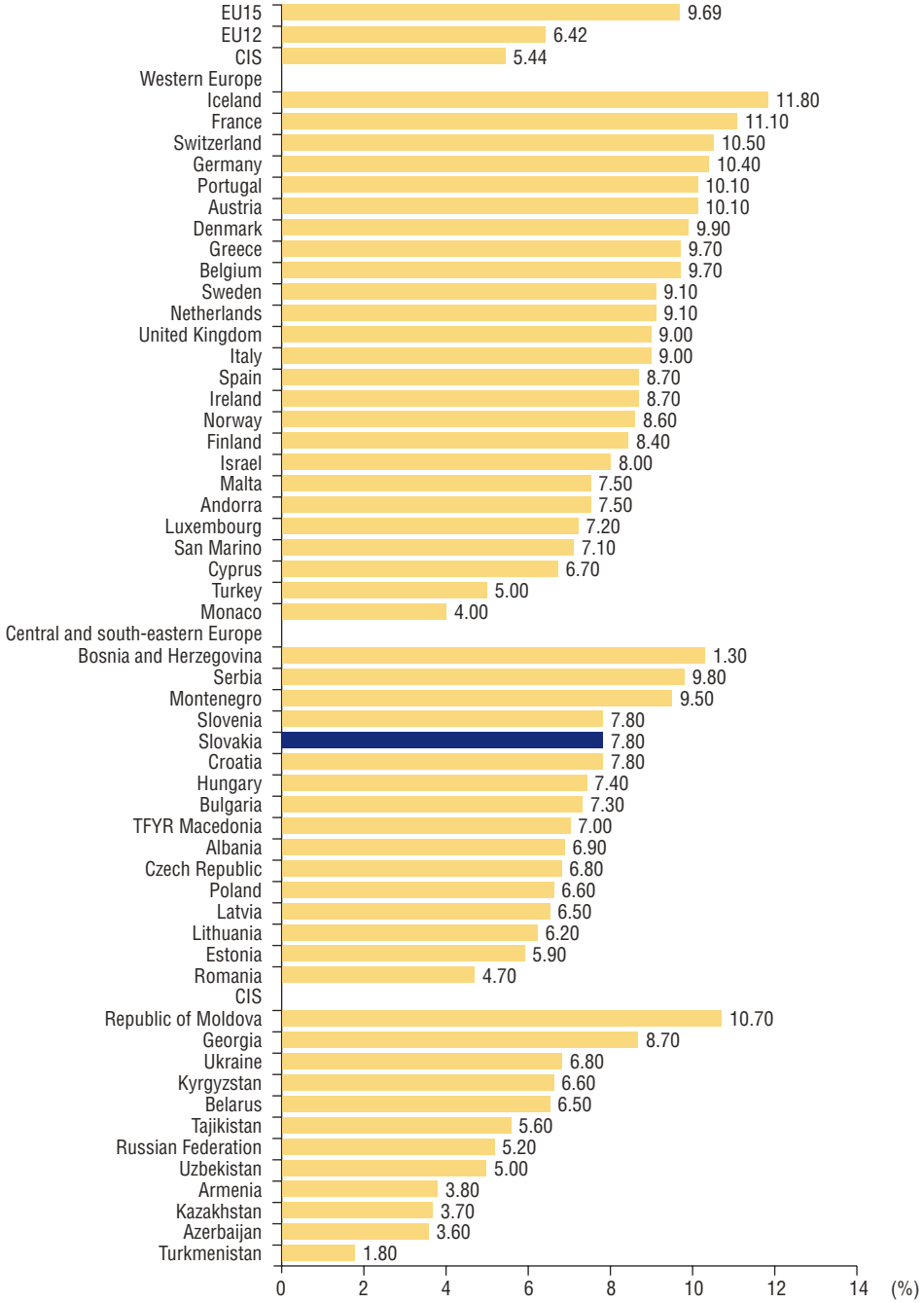
Contribution of each financing source in € million and as % of GDP

	2002	2003	2004	2005	2006	2007	2008	2009	2010[e]
In € million									
A. SHI	1 836	1 978	2 197	2 443	2 642	2 898	3 263	3 305	3 409
– Contributions from economically active population	1 322	1 444	1 583	1 723	1 869	2 002	2 266	2 144	2 127
– Contributions for economically inactive population paid by the state	515	534	614	720	773	896	997	1 161	1 282
B. Debt settlement/bail-out	119	177	266	202	0	0	0	199	0
C. Ministry of Health including eurofunds	159	159	136	126	123	116	123	174	225
D. Other budgetary chapters, higher territorial unit (HTU) contributions of social insurance	55	38	15	18	19	12	15	15	16
E. Public sources total (A+B+C+D)	2 169	2 352	2 614	2 789	2 784	3 026	3 401	3 693	3 650
F. Private sources total	288	380	604	678	761	929	1 003	1 142	1 107
G. Sources total (E+F)	2 457	2 732	3 218	3 467	3 545	3 955	4 404	4 835	4 757
H. GDP	36 782	40 580	44 986	48 833	54 314	61 500	67 330	63 524	65 507
In % of GDP									
A. SHI	5.0	4.9	4.9	5.0	4.9	4.7	4.8	5.2	5.2
– Contributions from economically active population	3.6	3.6	3.5	3.5	3.4	3.3	3.4	3.4	3.2
– Contributions for economically inactive population paid by the state	1.4	1.3	1.4	1.5	1.4	1.5	1.5	1.8	2.0
B. Debt settlement/bail-out	0.3	0.4	0.6	0.4	0.0	0.0	0.0	0.3	0.0
C. Ministry of Health including eurofunds	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3
D. Other budgetary chapters, HTU contributions of social insurance	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E. Public sources total (A+B+C+D)	5.9	5.8	5.8	5.7	5.1	4.9	5.1	5.8	5.6
F. Private sources total	0.8	0.9	1.3	1.4	1.4	1.5	1.5	1.8	1.7
G. Sources total (E+F)	6.7	6.7	7.2	7.1	6.5	6.4	6.5	7.6	7.3

Source: Data from health insurance companies, Ministry of Finance, Statistical Office of the Slovak Republic.
Note: e = estimate (from HPI).

Fig. 3.1

Total expenditure on health as a share (%) of GDP in the WHO European Region, 2008 (WHO estimates)

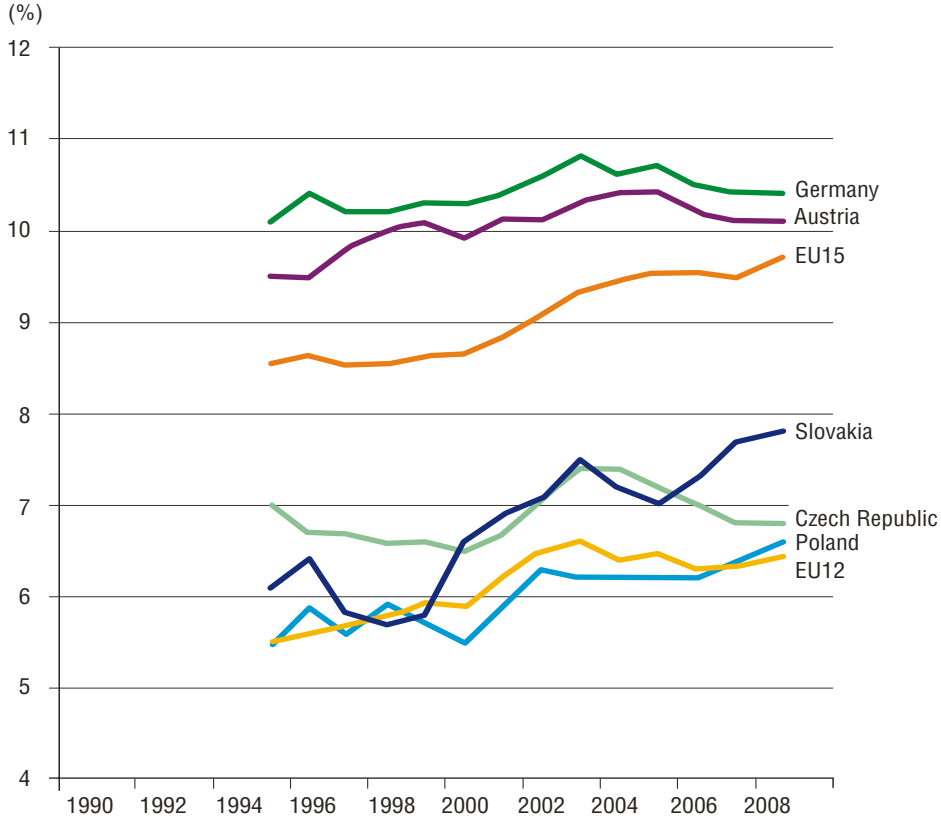


Source: WHO Regional Office for Europe, 2010.

Compared to other European countries, the internationally available figure of 7.8% for Slovak health expenditure as share of GDP in 2008 was well above the EU12 average but still significantly lower than the EU15 average (see Fig. 3.1). This number is higher than in national data, which is due to the internationally accepted National Health Accounts methodology used by the WHO showing higher private expenditure figures than the national sources. Since there is a break in the WHO data series in 2002, the longitudinal data in Fig. 3.2 must be interpreted cautiously. Comparing Slovakia's per capita expenditure (US$ 1717 in PPP) with the other Visegrád Four countries in 2008 shows that it was slightly higher than in the Czech Republic and much higher than in Hungary and Poland (see Fig. 3.3).

Fig. 3.2

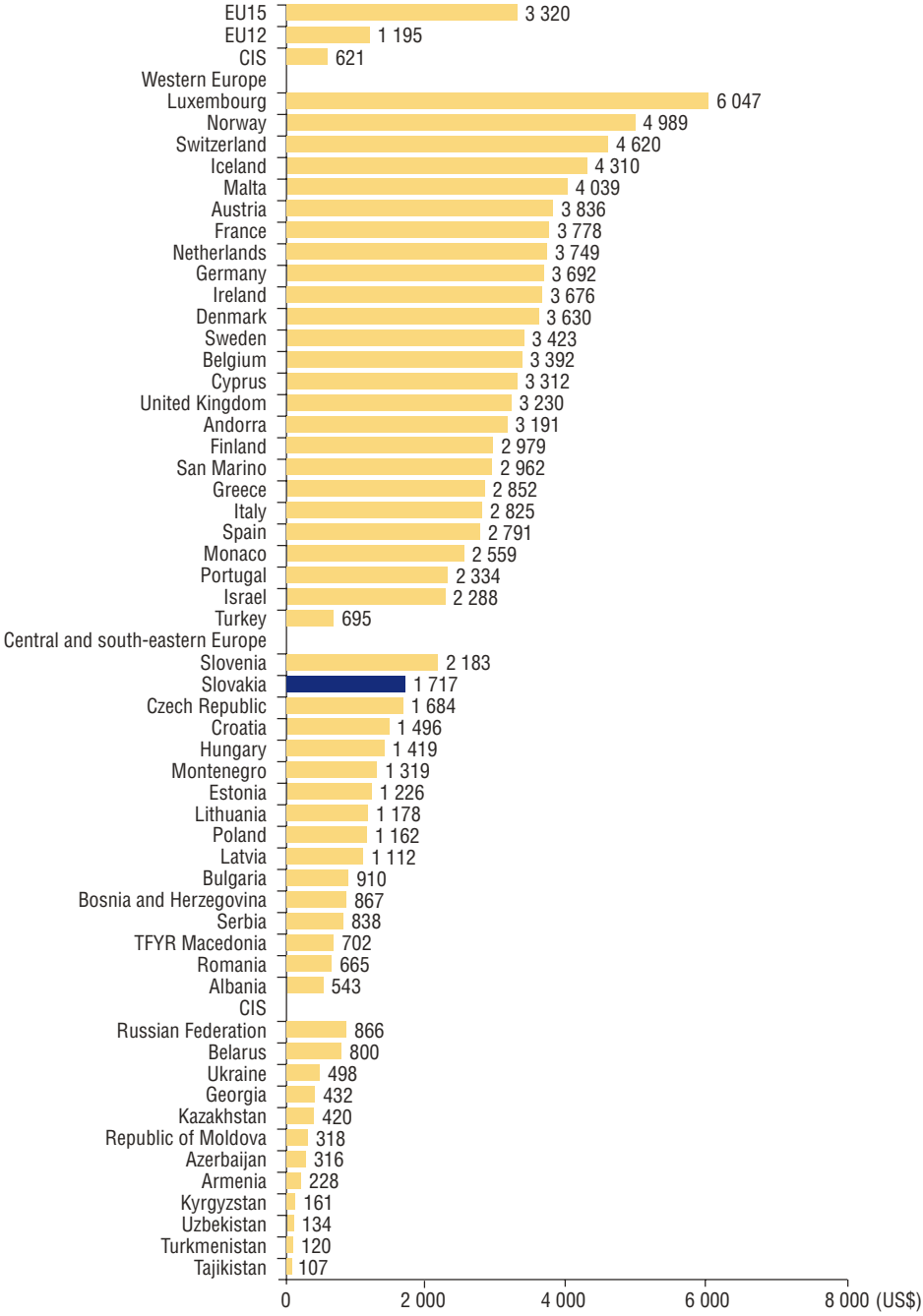
Trends in health expenditure as share (%) of GDP (WHO estimates) in Slovakia and selected countries and averages, 1990 to latest available year



Source: WHO Regional Office for Europe, 2009.

Fig. 3.3

Total health expenditure in US$ PPP per capita in the WHO European Region, 2008 (WHO estimates)



Source: WHO Regional Office for Europe, 2009.

The share of public expenditure on total health expenditure has been decreasing during the economic transformation and fell to 76.5% in 2007 (see Table 3.2). This decrease in public health expenditure is similar to that in the other Visegrád Four countries and is the result of less state interference in all economic sectors, including health care.

From an international perspective, using WHO data collected according to the National Health Accounts methodology, this number (in 2008) was around 10 percentage points lower. At 66.8% it was among the lowest of all EU countries, slightly below the other Visegrád Four countries, and well below the EU12 and EU15 averages (see Fig. 3.4).

Table 3.2

Trends in health expenditure

Indicator	2002	2005	2007	2010[e]
Total health expenditure US$ PPP per capita[a]	730	1 139	1 569	1 710
Total health expenditure as % of GDP[b,c]	6.7	7.1	6.4	7.3
Public sector expenditure on health as % of total expenditure on health[b,c]	88.3	80.4	76.5	76.7
Private sector expenditure on health as % of total expenditure on health[b,c]	11.7	19.6	23.5	23.3

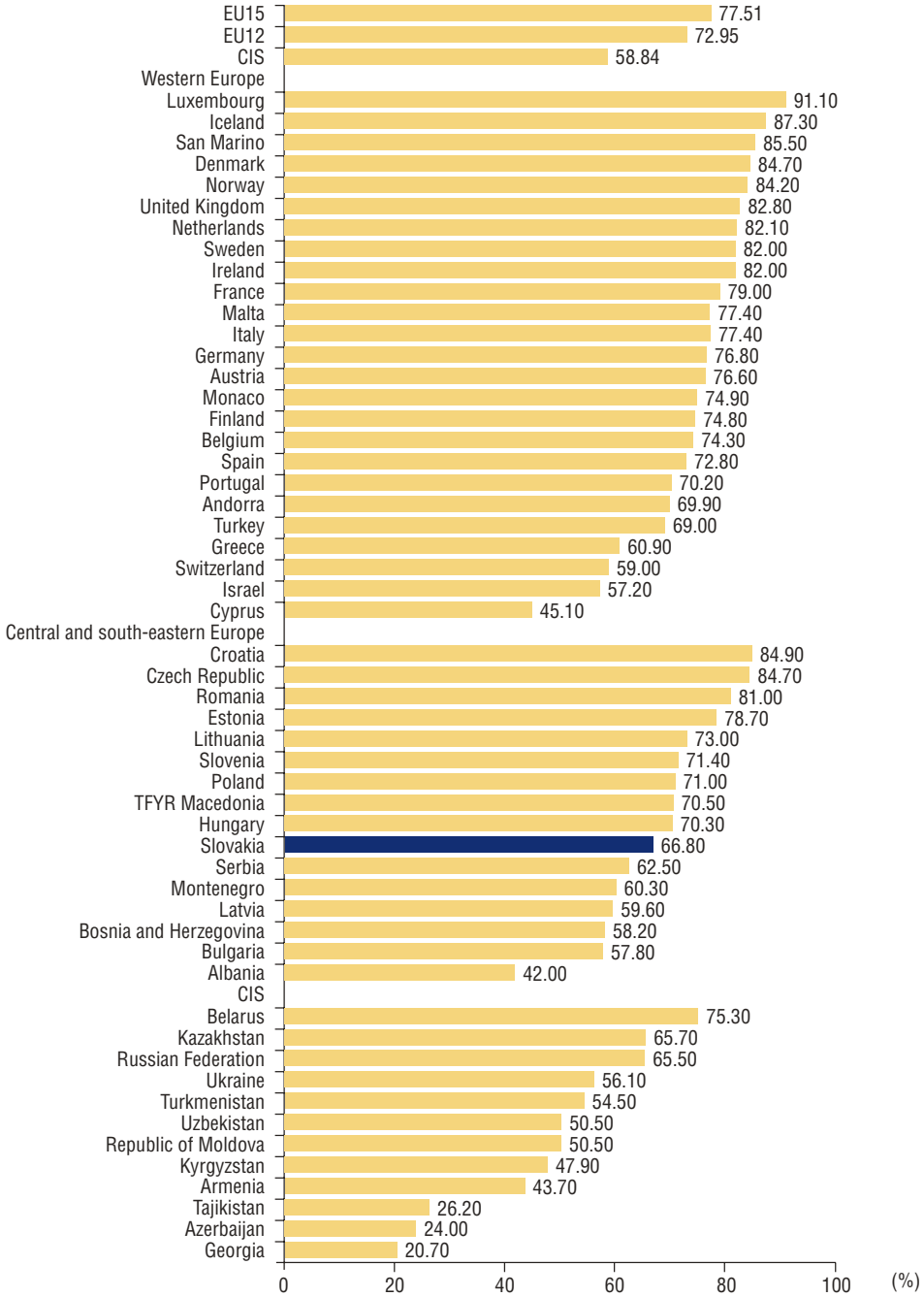
Average values of selected indicators	2003–2006	2007–2010
Mean annual real growth rate in total health expenditure % (in constant prices)[d,e,f]	-0.9	3.0
Mean annual real growth rate in GDP[d,e]	6.3	4.0
Public health expenditure as % of total public expenditure[b,c,e]	81.6	76.7
Public health expenditure as % of GDP[e]	5.6	5.3

Sources: [a]OECD, 2010a; [b]Health insurance companies; [c]Ministry of Finance; [d]Statistical Office of the Slovak Republic; [e]HPI calculations.

Note: [f]Total health expenditure annual growth index (current prices) divided by consumer prices index in consumption branch "health".

Fig. 3.4

Public sector health expenditure as share (%) of total health expenditure, 2008 (WHO estimates)



Source: WHO Regional Office for Europe, 2009.

Slovak health insurance companies spend a relatively high share of their revenue on pharmaceuticals. Pharmaceutical expenditure amounts to 30% of expenditures by health insurance companies (Table 3.3) – compared to 7% on primary care, 11% on ambulatory secondary care and 27% on inpatient ("tertiary") care.

Table 3.3

Health care expenditure by insurance companies

		in € million				as % of total expenditure			
Expenditures		**2007**	**2008**	**2009**	**2010**	**2007**	**2008**	**2009**	**2010**
A	**Health care expenditure total**	**2 751**	**3 160**	**3 173**	**3 311**	**94**	**93**	**96**	**96**
A1	Drugs and medical aids	978	1 105	1 075	1 165	33	32	32	34
	Drugs	880	990	945	1 027	30	29	29	30
	Medical aids	98	115	130	138	3	3	4	4
A2	Ambulatory care	1 002	1 208	1 188	1 191	34	35	36	34
	Primary care	244	285	270	258	8	8	8	7
	Secondary care	324	412	392	364	11	12	12	11
	Dentists	98	119	114	108	3	3	3	3
	Diagnostics and labs	336	392	412	461	11	12	12	13
A3	Tertiary care	752	824	886	931	26	24	27	27
	General hospitals	553	595	645	672	19	17	19	19
	Specialized hospitals	170	191	201	217	6	6	6	6
	Medical centres	3	0	0	0	0	0	0	0
	Nursing homes	26	37	40	42	1	1	1	1
A4	Foreigners, homeless, EU	19	23	24	24	1	1	1	1
B	**Administrative expenditure**	**143**	**216**	**120**	**125**	**5**	**6**	**4**	**4**
C	**Other expenditure**	**36**	**27**	**23**	**26**	**1**	**1**	**1**	**1**
C1	Funding of HCSA	12	14	14	15	0	0	0	0
C2	Funding of emergency operational centres	7	8	9	11	0	0	0	0
C3	Others	16	5	0	0	1	0	0	0
D	**Expenditure total (A+B+C)**	**2 930**	**3 405**	**3 316**	**3 462**	**100**	**100**	**100**	**100**

Source: Data from health insurance companies and HCSA.

3.2 Sources of revenue and financial flows

Following the establishment of Slovakia in 1993, the Bismarck system of SHI was reintroduced by establishing the National Insurance Fund, which was made responsible for financing health, sickness and pension insurance. In 1994, the Act on Health Insurance was adopted, which allowed the establishment of multiple health insurance funds and, at the same time, defined the SHI financing mechanism as a combination of contributions from the economically active population, employers, and contributions from the state budget on behalf of the economically inactive population. In the meantime, a chronic deficit in the system became a problem. Soft budget restrictions, insufficient regulation of the health sector as well as ineffective policies played a key role in growth of the deficit. Therefore, the health reform in 2002–2006 was primarily aimed at tightening budgetary restrictions, increasing the effectiveness of utilization of resources as well as identifying internal reserves of the system. The reform included a transformation of health insurance funds, which were public institutions, into joint stock companies, now called health insurance companies.

Since 1993, health system financing has gone through multiple changes (see also Chapter 6). Substantial changes which have had an impact on the volume of resources in health care include linking the state contributions on behalf of the economically inactive population to economic growth, and increasing these contributions from 4% to 4.9% of the average salary in 2009.

In 2010, the Slovak health system provides universal coverage for a broad range of benefits. The main sources of revenue in the health system are contributions paid to the health insurance companies under the SHI system (see Fig. 3.5). These include contributions by (1) employees and employers, (2) self-employed people, (3) voluntarily unemployed, and (4) "state-insured". The latter term is used for the significant group of mostly economically inactive people for whom the state pays contributions (approximately two-thirds of the population and one-third of total resources from contributions).

Contributions are collected by health insurance companies. The resources of health insurance companies are risk adjusted for two demographic predictors, age and gender of insured, and, since 2010, for the characteristic "state-insured". Between 2008 and 2011, health insurers were allowed to use their profit only for health care purchasing. This legislative measure was heavily criticized by private insurers and led to international arbitrations against Slovakia. The EC sent a formal letter of notice to Slovakia in late 2009 expressing concerns that the law breaches the EC Treaty. In January 2011 the Constitutional court ruled that the profit restriction was unconstitutional and nullified it.

Payments to providers are subject to a contract that determines the amount of payments, the type and quality of services, and the payment system. Furthermore, the health insurance companies fund the HCSA in proportion to their revenue.

Apart from the state-insured, the central government budget finances the activities of several ministries, most notably the Ministry of Health. The Ministry of Health, for example, funds the PHA, the state-run Slovak Health University and covers small investment costs in some state hospitals. Self-governing regions and municipalities are responsible for investment costs in their hospitals and outpatient centres.

Lastly, out-of-pocket payments include direct payments, cost-sharing and informal payments. Because of the very broad definition of the SHI benefit package, VHI plays only a very marginal role.

Table 3.4 provides a breakdown of the resources in the Slovak health care system. The composition of SHI resources has changed significantly since 2002. In 2002, 72% of resources came from contributions of the working population and 28% of the resources were contributions by the state on behalf of the state-insured from general tax revenue. In 2010, the share of these state contributions to total revenue will reach 38%. In 2010, the payment of the state will be 2.0% of GDP, while in 2002 this figure was only 1.4%.

These changes in structure are the consequences of the Insurance Act reform in 2004, which introduced the following measures.

1. Change of state contributions on behalf of the state-insured into a percentage of the average monthly wage. In the past, the state contribution was the result of a political decision, the amount depending on the state budget.
2. The introduction of a precise definition of a state-insured person. Contributions paid by the National Office of Labour for unemployed insured as well as payments by the Social Insurance Company for insured on sick leave were abolished. Both groups became state-insured.
3. Setting the minimum and maximum assessment base as a function of the real economy. Previously, both limits had been set by a fixed price, which resulted in valorization problems (also see section 3.3.2 *Collection*).
4. An annual settlement of the SHI contribution was introduced, in order to consolidate the financial flow as well as to prevent insured individuals avoiding their obligatory contributions by manipulating their income level. At the same time, it protects people who previously had paid high contributions (above the assessment base) or who have double incomes (for example, a job and their own business).

Fig. 3.5
Financial flows in the health care system, 2010

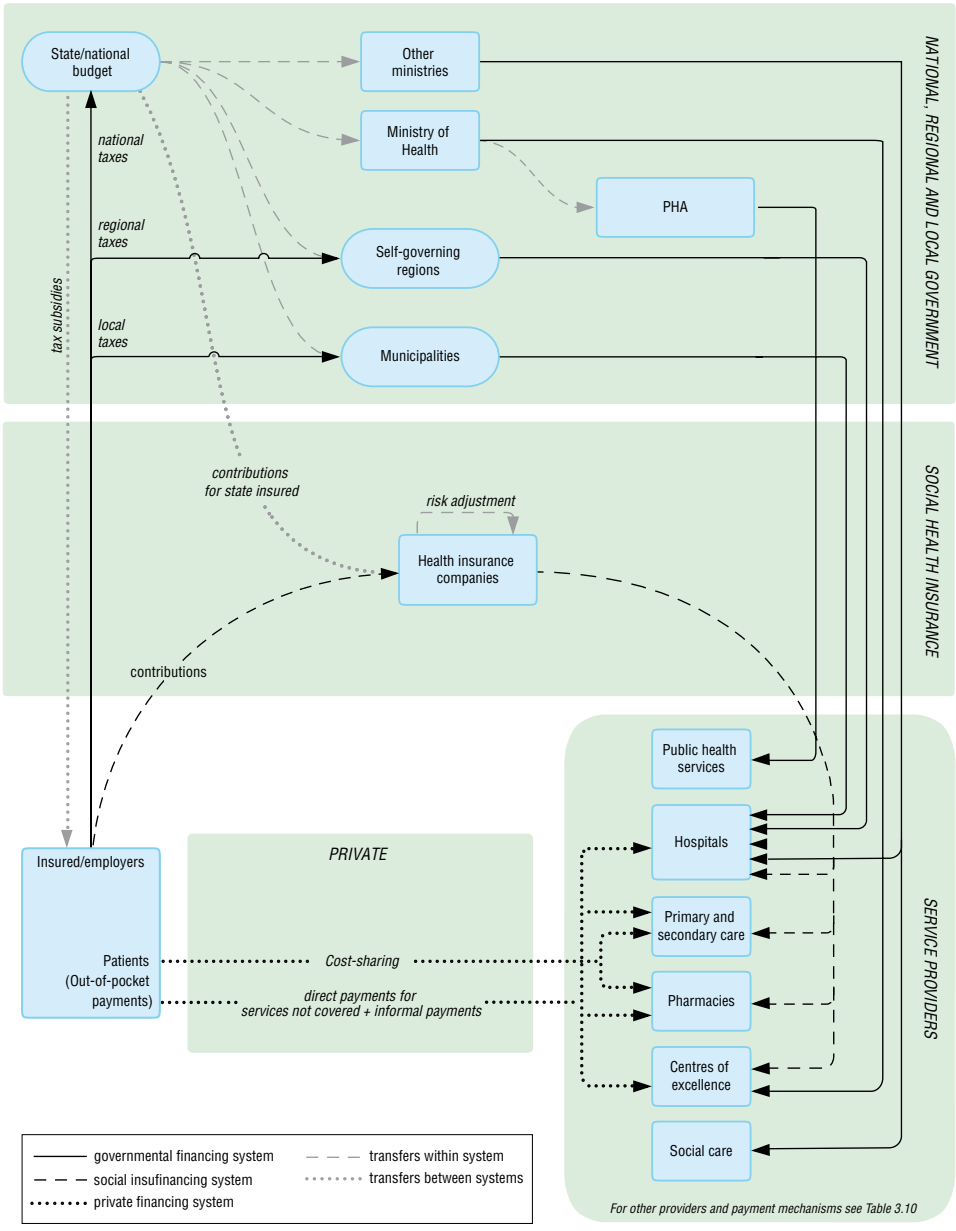


Table 3.4
Resources of the SHI system, as % of GDP and breakdown of economically active and non-active population

	2002	2003	2004	2005	2006	2007	2008	2009	2010[e]
SHI as % of GDP	5.0	4.9	4.9	5.0	4.9	4.7	4.8	5.2	5.2
Contributions from economically active population as % of GDP	3.6	3.6	3.5	3.5	3.4	3.3	3.4	3.4	3.2
Contributions for economically inactive population paid by the state as % of GDP	1.4	1.3	1.4	1.5	1.4	1.5	1.5	1.8	2.0
SHI	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Contributions from economically active population as % of total SHI	72.0	73.0	72.0	71.0	71.0	69.0	69.0	65.0	62.0
Contributions for economically inactive population paid by the state as % of total SHI	28.0	27.0	28.0	29.0	29.0	31.0	31.0	35.0	38.0

Source: HPI compilation based on data from health insurance companies and Ministry of Finance, Statistical Office of the Slovak Republic, 2010.
Note: [e] estimate

3.3 Overview of the statutory financing system

3.3.1 Coverage

Breadth: who is covered?
All residents in Slovakia are entitled to SHI, with the exception of people with health insurance in another state, which may be related to their job, business or long-term residence. The number of insured (5.274 million) is different from the number of inhabitants (5.405 million) because of a number of Slovak citizens who are insured in other EU Member States (approximately 131 000).

People seeking asylum and foreigners who are employed, studying or doing business in Slovakia are also covered by SHI. Those insured are entitled to health care services according to conditions set forth in legislation. Every citizen has an equal right to have his or her needs met, regardless of his or her social position or income. The SHI system is universal, based on solidarity, and guarantees free choice of health insurance company for every insured. A health insurance company can reject a patient only if he or she applied for health insurance at several health insurance companies at the same time. In such cases, the valid application is the one submitted first.

Submitting an application to a health insurance company is the basic obligation of every SHI insured person. After an application has been submitted and acknowledged, a legal relationship between the applicant and

the health insurance company is established. An insured person may opt for another health insurance company once a year, as of 1 January. The application should be submitted to the health insurance company by 30 September of the previous calendar year. The application is validated by the HCSA. Payment of contributions is a condition for receiving health care benefits based on SHI. With the exception of the "state-insured", whose contributions are paid by the state, all insured are obliged to make monthly advance payments and to settle any outstanding balance on their total SHI contribution annually. If this obligation is violated, the insured are entitled only to urgent care and the health insurance company may require reimbursement of the costs.

Scope: what is covered?

The range of benefits available to individuals covered by SHI in Slovakia is broad. The Slovak Constitution guarantees every citizen health care under the SHI system according to the conditions laid down by law. The law outlines a list of free preventive care examinations; a list of anatomic therapeutic chemical (ATC) groups of essential pharmaceuticals without co-payment; a list of diagnoses eligible for free spa treatment; and a list of priority diagnoses (two-thirds of *ICD-10* diagnoses). All health procedures provided to treat a priority diagnosis should be provided free. Non-priority diseases may be subject to co-payments. Until now (2010) procedures for treatment of almost all non-priority diseases are also without co-payment. Services upon a patient's request and not based on his/her health needs are not covered.

The Ministry of Health issues a positive list of reimbursed pharmaceuticals and medical aids each quarter. It sets the conditions of reimbursement and reimbursement level. Approximately one-third of the pharmaceuticals on the list are without co-payment. The decision is made by the Reimbursement Committee based on a set of criteria (for more detailed information see section 2.8.4 *Regulation and governance of pharmaceuticals*).

Depth: how much of the benefit cost is covered?

In the Slovak health system, the introduction of formal cost-sharing in 2003 has noticeably reduced the depth of the coverage. Cost-sharing mainly takes place through a system of small user fees for prescriptions and certain health services (for example, emergency care) as well as co-payments for pharmaceuticals and spa treatments. A reform in 2006 reduced some of the user fees and in some cases abolished them completely. See section 3.5 for more detailed information.

3.3.2 Collection

The SHI system is financed through a combination of contributions from the economically active population and state contributions on behalf of the non-economically active population ("state-insured"). SHI resources include (1) contributions from employees and employers, (2) contributions from self-employed people, (3) contributions from voluntarily unemployed (self-payers) and (4) contributions by the state for the "state-insured". Contributions are collected and administered by health insurance companies.

The SHI contribution is calculated as the product of the insurance contribution rate defined by law and the assessment base. An overview is provided in Table 3.5. The contribution rate for economically active people is 14 %, with employees paying a 4% share and employers a 10% share. The contribution rate for people with severe disabilities is set at 7%, with employees paying a 2% share and employers a 5% share.

The annual assessment base is a sum of specified incomes, mainly related to work (excluding capital and other income). The Insurance Act sets limits to the contribution burden by defining minimum and maximum limits of the assessment base. The minimum assessment base is set at the monthly minimum wage (€296 in 2010). The maximum annual assessment base is three times the monthly national average wage (€2007 in 2010). Also the self-employed have to pay contributions at least from the minimum base, even if they have suffered losses in a particular year. However, their assessment base is calculated as 1 per 2.14 or 46.7% of their taxable income with the same maximum assessment base as employees have. For the voluntarily unemployed (self-payers), the minimum base is 4/14 of the average wage (€191 in 2010).

SHI contributions paid by the state are subject to a separate regulation. In 2010, the contribution rate is set at 4.78% with the national average wage as assessment base. At the beginning of the health reform in 2002–2006, the contribution rate was 4%, and since 2006 it has been rising continuously, reaching 4.9% in 2009. This contribution is paid on behalf of all those who are state-insured. The state contributions based on the average wage replaced arbitrary payments from general taxes.

Table 3.5
SHI contributions in the health insurance system, 2010

Payer	Number of insured (in thousands)	Assessment base	Lower limit of the assessment base (monthly)	Upper limit of the assessment base (monthly)	Collection rate	Contribution rate (%)
Employees	1 744	Wage	Minimum wage (€296)	Three times the average monthly wage (€2 007)	Traditionally very high (ca. 95%)	4.00
Employers						10.00
Self-employed	344	1 per 2.14 of the tax base	Minimum wage (€296)	Three times the average monthly wage (€2 007)	High (ca. 92%)	14.00
Voluntarily unemployed	95	Tax base	4/14 of average wage (€191)	Three times the average monthly wage (€2 007)	Traditionally low (ca. 60%)	14.00
State-insured	3 091	Average monthly wage in year before last	–	–	100%	4.78

3.3.3 Pooling of funds

Contributions are collected directly by health insurance companies from employers, the self-employed, self-payers (voluntarily unemployed) and the state. The distribution of revenues and expenditures among the health insurance companies is unequal due to the different structure of their insured populations. To alleviate the financial burden on health insurance companies with a higher-risk portfolio and to reduce the potential for risk selection, SHI contributions are redistributed among the health insurance companies using a risk-adjustment scheme.

Between 1995 and 2004, there was an internal system of risk adjustment, which was administered by the state-owned General Health Insurance Fund using a special "central redistribution account". Since it was administered by the General Health Insurance Fund, which was also responsible for the central register of insured, it was frequently criticized on the grounds that its decision-making was not independent. Until 2004 it was quite common for health insurance funds not to pay into the central account, without any consequences such as licence withdrawal or limitation of their activities.

With the 2004 reform, the internal risk-adjustment scheme was replaced with an external risk-adjustment system supervised by the HCSA. The HCSA

also became responsible for administering the central register of insured. Using risk adjusters, the receivable–payable relations between health insurance funds are calculated. As a result, each health insurance company knows which health insurance company is the debtor and which health insurance company is the creditor.

As of 2009, 95% of the contributions are subject to risk adjustment. This is to motivate the health insurance companies to increase their level of collected contributions (for example from defaulters). Risk adjustment is performed on a monthly basis and is accounted annually.

Until 2009, the redistribution system took only two demographic risk adjusters into account – age and gender of the insured. However, evidence shows that age and gender predict less than 5% of health care costs variability in Slovakia. In January 2010, a new risk adjuster was added to the redistribution mechanism. The age- and gender-related risk index is defined separately for the state-insured and insured people for whom the state does not pay contributions. The state-insured are legally defined in a heterogeneous list of individuals of widely diverging social status and different needs for health care services. This could make certain subgroups more attractive (for example students) than others (for example unemployed). Thus, this new risk adjuster may increase the incentive for risk selection (Szalay, 2008). Although efforts by health insurance companies to focus their marketing communication on selected target groups were observed in the past, analysis of insured mobility does not confirm the effectiveness of such efforts (Pažitný et al., 2008).

After several changes (see Table 3.6), the risk-adjustment system as of 2010 works as follows:

1. Insured are divided into groups by age (five-year cohorts), gender and economic activity. There are 68 groups of insured altogether.
2. Each insured is assigned a risk index according to his/her risk group. This equals the proportion of average costs of one insured in a given group to the average costs of one insured in the group with the lowest costs.
3. Subsequently, each insured is weighted using his/her risk index, which results in a standardized insured. The total sum of all standardized insured is calculated as the sum of products of insured and their risk index across all 68 groups.
4. Standardized income from redistribution of one standardized insured is calculated as follows: redistributed resources (95% of all contributions) divided by the number of all standardized insured.

5. The volume of resources from redistribution for each health insurance company is calculated as a product of the number of standardized insured and the contribution from redistribution per one standardized insured.
6. Subsequently a redistribution matrix is created, which determines for each health insurance company the amount payable to or receivable from other health insurance companies.

Table 3.6

Changes to risk adjustment in the period 1995–2010

Change valid as of	Risk adjusters	Subject to risk adjustment (% of contributions collected)	Other changes
1.1.1995	age-related risk coefficient of an insured of the state < 60 years: 1.0 and > 60 years: 3.0	60.0	
1.1.1996	age-related risk coefficient of an insured of the state < 60 years: 1.0 and > 60 years: 3.0	80.0	
1.1.1997	age-related risk coefficient of an insured of the state < 60 years: 1.0 and > 60 years: 2.5	75.0	
1.8.1997	age-related risk coefficient of an insured of the state < 60 years: 1.0 and > 60 years: 2.0	70.0	
1.6.1998	age-related risk coefficient of an insured of the state < 60 years: 1.0 and > 60 years: 2.5	65.0	
1.7.1999	Insured are divided into 34 groups by gender and age in five-year cohorts; each group has a risk index with the lowest set to 1.0	100.0	
1.8.2002		85.0	
1.1.2005		85.5	Abolition of the special redistribution account and creation of redistribution matrix Redistribution cash flow controlled by HCSA
1.9.2005		85.5	Monthly redistribution cash-based and annual redistribution based on required contributions
1.1.2009		95.0	
1.1.2010	New risk adjuster (economic activity) added to gender and age: insured are divided into 68 groups; each group has a risk index with the lowest set to 1.0	95.0	

The General Health Insurance Company is the biggest recipient of redistribution resources. Since it was the only insurer on the market in 1994, historically it has an over-representation of the elderly. When new health insurance companies entered the market, it was generally the younger (healthier) people who switched health insurance companies.

3.3.4 Purchasing and purchaser–provider relations

Health care purchasing is based on selective contracting. This means that health insurance companies may have different contracts with different providers and that providers may have different contracts with different health insurance companies. Apart from state-owned hospitals, emergency services, GPs and pharmacies, health care providers are not implicitly entitled to have a contract with a health insurance company. The quality and price, and thus maintaining minimum accessibility of health care, are the determining criteria when contracting providers. The HCSA is in charge of monitoring the purchasing of health care services (see also section 2.8.1 *Regulation and governance of third-party payers*).

The contractual parties settle on conditions in the contract, including the scope and price of health services. The prices of health services are mostly freely negotiable. Health care providers enter into a contract directly with health insurance companies. The contracts are concluded for a period of one year, in accordance with the minimum contract duration set by law. To assure a minimum network of providers, health insurance companies must contract a minimum number of outpatient providers and a minimum volume of bed capacity in different self-governing regions. In 2007, the state strengthened its role in health care by adjusting the definition of a minimum network. An obligation of health insurance companies to contract all state hospitals, without meeting quality and effectiveness criteria, was laid down in a government regulation.

If the contracted limit is exceeded, the services performed by health care providers are not reimbursed by health insurance companies. In 2007, the difference between actual services delivered and reimbursed services mounted to €69 million, that is, 2.43% of total services delivered in 2007 (HCSA, 2008).

Once every nine months, the health insurance companies must publish the contract requirements for health care providers in terms of technical equipment, personnel and quality indicators. The latter are defined by the Ministry of Health. Every six months, the health insurance company must also publish price offers from competing providers who have met their contract requirements. As of 31 December each year, the rating of providers, according to which the contracts are concluded by the health insurance company involved, is updated.

Health insurance companies present draft contracts to health care providers. Professional organizations take part in most of the negotiations on contractual conditions, but they rarely have an authorization from their members to negotiate on their behalf. The framework agreement is therefore more a recommendation than an obligation, setting only a minimum tariff and volume.

Some professional organizations negotiate contracts with health insurance companies on behalf of their members. Examples include the Zdravita association of outpatient physicians, which negotiates on behalf of approximately 1800 members, and the Slovak Medical Chamber, which negotiates on behalf of approximately 100 of its 18 000 members. The negotiated tariffs in the contract are shared by all members. The volume of health services is individually negotiated. These volumes are based on historic performance of the health care provider involved. If an association member is not satisfied with the contract volumes, he or she may negotiate directly with the health insurance company, supported by a representative of the association.

Possible disagreement on contracts is not specifically addressed in legislation. Health care providers are motivated to negotiate a contract or risk ending up empty-handed. Health insurance companies, in turn, need to contract in order to fulfil the minimum network requirement.

According to the HCSA, there is a significant difference in average prices between university (state-owned) and general (mostly non-state) hospitals, ranging between 30% and 104%. This difference does not correspond with the difference in difficulty and complexity of care according to a case-mix index (Pažitný, 2008).

3.4 Out-of-pocket payments

According to the Statistical Office of the Slovak Republic, an average Slovak spends more than €200 annually on health out of pocket (Table 3.7). In 2009, out-of-pocket expenditure amounted to 1.8% of GDP. As share of total health expenditure, Slovaks spent 23.6% on health out of pocket in 2009, a significant rise from 2002 when it was only 11.7%. The main reasons for increasing out-of-pocket expenditure are rising co-payments on drugs, higher spending on OTC drugs, increased use of private providers by patients, and increase of different administrative fees and informal payments in the state sector.

Table 3.7

Private expenditure according to national data

Private expenditure	2002	2003	2004	2005	2006	2007	2008	2009
Per capita in €	53	70	112	126	141	172	186	211
Total in € million	288	380	604	678	761	929	1 003	1 142
as % of GDP	0.8	0.9	1.3	1.4	1.4	1.5	1.5	1.8
as % of total expenditure	11.7	13.9	18.8	19.6	21.5	23.5	22.8	23.6

Source: Data from Statistical Office of the Slovak Republic.

Out-of-pocket payments in Slovakia mainly consist of (1) user fees for prescriptions and various health services; (2) co-payments for prescription pharmaceuticals and spa visits; and (3) direct payments for OTC pharmaceuticals, above-standard care, preferential treatment and care not covered by SHI (see Tables 3.8 and 3.9).

3.4.1 Cost-sharing (user charges)

In 2003, measures were introduced to stabilize the financing system. One of the measures was the introduction of an elaborate system of user fees for a doctor's visit (€0.66), one day of hospital stay (€1.66; plus €3.32 for accompanying people), a prescription (€0.66), emergency care (€1.99), ambulance transport (€0.07/km) as well as for food and accommodation in spas (€4.98–7.30 per day). Following the change of government in 2006, user fees for a doctor's visit and one day of hospital stay were abolished. The fee for a prescription was reduced to €0.17, which is paid in addition to co-payments where the price of the drug is above the reference price.

A full overview is provided in Table 3.8. User fees are analysed in more detail in section 6.3.1 *Introduction and subsequent abolition of user fees*.

Table 3.8
Cost-sharing in the health care system, 2010

	Co-payments	User fees
Pharmaceuticals, medical devices, dietary food	Co-payment for 3 114 pharmaceuticals out of 4 575 (resulting from reference pricing system)	€0.17 for a prescription
Primary ambulatory care	No co-payment	€0.00
Secondary ambulatory care	No co-payment	€0.00
Inpatient health care	No co-payment	€0.00
Spa	According to categories, diagnoses in category B are partially covered by HICs	€1.66–7.30/one day of stay
Shared examination and medical units	No co-payment	–
Emergency medical service	No co-payment, unless misusing the service	–
24/7 first aid medical service	No co-payment	€1.99 for a visit
Transport health service	According to local conditions	€0.07/km

3.4.2 Direct payments

Direct payments are payments made at the point of use for goods or services that are not covered by SHI. In Slovakia, these mainly consist of OTCs and non-SHI services, as well as preferential appointments. A full overview is provided in Table 3.9.

Table 3.9
Direct payments in the health care system, 2010

	Health services not covered by SHI	Above-standard services	Non-contracted providers
Pharmaceuticals, medical devices, dietary food	e.g. OTCs	–	All pharmacies are contracted by health insurance companies, however, full payment by a patient is required where a medication is prescribed by a non-contractual provider
Primary ambulatory care	e.g. vaccination, medical examination required by an employer, etc.	Direct payments for preferential appointments, timing of appointments, issuing certificates upon request of a third party, etc.	Not applicable – all providers must have a contract with the HIC
Secondary ambulatory care	e.g. IVF (first three cycles are co-financed), circumcision, cosmetic plastic surgery, anaesthesia upon the patient's request, etc.	Direct payments for preferential appointments, timing of appointments, issuing certificates upon request of a third party, etc. Membership fees, registration fees for individual management of a patient	Full coverage by patient, financial participation of HIC in case of pre-authorization
Inpatient health care	e.g. induced abortion upon request of the patient, sterilization, plastic surgery, etc.	Membership fees, registration fees for an individual management of a patient Above-standard accommodation and meals	Full coverage by patient, financial participation of HIC in case of pre-authorization
Spa	e.g. medical procedures not covered by HIC or stay upon the patient's request	Above-standard accommodation and meals	Full coverage by patient, financial participation of HIC in case of pre-authorization
Laboratory diagnostics and radio-diagnostics (X-ray, CT, MRI, PET)	e.g. medical examinations upon the patient's request, e.g. paternity test	Preferential medical examination upon patient's request	Full coverage by patient
Emergency medical service	–	–	Not applicable – HICs are obliged to contract each emergency medical service
24/7 first aid medical service	–	–	Every provider must provide urgent care

3.5 Voluntary health insurance (VHI)

Private VHI is part of the commercial insurance system. Commercial insurance companies can offer private VHI and are allowed to make a profit. The National Bank of Slovakia is responsible for monitoring private VHI. So far, private VHI plays only a marginal role due to the broad benefit package and low official cost-sharing requirements. According to the National Bank of Slovakia, total VHI premiums are approximately €1 million (in 2009). Thus they account for only 0.02% of total health expenditure and 0.2% of overall non-life insurance premiums.

3.6 Other financing

Since Slovakia's SHI system provides a broad range of benefits and universal coverage, the role of other sources of funding is rather limited. However, all employers must offer an occupational health service for employees working in high-risk environments since 2008 (see also section 2.6).

Furthermore, under the management of the Ministry of Health there are two EU-funded operational programmes. The objective of Operational Programme Health (€250 million) is the improvement of conditions influencing the health status of the economically active and the economically inactive populations. The main strategy is capital investments in hospitals and outpatient facilities (buildings, medical equipment and information technology [IT]). The objective of Operational Programme Education (€36.5 million) is to support the education of health professionals. The strategy is to invest in further education and specific training.

There are also EU structural funds (not under Ministry of Health management) used in health care, such as Operational Programme Information Society (e-health), Operational Programme Employment and Social Inclusion (further education of health care professionals) and Operational Programme Environment (capital investments into heat generation and waste management of health care providers)

3.7 Payment mechanisms

Providers are paid according to an individual contract, which determines the amount, the nature and quality of services as well as the payment system. A given health insurance company may have negotiated different prices for different providers, which is particularly the case in inpatient care. Outpatient health care providers and providers of laboratory diagnostics operate with uniform prices. A health care provider can be paid higher prices, when the quality or effectiveness criteria in the contract are met; or paid lower prices when these criteria are not met.

3.7.1 Paying for health services

In the past, payment mechanisms and prices for health services were determined at the central level by the Ministry of Finance and the Ministry of Health. Since 2003, health reform has brought a gradual deregulation of the majority of prices and payment mechanisms. At present, the Ministry of Health only

sets maximum prices for pharmaceuticals, medical devices and dietary foods in outpatient care; 24/7 first aid medical services; social services covered by public resources; induced abortions; and preventive care for active athletes below 18 years of age. The prices of emergency medical services are fixed.

Prices and payment mechanisms for other health services are subject to contractual conditions as negotiated between health insurance companies and health care providers. Payment mechanisms were slow to follow the deregulation of prices. Today's payment mechanisms (see Table 3.10) represent mostly just a modification of the original models.

Payments for *primary outpatient health care* are a combination of capitation and fees for certain medical procedures not covered by the capitation but included in SHI benefits, such as preventive care and some costly examinations like C-reactive protein, ECG or colorectal cancer screening. The amount of an insured person's capitation payment is age-dependent and generally equal for all health care providers. The recent implementation of differentiated capitation payments, based on certain quality and effectiveness criteria, is an exception. The system of capitation payment is an advantage for health insurance companies in terms of controlling their costs because it allows them to know the exact cost in advance. On the other hand, it does not motivate GPs to perform more costly medical procedures since they bear all the risk.

Specialists in outpatient care are paid on a fee-for-service basis. Each medical procedure has an assigned number of points, and health insurance companies negotiate the fee for one point (point value) with health care providers. Since 2005, the numbers of points, issued by the Ministry of Health and originally representing a fixed payment mechanism, do not represent an obligatory mechanism for health insurance companies. The insurance companies and providers are free to negotiate any payment mechanisms in contracts. Despite this, all health insurance companies have been using the points system. With this system, the specialists have an incentive to treat patients, but the system may not motivate to cure patients. This makes it difficult to control the volume of the services provided and thus the costs. Therefore, most health insurance companies negotiate a maximum volume of points to be reimbursed. If the health care provider exceeds the negotiated volume, the health insurance company does not have to reimburse the extra points. Whether the health insurance company will cover the costs or not depends on the negotiated contract. Some health insurance companies have introduced differentiated point values, depending on the provider's quality and effectiveness. One health insurance company applies a differentiated point value, depending on the number of medical procedures performed in a given month. In this system, the point value decreases with

Table 3.10
Payment mechanisms in health care purchasing in 2010

Type of health care	Central regulation of payment mechanisms	Non-regulated payment mechanisms
Primary outpatient care	Pharmaceutical prices in ambulatory medical procedures	Capitation according to age; some HICs use: – differentiated capitation depending on quality parameters and providers' effectiveness – payment for procedures in selected medical examinations (preventive procedures, ECG, C-reactive protein, patient's home visit, etc.)
Specialized outpatient care	Pharmaceutical prices in ambulatory medical procedures	Fee for service; some HICs use: – maximum volumes of health care covered – differentiated prices depending on quality parameters and provider's effectiveness – degressive fee for point
Diagnostic and laboratory procedures		Fee for service; some HICs use: – maximum volumes of health care covered – differentiated prices according to specialization, accreditation and 24/7 service
Inpatient health care facilities (except hospices, psychiatric institutions, pharmaceutical rehabilitation clinics)		Case-based payment for hospitalization completed according to specialization and type of health care facility; some HICs consider: – length and category of hospital stay – case-mix index – differentiated prices depending on quality parameters and provider's effectiveness – maximum volumes of health care covered – selected procedures are covered by particular performance (e.g. anaesthesia, transplantation) – selected medical devices covered separately (joint replacements, pacemaker, etc.)
Hospices, psychiatric institutions, drug dependency inpatient care		Payment for one day of hospital stay; some HICs use: – maximum volume of health covered – case-mix index – differentiated prices depending on quality parameters and provider's effectiveness
Natural healing spa		Payment for one day of stay
Emergency medical service	– fee for different services within emergency care (ambulance with or without a physician, mobile intensive unit) – fee/km	
24/7 first aid medical service	– fee according to the number of insured of HIC – regulated fees for medical procedures	
Transport health service		– fee/km; some HICs use: – differentiated prices according to type of transport – maximum volume of health care covered
Pharmaceuticals, medical devices and dietary food	Maximum coverage for a product or item	Direct purchasing of pharmaceuticals, medical devices or dietary food by HIC
Retailer's margin	Percentage fee from the product's or item's price, the fee in pharmaceuticals depends on the price of a pharmaceutical (degressive margin)	

the increase in number of procedures performed (degressive point value). Pharmaceuticals given to a patient during outpatient visits are reimbursed to a physician in addition to the capitation and fee-for-service payments by the insurance companies. The positive list of reimbursed pharmaceuticals as well as the reimbursement level are defined by the Ministry of Health (see section 2.8.4 *Regulation and governance of pharmaceuticals*).

The prices for *diagnostic and laboratory procedures* are also deregulated, but all the health insurance companies still use the points system. However, health insurance companies apply volume limits for providers of diagnostic and laboratory tests as well as differentiated fees according to specialization, accreditation and for 24-hour health services.

Medical procedures in *inpatient care* are paid using a case-based system. The health insurance company reimburses the hospital for a completed hospitalization of a patient according to the specialization and type of health care facility. Prices for completed hospitalization are contracted on an individual basis between health insurance companies and hospitals. Some health insurance companies set the prices depending on the length of a hospitalization; a patients' case-mix index, which takes into account severity of the hospitalization; and on quality and effectiveness parameters. In order to control the costs, some health insurance companies negotiate a maximum volume of reimbursed health care services. Some procedures, costly pharmaceuticals and medical devices such as artificial joints and pacemakers are reimbursed separately from the hospitalization fee.

The prices in *chronic and psychiatric health care*, as well as *balneal treatment* are set for one day of stay and are subject to negotiations between a health care provider and a health insurance company.

The 2004 reform changed the payment mechanism for *emergency medical services*. Health insurance companies pay a fixed price per ambulance car plus mileage, both determined by the Ministry of Health. Payments for 24/7 first aid medical services are regulated on a central basis, covered by health insurance companies according to their market share.

Transport for receiving a health service is priced by mileage; some health insurance companies set prices according to the type of transport or maximum volume of health care covered.

Pharmaceuticals, medical devices and dietary foods are included in hospitalization costs. In the case of expensive medical devices, health insurance covers the price above the limit set for hospitalization. In ambulatory care, these services are covered by SHI when prescribed by a contracted physician.

The maximum amount to be covered is set by the Ministry of Health. The health insurance companies must reimburse the costs for pharmaceuticals to the pharmacy where the patient received his or her prescription, or to a health care provider if the patient was administered a pharmaceutical in ambulatory care.

In case of *non-contracted care*, a health care provider can charge the patient directly. The tariffs for non-contracted care must be published by the provider. If an insured person opts for a non-contracted health care facility, he or she must approach his or her health insurance company for pre-authorization. In case of an approval, the costs will be reimbursed afterwards, either fully or up to a certain amount.

Whether payment mechanisms will develop further depends on the negotiations between health insurance companies and health care providers. Both parties have an incentive to improve the mechanisms, so that the systems better reflect the quality of provided care and its intensity. In ambulatory care, health care companies are expected to apply mechanisms to improve the quality and effectiveness of the health care provided.

Implementation of protocols into contracts with health care providers, resulting in a fee for health outcome could be the most important development. Protocols should ensure standardization of processes as well as good quality and effective health care for those insured. The use of outcomes will motivate health care providers to improve the health of patients. Introducing a more sophisticated DRG model could more accurately reflect costly hospitalizations. This will require a long preparatory process as there is a lack of data on the severity of hospitalization cases.

3.7.2 Paying health care professionals

Private physicians in ambulatory care are financed by earnings from contracts with health insurance companies, as well as by earnings from direct payments by patients for services not covered by SHI. The earnings cover all the expenses for outpatient care provided as well as the salaries of health care personnel.

Prior to 2005, health care personnel in inpatient care facilities were paid according to a uniform system for public service staff. Since January 2005, the financing of personnel in inpatient health care facilities has changed. Employees are hired/fired according to the Labour Code. The amount of salaries depends on collective agreements between the employees' representatives (trade unions) and the employers' representatives. These agreements are decentralized, so salary levels vary across the country.

The growth of average monthly salaries in health care during the past 10 years shows significant fluctuations (see Table 3.11). Until 2000 and in the period 2002–2005, this growth was less than 5% per year, that is, less than the average monthly salary in the Slovak economy. In 2000–2002 and since 2006, growth was more rapid than average salary growth. In 2006 and 2007, the salaries of physicians increased by more than 17% (2.3 times more than average salaries) and salaries of nurses increased by 25% (3.3 times more than average salaries).

Table 3.11

Average wage of physicians and nurses, and average wage in Slovakia (€)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average wage of physicians [a,b]	579	581	598	711	825	837	862	1 041	1 147	1 346	1 537	1 506
Average wage of nurses [a,b]	304	308	316	373	441	447	460	479	541	632	710	737
Average wage in economy [c]	332	356	379	410	448	477	525	573	623	669	723	745
Average wage of physician/ average wage in economy	1.7	1.6	1.6	1.7	1.8	1.8	1.6	1.8	1.8	2.0	2.1	2.0
Average wage of nurse/ average wage in economy	0.9	0.9	0.8	0.9	1.0	0.9	0.9	0.8	0.9	0.9	1.0	1.0

Source: Data from: [a] SOZZASS, [b] NCHI, [c] Statistical Office of the Slovak Republic.

4. Physical and human resources

Three steps need to be taken to enter the Slovak health care provision market. First, the health care professionals have to obtain a licence from the Slovak Medical Chamber. Second, the provider has to obtain a permit from the self-governing region or the Ministry of Health depending on what type of provider it is. In this step, the health care facility is required to meet certain technical conditions as well as certain personnel requirements. Third, providers need to submit a request for a contract with a given health insurance company. However, it needs to be noted that meeting the first two conditions does not guarantee obtaining a contract and that providers may also provide services without a contract with a health insurance company.

Capital investments from the Ministry of Health budget were abolished in 2003. Instead these resources were allocated to health insurance companies to include amortization in their payments to providers. Acute beds, psychiatric beds and long-term beds have seen a gradual decline in relative and absolute terms since 2000, although the number of acute beds is still among the highest in Europe. An active bed reduction plan provided the basis for adjustments in the structure of both inpatient and outpatient care providers: 6000 acute beds were eliminated or transformed into chronic care beds; three acute care hospitals were closed and several others transformed into almost exclusively chronic (long-term) care facilities. A decline in the number of beds per 1000 population and the occupancy rate can be explained by the aforementioned active reduction policy, a simultaneous decline in the average length of stay in acute hospitals and gradually decreasing number of admissions. Substitution by one-day surgery procedures lags behind, although a dynamic growth of facilities with one-day surgery has been observed in the past years.

Compared to other countries, the number of physicians and nurses per capita was similar to those of the EU15 until 2001. After 2001, Slovakia witnessed a continuous fall in the number of physicians and nurses in relation to the

population, although their numbers remain above the EU12 average. These changes are closely linked with the migration of doctors and nurses abroad and the restructuring of health care facilities. National data show that, since 2006, the health workforce has started to increase again. Yet the ageing workforce combined with migration of health care workers may reinforce the shortage of health care workers. Although exact data on migration are lacking, this is considered common knowledge. Health care workers may receive professional qualifications in four ways. They may complete (1) a Bachelor's or Master's degree in an accredited university programme, or (2) higher vocational training, (3) full secondary vocational training, or (4) secondary vocational training in degree programmes of secondary health schools.

4.1 Physical resources

4.1.1 Capital stock and investments

In 2008, there were 138 hospitals in Slovakia, 73 of which were general hospitals and 65 specialized hospitals or inpatient facilities (Table 4.1). A study carried out in 2004 found that the technical infrastructure of hospitals is unsatisfactory and old fashioned (see Table 4.2), which leads to their ineffective management (Sanigest International, 2004). The average age of the Slovak hospitals was 34.5 years. In 2004, a hospital site consisted of 30 buildings on average, but some health care facilities owned up to 81 buildings (for example Faculty Hospital in Martin). Capital investments from the Ministry of Health budget were abolished in 2003 to avoid non-transparent decisions. Instead, these budget resources were allocated to health insurance companies to include amortization in their payments to providers. See also section 2.8.6 *Regulation of capital investment*.

Table 4.1
Number of hospitals

	2005	2006	2007	2008
General hospitals	83	79	80	73
Specialized hospitals	59	70	69	65
Hospitals total	142	149	149	138

Source: OECD, 2010a.

Table 4.2
Technical operating conditions of buildings by hospital categories (%)

Hospital category	Good	Satisfactory	Reconstruction needed	Poor	Unacceptable
General hospitals	2	41	27	17	13
Specialized hospitals	7	38	43	11	1
All hospitals	4	40	35	14	7

Source: Sanigest International, 2004.

4.1.2. Infrastructure

A minimum network of providers is set by government regulation and defines the density and structure of health care providers across Slovakia. In primary care, a GP is entitled to a contract as soon as a patient registers with him or her. In ambulatory secondary care, the minimum network is defined as a minimum number of specialists by type in a given region. The health insurance company may contract more capacity if they have enough resources. In inpatient ("tertiary") care, the minimum network is defined similarly to secondary care. However, the regulation also explicitly states that certain state-owned hospitals must be contracted, even if quality and price do not match those of their competitors. These state-owned hospitals are deemed crucial in guaranteeing geographical accessibility of specialized services.

In 2007, there were 26 546 acute beds, 4450 psychiatric beds and 4403 long-term beds in Slovakia. All three types of beds have seen a gradual decline in relative and absolute terms since 2000 (see Table 4.3). A bed reduction plan, which was adopted in 2002, provided the basis for adjustments in the structure of both inpatient and outpatient care providers. The total number of acute beds was reduced; 6000 were eliminated or transformed into chronic care beds (which, however, were also reduced). Three acute care hospitals were closed and several others transformed into almost exclusively chronic (long-term) care facilities. In two cases, hospitals were merged and in many cases superfluous buildings were sold. After this reduction, the Ministry of Health still spoke, in 2006, of an excess of 6500 beds in general. In case of extraordinary situations such as crisis situations or pandemics, the Ministry of Health guarantees an increase in production ability of the health sector by increasing the number of beds.

Viewed from a European perspective, in the early 1990s the number of acute beds per 1000 population in Slovakia was one of the highest in Europe, well above the average of the countries that would later form the EU27 (see Fig. 4.1).

At the same time, the occupancy rate for acute beds (77.2) was roughly on the EU12 average and slightly above the EU15 average, as shown in Fig. 4.2. Even though the number of acute beds has steadily declined, it was still among the highest in Europe in 2008. The acute bed occupancy rate fell as well – to 67.5 in 2008, which was well below the EU12 average (71.5) and EU15 average (77.2 in 2006). The reductions in the number of beds per 1000 population and occupancy rate can be explained by the active reduction policy mentioned above and simultaneous decline in the average length of stay in acute hospitals (see Fig. 4.3) and gradually decreasing number of admissions (see Table 4.4 – here for all beds combined). Indeed, the strong and almost continual decrease in the average length of stay in acute care hospitals in Slovakia since 1990 has closely followed the trend observed in the new EU Member States. In 2008, patients in Slovakia averaged a 6.9-day stay in acute care hospitals, showing a steep drop from 2007, and falling below the averages of Germany and the Czech Republic. So far, substitution by one-day surgery procedures lags behind, although a dynamic growth of facilities with one-day surgery has been observed in the second half of the 2000s (24 facilities in 2005, 52 facilities in 2006).

Health care facilities are usually closed due to a lack of contracts with health insurance companies and/or as a result of negative financial results. The fact that Slovakia does not have a long-term infrastructure plan has led to imbalances in the number and structure of hospital beds as well as a considerable migration between regions. Approximately every ninth patient is hospitalized in another region than his/her region of residency (Szalay, 2008). Furthermore, the distribution of long-term care beds also reveals significant regional discrepancies.

Table 4.3

Acute, psychiatric and long-term care beds

Year	Acute		Psychiatric		Long-term	
	Total	Per 1 000 population	Total	Per 1 000 population	Total	Per 1 000 population
2000	31 101	5.8	5 031	0.9	6 201	1.2
2001	29 932	5.6	5 003	0.9	6 314	1.2
2002	29 487	5.5	5 060	0.9	6 167	1.2
2003	28 058	5.2	4 831	0.9	6 084	1.1
2004	26 620	5.0	4 669	0.9	5 919	1.1
2005	27 003	5.0	4 502	0.8	5 124	1.0
2006	26 307	4.9	4 432	0.8	4 514	0.8
2007	26 546	4.9	4 450	0.8	4 403	0.8
Change (%)	-15		-12		-29	

Source: NCHI, 2008.

Table 4.4

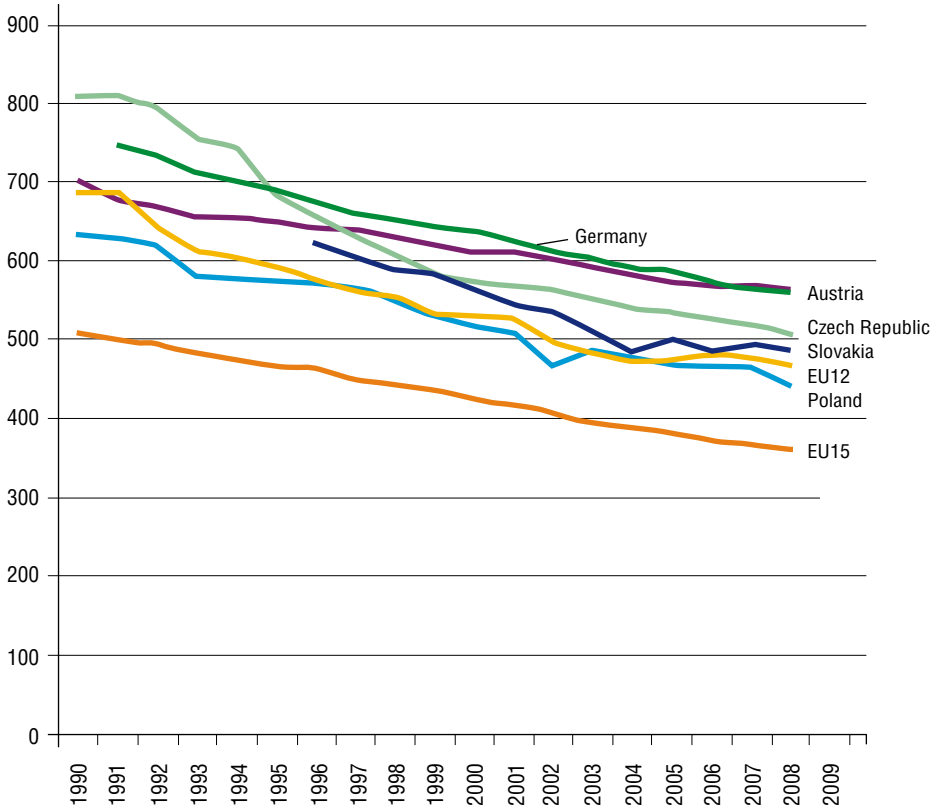
Utilization of bed capacity

	2000	2001	2002	2003	2004	2005	2006	2007	Change (%)
Number of physician posts	6 143	5 966	5 783	5 470	5 260	5 088	5 028	5 334	-13
Admissions (000s)	1 074	1 063	1 022	1 001	1 002	995	1 006	1 022	-5
Average length of stay (days)	10.2	10.0	9.4	9.1	9.1	8.9	8.8	8.7	-15
Number of days of stay	10 991	10 605	9 650	9 136	9 095	8 840	8 846	8 842	-20
Occupancy rate (%)	70.5	70.4	65.4	63.6	67.4	67.5	68.3	68.7	-3

Source: NCHI, 2008.

Fig. 4.1

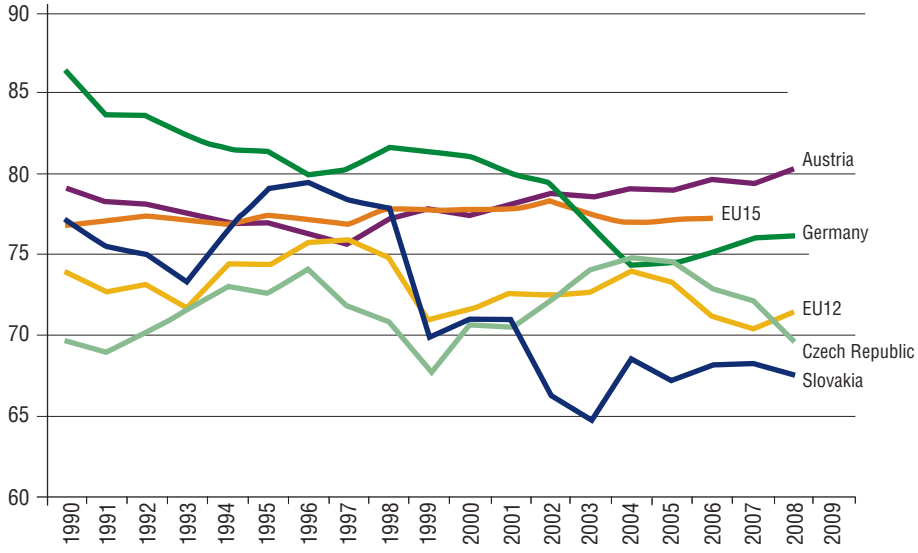
Beds in acute hospitals per 1 000 population in Slovakia and selected countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010.

Fig. 4.2

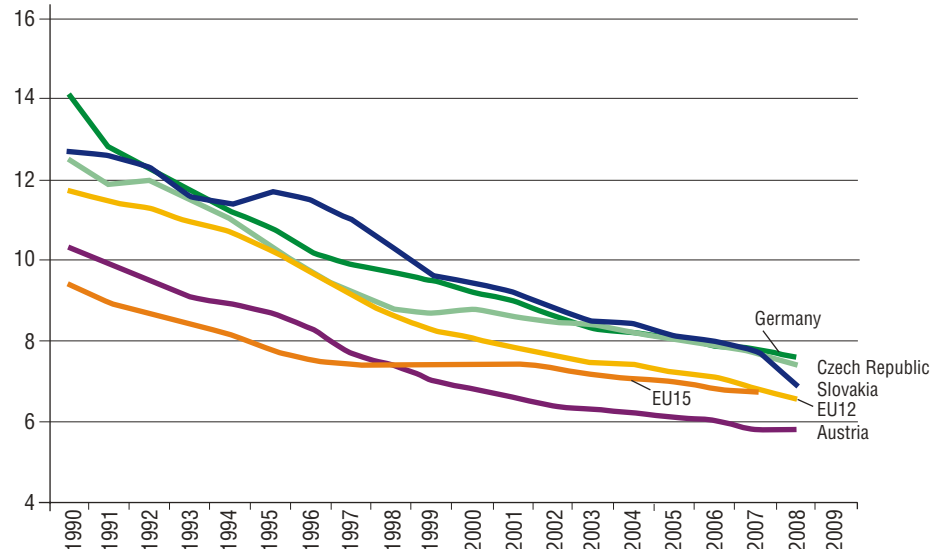
Bed occupancy rates (%) in acute-care hospitals in Slovakia and selected countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010.

Fig 4.3

Average length of stay in acute-care hospitals in Slovakia and selected countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010.

4.1.3 Medical equipment

The purchasing of big-ticket medical equipment and technologies is currently not regulated by legislation. Although health insurance companies are required to guarantee a minimum provider network and bear formal responsibility for the accessibility of health care, ensuring the availability of certain technologies and providers, however, is neither specified nor regulated.

Only radiation technologies are subject to inspection by PHA experts because of radiation protection. In 2007, there were almost 700 X-ray machines in Slovakia (NCHI data). According to health technology experts, only 450 of them were fully operational. The average age of the equipment used in 2008 was 14 years, and a large number of these machines were technically outdated. Only institutions with a strong financial position can adapt to the latest developments in technology. The first X-ray machines capable of digital radiography were purchased in 2004. In 2008, 15 institutions in Slovakia were equipped with such digital X-ray machines.

The first computerized tomography (CT) scanner in Slovakia was put into operation in 1983. In 2008 there were 76 CT scanners in Slovakia, 25% of which were owned by private health care providers. This equals 14 CT scanners per 1 million people.

The first magnetic resonance imaging (MRI) equipment in Slovakia was installed in 1992. In 2008, there were 30 MRI machines (73% in private ownership), or 5.5 MRI machines per 1 million people. There were only two PET systems operational in Slovakia in 2008 – one was in private hands, the other state-owned.

In 2005, the density of CT and MRI scanners in Slovakia, expressed in numbers of machines per million people, was higher than in Hungary and Poland but still well below the EU15 average (see Table 4.5).

Table 4.5

Number of diagnostic imaging technologies per million population, 2005

	CT	MRI	X-ray
Germany	15.4	7.1	4.7
Czech Republic	12.3	3.1	8.6
Slovakia	11.3	4.3	9.8
Poland	7.9	2.0	–
Hungary	7.1	2.6	2.7
Netherlands	5.8	5.6	–
EU15	18.6	9.4	5.8

Source: OECD, 2007.

4.1.4 Information technology (IT)

According to Eurostat data, 37% of households had access to the Internet in 2007. Only 27% of households had a broadband Internet connection at home. These data are comparable with other countries in the region, but well below the EU15 average (see Table 4.6). A Eurostat survey (2007) has indicated that use of the Internet in Slovakia is a generational issue: 79.5% of people aged between 16 and 24 years and 57.5% of people aged between 25 and 54 years use the Internet at least once a week. In contrast, this figure is only 12% for people aged between 55 and 74. The Internet in Slovakia is used by 46 % of households (Eurostat Data in Focus, 2007).

Table 4.6
Households with broadband Internet connections (%)

	2003	2004	2005	2006	2007
Netherlands	20	–	54	66	74
Germany	9	18	23	34	50
Hungary	–	6	11	22	33
Poland	–	8	16	22	30
Czech Republic	1	4	5	17	28
Slovakia	–	4	7	11	27
EU25	–	14	23	32	43
EU15	–	–	25	34	46

Source: Eurostat Data in Focus, 2007.

Most of the primary care providers and specialists use information technologies in their practices. Among information technologies, desktop computers prevail, with average hardware age of more than three years. The majority of providers use one of many specialized ambulatory information systems purchased from IT companies. It is not an obligation to have an information system and there are no regulations or standardization requirements laid down in law. Approximately 30% of outpatient departments have Internet access, and the number has been rising. The Internet is used to search for scientific information and to log on to certain information systems (for example, the database of insured). Approximately one-third of all Internet connections in outpatient departments are high-speed Internet connections. The level of IT security is low. Security requirements are not specified by law and providers often use either illegal or incomplete software versions (Ministry of Health, 2007). Although significant progress has been observed in the development of e-health, it is not enough to ensure smooth interoperability of the national information systems and information system of providers. The health

information strategy, as elaborated by the Ministry of Health (2008), lacks concrete steps at the level of providers as well as financial specifics (also see section 2.7.2 *Information systems*).

The use of IT diverges widely in inpatient health care facilities. Most of the hospitals own a hospital information system, consisting of three parts: (1) a hospital care information system, (2) an economic information system and (3) a management information system. Hospital information systems are purchased from various IT companies but not required or regulated by law. The majority of hospitals do not have an elaborated IT security strategy.

Slovakia participates in a pilot of the e-health project. It involves 27 beneficiaries from 12 EU Member States, including ministries of health, national competence centres and industry. The project will deliver and validate interoperable patients' summaries and ePrescription solutions, which should enable the exchange of data in a safe, secure and interoperable manner also across national borders.

The Act on Health Care has created room for implementing electronic health records. However, the prescribed conditions (valid electronic signature, data back-up, and security) mostly cannot be met. As of 2010, electronic health documentation is used in addition to paper documentation.

4.2 Human resources

4.2.1 Trends in the health workforce

In 2007, the total health workforce was 109 829 people, which is 4.64% of the total workforce in Slovakia. Non-state health care facilities employed 62.2% of health workers, which is 24.6% more than in 2003. This increase reflects the transformation of health care facilities owned by self-governing regions and municipalities into the non-state sector. Table 4.7 captures the numbers of health workers per 1000 population for the period 2000–2007.

Of the total number of employees working in health care facilities in Slovakia in 2007, 16.6% were physicians, 2.6% dentists, 3.0% pharmacists, 31.0% nurses, 1.5% midwives, 5.2% lab technicians, 8.7% assistants, 1.8% technicians, 2.6% other health care workers (for example physiotherapist, speech therapist psychologist) and 27.1% other workers (technical and operational personnel). Per 1000 inhabitants, these numbers amounted to 3.37 for physicians, 0.53 for dentists, and 6.61 for nurses (2007; other figures see Table 4.7). Over half – 55.5% – of all physicians were female.

A gradual decrease of the health workforce could be observed until 2005. The most significant decrease was observed in the number of nurses and professions not directly related to health care provision. In 2006, the health workforce started to increase again (Table 4.7). The decrease in the period 2000–2005 was most probably due to the restructuring of health care facilities after 2000, as well as the migration of health care workers. In 2007, the number of health workers increased as a result of the new Labour Code, which transposed the EU Working Time Directive (2003/88/EC). The providers were forced to employ more employees in order to maintain operational levels. The increase in 2007 in the number of health workers reached 2.8% for workers in state providers and 2.5% in non-state providers. This was insufficient to observe the Labour Code in the opinion of trade unions. From 2009 onwards, the implementation of minimum workforce requirements for inpatient health care facilities, which was issued by the Ministry of Health in 2008, will result in further increases in the health workforce.

Table 4.7

Number of health workers per 1 000 population in all health care facilities, 2000–2007

Occupation category	2000	2001	2002	2003	2004	2005	2006	2007
Total	22.35	21.74	21.14	19.77	20.20	18.34	19.86	20.33
Health care	15.42	15.32	15.10	14.51	14.24	13.63	14.05	14.83
physicians	3.68	3.62	3.57	3.01	3.10	3.03	3.16	3.37
dentists				0.51	0.53	0.54	0.50	0.53
pharmacists	0.44	0.44	0.48	0.44	0.53	0.50	0.56	0.60
nurses	7.42	7.26	6.93	6.53	6.32	6.00	6.04	6.30
midwives	0.06	0.07	0.20	0.27	0.32	0.32	0.29	0.31
laboratory technicians	1.16	1.16	1.15	1.07	1.09	0.99	0.99	1.06
assistants	2.06	2.17	2.17	2.04	1.79	1.55	1.69	1.77
technicians	0.32	0.30	0.30	0.29	0.29	0.27	0.34	0.37
other health occupations	0.28	0.30	0.31	0.33	0.27	0.44	0.48	0.52
Other occupations, total	6.93	6.42	6.04	5.26	5.96	4.71	5.81	5.50

Source: NCHI, 2009b.

Table 4.8 presents a detailed division of health workers in health facilities. Public health tasks are carried out by public health experts educated in an appropriate field of expertise. Physicians specialized in epidemiology, hygiene and preventive medicine form a minority among the public health workforce.

Table 4.8

Registered number of health workers (full-time equivalent [FTE]) by category and type of facility, 2007

		Facilities			
Occupation category	Total	Outpatient	Inpatient	PHA	Other (e.g. pharmacies)
Total	105 853	29 694	58 538	2 401	15 219
Health care	76 964	27 239	40 487	594	8 642
physicians	16 290	8 336	7 644	43	266
dentists	2 775	2 609	109	–	55
pharmacists	3 183	7	106	–	3 069
nurses	33 476	11 731	21 219	31	494
midwives	1 631	459	1 162	–	8
laboratory technicians	5 630	1 119	1 887	192	2 430
assistants	9 321	1 960	6 933	84	343
technicians	1 977	27	41	–	1 909
other health care occupations	2 678	988	1 383	242	64
Technical and administrative	9 228	1 024	4 665	243	3 294
Other workers (construction, operational)	17 691	1 429	13 380	273	2 608
Educational	242	0	0	–	242
Science, research and development	197	0	5	–	192
Public servant	1 528	0	0	1 289	239

Source: HPI based on data of NCHI, 2009b.

The health care workforce is ageing. The proportion of physicians aged 50 years and older reached 47.4% in 2007. The largest group of health workers is between 50 and 54 years. In the long-term, a gradual increase in people retiring from their jobs combined with migration of health care workers is reinforcing the shortage of health care workers. Professional mobility also poses a challenge to the health workforce. This is elaborated in more detail in section 4.2.2 *Professional mobility of health workers.*

Distribution of personnel in the territory of Slovakia shows large disparities (Table 4.9). The Bratislava region has 1.5 to 2.5 times more health workers on average per population as compared to other regions.

Table 4.9
Geographical differences in distribution of health workers per 1 000 population, 2007

Region	Physicians		Dentists		Nurses	
	Number	Per 1 000 inhabitants	Number	Per 1 000 inhabitants	Number	Per 1 000 inhabitants
Bratislava	4 140	6.9	556	0.9	6 457	10.6
Trnava	1 465	2.6	248	0.4	2 863	5.1
Trenčín	1 502	2.5	263	0.4	3 024	5.0
Nitra	1 876	2.7	305	0.4	3 612	5.1
Žilina	2 170	3.1	333	0.5	4 268	6.1
Banská Bystrica	1 887	2.9	297	0.5	3 819	5.8
Prešov	2 151	2.7	372	0.5	4 718	5.9
Košice	3 028	3.9	488	0.6	5 279	6.8
Slovakia	18 219	3.4	2 862	0.5	34 040	6.3

Source: HPI based on data of NCHI, 2009b.

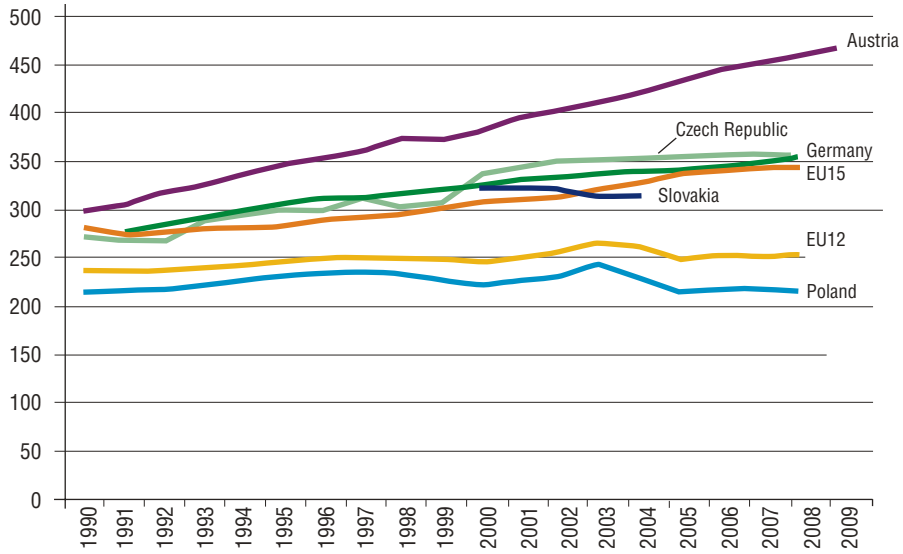
Compared to other countries, the number of physicians per population was similar to Germany as well as the EU15 until 2001. After 2001, Slovakia witnessed a continuous fall in the number of physicians per population (Fig. 4.4), although the number remains well above the EU12 average. The number of nurses per population (Fig. 4.5) also shows a trend break in 2001. Before 2001 this number was on the EU15 average and similar to the number in the Czech Republic. After 2001, this number fell below the EU15 average but remained above the EU12 average. These changes are closely linked with the migration of doctors and nurses abroad, as well as the restructuring of health care facilities.

Fig. 4.6 shows that the number of dentists per 1000 population in Slovakia is well below the EU15 average, but above the EU12 average. Among the countries of the Visegrád Four, Slovakia is only surpassed by the Czech Republic, similar to Hungary and above Poland.

In 2008, there were 3032 pharmacists and 1406 pharmacies in Slovakia. According to the Slovak Pharmaceutical Chamber's data, the number of pharmacies exceeded 1900 in 2009. This is the result of liberalized ownership regulation, which enables non-pharmacists to own pharmacies. Pharmacy chains are not explicitly permitted, but the same subject is allowed to establish more than one pharmacy. Currently about one-third of all pharmacies in Slovakia are part of a pharmacy chain. The number of pharmacies and pharmacists is not regulated. Fig. 4.7 shows that the number of pharmacists per 1000 population in Slovakia (0.47, number for 2007) was slightly above the EU12 average, but well below the EU15 average.

Fig. 4.4

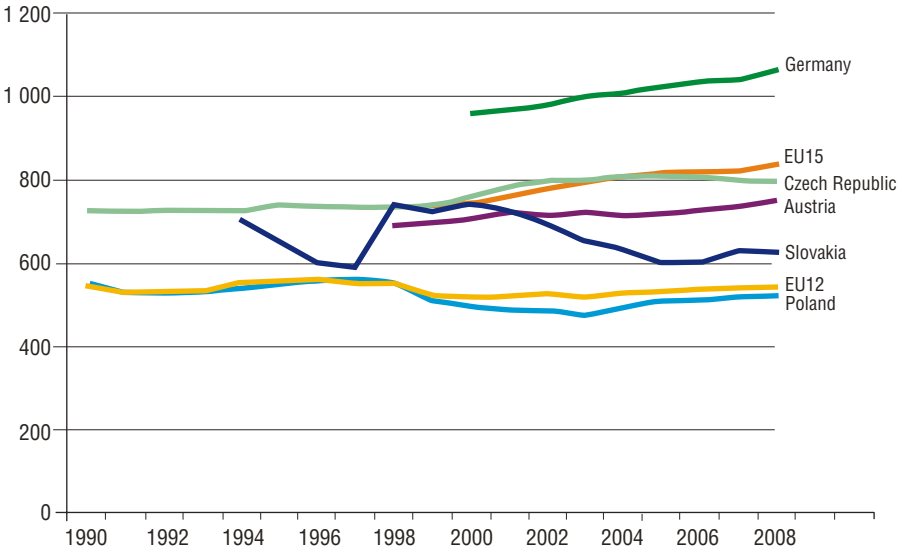
Number of physicians per 100 000 population, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010.

Fig. 4.5

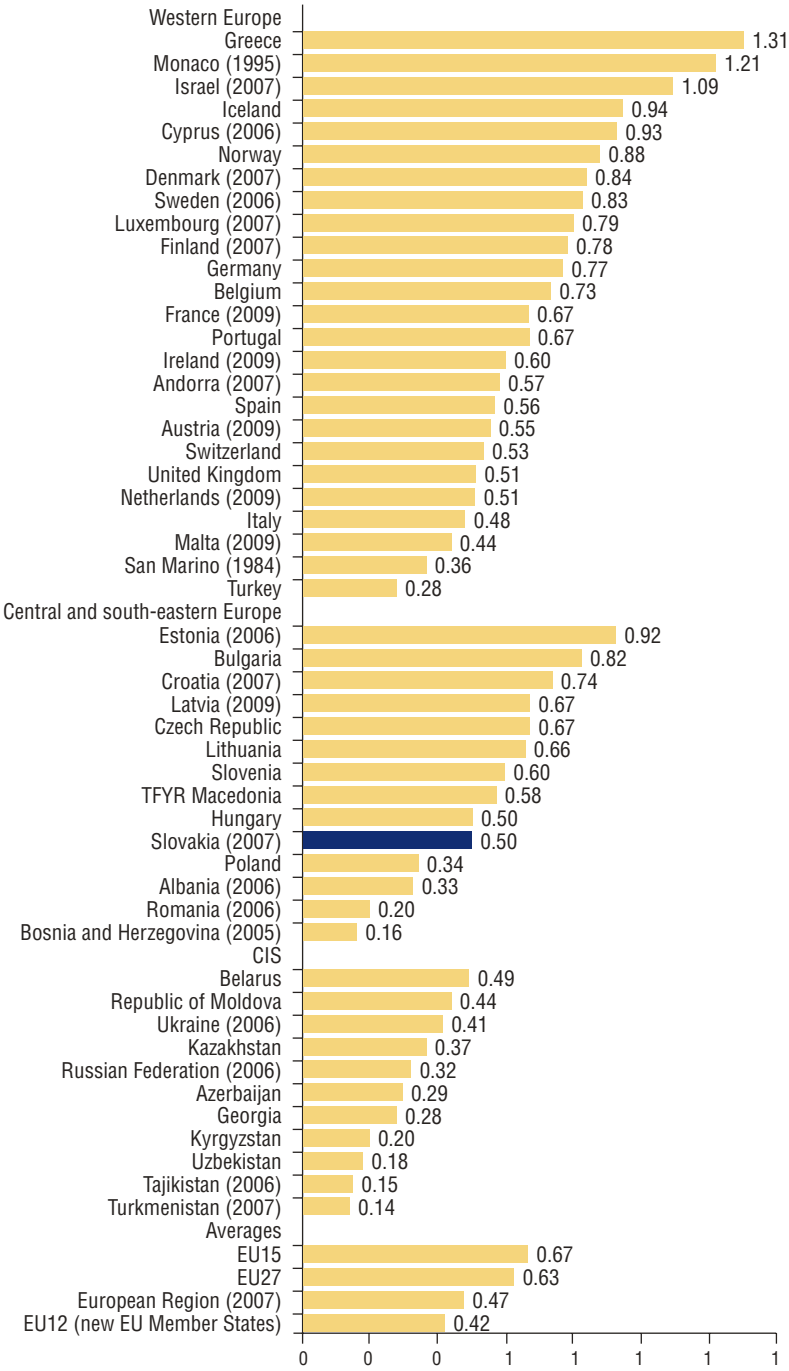
Number of nurses (PP) per 100 000 population, 1990–2007 or latest available year



Source: WHO Regional Office for Europe, 2010.

Fig. 4.6

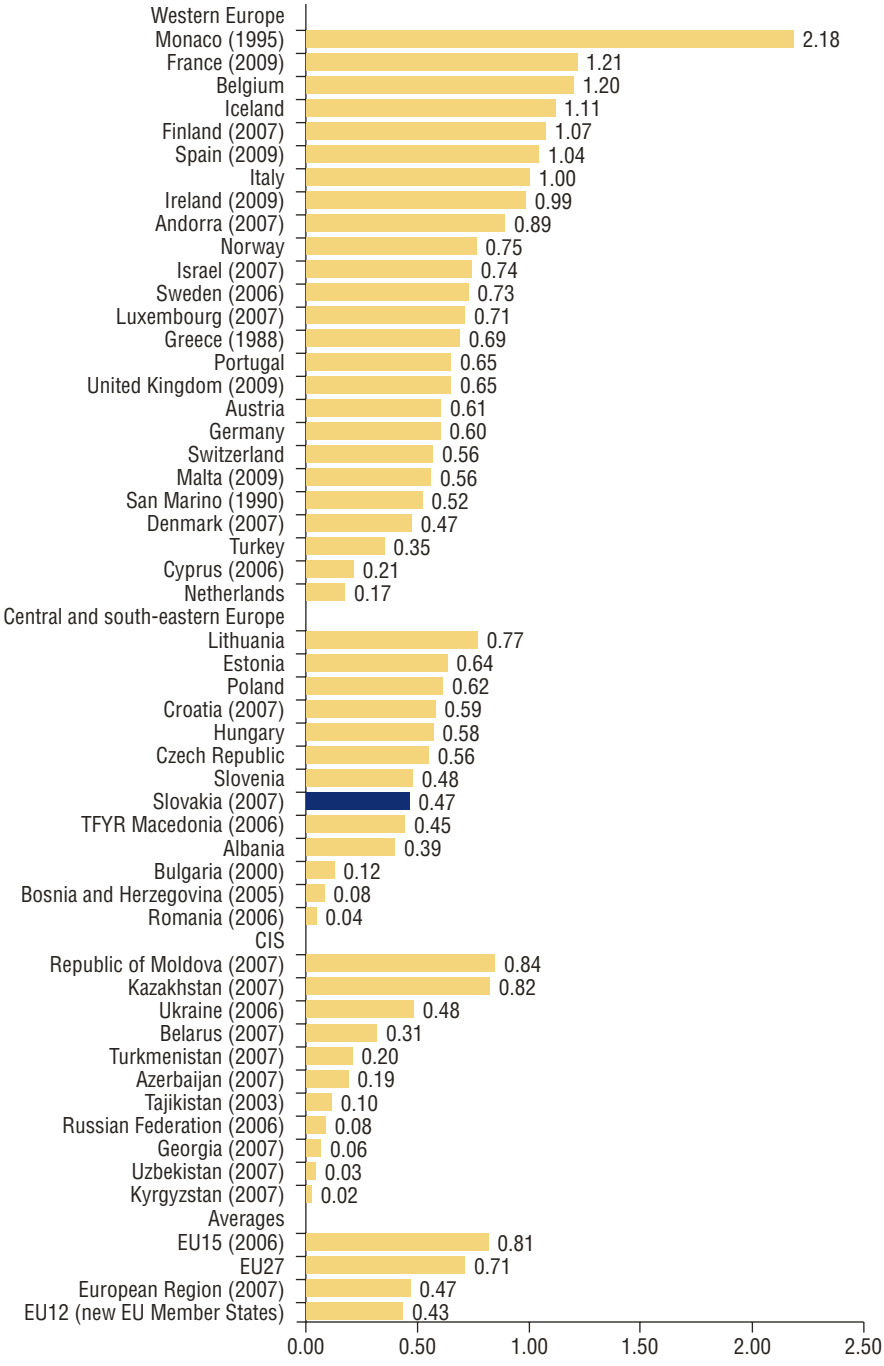
Number of dentists (PP) per 1 000 population, 2008 or latest available year



Source: WHO Regional Office for Europe, 2009.

Fig. 4.7

Number of pharmacists (PP) per 1 000 population, 2008 or latest available year



Source: WHO Regional Office for Europe, 2009.

4.2.2 Professional mobility of health workers

Four medical faculties in Slovakia produce approximately 500 graduates annually and many of them leave the country to work abroad. The migration of highly respected specialists, motivated by higher salaries creates a problem in human resources (Beňušová, 2007). Although this is considered common knowledge, the statistical data to evaluate the decrease in the number of health staff are lacking. The registration of health care professionals in professional chambers should contain information on the location of their practice as well as information about their employer. However, professional chambers often do not have this information as health care professionals do not always fulfil their reporting requirements and the chambers do not possess effective tools to enforce this requirement.

The number of issued certificates of conformity of study, required for working abroad (see Table 4.10), provides an indication of the number of health workers leaving the country. In percentages (calculated using Tables 4.8 and 4.10) this means that, for example in 2006, 1.26% of health workers, 2.14% of physicians and 1.26% of nurses had such a certificate and may have decided to practise abroad. According to EC Directive 2005/36 on the recognition of professional qualifications, the issued certificates enable health care workers to start a recognition procedure in another Member State or Iceland, Liechtenstein and Norway. Between 1 May 2004 and 30 June 2008, the Ministry of Health issued 3972 confirmations. However, these data provide only a partial picture of the situation as the data does not show whether health care professionals have actually migrated and does not include those health workers who have decided to work in countries outside the EU or Iceland, Liechtenstein and Norway. The number of nurses leaving their jobs in Slovakia and working as caregivers in other Member States of the EU is not available. It is assumed that over 1000 Slovak physicians work in the Czech Republic.

Table 4.10

Number of certificates of conformity of study issued by the Ministry of Health to health workers

Occupation category	2004 (since May)	2005	2006	2007	2008 (until June)	Total
Physician	442	595	364	267	104	1 772
Dentist	23	32	31	27	13	126
Pharmacist	4	43	48	66	20	181
Nurse	308	506	410	204	97	1 525
Midwife	15	21	28	18	3	85
Other health worker	55	86	78	37	27	283
Total	847	1 283	959	619	264	3 972

Source: Unpublished data from Ministry of Health, 2008.

4.2.3 Training of health care personnel

A professional qualification to perform activities in various health occupations, which is called the basic qualification in Slovakia, can be obtained after completing:

- a Bachelor's or Master's degree in an accredited university programme
- higher vocational training
- full secondary vocational training
- secondary vocational training.

Professional qualifications to perform specialized professional activities can be obtained through a specialized course/training. Professional qualifications to perform certified professional activities can be obtained through certified training. Specialized training, certified training and continuous education of health workers are called "further education/training" in the Slovak system.

Until 2004, the Slovak Health University was the sole provider of further education. Since 2004, other institutions, accredited by the Accreditation Committee of the Ministry of Health, including medical faculties, may offer training and education for health professionals. Life-long continuous medical education is obligatory for every health professional. Relevant professional chambers perform evaluations of continuous education at five-year intervals. In case of shortcomings, the professional organization may warn the employer or may notify the HCSA. It may also investigate a health professional or impose sanctions (for example temporary withdrawal of their licence). The employers must create conditions for further education of their employees while professional organizations must participate in educational activities and quality assurance programmes.

Physicians in Slovakia must have a Master's degree university education in a medical doctor programme. The Slovak Master's degree in General Medicine is recognized by the EU as equal to comparable degree programmes in other EU Member States. The General Medicine degree programme has a six-year curriculum and includes at least 5500 hours of theoretical and practical study. Graduates are awarded the title of Doctor of Medicine (MD). At present, four medical faculties provide programmes in General Medicine at three universities; two medical faculties in Bratislava (Comenius University, Slovak Health University), one in Martin (Comenius University) and one in Košice (Pavol Jozef Šafárik University).

If a physician aspires to become a specialist, he or she should continue his or her education and complete a training programme in a selected medical specialty. Currently there are 96 specialized postgraduate training programmes which last at least three years. After completing the specialized postgraduate training, physicians can apply for certified programmes in relevant specializations and achieve a certificate (such as endoscopies, ultrasonography and so on). Currently there are 32 different types of certified programmes.

In addition to specialized postgraduate training programmes and continuous education, physicians can complete a PhD programme. Physicians may continue their academic career with the academic titles "University Reader" (United Kingdom) or "Associate Professor" (United States) and "Professor", if they meet the necessary criteria.

Prior to accession of Slovakia to the EU, training for dentists was part of the study programme "stomatology". Since accession, to ensure full compliance with EU law, dental practice requires a specialized degree in dentistry instead of a degree in General Medicine. This new programme can be followed at two medical faculties in Slovakia. To be allowed to practise, dentists who graduated under the old system as doctors of general medicine (with the title MUDr.) are obliged either to extend their education in a specialized training programme in dentistry, or to practise for three years under the supervision of a specialist. The last opportunity to enrol in the stomatology degree programme was in 2009. The relevant professional chamber issues licences for independent practice.

A shortage of nurses caused by the departure of health personnel from Slovakia was aggravated by the low numbers of nurse graduates from medical schools. The decrease in nurse graduates is a result of two factors. First, a low salary relative to the intensity of the work causes a lack of interest in this occupation. Second, since EU accession, instead of secondary vocational training at specialized high schools, nursing education is provided either as vocational training or at a Bachelor's (Bc) level. Further education at a Master's degree university level (Mgr) is optional, but not a condition for nurses to practise. Following this change, a rise in the number of university graduates in nursing can be observed (see Table 4.11), but the overall number of nurse graduates went down. The relevant professional organization issues licences for nurses to practise.

Pharmacists are required to complete a Master's degree university programme in pharmacy. Their training was reformed to ensure full compliance with EU law. There are two entities offering this programme – the Pharmaceutical

Faculty of Comenius University in Bratislava and the University of Veterinary Medicine and Pharmacy in Košice. The relevant professional organization issues licences for pharmacists.

Table 4.11

Number of health care oriented graduates of full-time university study, 2000–2006

	2000	2001	2002	2003	2004	2005	2006
General medicine	523	477	487	519	520	498	509
Stomatology	59	52	47	54	50	61	47
Nursing	34	33	41	40	227	488	540
Pharmacy	167	165	154	164	164	142	177

Source: NCHI, 2009b.

5. Provision of services

Public health is supervised by the PHA, which concentrates predominantly on the monitoring of communicable diseases. The PHA organizes an immunization programme that is carried out by GPs and financed by health insurance companies. Ambulatory care is provided predominantly by privately organized physicians. People have free choice of their GP. There is also free choice of specialist for specialized care. Their services are provided without cost-sharing from patients with the notable exception of dental procedures, which often involve direct payments from the patient. Inpatient care is provided in general hospitals (including university hospitals) and specialized hospitals, owned publicly or privately. Hospitals usually provide specialized ambulatory care as well. Emergency medical services are provided by a dense network of private and public providers operating in a total of 280 areas accessible to patients within 15 minutes. Slovakia's pharmaceutical expenditure accounts for one-third of public expenditures on health care, the highest share in all OECD countries.

The provision of pharmaceutical care is monitored by the SIDC. Distributors and pharmacies are virtually all private. There is a lack of coordination between the health care and social care frameworks in the long-term care sector. Similar services provided in health care facilities and in social care facilities are subject to different regulations and financing arrangements. Complementary and alternative medical services are predominantly provided in private specialized outpatient departments or specialized facilities. These are not covered by SHI.

5.1 Public health

The growing prevalence of cardiovascular disease, cancer, respiratory disease, allergies and fatal accidents are the most significant health problems facing the population in Slovakia. In addition, communicable diseases also receive a great deal of attention. The four priority areas for public health policy are as follows:

- chronic diseases – mainly cardiovascular disease, cancer and obesity
- communicable diseases
- environment and health
- tobacco and alcohol.

The PHA, a budgetary organization of the Ministry of Health, is responsible for the coordination of national-level activities in the realm of public health. The PHA manages 36 regional public health authorities and addresses health promotion at the national level, monitors communicable diseases, and adopts measures for health protection and health improvement when necessary.

5.1.1 Health promotion

Health promotion clinics were established in 1993 as an integral part of regional public health authorities to provide advice on risk factors, healthy nutrition, smoking cessation, physical activity, mental health and stress management, occupational health support and protection, non-pharmacological treatment, AIDS and anti-drug counselling, children and youth counselling, hepatitis B positive families counselling, and counselling for breastfeeding women. Numerous conferences, seminars, courses and health educational sessions are organized to raise awareness (for example World Health Day, World Environment Day, International Drug Dependency Day, World Nutrition Day, World No Tobacco Day and World AIDS Day). Furthermore, health clinics advise on topics such as air quality, environmental noise, quality of housing, and drinking and bathing water and its impact on human health.

Regional public health authorities supervise the living conditions of children and youth by monitoring canteen services, the education process, extracurricular activities, and housing conditions of children and youth. Regional public health authorities promote health through programmes for children and youth about healthy lifestyle issues (smoking, healthy nutrition, drugs, HIV/AIDS and sex). Furthermore, various programmes are organized with WHO support (for example Health Promoting Schools, Healthy Children in Healthy Families, Healthy Kindergartens). Despite these projects, the 2007 Slovak Consumer

survey (Publicis Knut, 2007), based on 4000 respondents aged 15 and over, indicated that more than half of the population is not active in sports and only 8.4% care about a healthy lifestyle and sufficient exercise.

In cooperation with the Ministry of Environment and other sectors, the regional public health authorities monitor risk factors in environment-related health care. This includes, among others, monitoring of water, soil, air and food quality, the level of radiation, as well as impact of these factors on population health.

The PHA is responsible for monitoring and surveillance of communicable diseases in Slovakia. This includes mandatory reporting of incidences of communicable diseases, the suspicion of communicable diseases, and of cases of pathogen carriers. Upon reporting, epidemiological and laboratory investigations are carried out. If necessary, these are followed by prevention measures against widespread infection. Surveillance mainly focuses on areas such as food poisoning, viral hepatitis, infectious diseases of the nervous system, zoonosis, AIDS and tuberculosis. Since 1991, the register for communicable diseases has been part of the epidemiological information system of communicable diseases (EPIS). This enables long-term follow-up on diseases. In 2007, a total of 57 650 cases of communicable diseases were reported, which was 11% more than in 2006. This was the result of an increased incidence of varicella and herpes zoster, type C viral hepatitis, salmonella infections and diarrhoea viral infections.

The centrepiece of the infection prevention strategy is maintaining a high vaccination rate. Slovakia has followed a strict immunization programme since 1986, which aims at the elimination and eradication of communicable diseases mainly by targeting children. The implementation of the immunization programme includes administering the vaccination, vaccination monitoring and evaluation of efficacy. Compulsory vaccinations include vaccinations against tuberculosis, diphtheria, pertussis, poliomyelitis, *H. influenzae*, type B viral hepatitis, rubella, morbilli and parotitis. The national immunization programme in Slovakia has been planned and implemented in accordance with the objectives of the WHO policy document *Health for All in the 21st Century*.

Consistent implementation of this programme succeeded in improving and maintaining low or zero incidences of vaccination-preventable diseases. Slovakia reports a high vaccination rate in all relevant categories ranging from 98.1% to 99.5% in 2007. Vaccinations are administered by primary care paediatricians. No cases of poliomyelitis, diphtheria or morbilli, and only two cases of rubella were reported in 2007. In the same year, the incidence of type B viral hepatitis had decreased by 16% compared to 2006. The considerable decrease among adolescents was the result of a vaccination programme for

this age group from 2004 to 2007. Higher incidence is still reported among young children who have not yet been vaccinated. The incidence of type A viral hepatitis (VH-A) continues to decline, as a result of a vaccination programme targeted at children living in communities with low standards of hygiene. Slovakia reported 384 cases of VH-A in 2007 (incidence 7.12 per 100 000), which is 17% less than in 2006 and 32% less than the five-year average.

Prevention and screening programmes in Slovakia are covered by SHI. The incidence of developmental and genetic malformations and diseases is determined using prenatal and perinatal diagnostics. Screening for phenylketonuria and congenital adrenal hyperplasia, as well as ultrasonography of kidneys, is performed on all newborns. Numerous examinations for children are covered by health insurance, including psychomotor development follow-up and compulsory vaccinations. Each child undergoes a hip ultrasonography at between 8 to 10 weeks old. Up to age 15, health insurance covers 17 preventive examinations, the contents of which are specified by law. Every insured adult is entitled to preventive examinations by a GP once every two years, including examinations of blood pressure and blood levels of sugar and fats, as well as an ECG, a faecal occult test, and colorectal cancer screening for those 50 years of age and older. Preventive gynaecological examinations include uterine cancer screening in all women aged 23 to 64. A preventive mammodiagnostic programme for women has been operating since 2001. In this programme, all women between the ages of 40 and 69 are entitled to one preventive mammogram every two years. Men over 50 years of age are entitled to one preventive urological examination every three years. The examination also includes screening for prostate cancer. Health insurance covers two preventive dental examinations per year for children (up to age 18) and one preventive dental examination for those over 18.

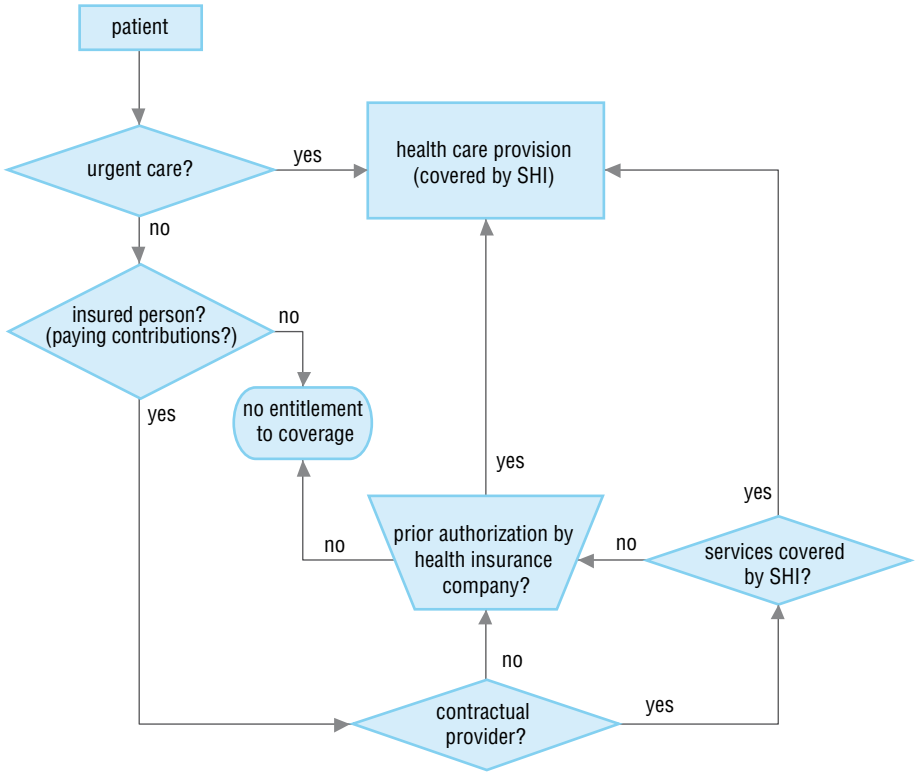
Alcohol- and smoking-related legislation is outlined in the Act on Protection Against Alcohol Abuse and the Act on Protection of Non-smokers. According to 2007 data from the Statistical Office of the Slovak Republic (2007), 38% of the population in 2006 were smokers, which is 8% less than in 2000. Results from the *2007 ESPAD Report* on alcohol and drug use among European 17–18-year-old students found that 51% of Slovak boys and 43% of Slovak girls had smoked at least one cigarette in the last 30 days (Hibell et al., 2007). Approximately 11 000 people die due to smoking-related diseases and conditions (PHA, 2010). The most frequent diseases caused by smoking are ischemic heart disease, cerebral apoplexy, lung cancer and chronic respiratory diseases. In 2006 and 2007, the government approved two strategic documents concerning legal drugs: the National Action Plan for Alcohol-related Problems for the years 2006 to 2010 and the National Programme of Tobacco Control. NGOs promote awareness of the dangers associated with smoking.

5.2 Patient pathways

A decision-making tree of a patient's pathway through the system of health care provision is depicted in Fig. 5.1. An interesting feature is that urgent cases can access health services directly. This not only means that an uninsured person has access in the case of urgency; it also implies that individuals can access specialist care directly. Since the law defines "urgent care" rather vaguely, there is room for misuse.

If a service is not covered by SHI or the provider is not contracted, an individual may still receive reimbursement but only if the health insurance company gives prior authorization.

Fig. 5.1
Patient pathways



5.3 Ambulatory care

Ambulatory care consists of general care and specialized care. Emergency medical services and 24/7 first aid medical services (see section 5.5) are special ambulatory care services. Also one-day surgery (see section 5.3.1 *Day care*) is provided as part of ambulatory care. Since 1993, many services in ambulatory care have been privatized. All GPs have their own private practices. Most specialized outpatient departments have been privatized as well, either as independent practices or associated with polyclinics. Hospitals with attached polyclinics represent a significant market share of specialized ambulatory care.

Patients, except for soldiers, police officers, prisoners and migrants seeking asylum, have the freedom to choose their health care providers for both general and specialized care. Admission of a patient to a hospital requires a referral from a physician, that is, a GP or a specialist. Patients who need urgent care, psychiatric patients and patients in the specialist's dispensary are exempt from referrals. A health care provider may reject a patient due to work overload, if a conflict of interest arises, or if asked to perform certain procedures irreconcilable with their religious or other beliefs. GPs cannot reject a patient due to work overload if the patient is a permanent resident in the physician's district or if the patient is in need of urgent care. Patients register with GPs through a written agreement for a period of at least six months, which can only be terminated in writing. Services are covered by SHI if there is a contract between the health care provider and the patient's health insurance company, or if a health insurance company grants a prior authorization to reimburse care provided by a certain non-contracted provider.

The aim of the gate-keeping system was to avoid unnecessary and duplicated specialist visits and to ensure the coordination of diagnostic and therapeutic processes and, consequently, improve the quality of care. However, capitation payment mechanisms do not motivate GPs to manage patients effectively or to coordinate health care. A comparison of the procedures performed by specialists in 2007 and 2008 has indicated that the number of procedures did not decrease (*SME Newspaper*, 2008a). The Association of Private Physicians considers cost-sharing a better regulatory tool to constrain health care utilization than referrals. Specialists consider referrals a burden for both physicians and patients (*SME Newspaper*, 2008b).

The numbers of outpatient contacts in ambulatory care, particularly of GPs, are collected using various methodologies and proxy data. Depending on the

data source and methodology used, the number of reported contacts per insured patient varies from 11 to 26 a year (OECD, 2009; Filko, 2008). Thus, even considering the lower value of this range, Slovakia has a very high number of outpatient contacts when compared to other new Member States, well above the European averages (see Fig. 5.2).

Regulation, monitoring, and quality of enforcement in ambulatory and hospital care focuse on structural indicators such as education and premises. Processes are left to the providers and outcomes are regulated by some specific indicators, which are, however, not applicable to the majority of providers (see also section 2.7.2 *Information systems*).

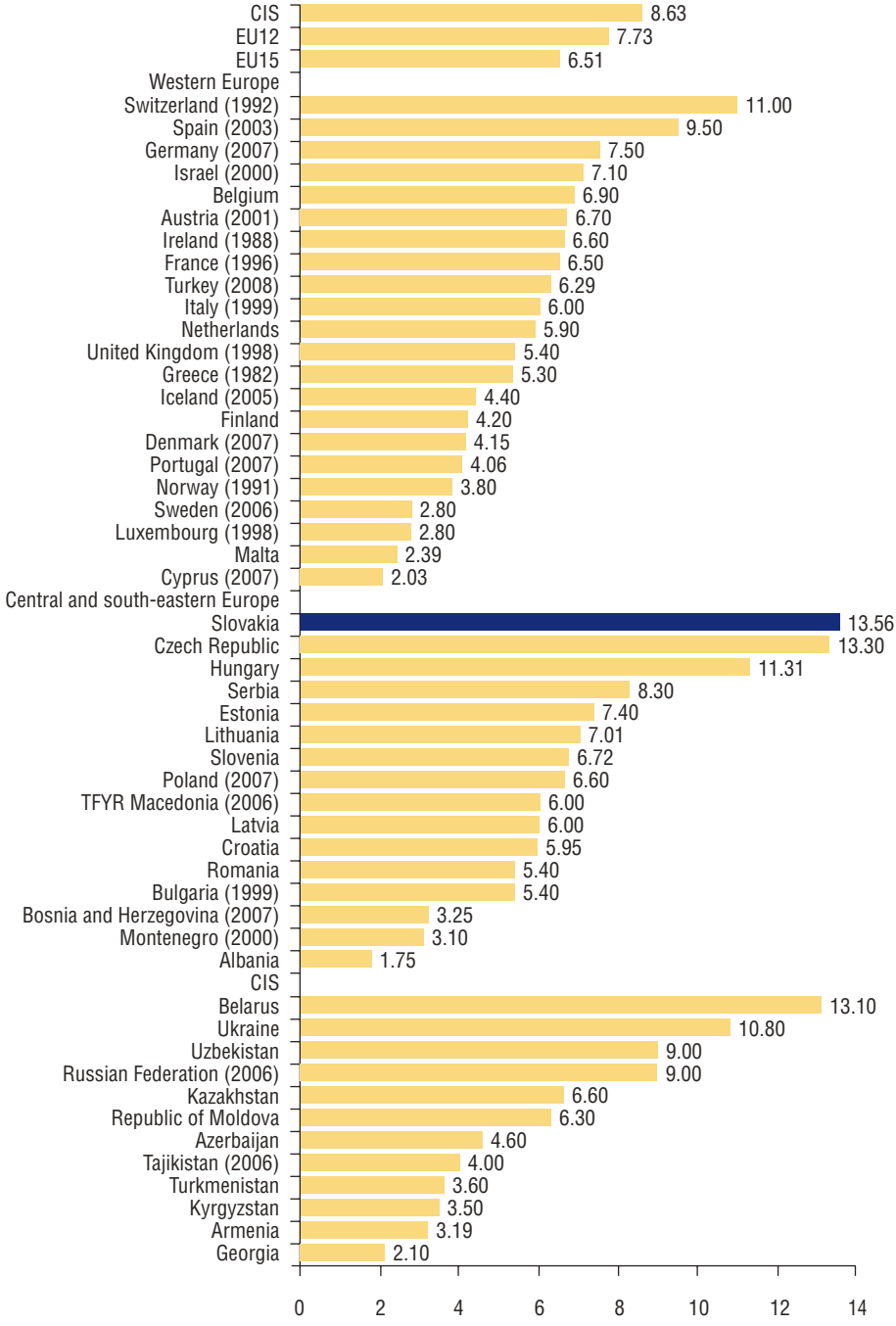
Ambulatory care is easily accessible in the place of residence for 77% of inhabitants of Slovakia. The same applies to dental care (73%) and gynaecological care (60%). Between 40% and 50% of inhabitants have direct access to most of the ambulatory care specialists within their municipality (see Table 5.1). Ambulatory care is generally available by car within 30 minutes. Health care is least accessible in the mountainous and sparsely populated regions of northern and eastern Slovakia (HPI, 2006). The minimum network requirement is defined as the minimum number of capacities (providers and number of beds) in self-governing regions. Self-governing regions range in size from 2000 to 9000 km^2. This does not allow the regulator to influence the accessibility of health care at the local level. An appropriate solution may be adding adequate accessibility as a requirement, rather than only a minimum number of providers for a region.

5.3.1 Day care

Day care is defined as continuous care for no longer than 24 hours. The development of day-care capacities since 2004 is a result of price deregulation and amended legislation. According to the Slovak Association of One-day Surgery (SAODS), 6% of operations are performed as one-day surgeries. The greatest barriers to the further development of one-day surgery are the different payment mechanisms and reimbursement levels in ambulatory and hospital care for the same type of procedures (SAODS, 2006). While day-care facilities are paid for particular procedures, hospitals are paid for completed hospitalization. In addition, contractual limits to the number of services provided may also make day care less attractive. These factors combined make it more attractive for hospitals to provide the care as inpatient care.

Fig. 5.2.

Outpatient contacts per person in the WHO European Region, 2008 or latest available year



Source: WHO Regional Office for Europe, 2010.

Table 5.1
Access to selected outpatient specializations (% of population with access within corresponding limit)

Outpatient specialization	Average access (in minutes)	Provider in the same city or municipality (%)	Access within 15 minutes (%)	Access within 30 minutes (%)
dermato-venerology	5.4	51.2	90.4	99.7
diabetology	6.3	46.9	86.4	99.4
physiotherapy, balneotherapy and medical rehabilitation	6.9	45.7	84.2	98.4
gastroenterology	8.3	39.6	77.6	98.8
gynaecology and obstetrics	3.2	60.2	97.2	100.0
surgery	5.9	48.5	88.6	99.5
cardiology	7.2	42.1	82.5	99.1
clinical allergology and immunology	7.5	44.0	81.7	97.9
clinical psychology	6.4	47.9	86.6	98.9
neurology	5.6	49.6	89.5	99.4
ophthalmology	5.3	50.6	90.6	99.7
orthopaedics	6.1	48.8	87.1	99.5
oto-rhino-laryngology	5.9	49.4	87.5	99.4
pneumology and ftiseology	9.8	34.3	72.3	95.9
psychiatry	6.3	48.3	86.9	98.4
rheumatology	9.6	37.2	73.1	96.1
stomatology	1.4	73.8	99.7	100.0
urology	8.4	41.9	77.5	96.9
internal medicine	5.0	52.2	91.8	99.7
GP	1.1	77.5	99.9	100.0

Source: HPI, 2006.

5.4 Inpatient care

In Slovakia, inpatient care is defined as care for patients who require health care for more than 24 hours. Hospitals are divided into general hospitals (including university hospitals) and specialized hospitals, depending on the services they offer. Hospitals also have an ambulatory component, in which hospital-based specialists provide specialized ambulatory care. Inpatient health care facilities include sanatoriums, hospices, day-care centres, natural healing spas and balneotherapy institutions. The Ministry of Health issues permits for specialized hospitals and biomedical research institutes to operate. Self-governing regions issue permits for all other health care facilities.

Mixed ownership of inpatient care providers is common, with the state owning a significant share. Until 2003, there were only three private hospitals while the rest were contributory organizations. After the transfer of ownership from state to local governments, the majority of local governments decided to change the

legal form of the hospitals to either a commercial company (for example a joint stock company) or a non-profit-making organization, or they moved into private ownership. The largest hospitals, including university hospitals, remained state owned. The majority of these state-owned hospitals are still contributory organizations, with the exception of five hospitals, which were transformed after the 2004 health reform into joint stock companies with 100% of the shares owned by the state. The transformation of hospitals was discontinued in 2006 but resumed again in 2011.

The hospital management is only held accountable by its owner(s). They are responsible for the management of hospitals and they are rewarded depending on financial results. In a state-owned hospital, however, directors are directly appointed and dismissed by the Minister of Health, making their position vulnerable to political opportunism. Shared ownership between providers and health insurance companies is not legally prohibited. On the contrary, the law allows for vertical integration. Private health insurance companies Apollo and Dôvera, which merged in 2010, are linked with several inpatient facilities and intend to increase the number of such shared facilities.

Of the inhabitants of Slovakia, 37% can access a general hospital near their place of residence. Inpatient care is accessible in all medical specialties, including neurology and traumatology/orthopaedics, within 45 minutes by car. Combined with the 15 minutes distance to emergency medical service (see section 5.5), this makes urgent hospital care accessible within 60 minutes (HPI, 2006).

Cooperation between ambulatory and inpatient care is limited to an exchange of health records. This is most effective when the hospital-based specialist is located either in the ambulatory section of the hospital or in his or her private office. Lack of trust in laboratory results from other health care facilities often results in physicians ordering the same diagnostic examination in their institution of affiliation. Cooperation with social care institutions is complicated due to an insufficient number of chronic beds, as well as the fact that social care institutions belong to the social sector and are the responsibility of the Ministry of Social Affairs. The inclusion of home nursing care services in SHI in 2004, which was meant as a substitute for inpatient care, has enabled the development of agencies that provide nursing care, rehabilitation and day-care services.

5.5 Emergency care

Emergency medical services provide urgent care in sudden life-threatening situations. System changes to emergency health care provision adopted in the 2004 health reform have led to an increase in provision, which improved the geographical accessibility of urgent care. Emergency care is now available within 15 minutes of the emergency call in 95% of Slovak territory. In the remaining 5%, emergency care is much more difficult to access. The number of emergency stations has increased from 92, before the health reform, to 264 after the reform took effect (Table 5.2). In 2011, the emergency stations were divided into 118 stations with a physician in the team, 155 stations without a physician and 7 helicopter emergency medical service bases, altogether managed by 27 providers. These providers may be both private and public organizations. They compete in a tender called for by the Ministry of Health for a four-year permit to operate in the stations' target areas with their personnel and equipment. The geographical location of emergency stations is set by the Ministry of Health. Whereas all other providers have to compete for a contract with the health insurance companies (flexible network), providers of emergency medical service have to be contracted by each health insurance company (fixed network). The details of the emergency medical service are outlined by law. The Ministry of Health determines the payments, which are a combination of a capitation fee for being on stand-by and service fees.

Table 5.2
Basic indicators of emergency medical service reform

Period	Financing	Provider	Dispatching time	Command	Number of ambulance cars	Inhabitants per ambulance car
until 31.12.2005	per capita	hospitals + state	–	own dispatching (74)	92	58 696
since 01.01.2006	fixed payment + fee for km	private providers + hospitals + state	dispatching in 1 minute	regional operation centre (8)	264	20 458

Source: Bahelka, 2008.

Regional emergency centres coordinate and manage emergency medical services and answer emergency calls. They are part of the National Emergency Centre, a contributory organization of the Ministry of Health. The average daily

workload of an emergency station was 4.1 interventions per day in 2007. In the same year, the average time needed to reach the site of an event was 11 minutes (Bahelka, 2008).

A 24/7 first aid medical service is a special type of urgent health care provision. Ambulatory physicians work in shifts according to the schedule of the self-governing region. The maximum fee for 24/7 first aid service is government regulated. It is not clearly legally defined and it is not directly linked to the emergency medical service. It does not include home visits by doctors.

Inpatient health care facilities provide urgent ambulatory care as part of inpatient emergency services. The fee for inpatient emergency services is set at €2 per visit, unless the patient is hospitalized. The same fee applies to 24/7 first aid medical service visits.

5.6 Pharmaceutical care

For regulation of pharmaceuticals see section 2.8.4 *Regulation and governance of pharmaceuticals*.

Before entering the market in Slovakia, pharmaceuticals must have an authorization from the EMA, or the national-level SIDC. As of 1 October 2008, with the exception of homeopathic remedies, 26 141 pharmaceuticals have been authorized, 24 198 of which are prescription pharmaceuticals and 1943 are OTC pharmaceuticals. Approximately 100 companies (for example wholesalers and pharmaceutical companies) have a licence to distribute pharmaceuticals and medical devices, but judst 11 companies cover 90% of the market.

Self-governing regions issue permits to open pharmacies according to the conditions outlined in law. Every health insurance company is obliged to contract each pharmacy. There were 1639 pharmacies in Slovakia in 2007, or one pharmacy per 3295 people (Table 5.3). The distribution of pharmacies in Slovakia shows regional disparities. The most dense network of pharmacies is in the Bratislava region (2450 people per pharmacy in 2007), while the highest number of people per pharmacy is in Zilina region (4087 in 2007) (Table 5.3). Since 2006, the number of pharmacies has increased as a result of legislative changes, which simplified the entry of new pharmacies to the market. Contrary to previous rules, a new pharmacy can be established regardless of its distance from the existing pharmacies. Non-pharmacists are allowed to own a pharmacy, but must guarantee a trained pharmacist at the premises.

Table 5.3
Number of pharmacies and number of inhabitants per pharmacy on average and in the self-governing regions, 2000–2007

Region	2000	2001	2002	2003	2004	2005	2006	2007
Number of pharmacies								
Slovakia	1 159	1 174	1 158	1 046	1 249	1 152	1 406	1 639
Number of inhabitants per pharmacy								
Slovakia	4 662	4 582	4 645	5 143	4 311	4 678	3 836	3 297
Bratislava	3 532	3 380	3 437	3 926	3 172	3 503	2 798	2 450
Trnava	4 805	4 439	4 663	5 092	4 553	4 633	3 811	3 372
Trenčín	5 455	5 150	4 857	5 241	4 636	5 029	3 791	3 587
Nitra	4 591	4 922	4 601	4 693	4 377	4 897	4 057	3 565
Žilina	5 313	5 132	5 249	5 372	4 784	5 299	4 425	4 087
Banská Bystrica	4 225	4 153	5 054	7 012	4 238	4 355	3 846	3 269
Prešov	4 691	4 870	4 538	5 255	4 622	4 763	4 065	3 045
Košice	5 197	5 006	5 174	5 355	4 461	5 290	4 156	3 451

Source: Data from NCHI, Statistical Office of the Slovak Republic, 2008.

In 2003, a user fee of €0.67 (20 SKK at that time) for each prescription was introduced, which was reduced to €0.17 (5 Sk) in 2006. In addition to the maximum reimbursement level and resulting co-payments (see section 3.4 and section 2.8.4 *Regulation and governance of pharmaceuticals*) can specify certain restrictions on prescribing and indications. If a restriction on prescribing applies, the pharmaceutical can only be prescribed by a GP for a period of six months upon recommendation from a specialist. After this period, the specialist must re-evaluate the patient's condition and the pharmaceutical's effectiveness and decide whether to continue the treatment. For pharmaceuticals with restricted indication, reimbursement is based on the user's health status, specific test results or a failure of other treatment options. The physician must comply with the restrictions on indication in order to have the treatment covered by SHI. Physicians may also approach health insurance companies with requests to make an exception and reimburse a specific therapeutic procedure that does not fall within the defined restrictions. The decision is at the discretion of the health insurance company.

Generic substitution in Slovakia was introduced in 2005. It is only allowed between pharmaceuticals with the same effective substance. The Ministry of Health issues a list of effective substances in which generic substitution is prohibited. These are not necessarily pharmaceuticals from the same reference pricing group. When providing advice on treatment, physicians must inform their patients about cheaper generic alternatives available in the market. If

necessary, they can also prohibit the use of generic substitutes for particular patients. Pharmacists must inform patients about generics when filling a prescription. If the physician did not provide any reason not to use the generic substitute, the patient may choose the less expensive option.

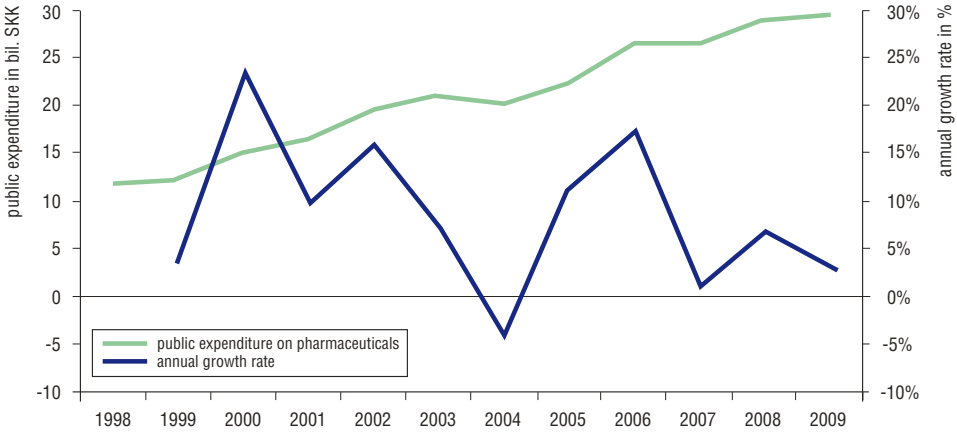
In 2009, the total expenditure on pharmaceuticals in outpatient care from public resources was €987.6 million, or approximately €183 per capita (NCHI, 2010a). Compared to EU15 countries, Slovakia has low pharmaceutical expenditure per capita in absolute terms, but it nevertheless accounted for almost 33.6% of public expenditure on health care in 2007 (HCSA, 2008), the highest share for pharmaceutical expenditure of all OECD countries (OECD, 2009). For more information on pharmaceutical spending see section 7.3.

Expenditures on pharmaceuticals have more than doubled in nominal terms since 1998. An expansive phase of 18% of annual growth from 1999 to 2002, which was caused by an increase in prices, was followed by a short spell of negative growth between 2003 and 2004, due to the introduction of user fees for doctor visits and prescriptions in mid 2003 (see Fig. 5.3). Based on changes to pharmaceutical reimbursement in November 2003, co-payments were increased due to strict reference pricing measures, followed by a reduction of pharmaceutical prices resulting from market competition. Drug expenditures rose again from 2005 to 2007 when a VAT reduction from 19% to 10% came into effect, and a reduction of prices by 6.6% was observed due to the strengthening of the Slovak crown against the euro and the US dollar. Also in 2008, the strengthening of the crown led to a reduction of pharmaceutical prices. The implementation of degressive margins in 2008 also aimed at achieving cost savings. Analyses have proved that many pharmaceutical prices in Slovakia are higher in comparison with other countries (Szalayová, 2007). Based on these analyses, the Ministry of Health in cooperation with the Ministry of Finance started to perform a re-evaluation of all pharmaceutical prices on the reimbursement list in 2009.

Although pharmaceutical expenditure has been constantly rising, the volume of consumed pharmaceuticals in millions of prescribed packages has been quite stable. After a moderate decrease until 2004, recent years have shown moderate increases again, but the numbers have not reached the levels of 2000. Patient co-payments for pharmaceuticals covered by SHI have been growing faster than pharmaceutical expenditure from public resources (see Fig. 5.4). Yet co-payments account for no more than 15% of total pharmaceutical expenditure.

Fig. 5.3

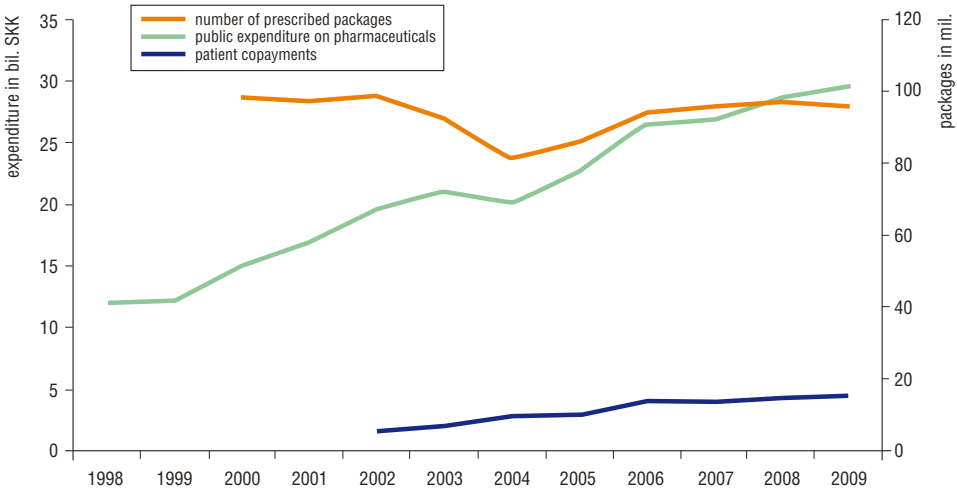
Trend in public expenditures on pharmaceuticals in SKK[a] (billion) and annual growth (%)



Source: Data from NCHI, 2006–2010.
Note: [a] 30 SKK = €1.

Fig. 5.4

Trend in public expenditure on pharmaceuticals and patient co-payments in SKK[a] (billion) and trend in number of prescribed pharmaceuticals (million packages)



Source: Data from NCHI, 2006–2010.
Note: [a] 30 SKK = €1.

Cardiovascular pharmaceuticals represent the highest share of expenditures and treatment packs in Slovakia. The share of total pharmaceutical expenditures in cardiovascular drugs has been decreasing continuously due to the expiry of patent protection followed by a reduction in prices, not due to decrease in use. In terms of expenditure, oncological and immunomodulant pharmaceuticals, with a 30% average annual growth in the past five years, represent the group with the most significant growth (data from NCHI, 2006–2010).

5.7 Rehabilitation/intermediate care

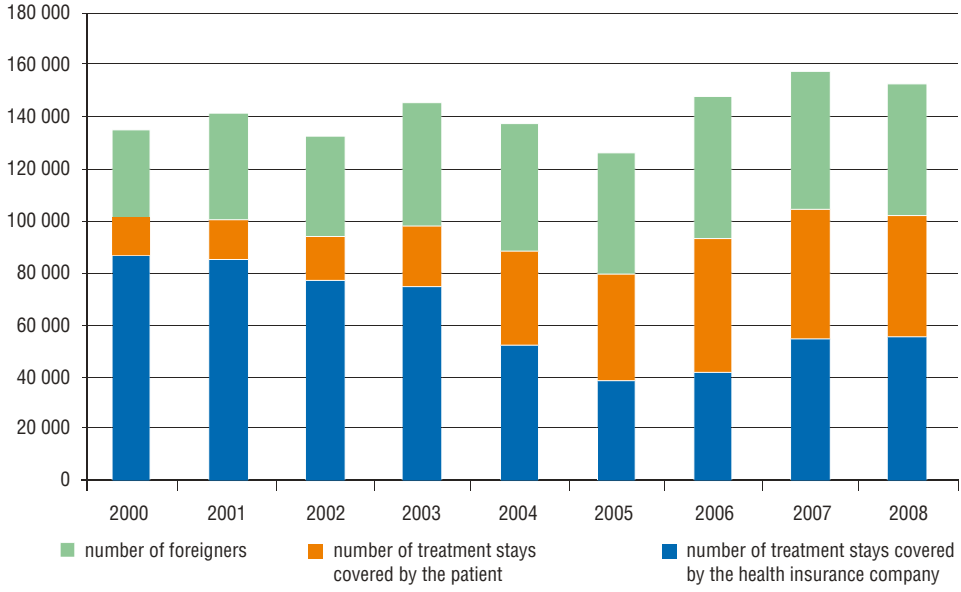
Rehabilitation facilities provide professional physiotherapy services as well as various therapeutic procedures and techniques. Their purpose is the elimination of or relief from conditions associated with accidents, cerebral episodes, operations and so on. Physiotherapy services are provided as ambulatory and inpatient care. Ambulatory care includes specialized services in physiatry, balneology and treatment rehabilitation. Inpatient care is provided in rehabilitation facilities, highly specialized facilities or spas. Balneotherapy, a regional tradition that combines spa visits with various therapeutic treatments, is provided in natural healing spas or balneal facilities. Based on the recommendations of the Balneal Committee, the Ministry of Health grants permits to provide these services. In addition to treatment, spas may also provide services aimed at prevention. The facilities use natural resources for curative and preventive treatments, such as climatic conditions (alpine air) or mineral resources (balneal spas).

Rehabilitation and balneal facilities have two main sources of funding. First, health insurance companies pay for treatment stays and associated services. Illnesses that are fully or partly covered by SHI, indication conditions and the length of treatment stay are by law divided into groups A and B. Diagnoses listed in group A are fully reimbursed by SHI, whereas diagnoses listed in group B require cost-sharing. Direct out-of-pocket payments (for accommodation and associated services) are the second source of funding.

In 2009, balneal treatment was provided in 20 natural healing spas and 10 balneal facilities. In 2008, 152 286 patients were treated in natural healing spas (102 357 Slovakians and 49 929 foreigners). The share of treatment stays covered by SHI has decreased over the years, from 64% of all patients in 2000 to 36.3% in 2008 (Fig. 5.5). This is due to the shifting of SHI resources towards more effective therapeutic procedures. Of the people treated in spas, 71.5% of patients came with musculoskeletal diseases, 8.0% with gastrointestinal

diseases, 6.7% with cardiovascular diseases, 5.5% with respiratory diseases, 2.1% with dermatological diseases, 1.9% with gynaecological diseases, 1.8% with diseases of the nervous system, 1.2% with endocrinological diseases, 0.7% with oncological diseases and 0.5% with other diagnoses.

Fig. 5.5
Number of patients in spas



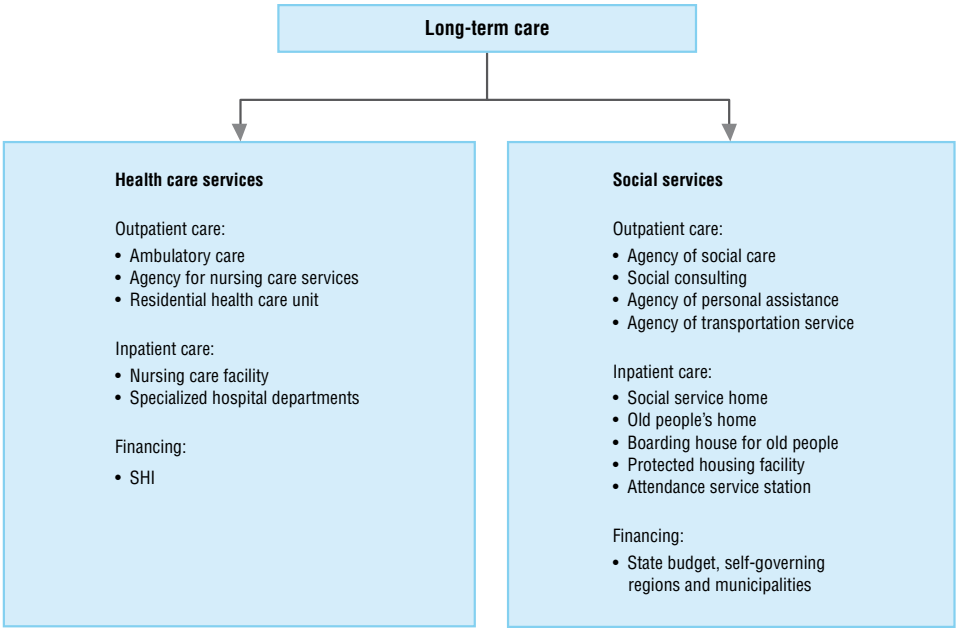
Source: NCHI, 2009a.

5.8 Long-term care

At present, health care and social care are not well coordinated for people requiring long-term care. Long-term care lacks integrated home care, community, ambulatory or hospital health and social services. Both social and health care are subject to different legal frameworks and their competences fall into two different sectors. Social care aims to reduce or overcome social deprivation, prevent mental, physical and social developmental disorders, and ensure underprivileged people full participation in society. Social care is funded from the state budget, the budget of the self-governing regions and the municipal budgets. Nursing care becomes part of the long-term care system if people are eligible for such services for a period of more than six months.

Health care services provided within long-term care are mostly covered by SHI or by direct payments from clients. Fig. 5.6 provides an overview of the various services provided under long-term care and its financing.

Fig. 5.6
Long-term care financing



Source: Data from HPI, 2008.

Ambulatory care for elderly people is provided in both general and specialized health care facilities. General health care for geriatric patients is provided in GP practices or by home care nursing agencies. Nursing care includes preventive activities through educational and counselling activities.

Both health and social services are provided in long-term outpatient care. Outpatient health services are provided in general and specialized outpatient departments, home care nursing agencies and day-care centres.

Specialized ambulatory care is provided to geriatric patients in geriatric outpatient departments or other specialized outpatient departments, including care for patients with incontinence, immobility and dementia. Ambulatory care for geriatric patients with psychiatric conditions is provided in geriatric psychiatric outpatient departments and day-care centres.

Agencies for nursing care services primarily provide nursing and rehabilitation care at home. Home care is provided as a continuation of inpatient care upon discharge from a hospital and for people with acute and chronic conditions not requiring hospitalization. The amount of reimbursement depends on the fees for procedures. Some of these agencies also provide attendance care (for example bathing, dressing and eating) but this type of care is not covered by SHI. In 2008, there were 127 agencies for nursing care services.

Most residential health care units focus on psychiatry and provide many different treatments (for example, occupational therapy, group therapy, individual psychotherapy). Typical examples are day-care centres for chronic patients such as addicts (drug, gambling, and alcohol addiction) and geriatric patients (psychiatric disorders or dementia). The services are covered by health insurance per one-day stay, provided the centre has a contract with a health insurance company. In 2008, 83 health care facilities delivered services in residential health care units with 1036 daily places for outpatients (NCHI, 2009b).

A nursing care facility may either be attached to a health care facility or may be an independent health care facility. They are financed by SHI, provided the nursing agency has a contract with a health insurance company. Health care facilities may require direct fees for services that are not covered by SHI or they may seek other resources. In 2007, only one independent nursing care facility with 33 beds was registered.

In 2004, the Ministry of Health proposed a draft bill on long-term care and long-term support aimed at the integration of people with functional restrictions. The objective of this bill was to integrate the overlapping social care and health care sectors as well as their financing. The bill, however, was opposed by NGOs as well as the Ministry of Social Affairs.

5.9 Palliative care

Palliative care is provided in outpatient departments, hospital-based departments of palliative care, (mobile) hospices and in the home setting by nursing agencies. The concept of palliative care was adopted in 2006. Palliative care is covered by SHI. The amount reimbursed by health insurance is often insufficient and additional financing from sponsors or donations is necessary. Care for terminally ill patients in hospices is neither defined by diagnosis nor by law. A terminally ill patient is eligible for palliative care if his or her state of health

is deteriorating and requires constant monitoring. The eligibility criteria set by health insurance companies are the following: chronic, untreatable and progressive disease with time-limited survival.

In 2008, hospice care was provided in 9 facilities with 120 beds in hospices, 269 beds in hospital-based departments of palliative care and 4 mobile hospices (NCHI, 2009b). This is equal to 4.5 beds per 100 000 population, less than half the number recommended by the WHO (10 beds per 100 000 population). Mobile hospices provide specific, complex home care in cases of untreatable, progressive diseases, which are not responding to causal treatment. It may be important to note that there are several facilities that are called hospices, which do not meet the conditions of hospice care.

5.10 Mental health care

Mental health care is provided in outpatient and inpatient settings and is covered by SHI. In 2008, psychiatric services were provided in 386 outpatient departments and in 81 inpatient departments with a total of 4379 beds. The inpatient departments are specialized in psychiatry (78% of psychiatric beds), geriatric psychiatry (7%) and drug addiction (15%). A total of 2134 patients had been admitted for outpatient treatment, 4% of whom were adolescents. Psychiatric diseases constituted 54% of the overall treatment, while alcohol and drug abuse accounted for 32% and 13% respectively (NCHI, 2009c). A full overview of the various institutions providing mental health services in Slovakia can be found in Box 5.1.

The government of Slovakia approved the National Programme of Mental Health in 2004, which has the following goals for the period 2005–2015: destigmatization of people with mental disorders, development of psychiatric home care agencies, development of crisis intervention services and development of mental health programmes. The goals were set through a dialogue between EU Member States and the EC (the Green Paper on Mental Health consultation) and their future development is incorporated in several EU documents. The Ministry of Health adopted strategic documents concerning mental health care and the concept of drug addiction medicine in 2006.

In 2008, inpatient facilities hospitalized a total of 1841 drug addicts, which was 30% less than in 2000. Treatment was sought most by users of heroin (35%) and stimulant drugs, mainly methamphetamine (23%) (NCHI, 2009b).

Financial resources used to fight drug use and abuse focused on a reduction of the supply through repressive measures (70% of financial resources) and a reduction of the demand through prevention, treatment, harm reduction and education (30%).

Box 5.1
Mental health services in Slovakia

- Specialized psychiatric outpatient departments
- General hospitals (psychiatric departments)
  - psychiatric departments for adult patients
  - psychiatric departments for children and adolescents
  - geronto-psychiatric departments
  - post-hospital treatment
  - departments for treatment of drug addiction
  - departments of psychiatric rehabilitation
  - psychiatric intensive care units (ICUs)
- Specialized hospitals
  - psychiatric hospitals
  - centres for treatment of drug addiction
  - psychiatric treatment institution
- Psychiatric day-care centres
- Psychiatric treatment facilities
- Home care agencies
- Psychiatric establishments with special orientation (protective psychiatric treatment, detention centres, establishments of forensic expertise, etc.)
- Community-based psychiatry facilities (community-based mental health centres, early intervention centres, assertive community-based teams)
- Crisis centres with mobile team units
- Facilities within other sectors with mental services (for example protected/supported living, supported work posts, psychiatric care for people in custody or in prison, social service facilities oriented at psychiatric care)

Source: Data from HPI, 2008.

The General Secretariat of the Ministerial Committee for Drug Addiction and Drug Control was established in 1995 with expert committees on (1) prevention, (2) legal issues and law enforcement, (3) communication strategies, and (4) treatment and re-socialization. The National Monitoring Centre for Drugs, a part of the General Secretariat, focuses on the monitoring and evaluation of the drug situation in Slovakia, in connection with the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) located in Lisbon. The centre is a member of the REITOX network (European Information Network on Drugs and Drug Addictions), which monitors psychotropic substances and provides background information for political decisions at the national and European levels.

5.11 Dental care

Dental care is provided by contracted and non-contracted dentists. Dental procedures often necessitate direct payments from the patient. In most cases, SHI only covers basic dental costs, under the condition that the insured patient has had a preventive dental examination in the past calendar year. This condition was introduced in 2005 with the intention of promoting prevention of dental diseases and adverse treatment conditions. As a result, the share of patients who received preventive check-ups increased from 39% in 2004 to 57% in 2005 (NCHI, 2009b). In 2008, a total of 3.0 million people received a preventive check-up (Table 5.4), 21% of whom were children (NCHI, 2009b).

Table 5.4
Number of dental examinations, 1997–2008

	1997	2000	2005	2008
Dental examinations (million)	7.6	7.8	7.1	7.6
- per 1 000 inhabitants	1 399	1 453	1 310	1 406
Preventive dental examinations (million)	2.0	2.3	3.1	3.0
- per 1 000 inhabitants	374	433	567	557

Source: NCHI, 2009b.

5.12 Complementary and alternative medicine

Complementary and alternative medical services provided in Slovakia include acupuncture, homeopathy, several eastern medicine treatments, massages and healthy nutrition counselling. These services are predominantly provided in

private outpatient departments or specialized facilities and are not covered by SHI. In 2007, a total of 15 360 acupuncture procedures were performed, which is 28.44 procedures per 10 000 people in Slovakia. Homeopathic remedies are subject to registration and monitoring by the SIDC, similar to the conditions for pharmaceuticals. It is at the discretion of physicians to use homeopathy. The Centre of Classical Homeopathy in Slovakia cooperates closely with European Central Council of Homeopaths (ECCH). According to a public opinion survey on alternative medicine carried out in 2007, 55.8% of the population has expressed trust in the effectiveness of acupuncture, 49.5% in homeopathy and 27.2% in chiropractics (MVK, 2007).

5.13 Health care for specific populations

Official statistical data on the ethnic composition of the population are not available. It is assumed that approximately 350 000 to 380 000 Roma live in Slovakia. The inclusion of this group is difficult due to their unfavourable social situation, racial prejudice and their long-term dependency on social benefits.

The National Action Plan of the Slovak Republic and the Decade of Roma population inclusion 2005–2015 have four areas of priority: education, employment, health and housing and three inter-related topics: poverty, discrimination and gender equality.

The health goals are as follows:

- to create a verified database of health data and health inequalities between the Roma population and the majority population as well as among Roma communities, as a basis for effective health interventions;
- to improve the access to health care for the Roma population and to increase their knowledge on health care provision;
- to improve the reproductive health of the Roma population;
- to improve the vaccination rate in the Roma population.

6. Principal health reforms

Since 1990, Slovakia has witnessed a turbulent reform trajectory, with periods of sweeping reforms alternating with calmer periods. The early 1990s were characterized by the reintroduction of the Bismarck model and privatization of providers. The institutional and regulatory framework was quite weak and plagued by corruption. This led to rapidly increasing debts and bankruptcies in the health insurance market. The late 1990s were in turn quite calm, although debt was accumulating quickly. In the period 2002–2006, a shock-type reform replaced all relevant health care related legislation and imposed a new approach based on individual responsibility. The health insurance companies were transformed into joint stock companies, hard budget constraints were introduced, and a new regulatory and institutional framework created. User fees were introduced with the aim of making patients more aware of their consumption of health care. The health system was based around managed competition, which was expected to leave enough room for the market (liberalized prices, easier entrance to market, liberalized payment mechanisms), albeit under strict regulation (minimum network requirement, solvency criteria, licensing). The model sought to create an environment in which societal goals are met through setting the right incentives for market players.

The government that entered into power after the 2006 elections brought a shift in paradigm. The pro-market reform efforts and individual responsibility were discarded in favour of more direct state involvement and responsibility. Although the institutional and regulatory framework remains largely intact, health insurance companies were no longer allowed to make a profit and selective contracting has been restricted. Furthermore, user fees were scaled down or completely abolished. The 2010 elections brought to power a government that is politically more closely aligned with the 2002–2006 government. The manifesto of the new government declared that health

insurance companies would once again be allowed to make profits, that the halted transformation of hospitals into joint stock companies would resume, that the independence of the HCSA would be increased, that a DRG payment system would be introduced and that market mechanisms in health insurance would be increased.

In this chapter the various reforms since 1990 will be discussed in more detail. Reforms prior to 1989 can be found in section 2.2. An overview of the main financial reforms since 1990 is provided in Table 6.1.

Table 6.1

Summary of main reforms and events in health system financing, 1992–2010

1992	• Re-establishment of SHI. • Establishment of the Institute of Health Insurance. • Health care still financed from state budget.
1993	• Establishment of the National Health Insurance Fund, responsible for health insurance, sickness and pension insurance. • Health insurance fund responsible for contribution collection and for financing of benefits-in-kind and cash benefits. • Insurance contribution for health insurance 13.7% of income. • Administrative costs may not exceed 3% of the collected contributions. • State guarantees solvency of the National Health Insurance Fund. • Insurance company contracts health care services. • Communication problems among administrations of funds. • Economic recession affects resource generation negatively. • Contributions for economically inactive population paid by the state (state-insured), amount may change from year to year.
1994– 2002	• Implementing compulsory health insurance and allowing multiple health insurance funds. • Establishment of the General Health Insurance Fund, a statutory institution (1.1.1995). • Establishment of other health insurance funds (12 health insurance funds in 1995). • Since 1995: implementation of monthly redistribution of resources between health insurance funds according to risk. • 2001: increase of contribution rate from 13.7% to 14.0%. • State freezes the payments for state-insured – other sectors are prioritized in the state budget. • 2002: cumulative debts exceed 50% of annual income of health insurance funds. • Creating a framework for a multiple payer health care system: basic legislative changes (Act on Health Care, Act on Treatment Order, Act on Social Insurance). • Price regulation by the Ministry of Finance. • Health insurance funds do not engage in strategic health care purchasing. • Soft budgetary constraints. • No regulation of health insurance funds (for example solvency, licences). • Consolidation between health insurance funds. • Bankruptcy of health insurance fund Perspektíva leaving enormous debts. • Deepening of structural deformation of the system's supply.

2003–2006	• Stabilizing measures – implementation of user fees. • Assessment base expanded to three times the average wage. • Establishment of the HCSA as a key supervisor of the health insurance market. • Involvement of HCSA in the process of collecting receivables (approval of debt recovery). • State contribution on behalf of state-insured linked to economic development (since 2005). • Implementation of annual settlement of health insurance contribution. • Implementation of annual risk adjustment between health insurance companies. • Clearing off health care debts in 2004–2005 through the state agency by purchasing receivables from creditors. • Transition of health insurance funds into joint stock companies. • Hard budgetary constraints. • Compulsory licensing of health insurance companies. • Obligation to meet solvency rate for health insurance companies (minimum 3% of contribution upon redistribution during the past 12 months). • Profit-oriented health insurance companies – in exchange for cost control and health care purchasing. • Introduction of standard corporate governance in health insurance companies. • Preparing the implementation of selective contracting.
2007–2010	• Formal changes in annual settlement. • Gradual increase of state contribution on behalf of state-insured to 4.9% for 2009. • First signs of selective contracting (slowed down by mandatory contracting of state hospitals within the minimal network). • Limiting the administrative costs of health insurance companies to 3.5% of contributions. • Ban on profit – the profit may be used only on health care purchasing. • Obligation to transfer the insuree portfolio only without remuneration. • Less independence of HCSA from the government.

6.1 Main reforms since the 1990s

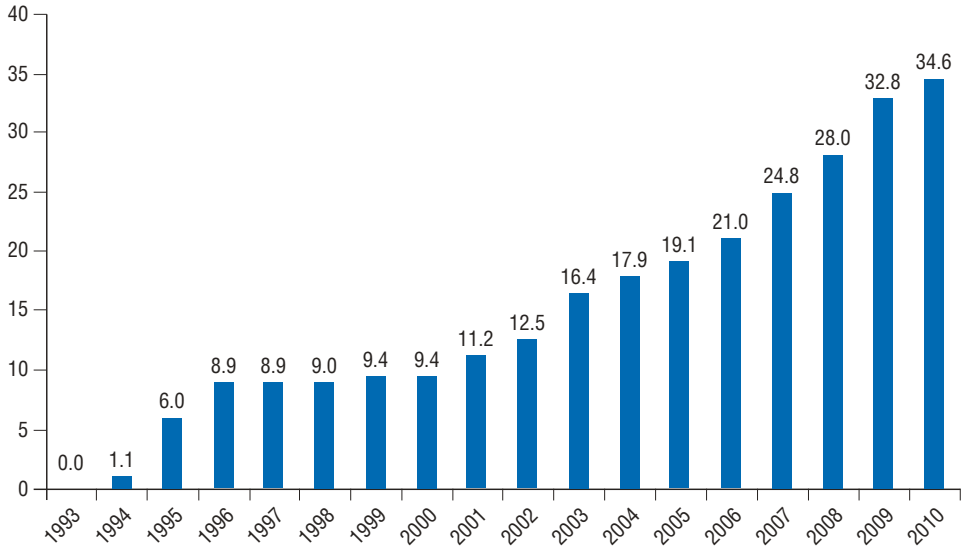
Slovakia, analogous to the Czech Republic, reintroduced a Bismarck model of health insurance in 1993. The Slovak National Health Insurance Fund was established in order to finance health insurance, sickness benefits and pensions. In 1994, the Act on Health Insurance was adopted, which enabled the establishment of other health insurance funds and legally defined SHI. More specifically, the latter was defined as a combination of financial contributions from the economically active population and state contributions on behalf of the non-working population. Considering the economic climate, the transition to an SHI system in 1993 was a bold move.

First, the economy was in a deep depression and economic performance in 1993 only reached 76% of the 1990 average. High unemployment and stagnant wages seriously affected the financing of health insurance. At 3.3% of GDP, contributions from economically active people were the only source of health financing.

Second, public finances were seriously constrained. The state did not have the fiscal capacity to pay health insurance contributions to cover the economically inactive population (approximately 3.3 million insured, 61% of the total population). In 1993, the state made no contributions to the health system and contributed only €1.11 per economically inactive insured person in 1994. Although the state made significantly higher contributions in 1995 and 1996 (see Fig. 6.1), the amount per insured person was not significantly increased until 2000. State contributions during this era increased only by 5.2%, while the total cumulative inflation in the same period reached 35.4%.

Fig. 6.1

State contributions on behalf of the economically inactive to health insurance companies in € per capita



Source: Data from state budget 1993–2010.

In 1993 and 1994, being heavily underfinanced, the health system produced a deficit of €780 million, accounting for 4.8% of the GDP. This starting deficit negatively affected the performance of the health system during the second half of the 1990s. Although the gap was somewhat closed in 1996–1998, the debt increase could not be stopped. The deficit reached €150 million in 1999, €260 million in 2000 and up to €290 million in 2001. The government tried to clear debts with unique non-recurring resources from privatization of state property and spent a total of €339 million on debt reduction from 2000 to 2002. In 2002, the annual deficit dropped to €220 million; however, the total debts almost reached €1.0 billion (see Table 6.2), more than 40% of health system resources.

Table 6.2

Development of debt in the health care system

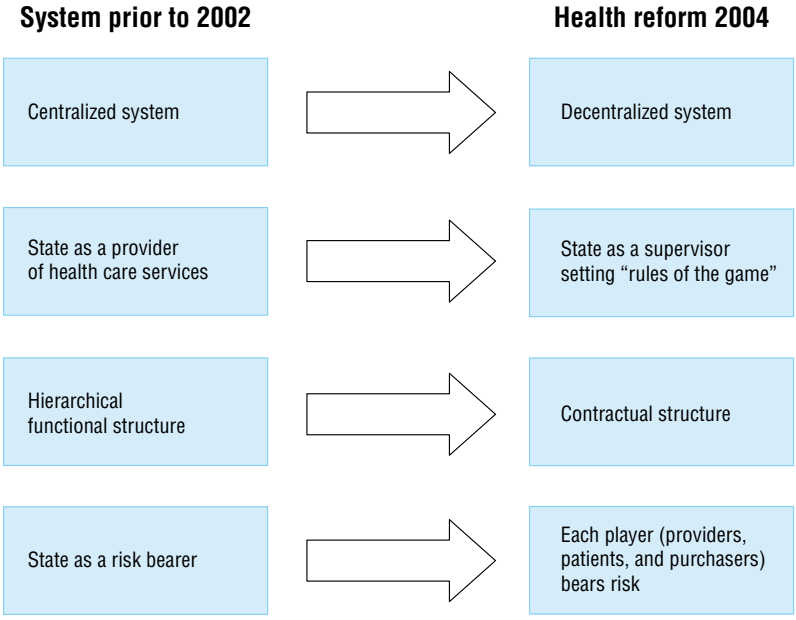
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Health insurance debts (€ million)	30	27	70	126	119	156	219	266	249	73	40	3	3	0	0
State loans (€ million)	20	23	56	63	146	146	193	196	166	93	0	0	0	0	130
Debts by state-owned health facilities (€ million)	86	90	153	276	345	402	471	534	375	461	93	153	196	196	115
Debts by health facilities owned by municipalities, self-governing regions, non-profit-making organizations (€ million)	–	–	–	–	–	–	–	–	66	106	80	76	73	77	78
Total	136	139	279	465	611	704	883	996	856	734	212	232	272	273	323
GDP	18 884	20 866	23 521	25 725	27 740	30 167	32 839	36 782	40 580	44 988	48 832	54 315	60 496	67 211	63 260
Health insurance debts as % of GDP	0.2	0.1	0.3	0.5	0.4	0.5	0.7	0.7	0.6	0.2	0.1	0.0	0.0	0.0	0.0
State loans as % of GDP	0.1	0.1	0.2	0.2	0.5	0.5	0.6	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.2
Debts by state-owned health facilities as % of GDP	0.5	0.4	0.6	1.1	1.2	1.3	1.4	1.5	0.9	1.0	0.2	0.3	0.3	0.3	0.2
Debts by health facilities owned by municipalities, self-governing regions, non-profit-making organizations as % of GDP	–	–	–	–	–	–	–	–	0.2	0.2	0.2	0.1	0.1	0.1	0.1
State-owned health facilities transformed into joint stock companies as % of GDP	–	–	–	–	–	–	–	–	–	0.0	0.0	0.0	0.0	0.0	0.0
Total debt as % of GDP	0.7	0.7	1.2	1.8	2.2	2.3	2.7	2.7	2.1	1.6	0.4	0.4	0.4	0.4	0.5

Source: Calculations by HPI based on data from the Ministry of Finance, Ministry of Health and Statistical Office of the Slovak Republic, 2010.

6.2 Reform period, 2002–2006

Health reform in 2002–2006 introduced hard budget constraints and aimed at effectively utilizing scarce resources and uncovering internal system reserves. In practice the latter meant increasing the responsibility of patients, health insurance companies and health care providers. The state significantly reduced its active involvement in favour of regulated market mechanisms. During the restructuring period, the system changed from a hierarchical and centralized system to a decentralized and contractual system (Fig. 6.2).

Fig. 6.2
Key structural and functional changes to the health system



Source: Pažitný and Zajac, 2004.

The health reform from 2002 to 2006 was part of a larger reform plan, which can be labelled as "Slovakia's neo-liberal turn" (Fisher, Gould & Haughton, 2007). Neoliberalism refers to liberal economic policies that increase personal responsibility for one's own well-being and that seek to dismantle institutions that socialize the risk of failure in the economy (Harvey, 2006: 145). According to Fisher, Gould and Haughton (2007), Slovakia's government distinguished itself in central Europe for its consistent adoption of liberal and neoliberal reforms between 2002 and 2006. Furthermore, the authors argue that the

neoliberal turn emerged from a deep, ideologically informed collaboration between highly placed political officials and innovative policy advisers. While Slovakia's reformers did not accomplish everything they wanted, they were able to put a neoliberal stamp on fiscal policy and taxation, the Labour Code, the pension system, investment regime, welfare payments, the judicial system, and the health and education sectors.

Unlike in Hungary (2006–2007) and in the Czech Republic (2007–2008), health system reform in Slovakia was part of broader reforms in public finances and the business environment. During this period, a 19% flat tax and the second pillar of the mandatory pension scheme, an enforcement of significant fiscal decentralization and a judicial reform, were implemented. Health reform comprised stabilizing measures, system measures and network measures. The stabilizing measures were aimed at halting rising debt and restricting overconsumption of health care services and drugs. The system measures were to create a new system of effective, fair and financially sustainable health care provision (Table 6.3; for details see section 6.3).

Table 6.3
Overview of key reform measures

Type	Measure
Stabilizing	Implementation of user fees Debts settlement Drug policy measures Stabilization of financing system – linked to real economy with anticyclical elements
Systematic	Hard budget constraints Transformation of health insurance companies into joint stock companies Establishment of HCSA Flexible prices decentralized to health insurance companies Flexible contractual relations and selective contracting Flexible basic benefit package
Network	New network of emergency rescue service Concept of flexible network, definition of minimum network Liberalization of ownership of pharmacies

Source: Data from HPI, 2008.

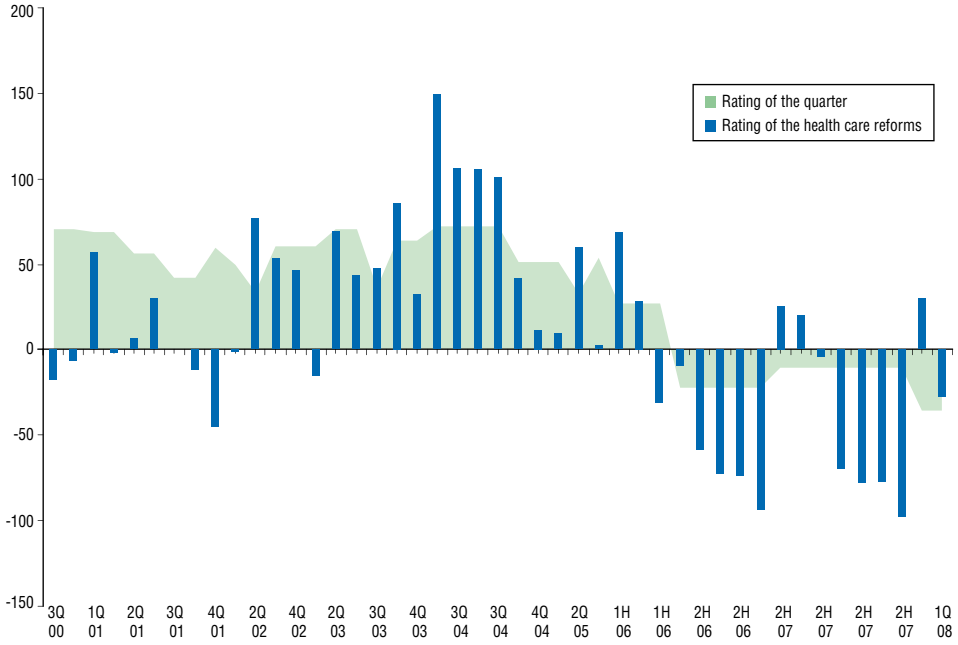
A more market-oriented system could not have been implemented had there not have been strong institutional and legal pillars upon which it could be built. The Standard Commercial Code, the Act on Competition and Compensation, and the Act on Accounting have played important roles and have provided a robust framework for the health care acts. The fact that Minister of Health Rudolf Zajac was able to hold on to his position during the whole of the government's term (unlike several of his colleagues in neighbouring countries) played a crucial role in the implementation of health reform.

The implementation of the reforms was not fully completed before the elections in 2006, which may explain the diversity of opinions about them. Eighty national experts grouped in a project called the project EESM (Evaluation of Economic and Social Measures) have evaluated the health reform as positive. According to the EESM, the key reform acts have reached ratings from 100 to 150 points (-300 points for complete disagreement and up to +300 for complete agreement). Fig. 6.3 based on the EESM evaluation illustrates that:

1. The key health reform laws adopted in the third quarter of 2004 received a higher rating (+100 to +150 points) than the quarter average (+75 points).
2. The measures taken until the first quarter of 2008 by the government that was in power since mid 2006 until mid 2010 mainly received negative ratings (-100), and contributed to a drop in the overall rating (-20 points).

Fig. 6.3

Rating of economic and social measures in the health care system



Source: Zachar, 2000–2008.

Experts viewed the 2002–2006 health reform as positive and welcomed the effort to establish an effective and financially sustainable system (Zachar, 2005). The plan to encourage personal involvement in decisions concerning

one's health received a largely positive response. However, critics pointed out that application of a new system based on market principles as used in other sectors may pose risks. They also raised the fact that the reformers did not listen enough to opponents and that the reform did not achieve a consensus of support across the political spectrum.

Although expert opinion was mainly positive, citizens largely disapproved. While professionals supported the introduction of user fees, up to 74% of the population disagreed. On the other hand, in the process of evaluating the reforms, health care did not rank as a priority issue when compared to other societal problems. This may indicate that, despite disagreeing with the reforms, people were adapting to the new health care system (IVO, 2007).

6.3 Key elements of the health reform, 2002–2006

6.3.1 Introduction and subsequent abolition of user fees

The implementation of user fees in June 2003 was aimed at reducing the demand for health care. They were set at €0.67 for a doctor's visit in ambulatory care (both primary and secondary), €0.67 for a prescription, and €1.67 for each day of a hospital stay. The user fee for using the first aid services was set at €2. The constitutional legitimacy of the user fees was confirmed by the Constitutional Court in May 2004. The impulse for constitutional inspection of user fees came from opposition members of Parliament, who argued that user fees violate the constitutional right to free health care provision. The Constitutional Court ruled that user fees are in accordance with the Constitution. They are legislatively defined as administrative fees linked to health care delivery. Moreover, the financial burden resulting from these fees was not considered as an access barrier, since financial compensation was paid to low-income groups to cover these fees.

According to data from the General Health Insurance Company, the largest health insurance company in Slovakia (Zajac, Pažitný & Marcinčin, 2004), the number of physician visits in primary care dropped by 10% in the second half of 2003 compared to the same period in 2002. Similar results were observed in first aid department visits (reduction of 13%). On the other hand, the changes to physician visits in secondary care (-2%) and hospitalizations (-2%) were not significant. The reduction in physician visits led to a reduction in prescriptions because nearly 95% of GP visits in Slovakia include prescribing a medication.

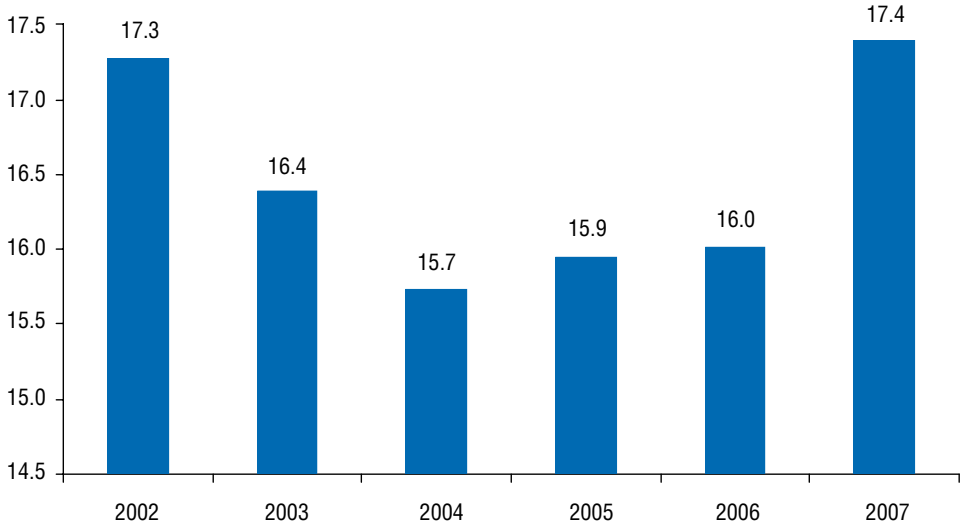
More than 20% of patients required less medication prescribed when visiting a GP. From 2002 to 2004, the volume of drug packages sold in pharmacies declined by almost 8%.

In a survey (FOCUS, 2004), 1.5% of respondents pointed out that the introduction of user fees had impacted their behaviour and that they had stopped visiting a doctor. Up to 58.4% of respondents, however, did not change their behaviour. A decrease in demand was observed in 18% of the population that had restricted their physician visits. User fees were a new item on the list of family expenses. Such a change in the structure of expenses was not welcomed. According to 27% of respondents, fees have caused a serious or very serious financial burden. Elderly people and single parents with more than one child mainly expressed negative opinions (FOCUS, 2004).

Over 32% of respondents viewed corruption in health care as the most serious problem and it ranked second in December 2002. In January 2004, the same attitude was expressed by only 10% of respondents and corruption ranked seventh. The number of people who had offered a gift to a specialist physician in October 2003 dropped by 22%, a decline of over one-fifth compared to June 2002. A decline of one-quarter was observed in hospitals and in dental care facilities. The value of these gifts decreased on average by 40% in hospitals, by 23% in specialized care and by 30% in dental care. The implementation of user fees produced a substitution effect: people did not feel obliged to offer small gifts to physicians once they had paid a legal fee (FOCUS, 2004).

Public support for user fees was low and it had become a topic of heated political debate. Following the parliamentary elections in 2006 and the victory of the left-leaning opposition, the new government did not eliminate the user fees in the law, but reduced the fees in outpatient and inpatient care to €0. Fees for first aid visits remained the same (€2) and the fee for a prescription was reduced to €0.17. Data from the General Health Insurance Company show that after the implementation of fees in June 2003, the number of patient–doctor consultations and medical examinations fell from 17.3 to 15.7 in 2004, after which it increased slightly to 16.0 in 2005. After abolition of part of the fees, the number of patient–doctor consultations and medical examinations returned to roughly the 2002 level (see Fig. 6.4).

Fig. 6.4
Number of patient–doctor consultations and medical examinations, 2002–2007



Source: Data from General Health Insurance Company, 2008.

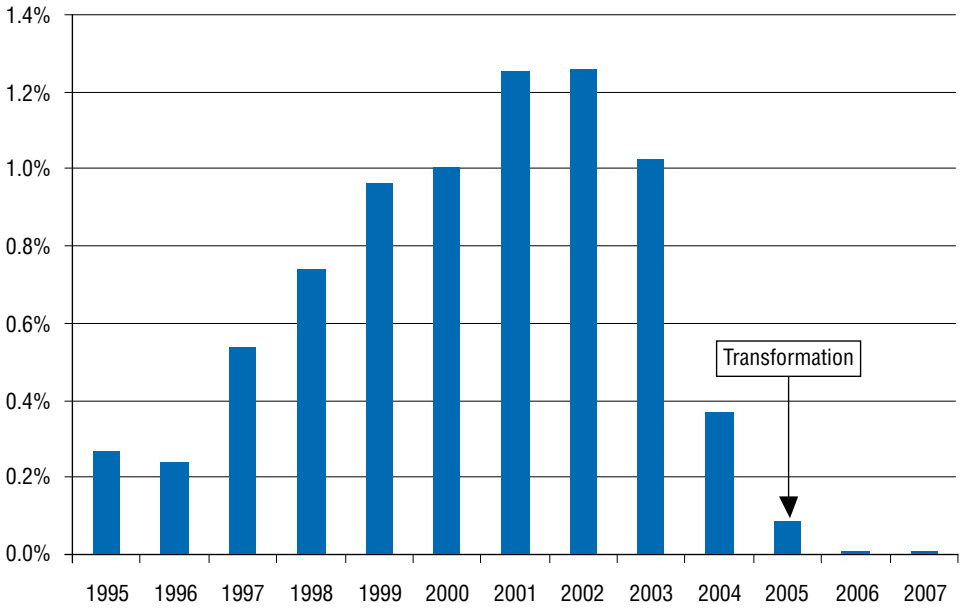
6.3.2 Transformation of health insurance funds into joint stock companies

The transformation of health insurance funds into health insurance companies, a change in nomenclature that indicates the transformation from a public institution into a joint stock company, was approved in 2004. Each transformation was left to the individual discretion of each health insurance fund. According to the law, if the fund was still against transforming into a health insurance company in 2005, it would be closed down. In the end, all five health insurance funds chose to become health insurance companies. Of the five new health insurance companies, two were state-owned and three were privately owned. In order to provide health insurance, the newly transformed health insurance companies had to apply for a licence at the HCSA, which was established in November 2004. Prerequisites for licensing were a basic property of €3.3 million, adequate organization and technical equipment. In addition, the individuals nominated to Boards of Directors and Supervisory Boards had to meet very strict criteria in terms of their education, moral and professional background. The original founders of health insurance funds became the first shareholders of the health insurance companies. The legal basis for health insurance companies is defined in the Commercial Code (*lex generalis*). The provisions that differ from the Commercial Code are outlined in the Act on Health Insurance Companies (*lex specialis*).

The transformation of health insurance funds into health insurance companies has stabilized the sector in terms of financing, as the companies were forced to become more prudent and effective at utilizing their own resources. After transformation, no new debt was created (Fig. 6.5).

Fig. 6.5

The effect of the transformation of health insurance funds into joint stock companies with hard budget constraints – debt as percentage of GDP



Source: Calculations of HPI based on data from Ministry of Finance and Ministry of Health, 2008.

The transformation of health insurance companies in 2005 aimed to create an environment in which health insurance companies and health care providers would operate independently. To increase the incentives for good performance of both parties, the legislature allowed them to make a profit (see Table 6.4). Profit for health insurance companies is a reward for bearing the financial risk, purchasing health care and administering health insurance.

According to the Amendment to the Health Insurance Act adopted at the end of 2007, all health insurance companies must use their profit to purchase health care. This provision resulted in health insurance companies starting an international arbitration against Slovakia in 2008 for what they view as damage to their investments. In summer 2008 a group of opposition members

of the Parliament filed a motion in the Constitutional Court regarding the constitutionality of this provision. In November 2009, the EC sent the Slovak government a letter of formal notice. In this notice the EC states, that "the prohibition on health insurance companies freely disposing of any profits resulting from the provision of public health insurance in Slovakia under section 15(6) of Act No 581/2004 constitutes an unjustified restriction on the freedom of capital movements guaranteed by Article 56 EC". The government in power since July 2010 announced in its Government Manifesto a return to allowing health insurance companies to make a profit. In January 2011, the Constitutional court ruled that the profit restriction was unconstitutional and nullified it.

Table 6.4

Profit/loss of health insurance companies in € million

Health insurance company	2005	2006	2007	2008	2009
VšZP (state-owned)	-83	7	-14	0	-27
SZP (state-owned)	3	7	7	0	-11
Apollo	3	21	7	1	n.a.
Dôvera	0	17	14	16	8
Sideria	0	14	–	–	–
EZP	0	-21	-7	–	–
Union	–	-3	-7	-11	-17
Total	-77	42	0	6	-47
Insurance contribution total	2 363	2 570	2 954	3 185	3 310
Profit as % of insurance contributions	-3.2	1.6	0.0	0.2	-1.4

Source: Data from health insurance companies, 2006–2010.

6.3.3 Debt settlement through the state consolidating agency

The main driving force of rising health care debt until 2002 was the debt itself. The highest contribution to the rising debt was from exchange rate losses, accrued interest on late payment (36.5% per year until 2002, after a change of the law it was reduced to 3.65% per year from 2003), court fees and sanctions.

The profit margin of drug suppliers increased, reflecting higher costs associated with the growing accrued interest and currency risk. This resulted in an increase in costs related to health care provision. Corruption had become more widespread mainly because debtors were giving payment preference to those creditors from whom they had received bribes. The debt absorbed financial resources which otherwise could have been used to increase the quality and effectiveness of health care provision.

From 2000 to 2002, the government used €339 million from the non-recurring resources from privatization to clear health care debts. These resources were allocated using state grants either to health insurance funds or directly to hospitals. No audits to identify the structure of the debt were performed before providing these grants, which led to notoriously unreliable data on debt. Furthermore, the grants were not controlled effectively, the prioritization of creditors was not transparent and the grants were frequently used to cover everyday expenses or to purchase new technologies. The lesson from this type of debt settlement was bitter. As of 31 December 2000, the reported debt was approximately €664 million and two years later, after the debt settlement was "over", it amounted to €996 million.

It became evident that effective debt liquidation depended not only on the accessibility of financial resources, but also on a proper debt-settlement technique. Therefore, a new state agency for the consolidation of health care debts was set up by the name Veritel. This agency repurchased from suppliers their receivables towards hospitals. In this process, receivables were thoroughly verified. The agency refused to pay for accrued interest and late fees. Instead, it focused solely on the principal, on which it demanded a cash discount of at least 3%. These steps saved considerable public resources.

As a result, the agency owned the receivables towards hospitals and the creditors were finally paid for products and services delivered in the past. The next step was that hospitals were allowed to pay their debts to the agency with their receivables towards health insurance funds. After this step, the hospitals were cleared of their debt and the agency owned receivables towards health insurance funds. The health insurance funds, in turn, were allowed to repay their debts to the agency with their receivables towards non-payers of health insurance, which amounted to €774 million in 2003. In the period 2003–2005, the agency settled debt in the health sector exceeding €1100 million in accounting value at the cost of €644 million in cash. Since the Ministry of Health announced that this was the last bail-out of the health care system, the agency was abolished in 2006.

6.3.4 Flexible prices and free payment mechanisms

One of the objectives of the health reform in 2004 was to increase the responsibility of health insurance companies in the purchasing of health care services. Since the reform was adopted, all pricing and payment mechanisms, with the exception of several market segments (such as drugs, emergency medical services and 24/7 first aid), are subject to contractual freedom.

Contracts with negotiable prices and deregulated payment mechanisms enable the absorption of potential financial or structural imbalances between health insurance companies and providers. Flexible prices enable health insurance companies to react to changes in system financing (with increasing resources they can increase prices for providers and vice versa) or to absorb structural imbalances in resource allocation in various areas of health care (for example, transfer resources between ambulatory and inpatient care).

The management of a free pricing system is more demanding for the regulator. If the regulator wants to influence health system financing, it cannot rely on simply changing centralized prices or payment mechanisms, but it has to use more complex indirect tools. Since 2007, state-owned hospitals are in a better position when negotiating contracts with health insurance companies. By government decree, state-owned hospitals fall under the minimum network requirement and must be contracted by health insurance companies. The practice of price agreements between state hospitals became the subject of investigation by the Anti-Monopoly Office of the Slovak Republic. According to a 2009 Anti-Monopoly Office report the hospitals behaved as a cartel. In spite of these problems, contracting has resulted in a greater differentiation in terms of prices and payment mechanisms among health insurance companies (see Table 6.5). The new government (since July 2010) declared the implementation of DRGs as the main payment mechanism for hospitals.

Table 6.5

Payment mechanisms used by health insurance companies, 2007–2008

HIC	GPs	Specialists	Inpatient facilities
General Health Insurance Company	Age-adjusted capitation Measurement of inputs (quality)	Capped fee for service (monthly/quarterly base); no payment for additional services after reaching the cap	Case-based payment combined with global budget
Dôvera	Age-adjusted capitation Measurement of inputs, processes and results	Capped fee for service; after reaching the cap, the provider gets a lower unit price Measurement of processes and results	Case-based payment combined with global budget for non-urgent care, first days of hospitalization are reimbursed at lower rate Measurement of process and results Case-mix utilization
Apollo	Age-adjusted capitation	Capped fee for service (semi-annually revised); after reaching the cap, the provider is not reimbursed for additional services	Case-based payment combined with global budget Case mix utilization
SZP	Age-adjusted capitation	Capped fee for service; after reaching the cap, the provider is not reimbursed for additional services	Case-based payment combined with global budget
Union	Age-adjusted capitation	Fee for service, no cap	Case-based payment with no cap

Note: [a] As of late 2010 only three health insurance companies remain.

6.3.5 Flexible network and selective contracting

One of the key objectives of the health reform in 2004 was to increase the independence and financial responsibility of health care providers. The first step was to make the process of entry into the health care provision market more transparent and to remove any artificial barriers. The provider must acquire a licence from the specified medical chamber and then acquire a permit from the self-governing region or Ministry of Health. The liberalization of the health sector attracted new investors in pharmacies, hospitals, drug wholesalers, laboratories, diagnostics and polyclinics.

Market entry does not entitle providers to a contract with health insurance companies. The health insurance companies were allowed to selectively contract based on their own structural, procedural and outcome criteria. The health insurance company only had to fulfil the minimum network requirement, which seeks to secure access of citizens to health care through a minimum number of contracted providers in a given geographical area. The role of the HCSA was limited to controlling this minimum number. Which providers were in fact contracted was the contracting freedom of the health insurance company. However, in 2008 only the General Health Insurance Company and Dôvera were implementing the principles of selective contracting.

In 2007 and 2008, the Ministry of Health changed the definition of the minimum network in tertiary care from a minimum capacity into a fixed network of specific inpatient facilities. These facilities, which are all state-owned hospitals, are entitled to obtain a contract with the health insurance companies as they are deemed crucial in guaranteeing geographical accessibility. This is contrary to the original idea, where health insurance companies had the full freedom to choose which hospital to contract. The government in power since July 2010 announced in its Government Manifesto that the fixed network would be abolished and the minimum network requirement – and thus competition among providers – reinstated.

6.3.6 A flexible basic benefit package

Quiet rationing was a serious ethical problem and a source of corruption in Slovakia. The ambition of the reform acts in 2004 was to replace the practice of implicit, quiet rationing by explicit rationing. The idea was to set a transparent basic benefit package on the basis of medical, economic and ethical criteria. The rationale was based on a message of financial protection: scarce resources must be used to cover those diseases for which no individual could afford to pay. On the other hand, financial participation should be allowed for services that patients can cover individually without bearing catastrophic financial risk.

The drafting of the basic benefit package was based on an "equal treatment to equal need" principle. Under the given hard budget constraints, priority-setting in this process was inevitable. The identification of priorities was divided into two stages. In the first stage, a proposal was drafted on the basis of the Oregon priority list of diseases and treatments. In the second stage, the proposal was adapted to the Slovak cultural and societal context by a group of 28 physicians (GPs, specialists, academics). The group used the *ICD-10* classification of diseases and identified the diagnoses which are considered as priority diseases (approximately 6700 diseases out of 11 000). In 2004, these represented 41% of all cases and 67% of all costs. The remaining 4300 diseases are on the non-priority list and represented 59% of all cases and 33% of all costs. For these diagnoses, co-payment may be required and set by a government decree.

The term "flexible basic benefit package" describes the legislative flexibility of this concept. The benefit package can be narrowed or widened by government decree and thus without complicated parliamentary negotiations prone to political opportunism.

Despite the fact that the law explicitly defined the priorities and the mechanisms for defining co-payments, they were never implemented due to political reasons. In 2008, no distinction was made between priority and non-priority diseases. All the non-priority diseases are free of charge. Therefore, the dominant components of private expenditure are co-payments for drugs and (private) direct payments to uncontracted providers.

6.3.7 Establishment of the independent HCSA

The HCSA was established in November 2004, right after the reform laws were passed in the Parliament. The HCSA was established to split the legislative and control function in the health care system. Until 2004, both functions were the responsibility of the Ministry of Health. Since 2004, the Ministry of Health has been responsible for setting the legislative framework for the health insurance market, the health care purchasing market and the health care provision market. The HCSA supervises whether health insurance companies and providers adhere to this legislative framework and intervenes when violations occur.

In the health insurance market, the HCSA licenses and monitors health insurance companies. The HCSA supervises the entry of health insurance companies into the market and their exit from it, imposes sanctions when necessary, orders recovery plans in case the health insurance companies do not meet solvency criteria and may even introduce forced management when the health insurance company is unable to manage its financial situation.

In the health care purchasing market, the HCSA monitors the minimum network requirement and the contracts between the health insurance company and the providers.

In the health care provision market, the HCSA controls the quality of care provided. The HCSA acts on behalf of citizens who feel their rights were violated or think that the care they or their family members received was not state of the art. Every complaint from citizens is filed and investigated. After the investigation, the citizen obtains a protocol with a statement of "state of the art" or "non-state of the art". With this statement, the citizen can decide to litigate. The HCSA has a power to impose sanctions on providers.

6.4 Future reforms

The government that came to power after the 2010 elections consists of four political parties, which have a conservative or liberal background (see section 1.3). Most of the leading politicians in this coalition were also part of the 2002–2006 government. Unsurprisingly, the Government Manifesto announced measures that are in line with the 2004 reform, which will reverse almost all the changes made by the 2006–2010 government.

According to the new government, the burden of health care funding should be fairly distributed. The system has to be funded sustainably and without creating future debts. The government wants to strengthen public health and prevention. Other plans are to implement a no-claim bonus for adults who have not utilized health care services in a given year and to abolish the obligation to issue referrals to specialists.

In the area of quality of care and safety of the patient the government wants to support the role of standard diagnostic and treatment protocols as well as evidence based medicine. A new system of hospital accreditation is announced. Furthermore, the government intends to restore the independence of the HCSA and increase its effectiveness, transparency and professionalism in terms of supervision.

In pharmaceutical care, the government plans to increase the availability of drugs for insured individuals, including low-income groups, and implement generic prescribing. One of the key measures should be the implementation of a maximum financial limit (€45 quarterly) for out-of-pocket payments on drugs for selected groups of insured.

The government plans to make the scope of health care services covered by SHI more explicit. In addition, the government wants to re-evaluate and restructure the minimum network requirement for health care providers and support the implementation of innovative, transparent and more objective payment mechanisms in hospitals using a DRG system. The government also plans to resume the process of transforming hospitals into joint stock companies. At the same time, the government wants to prevent the establishment of possible cartel agreements of providers and insurance companies in price negotiations. The granting of licences for the emergency health service will be realized in the form of electronic auction.

In health insurance, the government strives to support the development of voluntary complementary health insurance and to allow health insurance companies to make a profit. The government aims to reduce barriers for new entrants to the health insurance markets. The government is also considering decreasing the percentage of redistribution of insurance contributions (now 95%). Finally, the government plans to refine the risk-adjustment system by adding new risk adjusters (pharmaceutical cost groups and diagnostic cost groups).

7. Assessment of the health system

Compared to the international benchmark, Slovakia has a progressive system of financing health care. Indirect taxes and out-of-pocket payments have increased regressivity in the period 2002–2005, but this trend was offset by rising progressivity of direct taxes and SHI contributions in the same period. This does not capture all distribution effects, however. The health reform of 2002–2006 led to an increase of the number of households that contributed more from their income. In addition, the distributive impacts were not equitable and the highest increase was reported for the people in the second and third income quintiles. This impact was mainly caused by the introduction of a reference pricing scheme for pharmaceuticals, which substantially increased co-payments.

Per capita health spending (in PPP) in Slovakia was fairly low in 2008 and around half the EU15 average. A large share of these resources were absorbed by pharmaceutical spending (28% in 2008, compared to 16% in OECD countries), effectively making spending on other components of care even lower. Compared to OECD averages, relatively high hospital bed availability, relatively low occupancy rate in hospitals, high hospital discharge rates and a high number of consultations signal plenty of resources in the system but may also indicate excess bed capacity and overutilization. In terms of human resources, the numbers of physicians and nurses are below the EU15 average, but still above the EU12 average. Although large improvements have been made, most notably in life expectancy and lower infant mortality, Slovakia's health outcomes are generally still substantially worse than the averages for the EU15 and OECD, but close to the other Visegrád Four countries.

7.1 Stated objectives of the health care system

The objectives of the current Slovak health care system originate from the Bismarck and Semashko health system models. Its primary purpose is to ensure universality, equity and free access to health services at the point of delivery; however, these objectives are met only formally in practice (for example, patients make informal payments to doctors) and any potential changes (for example introduction of user fees) are not welcomed by the population due to cultural patterns and conventions.

No political party in Slovakia would question that the ultimate objective of the health system is to improve the health status of the population. That being said, governments have approached this goal in different ways. Prior to 2002, this ultimate goal was considered to be the direct responsibility of the government. The government in the period 2002–2006 brought a profound change in attitude. In their view, the government is only indirectly responsible for the health status of the population. The responsibility was decentralized to other players (individuals, providers, health insurance companies) and the main role of the government was to create an environment with the right incentives for market players in which these societal goals are met. This new paradigm, which handed individuals more responsibility, proved not too popular.

The change of government in the 2006 elections meant a return to the conventional paradigm that the state must be responsible for the health status of its population. This paradigm was viewed positively by the population and raised high expectations amongst citizens. However, as a result of the 2004 reform, the state now largely lacks the regulatory tools to steer the health care system directly and to assume this responsibility.

The new government that came to power after the 2010 elections has strong ties to the government that was in power in the period 2002–2006. For a description of the Government Manifesto of the new government see section 6.4.

It should be noted that most of the former governments viewed the health system from the prism of production ability and prioritized the needs of health professionals over the needs of patients. Consequently, health professionals and health care providers did not face pressure from strong consumer groups. Before the HCSA was established in 2004, there was no external and independent authority to monitor their performance.

7.2 Equity

On the level of financing, it is not only the volume of resources generated that is important but also the distribution of the financial burden. Vertical equity refers to the idea that people with a greater ability to pay should pay more than people with a lower ability to pay. To measure the distribution of the financial burden on population groups, the Kakwani index is used. If the index is positive, the health system is progressive, that is, people with higher incomes pay a higher share. If the index is negative, the system is regressive. If the index is zero, the financing system is proportional and health care contributions reflect the proportion of revenue distribution.

- Due to the 2004 health reform, the Kakwani index dropped slightly, from 0.074 (2002) to 0.045 (2005) (see Table 7.1). Although the progressivity of direct taxes and SHI has increased, at the same time the regressivity of indirect taxes and direct payments has increased:
- The increase in regressivity of indirect taxes is a consequence of a unification of VAT rates. In 2002, there were two rates, 10% and 23%; in 2003, as an intermediate step, they were set at 14% and 20%; finally, a unified 19% rate was adopted in 2004.
- The increase in regressivity of out-of-pocket payments was due to the introduction of user fees in 2003 and higher co-payments for drugs, which have affected the poor more than the wealthy. The effect on the overall Kakwani index was also increased due to the larger role assigned to user fees and co-payments in the years after the reform (that is, from 14% in 2003 to 22% in 2006).
- The increase of progressivity of direct taxes after the introduction of a 19% flat income tax seems to be a paradox. The answer lies in the design of the flat tax. There are many deductible items, which are not subjected to taxation. In addition, the system has "negative tax" components in the form of child bonuses. This means that more than 50% of tax payers do not pay income tax and that the financial burden has been shifted to the wealthy people. However, the progressive effect of direct taxes on the overall Kakwani index was weakened because direct taxes played a lesser role after the reform (8% instead of 12%).
- A moderate increase in progressivity of SHI contributions was a result of changes in the contributions system. There was an increase in the minimum assessment base and the introduction of a flexible upper assessment base, that is, one that is related to wages instead of a fixed upper ceiling. In addition, annual settlement of contributions was introduced to address under- and over-payment.

Table 7.1
Health system financing sources and their Kakwani indices

	2001	2002	2003	2004	2005
Direct taxes[a]	0.229	0.326	0.317	0.388	0.396
Indirect taxes[b]	n.a.	-0.123	-0.134	-0.155	n.a.
SHI[c]	0.150	0.140	0.130	0.150	0.170
Out-of-pocket payments[d]	-0.170	-0.160	-0.190	-0.250	-0.230
Overall	0.069	0.074	0.053	0.033	0.045

Sources: [a]Sulík, 2008; [b] HPI calculations based on Krajčír & Ódor, 2005; [c]Kišš, Koolman & Filko, 2007.
Note: [d]Data are weighted by share of individual financing channel in given year of overall financing (see Table 7.2).

Summing this all up, indirect taxes and out-of-pocket payments increased regressivity in the period 2002–2005, but this trend was compensated by rising progressivity of direct taxes and SHI contributions in the same period. Table 7.2 provides the individual shares of these financing components.

Table 7.2
Share of individual financing channels (%)

	2001	2002	2003	2004	2005	2006
Direct taxes	12	12	12	10	9	8
Indirect taxes	19	20	20	22	21	17
SHI	56	56	54	49	50	53
Out-of-pocket payments	12	12	14	19	20	22
Total	100	100	100	100	100	100

Source: Data from HPI, 2008.

Vertical equity determines whether individual contributions to the health sector are proportional to people's incomes in the real economy. Based on empirical observations, different channels of financing have different rates of progressivity. According to international observations (Wagstaff & van Doorslaer, 1998), direct taxes are the most progressive, while direct payments are the most regressive.

According to the Kakwani index calculated for Slovakia, the country has a progressive system of financing health care. When comparing the international data with the progressivity rate measured for Slovakia (see Table 7.3), the following can be observed:

- The progressivity of direct taxes exceeds the international average, mainly after the implementation of a flat tax.
- Indirect taxes rank in the upper half of the international regressivity range.
- SHI ranks in the upper quartile of the international progressivity span.
- There is no private insurance in Slovakia.
- Direct payments rank in the middle of the international regressivity interval.

Table 7.3

The Kakwani index analysis of Slovakia compared with international data

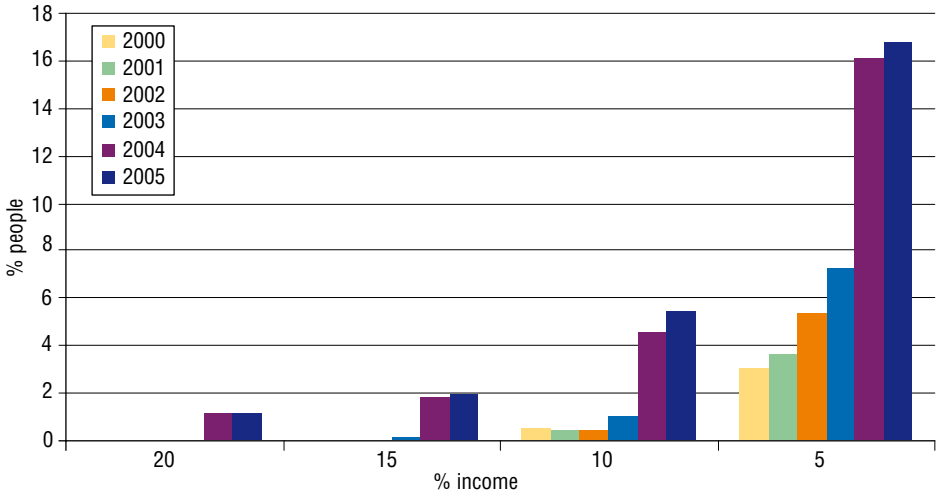
Financing channel	Progressivity	Kakwani index – international benchmark[a]	Kakwani index – Slovakia (2001–2005)[b]
Direct taxes	progressive	+0.1 to +0.3	+0.23 to +0.40
Indirect taxes	regressive	-0.2 to 0.0	-0.16 to -0.12
SHI	progressive	0.0 to +0.2	+0.13 to +0.17
Private insurance	progressive / regressive	-0.2 to +0.2	n.a.
Out-of-pocket payments	regressive	-0.3 to -0.1	-0.25 to -0.16
Total		-0.14 to + 0.05	+ 0.03 to +0.07

Source: [a] Wagstaff & van Doorslaer, 1998; [b] data from HPI, 2008.

Progressivity alone does not necessarily capture all distribution effects. Measuring catastrophic expenditure of households is therefore another equity criterion. Due to the health reforms in the years 2002–2006, the number of households that contributed more from their income to health care has grown, with strong and statistically significant changes occurring in 2004 (see Figs 7.1 and 7.2). The percentage of people that spent more than 5% of their income on health care increased from 7.3% in 2003 to 16.1% in 2004; the number of people that spent more than 10% of their household income on health care increased from 1% to 4.5% (Fig. 7.1). Until 2004, no household spent more than 20% of their household income on health care. In 2004, there was a significant increase to 1.1% of people. The distributive impacts of the reforms were not equitable. The highest increase was reported for the people in the second and third income quintiles (Fig. 7.2). The cause of this increase was not the user fees introduced in 2003 but the introduction of reference pricing for pharmaceuticals, which significantly increased co-payments for (partly) reimbursed drugs (Kišš, Koolman & Filko, 2007).

Fig. 7.1

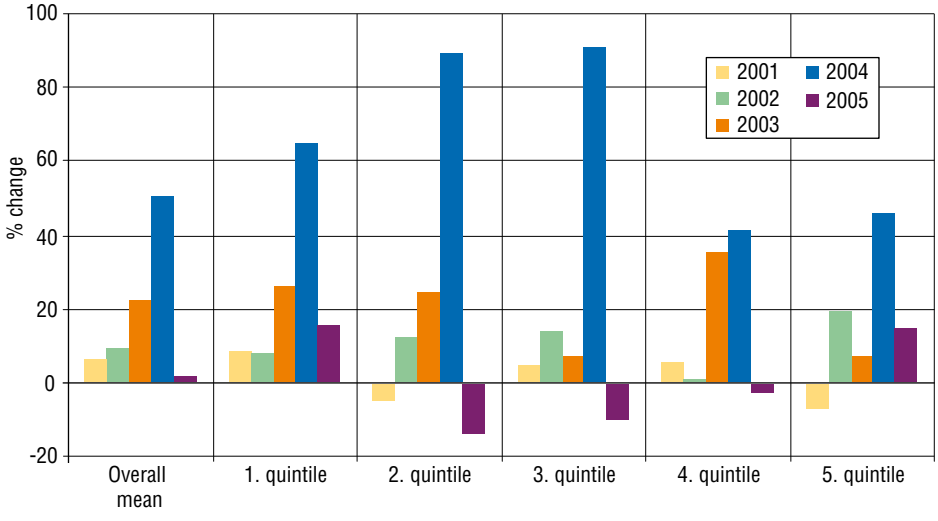
Catastrophic financing impact of the 2002–2006 reform: percentage of people (y-axis) spending more than 20%, 15%, 10% and 5% of income (x-axis) in the period 2000–2005



Source: Kišš, Koolman & Filko, 2007.

Fig. 7.2

Distributive impact of the 2002–2006 reform: annual change in health spending (%) for different income quintiles



Source: Kišš, Koolman & Filko, 2007.

7.3 Efficiency of resource allocation

According to OECD Health Data (2010a) an international comparison of the Slovak health system shows that (see also Table 7.4):

- Health spending per capita in Slovakia (US$ 1738 per capita in PPP) is half of the EU15 average (US$ 3483), on the same level as in the Czech Republic (US$ 1 781), 20% higher than in Hungary (US$ 1 437) and 40% higher than in Poland (US$ 1 213).
- Hospital bed availability (6.6 beds per 1000) is, with Poland, the lowest among the Visegrád Four countries, but higher than for the EU15 (5.3) and OECD (5.6). However, the acute care occupancy rate (67.5%) is the lowest among the Visegrád Four and significantly lower than for the EU15 (76.4). On the other hand, discharge rates (20.8 per 100) are the highest among the Visegrád Four and 20% higher than for the EU15 (17.3).
- The number of consultations (12.1 per capita) is only slightly higher than in the Czech Republic (11.4) and Hungary (11.3), but almost double that of Poland (6.8), the EU15 (6.7) or OECD average (7.7).
- Spending on pharmaceuticals in Slovakia (US$ 489 per capita in PPP) is at the same level as the OECD (US$ 490) and much higher than in Hungary (US$ 454), the Czech Republic (US$ 363) or Poland (US$ 274). Combined with the lower economic performance of Slovakia (US$ 22 193 per capita in PPP) compared to the OECD average (US$ 33 271) this means that pharmaceutical expenditure in Slovakia is 2.2% of GDP compared to 1.5% GDP in the OECD, or 28% of total health care spending versus 16% in the OECD.
- According to Filko (2009), high spending on pharmaceuticals in Slovakia (Fig. 7.3) can be explained mainly by the effect of the low price level for health services in Slovakia (which makes pharmaceuticals relatively expensive), to a lesser extent by the lower level of other health care expenditure and, finally, to a small extent, to the effect of over-priced drugs (Fig. 7.4). The high proportion of expenditure on drugs leaves only a little room for growth in outpatient and inpatient care. Experience from recent years shows that more resources can be allocated to inpatient and outpatient care when drug expenditure is not rising quickly.

Table 7.4

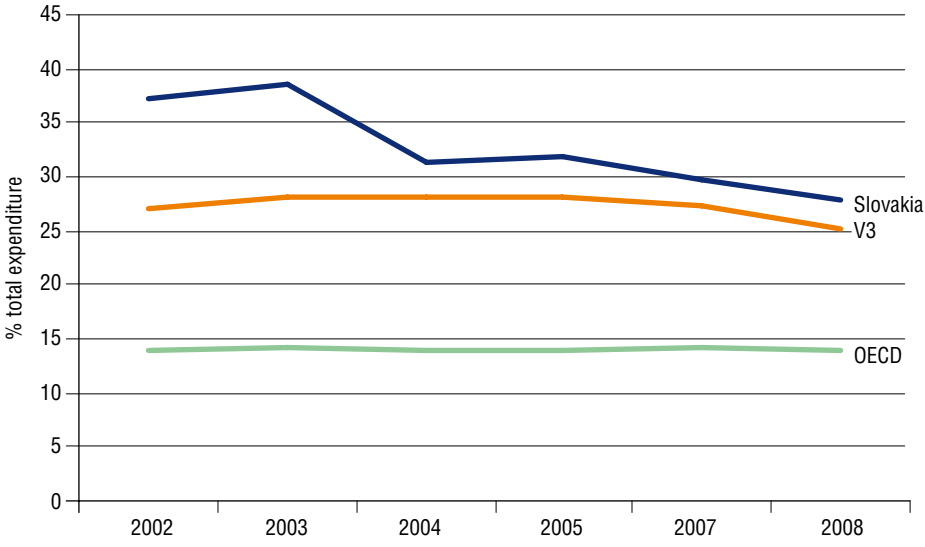
Selected health resources, 2008

				Resources					Utilization rates				
	GDP (US$ per capita in PPP)	Expenditure on health (% of GDP)	Expenditure on health (US$ per capita in PPP)	Hospital beds (per 1 000)	Physicians (per 1 000)	Health and social workers (per 1 000)	Pharmacists (per 100 000)	Doctors' consultations (per capita)	Acute care occupancy rate (%)	Discharge rates for all causes (per 100)	Average length of stay in acute care (days)	Measles immunization (% of children)	Drug consumption (US$ per capita in PPP)
Slovakia	22 193	7.8	1 738	6.6	3.0	28.6	47	12.1	67.5	20.8	6.9	99.5	489
Czech Republic	25 033	7.1	1 781	7.3	3.6	31.9	57	11.4	69.7	20.2	7.4	97.9	363
Hungary	19 738	7.3	1 437	7.0	3.1	24.8	58	11.3	75.3	18.4	6.0	99.9	454
Poland	17 294	7.0	1 213	6.6	2.2	22.9	62	6.8	77.0[a]	17.2	5.7	98.0	274
EU15 average	36 742	9.6	3 483	5.3	3.3	56.5	68	6.7	76.4	17.3	6.4	92.6	534
OECD average	33 271	9.1	3 143	5.6	3.0	50.8	75	7.7	74.6	16.2	6.7	93.4	490

Source: OECD, 2010a.
Note: All data are for 2008, except [a]2002.

Fig. 7.3

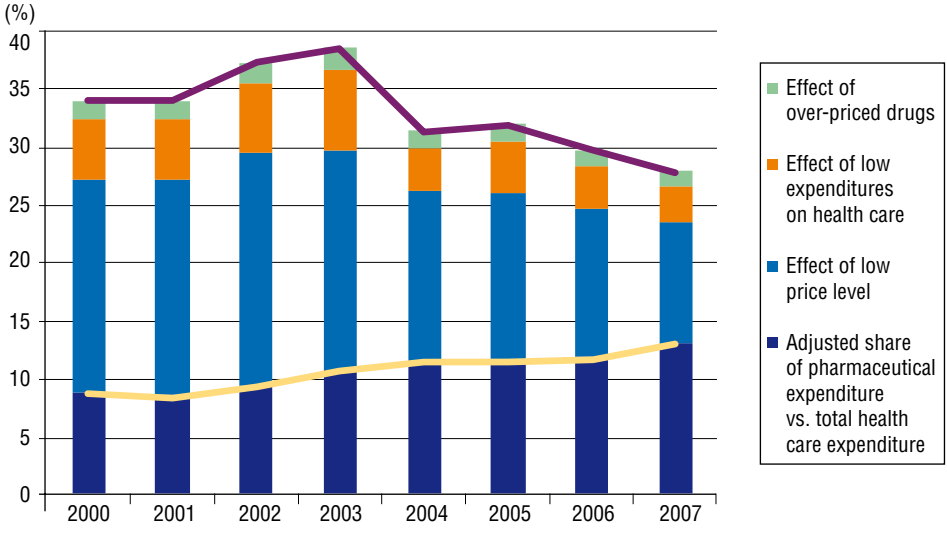
Pharmaceutical expenditure in Slovakia vs OECD and Visegrád Three (Czech Republic, Hungary, Poland) as % of total health expenditure



Source: Filko, 2009.

Fig. 7.4

Components of pharmaceutical expenditure in Slovakia



Source: Filko, 2009.

The OECD *Health Data* (2010) also shows that health outcomes in Slovakia are relatively close to the other three Visegrád Four countries but significantly worse than the averages for the EU15 and OECD (see Table 7.5):

- Life expectancy in Slovakia is 74.8 years, five years less than the EU15 (80.2 years) and OECD averages (79.2 years).
- The standardized death rate (895.6) is 55% higher than the EU15 average, while the standardized death rate for diseases of the circulatory system (485.4) is the highest among the Visegrád Four countries and more than double the EU15 (203.8) and OECD (230.1) averages. In contrast, the standardized death rate for malignant neoplasms is the lowest among the Visegrád Four countries and only 20% higher than the EU15 (162.5) and OECD (164.3) averages.
- Infant mortality in Slovakia (5.9 per 1000 live births) is slightly above the level of Hungary and Poland (both 5.6) and significantly higher than the EU15 average (3.4). On the other hand, the maternal mortality rate is significantly lower in Slovakia (3.5 per 100 000 live births) than the EU15 (6.5) or OECD (10.1) averages.

Table 7.5

Health outcome in the Visegrád Four, EU15 and OECD

	Life expectancy (years)	Potential years of life lost (all causes, per 100 000 population 0–69)[a]	Infant mortality rate (per 1 000 live births)	Maternal mortality rate (per 100 000 live births)	Standardized death rates (per 100 000)[a]	Diseases of circulatory systems (standardized death rate per 100 000 population)[a]	Malignant neoplasms (standardized death rate per 100 000 population)[a]
Slovakia	74.8	5 481	5.9	3.5	895.6	485.4	196.2
Czech Republic	77.3	4 226	2.8	12.0	792.3	396.4	206.0
Hungary	73.8	6 526	5.6	17.1	952.2	476.2	219.8
Poland	75.6	5 597	5.6	4.6	809.7	363.0	199.2
EU15 average	80.2	3 296	3.4	6.5	576.9	203.8	162.5
OECD average	79.2	3 811	4.7	10.1	618.5	230.1	164.3

Source: OECD, 2010a.
Note: All data are for 2008, except [a]2005.

These observations are in line with a 2007 IMF study (Verhoeven, Gunnarsson & Lugaresi 2007), which concludes that Slovakia, like other EU10 countries (i.e. the 10 countries that joined the EU in May 2004), combines relatively low health spending with relatively poor health outcomes. Inefficiencies in the Slovak health system occur mostly in the process of transforming intermediate health resources into health outcomes. The IMF study sees two reasons for

this. First, this is due to inertia – for instance, hospital structures may still reflect old standards and a significant proportion of current health workers were educated in the pre- and early transition period. Second, high cost–effectiveness in Slovakia reflects relatively low prices for labour and other inputs for health services. As a result, despite spending levels, real resources in the health sector are relatively high.

7.4 Technical efficiency

Increasing technical efficiency is important in an environment with limited financial resources. According to Osterkamp (2004), out of every €1 invested, only €0.62 was used effectively in Slovakia in 2000. The low technical efficiency of Slovakia in the year 2000 (72%) was also confirmed by Frisová (2010) through a Data Envelopment Analysis based on OECD Health Data (OECD, 2009). According to this analysis, Slovakia increased its technical efficiency substantially between 2000 and 2006 (Table 7.6). Slovakia was able to decrease its inputs (mainly by reducing the number of nurses and beds; while the number of doctors remained stable) and increased its outputs (improved life expectancy at birth and lower infant mortality). The technical efficiency increased from 72% to 84% (when measuring constant economies of scale) and improved from 74% to 89% (when measuring variable economies of scale).

Table 7.6

Rise in technical efficiency of Slovakia between 2000 and 2006

	Constant economies of scale		Variable economies of scale	
	2000	**2006**	**2000**	**2006**
100%	Finland, Greece, Portugal, Spain, Sweden, United Kingdom, Ireland	Finland, Greece, Portugal, Spain, Sweden, United Kingdom	Finland, Greece, Portugal, Spain, Sweden, United Kingdom, Ireland, Italy, Netherlands, France	Finland, Greece, Portugal, Spain, Sweden, United Kingdom, Ireland, Italy, France
90.0–99.9%	Italy, Netherlands, Czech Republic	Poland, Ireland, Hungary	Czech Republic, Austria, Poland	Poland, Hungary
80.0–89.9%	Poland, Denmark, Hungary, France, Austria	Czech Republic, Italy, Denmark, **Slovakia (84%)**	Denmark, Hungary	**Slovakia (89%)**, Czech Republic, Netherlands, Denmark, Austria
70.0–79.9%	**Slovakia (72%)**, Belgium	Netherlands, France, Austria	**Slovakia (74%)**, Belgium, Germany	Germany
< 69.9%	Germany	Belgium, Germany		Belgium

Source: Frisová, 2010.

The Slovak health system has historically been characterized by high utilization of health care services. Although the introduction of user fees in 2003 decreased the number of contacts, the visiting rate remained high. After reducing and partly abolishing the user fees in 2006, the number returned to 2002 levels by 2007.

In addition to this, visits to the GP are generally concluded with a drug prescription or a referral to a specialist. This GP behaviour is understandable in light of the current payment method (capitation) – with little effort a high number of patients can be "helped". This behaviour induces demand for drugs, laboratory examinations, diagnostics and specialists' time and causes high opportunity costs for the system. There is a great deal of anecdotal evidence about how pharmaceutical companies, laboratories or pharmacists motivate GPs or specialists to prescribe a certain drug or send samples for examination to a given laboratory or recommend a specific pharmacy to patients.

As a heritage from the past, where universality, access and free health care was the main agenda, Slovak people enjoy a dense network of providers, both in outpatient and inpatient care. For more than 70% of people, there is a GP close to where they live. For more than 90%, access to a GP is within 10 minutes travel at standard speed (Szalay, 2008).

Similarly, the network of hospitals is very dense. According to Frisová (2007) there is still room for improving technical effectiveness, that is, 3397 beds, 1784 nurses and 826 physicians could be cut. Compared to 2005 and 2006, the annual technical effectiveness of the monitored hospitals has improved. On the other hand, the technical effectiveness of university hospitals between 2005 and 2006 has slightly declined (Table 7.7).

Table 7.7

Number of hospitals in intervals ranked according to technical efficiency, 2005 and 2006

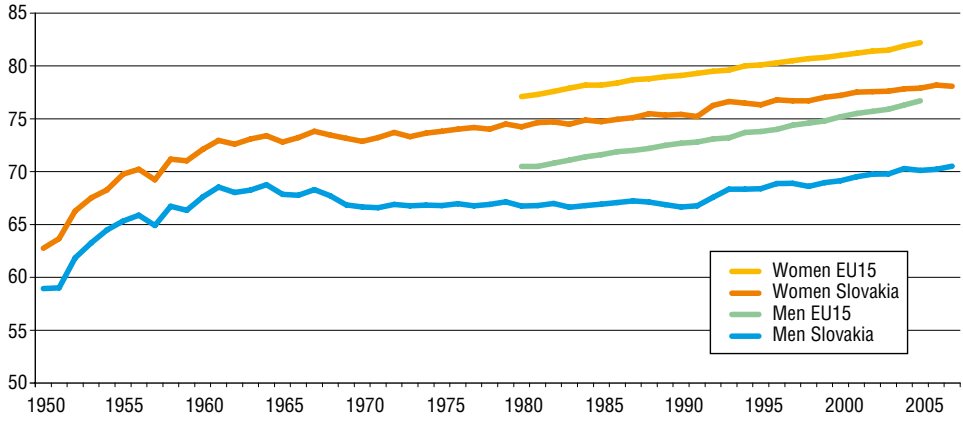
Interval (%)	2005	2006
100	5	6
99.9–95.0	9	10
94.9–90.0	10	6
89.9–80.0	17	13
79.9–70.0	3	13
69.9–60.0	2	2
59.9–50.0	2	1
49.0–0.0	3	0

Source: Frisová, 2007.

7.5 Contribution of the health system to health improvement

In spite of the past paradigm of care being universal, accessible and free at the point of delivery, Slovakia witnessed 30 years of stagnation in life expectancy from the 1960s. Life expectancy for men decreased by 1.65 years in the period 1967–1990, while for women slight progress (1.61 years) was observed in the same period. After 1989, strong gains in life expectancy were made. Life expectancy for men increased by 3.86 years and for women by 2.65 years in the period 1990–2007. Despite this progress, the gap between Slovakia and the EU15 is not closing (see Fig. 7.5).

Fig. 7.5
Life expectancy in Slovakia and EU15 average

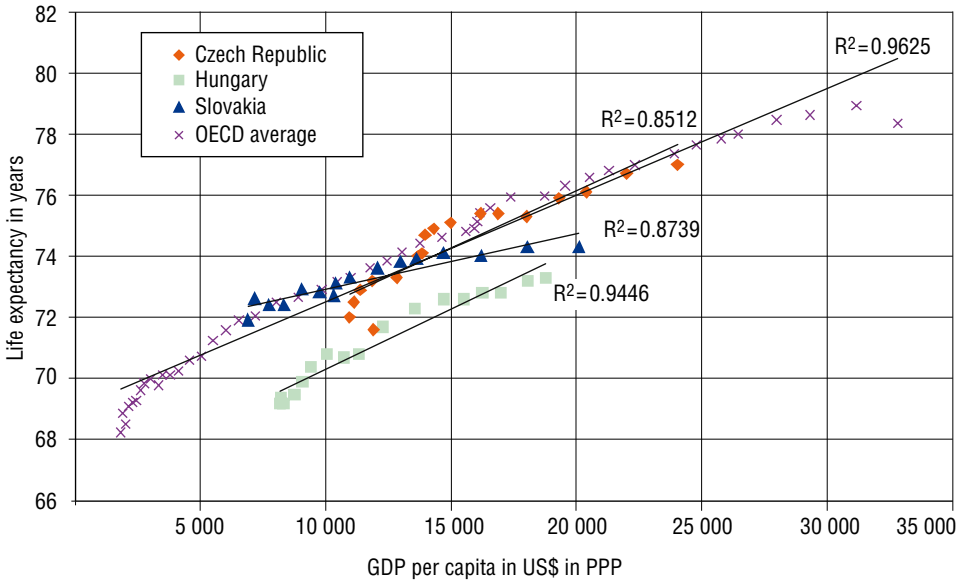


Source: Statistical Office of the Slovak Republic; OECD, 2009.

According to the WHO World Health Report 2000, people in richer countries live longer without disabilities than people in poorer countries (WHO, 2000). This is also accompanied by lower variability of outcomes in richer than poorer countries. Slovakia does not provide an exception. According to OECD data, life expectancy in Slovakia corresponds to the recent economic development in Slovakia (Fig. 7.6). The rationale behind this is that countries with a higher GDP spend more on health than poorer countries. With a growing economy, the expenditure on health is proportionally increasing (Fig. 7.7).

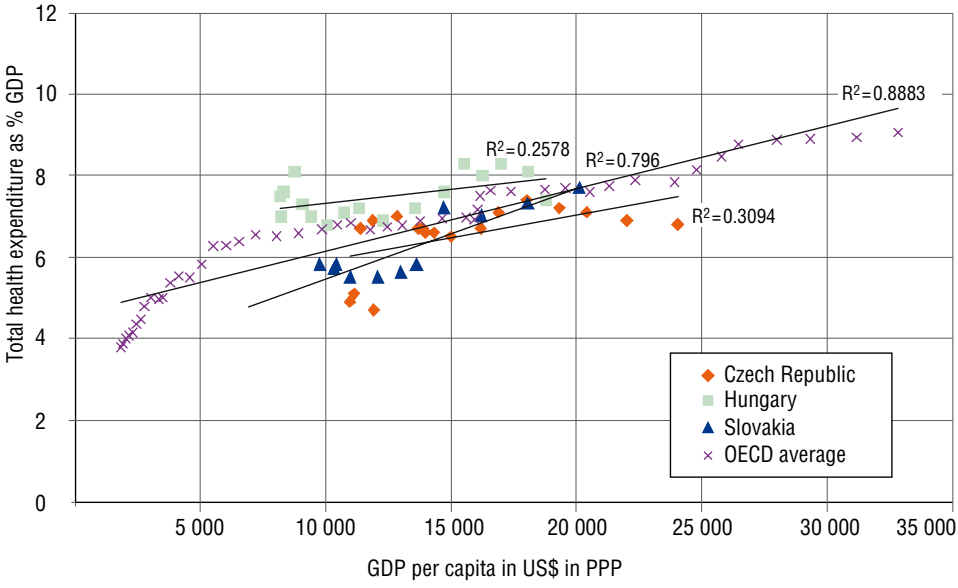
The main differences are in the structure of health care spending. Slovakia spends a much higher percentage on drugs than OECD countries did when they were at Slovakia's economic level (Fig. 7.8). The higher spending levels on drugs crowd out inpatient and outpatient expenditures, which are both much lower than in the Czech Republic and Hungary (Fig. 7.9 and 7.10)

Fig. 7.6
GDP and life expectancy, 1960–2007



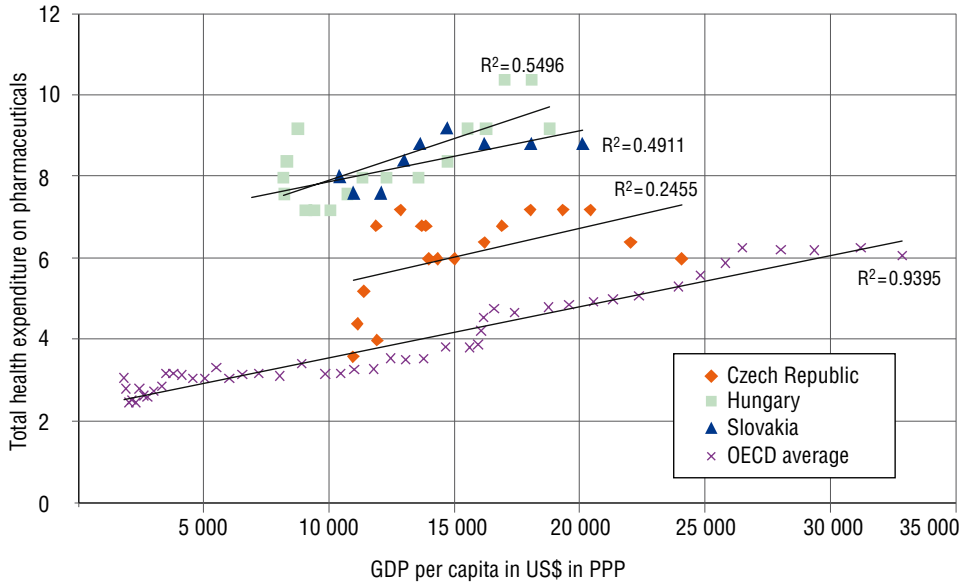
Source: OECD, 2009.

Fig. 7.7
GDP and expenditure on health as % of GDP, 1960–2007



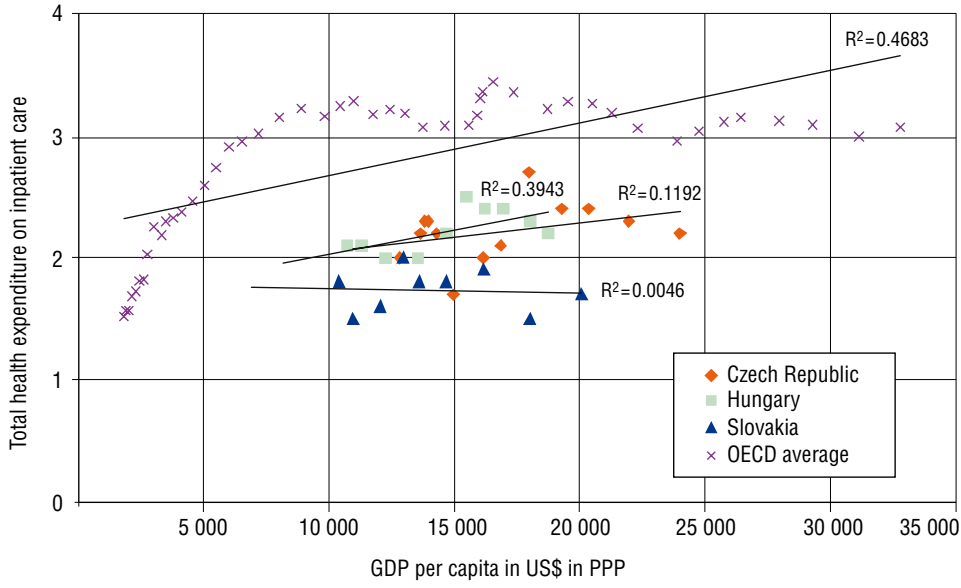
Source: OECD, 2009.

Fig. 7.8
GDP and pharmaceutical expenditure as % of GDP, 1960–2007



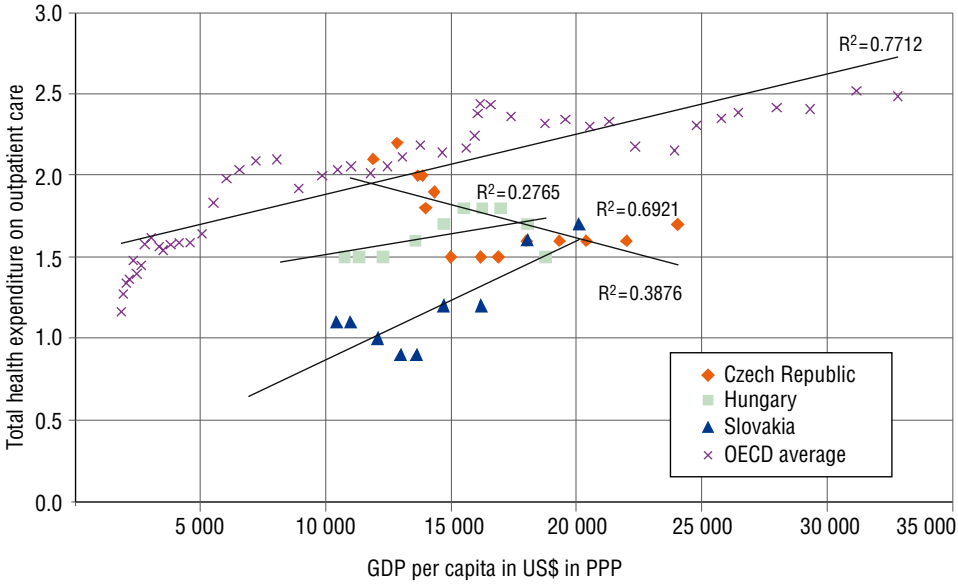
Source: OECD, 2009.

Fig. 7.9
GDP and inpatient expenditure as % of GDP, 1960–2007



Source: OECD, 2009.

Fig. 7.10
GDP and outpatient expenditure as % of GDP, 1960–2007



Source: OECD, 2009.

The considerable improvement in the overall health status of the Slovak population over the past 20 years cannot be explained by economic progress and higher spending on health care alone. The second cause of the increase in life expectancy is changes in behaviour. Slovakians increasingly adopt healthier lifestyles, exercise more and eat more healthily (Publicis Knut, 1999, 2003, and 2007). A third, very important factor in the gains in life expectancy since 1990 is the introduction of new diagnostic technologies, new treatment methods and the application of the latest evidence.

8. Conclusions

The Slovak health system is a system in progress. Major health reform in the period 2002–2006 replaced all relevant health care related legislation and meant a new approach based on individual responsibility and managed competition. The health insurance funds became profit-making companies, hard budgetary constraints were introduced, and a new regulatory and institutional framework was created. The model sought to create an environment in which societal goals are met through incentives for market players. The future of this system largely depends on political will. Opposing political views may lead to different decisions regarding market mechanisms and state control. The government that entered into power in 2010 pledged to move forward with the market reform agenda.

Although large improvements have been made, most notably in life expectancy and lower infant mortality, Slovakia's health outcomes are generally still substantially worse than the averages for the EU15 and OECD, but close to the other Visegrád Four countries – the Czech Republic, Hungary and Poland.

Per capita health spending (in PPP) in Slovakia was fairly low in 2008 and around half the EU15 average. A large share of these resources was absorbed by pharmaceutical spending (28% in 2008, compared to 16% in OECD countries), effectively making spending on other components of care even lower.

Compared to OECD averages, relatively high hospital bed availability, relatively low occupancy rate in hospitals, high hospital discharge rates and a high number of consultations signal plenty of resources in the system but may also indicate excess bed capacity and overutilization.

The numbers of physicians and nurses per capita were similar to the EU15 until 2001. After 2001, Slovakia witnessed a continuous fall in the number of physicians and nurses in relation to the population, although their numbers remain above the EU12 average. These changes are closely linked with the

migration of doctors and nurses abroad and the restructuring of health care facilities. National data show that since 2006, the health workforce has started to increase again. Yet the ageing workforce combined with the migration of health care workers may reinforce the shortage of health care workers.

The technical infrastructure of hospitals is outmoded with Slovak hospitals on average being 34.5 years old. Capital investments from the Ministry of Health budget were abolished in 2003. Instead these resources were allocated to health insurance companies to include amortization in their payments to providers.

Compared to the international benchmark, Slovakia has a progressive system of financing health care. Indirect taxes and out-of-pocket payments increased regressivity in the period 2002–2005, but this trend was offset by rising progressivity of direct taxes and SHI contributions in the same period. However, the health reform of 2002–2006 led to an increase in the number of households that contributed more from their income and the distributive impacts were not equitable, with the second and third quintiles reporting the highest increase. This was mainly caused by the introduction of a reference pricing scheme for pharmaceuticals, which substantially increased co-payments.

Going forward, some key challenges remain for the Slovak health system. Most importantly, attention needs to be focused on improving the health status of the population and the quality of care. This could be achieved by implementing clinical guidelines and protocols for the provision of health services, and by developing comprehensive sets of quality indicators and actively measuring them. This could help make the quality of health provision more accountable in the future and enable payment mechanisms that reward quality. Furthermore, all relevant quality information could be made publicly available so that patients can make informed decisions when selecting health providers and insurance companies.

The Slovak system, which has long been plagued by debt, must secure the future financial sustainability of the system. How this should be achieved remains the subject of considerable political controversy. With the chosen managed competition model, Slovakia has opted for a model that assumes that increased competition will lead to higher quality care at lower costs. For such a model to work, it will be necessary to explicitly define the scope of services (possibly with the help of a health technology assessment [HTA] agency); to foster competition by improving the risk-adjustment system and payment methods; to stimulate informed choices; and to reinforce the independent position of the HCSA.

9. Appendices

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9.2 HiT methodology and production process

The HiT profiles are produced by country experts in collaboration with the Observatory's research directors and staff. The profiles are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile HiTs. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The most recent template is available online at: http://www.euro.who.int/en/home/projects/observatory/publications/health-system-profiles-hits/hit-template-2010.

Authors draw on multiple data sources for the compilation of HiT profiles, ranging from national statistics, national and regional policy documents to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 1200 indicators for the 33 OECD countries. Data are drawn from information collected by national statistical bureaux and health ministries. The World Bank provides World Development Indicators, which also rely on official sources.

In addition to the information and data provided by the country experts, the Observatory supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the European Health for All database. The Health for All database contains more than 600 indicators defined by the WHO Regional Office for Europe for the purpose of monitoring Health in All Policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments, as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments. With its summer 2007 edition, the Health for All database started to take account of the enlarged EU of 27 Member States.

HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

A typical HiT profile consists of 10 chapters.

1 Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.

2 Organizational structure: provides an overview of how the health system in the country is organized and outlines the main actors and their decision-making powers; discusses the historical background for the system; and describes the level of patient empowerment in the areas of information, rights, choice, complaints procedures, safety and involvement.

3 Financing: provides information on the level of expenditure, who is covered, what benefits are covered, the sources of health care finance, how resources are pooled and allocated, the main areas of expenditure, and how providers are paid.

4 Regulation and planning: addresses the process of policy development, establishing goals and priorities; deals with questions about relationships between institutional actors, with specific emphasis on their role in regulation and what aspects are subject to regulation; and describes the process of HTA and research and development.

5 Physical and human resources: deals with the planning and distribution of infrastructure and capital stock; the context in which IT systems operate; and human resource input into the health system, including information on registration, training, trends and career paths.

6 Provision of services: concentrates on patient flows, organization and delivery of services, addressing public health, primary and secondary health care, emergency and day care, rehabilitation, pharmaceutical care, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health care for specific populations.

7 Principal health care reforms: reviews reforms, policies and organizational changes that have had a substantial impact on health care.

8 Assessment of the health system: provides an assessment based on the stated objectives of the health system, the distribution of costs and benefits across the population, efficiency of resource allocation, technical efficiency in health care production, quality of care, and contribution of health care to health improvement.

9 Conclusions: highlights the lessons learned from health system changes; summarizes remaining challenges and future prospects.

10 Appendices: include references, useful web sites and legislation.

The quality of HiTs is of real importance since they inform policy-making and meta-analysis. HiTs are the subject of wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to the following:

- A rigorous review process (see the following section).
- There are further efforts to ensure quality while the profile is finalized that focus on copy-editing and proofreading.
- HiTs are disseminated (hard copies, electronic publication, translations and launches). The editor supports the authors throughout the production process and in close consultation with the authors ensures that all stages of the process are taken forward as effectively as possible.

One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely to ensure that all stages of the process are as effective as possible and that the HiTs meet the series standard and can support both national decision-making and comparisons across countries.

9.3 The review process

This consists of three stages. Initially, the text of the HiT is checked, reviewed and approved by the series editors of the European Observatory. The HiT is then sent for review to two independent academic experts and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health, or appropriate authority, and policy-makers within those bodies are restricted to checking for factual errors within the HiT.

9.4 About the authors

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HiTs are in-depth profiles of health systems and policies, produced using a standardized approach that allows comparison across countries. They provide facts, figures and analysis and highlight reform initiatives in progress.

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