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Bulgaria

Health system review

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Preface

The Health Systems in Transition (HiT) series consists of country-based reviews 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 review is produced by country experts in collaboration with the Observatory's staff. In order to facilitate comparisons between countries, reviews are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a report.

HiTs 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 reviews 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's European Health for All database, data from national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, data from the International Monetary Fund (IMF), the World Bank's World Development Indicators and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate review.

A standardized review 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. HiTs 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.

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

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This edition was written by Antoniya Dimova (Associate Professor of Health Care Management, Health Care Quality Management and Health Policy at the Department of Health Economics and Management, Varna University of Medicine), Maria Rohova (Assistant Professor at the Department of Health Economics and Management, Varna University of Medicine), Emanuela Moutafova (Associate Professor of Health Economics and Statistics and Head of the Department of Health Economics and Management, Varna University of Medicine), Elka Atanasova (Chief Assistant Professor in Economics and Health Economics at the Department of Health Economics and Management, Varna University of Medicine) and Stefka Koeva (Professor of Economics and Health Economics at the Department of Health Economics and Management, Varna University of Medicine). It was edited by Ewout van Ginneken and Dimitra Panteli, working with the support of Reinhard Busse, Head of the Observatory's team at the Department of Health Care Management, Berlin University of Technology.

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List of abbreviations

AIDS	Acquired immune deficiency syndrome
ALOS	Average length of stay
BDA	Bulgarian Drug Agency
BGN	Bulgarian national currency (Bulgarian lev)
CAM	Complementary and alternative medicine
CIS	Commonwealth of Independent States
DCC	Diagnostic-consultative centre
DDD	Defined daily dose
DFLE	Disability-free life expectancy
DMFT-12	Decayed, missing or filled teeth at age 12 index
DNA	Deoxyribonucleic acid
DRGs	Diagnostics-related groups
EAMA	Executive Agency Medical Audit
EC	European Commission
EHIC	European Health Insurance Card
EU	European Union
EU 12	12 countries that joined the EU in 2004 and 2007
EU 15	15 EU Member States before May 2004
EU 27	All 27 EU Member States as of 2011
EUR	Euro, the official currency of the Eurozone
FSC	Financial Supervision Commission
GDP	Gross domestic product
GERB	Citizens for European Development of Bulgaria
GP	General practitioner
HALE	Health-adjusted life expectancy
HFA	Health for All (Database)
HIV	Human immunodeficiency virus
HTA	Health Technology Assessment
ICT	Information and communication technologies
MMS	Minimum monthly salary
MRI	Magnetic resonance imaging
NATO	North Atlantic Treaty Organization
NCHI	National Centre of Health Informatics
NFC	National Framework Contract
NGO	Nongovernmental organization
NHA	National Health Accounts

NHIF	National Health Insurance Fund
NHS	National Health Strategy
NSI	National Statistical Institute
OECD	Organisation for Economic Co-operation and Development
OOB	Out-of-pocket
OSI	Open Society Institute
PDL	Positive Drug List
PPP	Purchasing power parity
PPS	Purchasing power standards
RCEC	Regional centre for emergency care
RCPCPH	Regional Centres for Protection and Control of Public Health
RHC	Regional Health Centres
RHIF	Regional Health Insurance Funds
RHI	Regional Health Inspections
SDR	Standardized death rate
SHI	Social health insurance
SPC	Supreme Pharmaceutical Council
THE	Total Health Expenditure
UBP	Union of Bulgarian Physicians
UN	United Nations
UNDP	United Nations Development Programme
USA	United States of America
USAID	United States Agency for International Development
VAT	Value-added tax
VHI	Voluntary health insurance
VHICs	Voluntary health insurance companies
WB	World Bank
WHO	World Health Organization
WTO	World Trade Organization

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Abstract

In the last 20 years, demographic development in Bulgaria has been characterized by population decline, a low crude birth rate, a low fertility rate, a high mortality rate and an ageing population. A stabilizing political situation since the early 2000s and an economic upsurge since the mid-2000s were important factors in the slight increase of the birth and fertility rates and the slight decrease in standardized death rates. In general, Bulgaria lags behind European Union (EU) averages in most mortality and morbidity indicators. Life expectancy at birth reached 73.3 years in 2008 with the main three causes of death being diseases of the circulatory system, malignant neoplasms and diseases of the respiratory system. One of the most important risk factors overall is smoking, and the average standardized death rate for smoking-related causes in 2008 was twice as high as the EU15 average.

The Bulgarian health system is characterized by limited statism. The Ministry of Health is responsible for national health policy and the overall organization and functioning of the health system and coordinates with all ministries with relevance to public health. The key players in the insurance system are the insured individuals, the health care providers and the third-party payers, comprising the National Health Insurance Fund, the single payer in the social health insurance (SHI) system, and voluntary health insurance companies (VHICs). Health financing consists of a public–private mix. Health care is financed from compulsory health insurance contributions, taxes, out-of-pocket (OOP) payments, voluntary health insurance (VHI) premiums, corporate payments, donations, and external funding. Total health expenditure (THE) as a share of gross domestic product (GDP) increased from 5.3% in 1995 to 7.3% in 2008. At the latter date it consisted of 36.5% OOP payments, 34.8% SHI, 13.6% Ministry of Health expenditure, 9.4% municipality expenditure and 0.3% VHI. Informal payments in the health sector represent a substantial part of total OOP payments (47.1% in 2006).

The health system is economically unstable and health care establishments, most notably hospitals, are suffering from underfunding. Planning of outpatient health care is based on a territorial principle. Investment for state and municipal health establishments is financed from the state or municipal share in the establishment's capital. In the first quarter of 2009, health workers accounted for 4.9% of the total workforce. Compared to other countries, the relative number of physicians and dentists is particularly high but the relative number of nurses remains well below the EU15, EU12 and EU27 averages. Bulgaria is faced with increased professional mobility, which is becoming particularly challenging. There is an oversupply of acute care beds and an undersupply of long-term care and rehabilitation services. Health care reforms after 1989 focused predominantly on ambulatory care and the restructuring of the hospital sector is still pending on the government agenda. Citizens as well as medical professionals are dissatisfied with the health care system and equity is a challenge not only because of differences in health needs, but also because of socioeconomic disparities and territorial imbalances. The need for further reform is pronounced, particularly in view of the low health status of the population. Structural reforms and increased competitiveness in the system as well as an overall support of reform concepts and measures are prerequisites for successful progress.

Executive summary

Introduction

Bulgaria is situated in southeast Europe in the eastern part of the Balkan Peninsula. It covers an area of approximately 111 000 square kilometres and had a population of 7.6 million in 2009. The country is a parliamentary representative democratic republic with a multi-party system and free elections. In the last 20 years, demographic development has been characterized by population decline, a low crude birth rate, a low fertility rate, a high mortality rate and an ageing population. A stabilizing political situation since the early 2000s and an economic upsurge since the mid-2000s were important factors in the slight increase of the birth and fertility rates and the slight decrease in mortality. Life expectancy at birth reached 73.3 years in 2008. In general, Bulgaria lags behind EU averages in most mortality and morbidity indicators. In 2009, the main three causes of death in Bulgaria were diseases of the circulatory system, malignant neoplasms and diseases of the respiratory system. Although infant mortality and under-five mortality have been decreasing by 5–6% a year in the last decade, this indicator is still behind the EU12 and EU27 averages and the extent of progress varies considerably for mortality sub-types. One of the most important risk factors overall is smoking. Unsurprisingly, the average standardized death rate (SDR) for smoking-related causes in 2008 was twice as high as the EU15 average.

Organization and governance

The Ministry of Health is responsible for national health policy and the overall organization and functioning of the health system and coordinates with all ministries with relevance to public health. The Health Insurance Act of 1998 reformed the Bulgarian health system into a health insurance system with compulsory and voluntary health insurance. The key players in the insurance system are the insured individuals, the health care providers

and the third-party payers, comprising the National Health Insurance Fund, the single payer in the social health insurance (SHI) system, and voluntary health insurance companies (VHICs). While the insurance system covers diagnostic, treatment and rehabilitation services as well as medications for insured individuals, the Ministry of Health is responsible for providing and funding public health services, emergency care, transplantations, transfusion haematology, tuberculosis treatment and inpatient mental health care. The Ministry is also responsible for planning and ensuring human resources for the health system, for the development of medical science, and for collecting and maintaining data on the health status of the population and the national health accounts. The quality and reliability of the collected information deteriorated after the introduction of the health insurance system. Health care providers are autonomous self-governing organizations. The private sector encompasses all primary medical, dental and pharmaceutical care, most of the specialized outpatient care and some hospitals. The state owns all university hospitals and national centres, specialized hospitals at national level, centres for emergency medical care, psychiatric hospitals, centres for transfusion haematology and dialysis, as well as 51% of the capital of regional hospitals.

Financing

Bulgaria has a mixed public–private health care financing system. Health care is financed from compulsory health insurance contributions, taxes, out-of-pocket (OOP) payments, voluntary health insurance premiums, corporate payments, donations, and external funding. Total health expenditure as a share of gross domestic product (GDP) increased from 5.3% in 1995 to 7.3% in 2008. The structure of total health expenditure has been changing over time, with private expenditure increasing at the expense of public financing. In 2008, total health expenditure consisted of 36.5% OOP payments, 34.8% SHI, 13.6% Ministry of Health expenditure, 9.4% municipality expenditure and 0.3% voluntary health insurance. Still, public sources prevail over private sources overall. In 2008, public expenditure on health as a share of total health expenditure was 57.8% while private expenditure accounted for 42.2%.

The main purchaser of health services is the National Health Insurance Fund (NHIF). Social health insurance contributions are calculated at 8% of monthly income, paid by the insured individuals, their employers, or the state. Relations between the NHIF and health care providers are based on the contract model. The Fund and the professional associations of physicians and dentists

sign the National Framework Contract (NFC), which regulates the format and operational procedures of the compulsory health insurance system. Based on the NFC, providers sign individual contracts with the regional branches of the Fund. Providers are mainly paid prospectively for the services they will provide to the population on a fee-for-service and per capita basis. Public health services and services provided by the national centres for emergency care, state psychiatric hospitals, and health and social care children's homes are funded by the Ministry of Health.

Private expenditure on health in Bulgaria includes OOP payments, VHI payments as well as payments by non-profit institutions and commercial organizations. The share of formal OOP payments (user fees and direct payments) accounted for more than 86% of all private health expenditures in 2008. User fees exist for visits to physicians, dentists, laboratories and hospitals and apply to all patients with few exceptions. Informal payments in the health sector represent a substantial part of total OOP payments (47.1% in 2006). Voluntary health insurance is provided by for-profit, joint-stock companies intended for voluntary health insurance only. Beyond the package covered by the NHIF all citizens are free to purchase different insurance packages. Voluntary health insurance companies can also cover the cost of services included in the basic benefit package guaranteed by the NHIF budget. Organizational relations between purchasers and providers in the field of voluntary health insurance are based on integrated and reimbursement models. Less than 3% of the population purchased some form of voluntary health insurance in 2010.

Physical and human resources

Planning of outpatient health care facilities in Bulgaria is based on a territorial principle. Investment for state and municipal health establishments is financed from the state or municipal share in the establishment's capital. For local hospitals, municipality funding for new investment and maintenance costs has shown a downward trend. The Ministry of Health runs various programmes for investment in medical infrastructure that health care establishments can apply to. Imperfections in the organization of primary health care, a regionally uneven distribution of general practitioners and the lack of incentives for primary and specialized medical practices have led to increased utilization of specialized care and increased hospitalization rates. The number of acute beds

per population in Bulgaria is above the EU27 average while the average length of stay is slightly below the EU27 and EU15 averages. Both indicators show a decreasing trend.

In the first quarter of 2009, health workers accounted for 4.9% of the total workforce. Compared to other countries the relative number of physicians and dentists is particularly high but the relative number of nurses remains well below the EU15, EU12 and EU27 averages. Bulgaria is faced with increased professional mobility, mainly due to the development of technology, accessible transport and communications. The migration of medical specialists has become a serious challenge: during the first nine months of 2010, more than 340 physicians and 500 nurses left the country. Medical education is provided by four medical universities and two medical faculties in other universities, while training for paramedical personnel is available at 10 medical colleges. The Council of Ministers determines the requirements for obtaining both higher education degrees and specializations. Professional specialties in health provision are determined by the Ministry of Health and require a state examination by the State Examination Commission in Sofia. Continuous medical education is organized and credited by the Professional Associations in accordance with the Health Act.

Provision of services

Health services are delivered by a network of various health care providers, operating in the public or in the private sector. Public health services are provided by the state and organized and supervised by the Ministry of Health. The Health Care Establishment Act stipulates the distinction between outpatient and inpatient care. The general practitioner is the central figure in primary care and acts as a gatekeeper for specialized ambulatory and hospital care. The number of general practitioners in Bulgaria has been declining slowly and their geographical distribution does not reflect the needs of the population. Ambulatory care is also provided by specialized outpatient facilities, including individual and group practices, medical and medico-dental centres, diagnostic-consultative centres and stand-alone medico-diagnostic or medico-technical laboratories. They are autonomous health care establishments, most of them with a contractual relationship with the National Health Insurance Fund. All primary, and the majority of specialized, outpatient facilities are privately owned. Inpatient care is delivered mainly through a network of public and private hospitals, divided into multi-profile and specialized hospitals. There

are also other inpatient health care establishments such as comprehensive cancer centres, centres for dermato–venereal diseases and hospices. The relatively high hospitalization rate reflects the underutilization of ambulatory care services and the lack of integration and coordination of different levels of care. Health care reforms after 1989 focused predominantly on ambulatory care and the restructuring of the hospital sector is still pending on the government agenda. Thus, both an oversupply of acute care beds and an undersupply of long-term care and rehabilitation services remain. Long-term care is generally underdeveloped, regarding both community-based services and inpatient care provided by specialized hospitals. Institutions for residential mental care include specialized psychiatric hospitals, mental health centres, psychiatric wards in multi-profile hospitals, as well as a number of social homes for people with mental disorders. In 2001, a mental health care reform was introduced, aiming to improve outpatient and community-based services and to prioritize care provided by the family and in the social environment. Despite efforts to deinstitutionalize psychiatric patients, hospitalizations have shown an increasing trend. Regional centres for emergency care and hospitals' emergency wards are the key units in the organization of emergency care. Urgent care is also provided by GPs. The main challenges faced in this field are the shortage of medical professionals and the lack of medical equipment.

Principal health reforms

Health care reform since 1989 passed through three stages. The first stage (1989–1996) was characterized by the abolishment of the state monopoly in the health system, building a decentralized health care administration, and the emerging idea for the introduction of a health insurance system. During the second stage (1997–2001), the new health insurance system was introduced through the landmark laws on health insurance, health care establishments and the professional organizations of physicians and dentists. In the third stage (2002–present), the legislative foundation of the health care reform was completed with the adoption of new laws and amendments and additions of the existing regulatory acts. Efforts during the third stage aimed to decrease the number of individuals without SHI coverage and to secure the financial stability of the system (mainly by raising the health insurance contribution from 6% to 8%). Yet the efforts did not lead to the desired results and the two main objectives set out in the beginning of the reform process in 1990, improving

population health and establishing a health system that would correspond to population health needs while being based on democratic and market principles, have still not come to fruition.

Assessment of the health system

Improvements in the nation's health status have been disappointing, with the main health indicators well behind EU averages. Citizens as well as medical professionals are dissatisfied with the health care system. The main principles, which the new health care system had to be built on, have not been respected. Although health expenditure has increased nearly three times since the introduction of the health insurance model, the system continues to experience a lack of financial resources and large inequities on all levels. Financial protection is inadequate and the distribution of the financial burden uneven. Equity within the health care system is a challenge not only because of differences in health needs, but also because of socioeconomic disparities and territorial imbalances. Services provided to the population vary substantially in terms of quality and access in the different regions. Poverty is a serious barrier in access to health care, especially in a system heavily reliant on formal and informal OOP payments.

Conclusions

With social and living conditions indicators being this unfavourable, the main challenge is to catch up with the more developed Member States. The need for further reform seems even greater than in the early 1990s. The major challenge is that of improving population health. The National Health Strategy 2008–2013 outlined the implementation of a number of national targeted programmes focusing on treatment and prevention of socially important diseases; raising public awareness on healthy lifestyles; and improving the public health network. However, the biggest challenge in this field is systematic monitoring and registration of population health status in order to restrict preventable mortality. Success also depends on improving competitiveness and structural reforms, particularly in the health system, to stimulate growth. To make a sustainable reform effort, health and health care policy need to be approved by both the majority of voices represented in the National Assembly and a wide constituent base.

1. Introduction

Bulgaria is situated in south-east Europe in the eastern part of the Balkan Peninsula. It covers an area of approximately 111 000 square kilometres and had a population of 7.6 million in 2009. The country is a parliamentary representative democratic republic with a multi-party system and free elections. In the last 20 years, demographic development has been characterized by population decline, a low crude birth rate, a low fertility rate, a high mortality rate and an ageing population. A stabilizing political situation since the early 2000s and an economic upsurge since the mid-2000s were important factors in the slight increase of the birth and fertility rates and the slight decrease in mortality. The global economic crisis led to a decline of GDP of 5.5% in 2009. In the same year, GDP per capita in purchasing power standards (PPS) was still the lowest in the EU, being 41% of that of the EU27 average. With social and living conditions indicators being this unfavourable, the main challenge for the country is to catch up with the more developed Member States. Its success depends to a large extent on improving competitiveness and structural reforms, also in the health system, to stimulate growth.

Life expectancy at birth has been increasing and reached 73.3 years in 2008. In general, Bulgaria is behind EU averages in most mortality and morbidity indicators. In 2009, the main three causes of death in Bulgaria were diseases of the circulatory system (66.0% of all cases), malignant neoplasms (15.9%) and diseases of the respiratory system (3.8%). Although infant mortality and under-five mortality have been decreasing by 5–6% a year in the last decade, this indicator still lags behind the EU12 and EU27 averages. However, insufficient progress in the decline of some of the sub-types of child mortality may point to deficiencies in the health system. One of the most important risk factors is smoking. Unsurprisingly, the average SDR for smoking-related causes in 2008 was twice as high in Bulgaria compared to the EU15.

1.1 Geography and sociodemography

Bulgaria (the country's official name is the Republic of Bulgaria) is situated in south-east Europe, in the eastern part of the Balkan peninsular, along the Black Sea. It is a comparatively small country, with a total area of approximately 111 000 square kilometres (National Statistical Institute, 2009). Bulgaria's longest boundary is with Romania to the north. To the west its neighbours are Serbia and Macedonia. Greece and Turkey border the country to the south and the Black Sea is its natural eastern boundary (Fig. 1.1).

Fig. 1.1

Map of Bulgaria



Source: United Nations Statistics Division, 2012.

Bulgaria offers a highly diverse landscape: the Balkan Mountains cross the country east–west; the north is dominated by the vast Danube plain and the south and south-west by highlands and elevated plains. In general, almost a third of the country territory is plain and some 28% mountains, the rest being lowlands and hilly areas. As Bulgaria is on the border between the temperate and Mediterranean climatic areas, the part north of the Balkan Mountains has a temperate continental climate, while the influence of the Mediterranean is strongly felt in the southern part. The Black Sea has local influence in the coastal areas, forming specific mild maritime climate conditions. The country is divided into 28 districts while 6 regions were also created by the 2008 Law of Regional Development (North-western, North-central, North-eastern,

South-western, South-central South-eastern). Although Bulgaria has no administrative regions, the term “regional” is often used in English to signify the decentralized aspect.

At the end of 2009, Bulgaria had a population of 7.6 million with a slight majority of women, 51.7% (see Table 1.1). According to the latest population census from 2011, the vast majority of Bulgarian citizens are ethnic Bulgarians, who constitute 84.8% of the population. Turks form an additional 8.8%, Roma 4.9%, and other traditional ethnic minorities (Armenian, Greek, Jewish, Russian, Tatar and others) 1.5% (National Statistical Institute, 2011c). In the 2011 Census, 76% of the population responded that they were Eastern Orthodox Christian, 10% Muslim and 14% other or did not state their religion. The share of people living in urban areas has been steadily increasing and in 2009 it was 71.4%. The population density is 70.2 people per square kilometre.

In general, the demographic development in Bulgaria has been among the major challenges in the last 20 years. Table 1.1 provides some basic sociodemographic information about the country. The data indicate a steady decline of its permanent population. As of 1988, the natural increase of the population has been negative and the total population has shrunk by some 1.4 million between 1988 and 2009. In 2009, the absolute number of natural decrease was 33 687 people, which was the smallest population decrease as a result of natural causes after 1995 (National Statistical Institute, 2009).

Table 1.1

Trends in population/demographic indicators, selected years

	1980	1990	1995	2000	2005	2009
Total population (millions)	8.9	8.7	8.4	8.1	7.7	7.6
Population, female (% of total)	50.2	50.7	51.0	51.3	51.5	51.7
Population aged 0–14 (% of total)	22.1	20.3	17.9	15.7	13.7	13.4
Population aged 65 and above (% of total)	11.9	13.1	15.1	16.6	17.2	17.4
Population growth (annual %)*	0.4	-1.8	-0.4	-1.8	-0.5	-0.5
Population density (people per sq km)	80.1	78.8	75.9	72.9	71.2	70.2**
Fertility rate (births per woman)	2.1	1.8	1.2	1.3	1.3	1.6
Birth rate, crude (per 1 000 people)	14.5	12.1	8.6	9.0	9.2	10.7**
Death rate, crude (per 1 000 people)	11.1	12.4	13.6	14.1	14.7	14.2**
Age dependency ratio (dependants to working-age population)	51.5	50.3	49.2	47.7	44.7	44.7
Age dependency ratio (aged 65+ as % of working-age population)	18.0	19.8	22.5	24.5	24.8	25.2
Age dependency ratio (aged 0–14 as % of working-age population)	33.5	30.5	26.7	23.1	19.9	19.4
Urban population (% of total population)	62.1	66.4	67.8	68.9	70.2	71.4
Literacy rate in population aged 15 and above (%)*	95.1	97.2	97.9	98.4	n/a	n/a

Sources: World Bank, 2010; * WHO Regional Office for Europe, 2010; ** National Centre of Health Informatics, 2010.

Notes: n/a = not available; *Compared to previous year.

Bulgaria has an ageing population, which is common in EU Member States. The number and share of the population under 15 years of age continues to decrease, whereas the share of the population over 65 years increases. While the relative share of people younger than 15 years was 22.1% in 1980, it dropped to 15.7% in 2000 and 13.4% in 2009. The percentage of people aged 65 and above is constantly rising, from 11.9% in 1980 to 16.6% in 2000 and 17.4% in 2009. The two immediate causes for the population decline are the negative net international migration and negative population growth.

However, more fundamental factors of political and economic nature have led to this decline. Hundreds of thousands of ethnic Turks left for Turkey in the second part of the 1980s due to a communist regime policy forcing them to adopt Bulgarian names. In addition, hundreds of thousands of Bulgarians, many of them young and educated, emigrated to the West in the 1990s to escape the lack of economic opportunity resulting from the painful transition from a centrally planned economy to a market economy. Another related factor is the sharp decline in living standards in the mid-1990s, which led to a low crude birth rate, low fertility rate and high mortality rate.

As a result of the stabilization of the political situation in the 2000–2001 period and the economic upsurge in the second half of the 2000s, a slight increase of the birth and fertility rates can be observed. In 2008, Bulgaria registered its highest birth rate in 14 years: 78 283 born children were registered, 99.3% of whom were live-born. In comparison with the previous year, their number increased by 2363 children and in comparison with 2001, by 9000 (National Statistical Institute, 2010a). The number of births and the crude birth level continued to increase in 2009, with 81 572 children registered – an increase of almost 12 300 children compared to 2001. While in 2000 the average number of births per woman was 1.3, it had increased to 1.57 by 2009. Although this figure remains below replacement level (2.1), Bulgaria's fertility rate is the same as the EU27 average (1.57) and a little below the EU15 average (1.6). Bulgaria is thus catching up with a number of European countries, including Greece, Romania and Latvia, and is ahead of countries such as Germany, Austria and Italy. However, it is still far behind the EU countries with the highest fertility rates – Ireland, Norway and Finland (WHO Regional Office for Europe, 2010). In general, the increasing fertility rate has only a small effect on slowing down the negative population growth.

A slight decreasing trend in mortality began in 2007. The number of deaths in 2009 (108 068) was lower than in 2008 (110 523) and 2007 (113 004). The crude death rate, which had reached a high of 14.8 per 1000 population in 2007, decreased by 0.3 in 2008 and by a further 0.3 in 2009, reaching 14.2

per 1000 population (National Statistical Institute, 2009a; 2010). This figure is considerably higher than in most other European countries, where this indicator was within the 9.0 and 10.2 per 1000 population range in 2009. In Bulgaria, the male crude death rate (15.8 and 15.5 per 1000 people in 2008 and 2009) was higher than the female crude death rate (13.3 and 13.1 respectively).

1.2 Economic context

Similar to many of the countries in central and eastern Europe, the current situation in Bulgaria can be better understood in the context of the deep transformation after the demise of communism. However, the reform pace in different countries has been uneven and they have displayed widely diverging performance patterns.

In Bulgaria, a series of reforms was launched as early as 1991, including price liberalization, liberalization of foreign trade, abolition of central planning and market liberalization. But compared to some other countries, the reform pace was slow, economic policies were inconsistent, and privatization was unsubstantial and delayed. As a result, Bulgaria plunged into a severe and profound transition crisis in 1996/1997 (Dobrinsky, 2000), which was characterized by a dramatic deterioration of all macroeconomic indicators. The uniqueness of this crisis was that it combined a fiscal crisis, a banking crisis and a currency crisis. The cumulative decline of GDP in these two years was more than 18% and at the beginning of 1997, the country experienced hyperinflation (1058%) (World Bank, 2010). The economic collapse triggered a political crisis and a drastic change in economic policy consisting of an acceleration of privatization, financial stabilization measures, bank rehabilitation and business restructuring. The most important change was the introduction of the Currency Board. An extreme version of a fixed exchange rate monetary policy regime replaced the active monetary policy. The local currency was fully covered by foreign currency reserves. Initially, the Bulgarian lev (BGN) was pegged to the German mark and later to the Euro. The Currency Board has been a pillar of stability and an eventual joining of the Euro zone is considered one of the main goals.

In the beginning of the new decade, particularly between 2004, when Bulgaria's accession to the EU was agreed upon, and 2008, the country experienced an economic boom. Real GDP grew by more than 6% annually in the period 2006–2008 (Eurostat, 2010), which led to some narrowing of the income gap with Western Europe. The acceleration of capital flows¹ and

¹ Foreign direct investment net inflow increased to 33.4% of GDP in 2007 (World Bank, 2010).

the credit boom were the two main sources of growth. Both were driven by the confidence-inducing effect of the Currency Board and the expectations of Bulgaria's impending membership of the EU. GDP growth was to a large extent due to the non-tradable sectors, such as financial services, real estate and construction, in particular.

The global economic downturn had a severe effect on the Bulgarian economy. In 2009, GDP contracted by 5.5% (see Table 1.2), which was above the EU27 average of 4.2% (World Bank 2010). The labour market worsened considerably as the downturn led to a fall of employment. In the same year, the number of employed people aged 15–64 years decreased by 3.1% and the employment rate for the same age group fell by 1.4%, reaching 62.6% (National Statistical Institute, 2010a). At the same time, the economic crisis brought about an adjustment of some of the imbalances. Inflation decelerated considerably from 12% in 2008 to 2.5% in 2009 (Bulgarian National Bank, 2010). Due to weaker domestic demand, imports decreased by 22% in real terms. The decrease in exports was lower, which resulted in an improvement of the foreign trade balance and current account balance. The downturn had an impact on the budgetary balance as well. It swung from a surplus of 1.8% of GDP at the end of 2008 to a deficit of 3.9% in 2009 (Eurostat News Release, 2010) as the measures to restrict expenditures and improve tax compliance were insufficient to offset the substantial revenue decrease.

Table 1.2
Macroeconomic indicators, selected years

	1980	1990	1995	2000	2005	2009
GDP (current US\$, millions)	20 039	20 726	13 107	12 599	27 188	47 100
GDP PPP (current international US\$, millions)	24 651	47 328	46 786	49 592	71 438	97 755
GDP per capita (current US\$)	2 261	2 377	1 560	1 563	3 513	6 210
GDP per capita, PPP (current international US\$)	2 782	5 429	5 570	6 153	9 230	12 888
GDP growth (annual %)*	–	-9.1	2.9	5.7	6.4	-5.5
Public expenditure (% of GDP)	–	53.5	39.4	32.3	33.3	30.9 ^a
Cash surplus/deficit (% of GDP)	–	-5.1	-5.1	-0.4	3.4	n/a
Value added in industry (% of GDP)	54.5	49.2	35.5	30.7	29.4	30.3
Value added in agriculture (% of GDP)	14.6	17.0	14.5	14.2	9.4	6.0
Value added in services (% of GDP)	30.9	33.8	50.0	55.1	60.2	63.7
Labour force (total, millions)	4.5	4.1	3.8	3.6	3.4	3.6
Unemployment (total, % of labour force)*	–	–	15.7	16.2	10.1	6.8
Real interest rate*	–	–	10.5	4.4	1.2	7.0
Official exchange rate (BGL per US\$)	–	–	0.07	2.1	1.6	1.4

Sources: World Bank, 2010; *World Bank, 2011, *2008.
Note: n/a = not available.

Unlike some other transition countries in central Europe, Bulgaria has made less progress in terms of convergence to EU living standards. In 2009, its GDP per capita in PPS was still the lowest in the EU: 41% of that of the EU27 average compared to Romania's 45%, Poland's 61% and Hungary's 63% (Eurostat News Release, 2010). In 2008, the at-risk-of-poverty rate (21%) was one of the highest in the Union, with only Latvia (26%) and Romania (23%) faring worse and the at-risk of poverty rate for children aged 0–17 (26%) was among the highest in the EU. The risk of poverty faced by people aged 65 or over stands at 34% in Bulgaria, as opposed to 4% in Hungary, 12% in Poland and 19% in the EU27 (Eurostat News Release, 2010).

In 2008, Bulgaria was also the EU country with the highest material deprivation rate² – more than 50%, with the rate for the elderly being 22% higher than for the whole population (Wolff, 2010). The main challenge faced by the country is to sustain a quick catching-up process with the more developed Member States. This depends to a large extent on structural reforms to stimulate growth and competitiveness. Examples of such reforms include education and pension reform as well as urgently needed health care reform.

1.3 Political context

The framework of politics in Bulgaria is outlined in the constitution, adopted in July 1991, according to which the country is a parliamentary representative democratic republic with a multi-party regime and free elections on the basis of universal suffrage. The constitution introduced and enforces the principle of the separation of powers divided between the legislative, executive and judiciary branches of government.

The Bulgarian parliament, the National Assembly, is unicameral, consisting of 240 deputies who are elected for four-year periods by popular vote. The constitution also provides for a Grand National Assembly, which is convened on special occasions: the adoption of a new constitution; change in the territory of the country; change in the form of government or essential amendments explicitly stated in the provisions of the existing supreme law. The National Assembly passes laws; approves the state budget; establishes the tax system; schedules the elections for a president; elects and removes the prime minister, and, on his motion, the members of the cabinet; approves any deployment and

² The material deprivation rate provides a headcount of the number of people who cannot afford to pay at least three of the nine following items: unexpected expenses, one week annual holiday away from home, mortgage or utility bills, a meal with meat, chicken or fish every second day, keep home adequately warm, a washing machine, a colour TV, a telephone or a personal car.

use of Bulgarian armed forces outside the territory of the country; ratifies international treaties and agreements, etc. Elections can be called before the end of the parliamentary term in certain cases such as the government losing a confidence vote. Following election, the largest parliamentary group is asked to form a government. A simple parliamentary majority is required to approve the cabinet, called the Council of Ministers, and to pass normal legislation. A three-quarter majority is needed to approve constitutional changes.

After changes in the electoral system the elections for the forty-first National Assembly were held on 5 July 2009 according to a combination of proportional representation and majority vote, with ballot lists of parties and coalitions and majority candidates registered in 31 multi-mandate and 31 single-mandate constituencies. There is a 4% threshold of the vote for parties and coalitions to qualify for participation in the distribution of seats in the National Assembly. Twenty parties and coalitions and 357 individual candidates took part in the elections. Six political parties and coalitions passed the 4% barrier: the Citizens for European Development of Bulgaria party (GERB), the Coalition for Bulgaria, dominated by the Bulgarian Socialist party, the Movement for Rights and Freedoms party (known as DPS), “Ataka” nationalist party, the centre-right Blue Coalition (a coalition of two parties, the Union of Democratic Forces party and the Democrat for Strong Bulgaria party) and the Order, Law and Justice party. Altogether, the total number of seats won by each party and coalition was as follows: GERB 116; Coalition for Bulgaria 40; the Movement for Rights and Freedoms 38; Ataka 21; the Blue Coalition 15 and Order, Law and Justice 10.

Bulgaria also has a president who is directly elected for a five-year term with the right to two consecutive terms at most. The president serves as head of state and commander-in-chief. Among his duties are to schedule elections and referenda; head the Consultative Council for National Security; approve and dismiss high-ranking military officials as well as chiefs of foreign diplomatic missions; represent Bulgaria abroad. The constitution entitles the president to return legislation to the National Assembly for further debate or to veto it. However, vetoed legislation can be passed again by a simple majority vote. As of late 2011, the President of Bulgaria is Mr Rosen Plevneliev.

The Council of Ministers (government) is the principal body of the executive branch. It is usually formed by the majority party in the National Assembly, if one exists, or by the largest party in coalition with other parties. The chairperson of the Council of Ministers (Prime Minister) is elected by the National Assembly. The Council is responsible for carrying out state policy, managing the state budget and maintaining law and order. Bulgaria's current

cabinet is a single-party cabinet formed by GERB and supported by Ataka and the centre-right Blue Coalition. The Prime Minister is Mr Boyko Borisov, leader of the GERB party.

The judiciary system consists of district (28) and local (113) courts of appeal. All judicial matters are overseen by the Supreme Judicial Council, which is in charge of the self-administration and organization of the judiciary. Its members elect, by a qualified majority of two-thirds, the Prosecutor General and the chairperson both of the Supreme Administrative Court and the Supreme Court of Cassation. The Constitutional Court is in charge of reviewing the constitutionality of laws and statutes as well as the compliance of these laws with international treaties. Its members serve a nine-year term and are elected by the National Assembly by a two-thirds majority.

The governors of the districts are appointed directly by the government. Municipalities act as self-governing bodies. Mayors and members of municipal councils are elected at municipal elections. Since 1992, substantial responsibilities for health care, education and social affairs have been devolved to municipalities. There have been signs of strengthening local governance – such as setting local tax rates, better coordination of local government responsibilities under centrally financed activities, and access to EU funds; however, observable results still have not been produced (Freedom House, 2010).

Similar to other central and eastern European countries, probably the most substantial historical development since the 2000s has been Bulgaria's accession to the EU in 2007. As noted in section 1.2 above, the preparation for this accession was a stabilizing and stimulating factor for economic and political changes. Before that, the country had joined the North Atlantic Treaty Organization (NATO) in 2004 and its armed forces have taken part in a number of NATO international missions. It has been a member of the UN since 1955 and is a founding member of the Organization for Security and Cooperation in Europe. It is a member of the World Trade Organization (WTO) and the Council of Europe. It has signed and ratified the Universal Declaration for Human Rights; the International Covenant on Civil and Political Rights; the International Covenant on Economic, Social and Cultural Rights; and the Convention on the Rights of the Child. Bulgaria has also ratified several international agreements relevant to health care: the European Convention on Human Rights and Biomedicine (signed in 2001 and entered into force in 2003); the Framework Convention for the Protection of National Minorities (1997) and the General Agreement on Trade in Services (1996).

Overall, in the two decades since the end of communism in 1989, Bulgaria has made good progress in the creation of a consolidated democratic governance system with a stable national assembly, sound government structures, active civil society and free media. Since joining the EU, however, the Bulgarian Government has come under strong criticism for backsliding on its reform efforts. As a result of several scandals, some payments under EU funding programmes were suspended in 2008. Furthermore, events during the last couple of years have shown that efforts are still needed to ensure the vitality and continued progress of Bulgarian democracy. Many essential issues remain to be addressed, including the reform of the judiciary, fighting corruption and organized crime, improving the treatment of underprivileged groups, and restoring public trust in democracy and re-engaging citizens in politics (Freedom House, 2010).

1.4 Health status

Life expectancy at birth has been increasing in all EU countries. The same is true for Bulgaria where average life expectancy at birth has been increasing since 1970, with the exception of a small dip between 1989 and 1997. In 1980, it was 71.2 years, while in 2008, it became 73.3 years. The discrepancy between men and women is substantial. Between 2007 and 2009, life expectancy for men was 69.8 and that for women was 77.0 (see Table 1.3). As in some other countries in the former eastern bloc, Bulgaria experienced a mortality crisis in the early 1990s (Nolte, McKee & Gilmore, 2004) with life expectancy reaching a low of 70.4 years in 1997 (World Bank, 2010). After the end of communism, mortality indicators for both men and women deteriorated, but much more substantially for men (see Table 1.3). As a result, there was a slight dip in life expectancy. In general, Bulgaria lags behind EU27 averages in most mortality and morbidity indicators. In 2008, life expectancy was six years below the EU27 average (79.5), almost seven years below the EU15 average (80.7), and slightly more than a year below the EU12 average (75.0), but comparable to Hungary (74.0) and Romania (73.4) and only slightly lower than that of Poland (75.5) (WHO Regional Office for Europe, 2010).

Table 1.3
Mortality and health indicators, selected years

	1980	1990	1995	2000	2005	2008
Life expectancy at birth, total (years)	71.2	71.6	71.1	71.7	72.5	73.3
Life expectancy at birth, male (years)	68.5	68.3	67.4	68.2	69.0	69.8
Life expectancy at birth, female (years)	74.0	75.2	74.9	71.3	76.2	77.0
Total mortality rate, adult, male (per 1 000 male adults)	189.9	219.3	245.3	224.9	220.6	213.0*
Total mortality rate, adult, female (per 1 000 female adults)	98.6	98.0	99.9	98.8	92.1	90.6*

Source: World Bank, 2010.

Note: * Number for 2007.

Data suggest that, as is the case with other transition countries, the population of Bulgaria has both a shorter life expectancy and a shorter expected lifespan in good health than populations in western countries. For the EU15, the average of years spent in good health in 2002 was 70.1 years (WHO, 2009b), while for Bulgaria, it was 66 years, 63 for men and 69 for women, in 2007 (Table 1.4). The estimated disability-free life expectancy (DFLE) was 66 in 2007 compared to 71.7 for the EU27 average, 73.0 for the EU15 average and 66.7 for the EU12 average (WHO Regional Office for Europe, 2010).

Table 1.4
Health-adjusted life expectancy (HALE), selected years

	2002	2007
Healthy life expectancy at birth (HALE), both sexes	65	66
Healthy life expectancy at birth (HALE), male	63	63
Healthy life expectancy at birth (HALE), female	67	69

Sources: WHO, 2008; WHO, 2009b.

An analysis of the causes of mortality in Bulgaria (see Table 1.5) shows that similar to many other European countries, the main causes of death are the diseases of the circulatory system. The SDR for these diseases has been fluctuating since the 1980s, with a peak in 1997 and 1998 (814.1 and 813.1 respectively – not shown in the table) and decreasing ever since. However, in 2008, it was still the highest in the EU with 611.3 deaths per 100 000, which was 1.4 times higher than the EU12 (439.9), 2.5 times higher than the EU27 (240.4) and 3.3 times higher than the EU15 average (188.3) (WHO Regional Office for Europe, 2010). This unfavourable trend can be attributed to prevailing unhealthy habits and behaviour (unbalanced diet, high rate of smoking and low physical activity), psychosocial factors, and insufficient health promotion, prevention and treatment of risk factors.

Malignant neoplasms (cancer) have been the second most common cause of mortality in the last couple of decades. In 2008, the SDR for malignant neoplasms in Bulgaria (171.6) was slightly below the EU27 average (173.6), well below the EU12 average (199.4), but above the EU15 average (166.9). However, in contrast to the falling malignant neoplasms SDR in the EU, Bulgaria's SDR has been increasing since 2000. Deaths attributable to external causes (injury or poisoning) and respiratory diseases are at a comparable level. In 2008, the SDR for external causes was 44.9, which is higher than the EU27 average (38.7) and the EU15 average (32.9) but much lower than the EU12 average (61.0). The SDR for respiratory diseases was 41.6, slightly lower than the EU27 and EU15 averages of 44.5 and 44.9, respectively (WHO Regional Office for Europe, 2010). In 2009, again, the main three causes of death in Bulgaria were diseases of the circulatory system (66.0% of all cases), malignant neoplasms (15.9%) and diseases of the respiratory system (3.8%) (National Centre of Health Informatics, 2010).

Table 1.5

Main causes of death, selected years (SDR, all ages per 100 000)

Causes of death	1980	1990	1995	2000	2005	2008
All causes	1 162.1	1 138.3	1 170.3	1 145.8	1 065.3	995.4
Infectious and parasitic diseases	7.2	5.89	7.06	8.59	7.3	6.9
Tuberculosis	3.9	2.1	3.4	3.4	2.9	2.4
Diseases of the circulatory system	638.0	691.3	725.6	737.1	677.4	611.3
Ischaemic heart disease	185.3	230.1	234.8	193.6	163.1	126.0
Malignant neoplasms	136.9	152.4	161.6	150.1	171.0	171.6
Cervical cancer	3.9	5.2	6.6	6.9	6.9	7.0
Breast cancer (female)	16.6	21.1	22.6	21.8	23.6	23.3
Cancer of the trachea, bronchus and lung	27.0	30.7	33.2	29.0	34.6	34.5
Diabetes	11.2	17.7	21.1	19.1	16.5	18.1
Mental disorders, diseases of the nervous system and sensory organs	7.2	8.3	11.2	11.0	9.6	11.0
Diseases of the respiratory system	107.8	68.4	56.1	46.8	43.6	41.6
Diseases of the digestive system	27.6	33.6	37.2	30.0	33.1	34.8
External causes (injury and poison)	61.1	60.9	62.7	52.4	45.0	44.9
Transport accidents	16.0	18.4	14.8	11.7	10.8	13.4
Suicide and self-inflicted injury	13.7	14.1	15.5	15.0	10.7	10.1

Source: WHO Regional Office for Europe, 2010.

Chronic non-communicable diseases have been a problem that Bulgaria has been tackling for decades. In 2008, the morbidity rate for diseases of the respiratory system accounted for 38% of all diseases, followed by diseases of the nervous system, diseases of the circulatory system, injuries and poisoning (Ministry of Health, 2008b). Cancer incidence per 100 000 rose from 285.1 in

1995 to 320.1 in 2000 and 426.0 in 2008 (WHO Regional Office for Europe, 2010). The Bulgarian incidence of tuberculosis has been fluctuating. After a steady decline in the 1980s, it started rising and almost doubled in the 1990s, from 25.1 cases per 100 000 in 1990 to almost 50 in 1998. The backlash in tuberculosis incidence in the 1990s can be partly attributed to deteriorating economic conditions and related factors such as poverty, social tension and undernourishment. Since the first half of the 2000s, this rate has been falling and reached 38.6 in 2008. Although this is comparable to the EU12 average (37.5), it is more than twice the EU27 average (14.1) and more than four times the EU15 average (7.9).

The prevalence of long-term illness and disability is an important indicator of the population's health status. The number of new invalidity/disability cases per 100 000 has been at a high level since the early 2000s. In 2004, it peaked at 1589.0 per 100 000 and although it has been a decreasing trend since, Bulgaria still had 734.5 such cases in 2008. Although comparisons between countries are difficult because of national specificities in definitions and legislation, the differences between the number of such cases in Bulgaria and that in Hungary (269.4), Poland (137.9), the EU27 average (563.4 in 2007) and the EU12 average (324.2) are substantial (WHO Regional Office for Europe, 2010).

The HIV incidence per 100 000 is comparatively low in Bulgaria: 0.6 in 2000, 1.1 in 2005 and 1.6 in 2008, compared to the averages of 5.3 for the EU27, 2.5 for the EU12 and 6.0 for the EU15 in 2008. However, the prevalence of HIV infections increased from 49 in 2000 to 125 in 2007. Altogether, between 1986 and 2007 there were 816 registered cases of people with HIV, 180 of whom developed AIDS. According to the health authorities there is an increase in registered cases after 2004, which is largely due to active tracking and provision of HIV prevention services under the HIV/AIDS Prevention and Control Programme financed by the Global Fund to Fight AIDS, Tuberculosis and Malaria (Ministry of Health, 2008c; United National Development Programme Bulgaria, 2008). One third of the new registered cases in recent years are people under 25, while the age in certain cases is as low as 16 years. The majority of new cases are registered in 4 of the 28 districts: Sofia, Plovdiv, Varna and Bourgas.

One of the most important risk factors affecting the health status in Bulgaria is smoking. In 2006, the prevalence of smoking among adults (aged 15 or over) was 49% for men and 38% for women. Tobacco use among adolescents aged 13–15 years in the period 2000–2009 was 26.4% for young males and 31.8%

for young females. In 2008, the SDR attributed to smoking-related causes was 372.5, which was well above the EU12 (349.6) average and more than twice that of the EU15 (179.6) (WHO Regional Office for Europe, 2010).

Between 1990 and 2000 the DMFT-12 (decayed, missing or filled teeth at age 12) index has increased from 3.1 to 4.4, the latter number being well above the EU27 (1.9) and the EU15 (1.4) averages and 25% higher than the EU12 average of 3.6 (WHO Regional Office for Europe, 2010). Unfortunately, no newer data is available.

Infant mortality (Table 1.6) has been decreasing in the last 30 years. Between 2000 and 2009 the infant mortality rate decreased substantially from 13.3 to 8.6 per 1000 live births. Under-five mortality also decreased from 17.4 per 1000 live births in 2000 to 10.0 in 2009. Both indicators report a drop of 5–6% a year. Nevertheless, with this rate, Bulgaria is still behind the EU12 and EU27 averages. In 2008, the number of infant deaths per 1000 live births in Bulgaria was approximately twice the EU 27 average (4.4 per 1000) and the second highest rate in the EU after Romania (11.0 per 1000) (WHO Regional Office for Europe, 2010). There are substantial geographical differences in infant mortality rates, the lowest being registered in Blagoevgrad (4.8) and the capital, Sofia (5.7) and the highest in Sliven (21.6) and Dobrich (12.7). The infant mortality in rural areas has been 50% higher than in urban areas (National Centre of Health Informatics, 2010).

The neonatal mortality rate (from day 0 to day 28 per 1000 live births) roughly halved, from 10.4 in 1980 to 5.4 per 1000 live births in 2009, but is still above the EU12 average (4.2 in 2008) and twice the EU15 average (2.6 in 2008). The postneonatal mortality rate (from day 29 to day 365 per 1000 live births) demonstrates an even more impressive decline, from 15.0 per 1000 in 1980 to 3.6 per 1000 in 2009. However, this is still disproportionately high compared to the EU27 average (1.5 in 2008), and even more so when compared to the EU15 average (1.2 in 2008) as well as to some other eastern European countries such as Hungary (1.8 in 2008) and Poland (1.7 in 2007). The data reveal slow progress in perinatal mortality rates (including the sum of stillbirths plus deaths before day 6). Although this rate decreased from 15.0 in 1980 to 10.5 in 2008, this is still almost twice the EU12 average (5.7 in 2008) and at least 50% higher than Romania's (8.0 in 2008). In general, positive changes in child mortality indicators in the last decade result from the stabilization of the political and economic situation in the country and the improving welfare of most families. However, insufficient progress in some of the sub-categories of child mortality may point to areas to be addressed in the health care system. In 2008, the SDR

per 100 000 from acute respiratory infections, pneumonia and influenza in children under 5 years was particularly high and stood at 30.7 compared to 1.5 in Hungary, 3.7 in Poland, 5.2 in the EU27 and 1.3 in the EU15 (WHO Regional Office for Europe, 2010).

Maternal mortality (Table 1.6) shows a steady downward trend and has fallen to slightly above the EU27 average. In 2008, the maternal death rate was 6.4, while the EU27 average was 6.1 (WHO Regional Office for Europe, 2010).

Table 1.6

Maternal, child and adolescent health indicators, selected years

Indicator	1980	1990	1995	2000	2005	2009
Fertility rate (per 1 000 women 15–19 years)	80.3	68.3	53.5	45.5	38.5	48.9
Termination of pregnancy (abortion) rate (per 1 000 women 15–49 years)	72.9	67.2	47.2	30.6	22.3	18.7
Infant mortality rate (0–1 per 1 000 live births)*	20.2	14.8	14.8	13.3	10.4	8.6 ^a
Under 5 mortality rate (per 1 000)**	24.1	18.3	19.3	17.4	13.3	10.0
Neonatal mortality rate (per 1 000 live births)	10.4	7.7	7.8	7.5	6.2	5.4
Postneonatal mortality rate (per 1 000 live births)	10.0	7.1	7.1	5.9	4.2	3.6
Perinatal infant mortality rate (per 1 000 births)	15.0	11.1	11.8	12.2	12.0	11.3
Maternal death rate (per 100 000 live births)*	21.1	20.9	13.9	17.6	11.3	6.4 a
Syphilis incidence rate (per 100 000)*	n/a	4.2	20.1	19.8	7.7	n/a
Gonococcal infection incidence (per 100 000)*	n/a	61.2	23.3	6.7	n/a	n/a

Sources: National Centre of Health Informatics, 2010; *WHO Regional Office for Europe, 2010; **World Bank, 2010.

Note: ^a2008.

Vaccination coverage in Bulgaria has traditionally been very high. It has remained above 95% in the 2000s for the prevailing part of vaccine-preventable diseases: tuberculosis, diphtheria, tetanus, measles, poliomyelitis and pertussis. In 2008, coverage against measles was 95.9%, which is higher than the EU15 (91.2) and the EU27 averages (92.6) but a little lower than the EU12 average (97.6).

2. Organization and governance

The Ministry of Health is responsible for national health policy and the overall organization and functioning of the health system. It is in regular touch with all ministries that have relevance to public health such as the Ministry of Finance, the Ministry of Transport and Communications, the Ministry of the Environment and Waters, the Ministry of Agriculture, the Ministry of Labour and Social Policy as well as the Ministry of Education, Youth and Science.

The Health Insurance Act of 1998 reformed the Bulgarian health system into a health insurance system with compulsory and voluntary health insurance. The key players in the insurance system are the insured individuals, the health care providers and the third-party payers, represented by the NHIF, a single payer that administers the SHI system, and VHICs.

While the insurance system (both SHI and VHI) covers diagnostic, treatment and rehabilitation services as well as medications for the insured individuals, the Ministry of Health is responsible for providing and funding public health services, emergency care, transplantations, transfusion haematology, tuberculosis treatment and inpatient mental health care. The Ministry of Health is also responsible for planning and ensuring human resources for the health system, the development of medical science, and collecting and maintaining data on the health status of the population and the national health accounts. However, the Ministry of Health acknowledged in the National Health Strategy 2008–2013 that the quality and reliability of the collected information deteriorated after 1989 and, more specifically, after the introduction of the health insurance system.

Health care providers are autonomous self-governing organizations. The private sector encompasses all primary medical and dental care and the pharmaceutical sector, most of the specialized outpatient care and some hospitals. The state owns all university hospitals and national centres, the specialized hospitals at national level, the centres for emergency medical care, the psychiatric hospitals, the centres for transfusion haematology and dialysis, as well as 51% of the capital of district hospitals.

As stipulated in the Health Insurance Act, all Bulgarian citizens are compulsorily health insured. Their rights as patients and as insured individuals are defined in the constitution, the Health Act, the Health Insurance Act, and many other national and international acts and regulations. However, several studies show that Bulgarian citizens are not sufficiently familiar with their rights as patients. Although many patient organizations exist in Bulgaria, their role in setting health priorities is not substantial.

2.1 Overview of the health system

Health policy priorities are determined by the Ministry of Health through the National Health Strategy (NHS). At the district level, state health policy is organized and implemented by the Regional Health Inspections (RHI). The Bulgarian health system is based on an insurance model consisting of compulsory SHI and VHI. SHI is administered by a single payer, the National Health Insurance Fund (NHIF) while VHI is solely provided by for-profit joint-stock companies. The insurance system (SHI and VHI) covers diagnostic, treatment and rehabilitation services as well as medications for the insured individuals. Public health services, inpatient services for people with mental disorders, emergency care, transplantations, and transfusion haematology are organized and financed by the Ministry of Health.

The SHI system was created with the 1998 Health Insurance Act; the National Health Insurance Fund (NHIF) was established as an autonomous public institution independent from the executive power (the government). The NHIF is the only responsible organization for SHI and thus, in effect, a monopolist by law. Its organization includes one central office located in Sofia, 28 branches (one in each district and called Regional Health Insurance Funds), and 105 municipal offices. The supreme governing body of the NHIF includes representatives of the government, insured individuals and employers. The main purpose of the NHIF is to guarantee equal access to the health system for those insured. The NHIF finances medical and dental services as well as medications

included in a basic benefit package (see also section 3.3.1. *Coverage*). The benefit package and prices of services are negotiated between the NHIF and the professional associations of physicians and dentists in Bulgaria. The negotiation takes place every year and ends with the signing of the NFC. The NFC also defines rights and obligations of the NHIF, health care providers and insured individuals, organizational procedures and control mechanisms. Based on the NFC, providers sign individual contracts with the Regional Health Insurance Funds (RHIF). The RHIF contract all public or private health care providers operating in their territory that meet criteria stipulated in the NFC. This means that the RHIF cannot selectively contract.

In accordance with the 1999 Health Care Establishments Act, health care providers are autonomous market players. The act distinguishes three types of health care providers: (1) outpatient care providers (single and group primary and specialized medical and dental practices, medical and dental centres, diagnostic laboratories), (2) inpatient care providers (specialized and multi-profile hospitals, for active or long-term treatment and rehabilitation), and (3) a group encompassing emergency care centres, mental health centres, comprehensive cancer centres, centres for dermato–venereal diseases, homes for medical–social care, hospices, dialysis centres and cell banks. Irrespective of ownership form, that is, public or private, all health care providers have to be registered according to the act as well as the Trade Law or Cooperation Law. As of 2011, the private sector encompasses primary care, much of the specialized outpatient medical and dental care, pharmacies and some hospitals. All health care providers except emergency care centres can contract with the NHIF and VHICs. They can also receive OOP payments for services not covered by the insurers, or in case providers have no contractual relations with a third-party payer. State and municipal health care providers may receive payments from the Ministry of Health and municipalities in addition to the NHIF and OOP payments.

Emergency care as well as public health services are organized and financed by the Ministry of Health. There are 28 regional centres for emergency care, one in each district, which have branches in the smaller towns in the district. In 1999, the public health system was restructured to 28 Regional Centres for Protection and Control of Public Health (RCPCPH). At the beginning of 2011, the RCPCPH merged with the Ministry of Health's representative bodies at the district level – the Regional Health Centres (RHC) – forming the new Regional Health Inspections (RHI). The RHI combine functions of the former two institutions. The public health network also includes the National Centre of Radiobiology and Radiation Protection, the National Centre for Infectious

Diseases, the National Centre of Drug Addictions, the National Centre of Health Informatics and the National Centre of Public Health Protection. The latter two merged in 2011.

2.2 Historical Background

Developments before 1989

The Balkan wars (1912–1913) and World War I (1914–1918), which led to a deteriorated health and social status, made the necessity for reform in the social and health field obvious to the Bulgarian Government at the time. An Act on Worker Insurances for Illness and Injury was adopted in 1918. The Act on Social Insurance was adopted in 1924, and was followed a year later by the Employment Insurance Act. The Act on Social Insurance introduced mandatory social insurance for all workers and public servants employed in governmental, public and private organizations in case of accident, illness, maternity, disability and old age. A Social Insurance Fund was established. This fund financed hospitals, nursing homes, dispensaries, community facilities and worker homes. The Act on Public Health adopted in 1929 (to replace the Act on Public Health of 1903) defined sanitary and anti-epidemic standards, combating social diseases and health educational activities.

The first Bulgarian Ministry of Public Health was established in 1944 at the onset of the centralization period in health care. The Act on Health Protection of Mother and Child, adopted in 1946, set up a stable system intended to provide health care for mothers and children.

The restructuring of the Bulgarian health care system to a centralized government system started in 1949. The principles of insurance medicine were replaced with the principles of socialist health care. A decision of the National Assembly of 1951 introduced nationwide free medical care. The supply of medical care was organized on a regional basis. A government infrastructure for the provision of pharmaceuticals was set up. Private hospitals and pharmacies were nationalized during this period. The physicians' and chemists' cooperatives, as well as private medical practice (1972), were prohibited. Furthermore, a specialized system for the provision of medical care for workers as well as a system to monitor a number of important diseases was introduced. Outpatient care was provided by regional physicians and specialists in polyclinics linked to hospital facilities. The government organized a system that monitored and emphasized maternal care and child care.

A new Public Health Act was adopted in 1973. This act highlighted environmental protection, behavioural factors, demographic issues and the involvement of the community in resolving health-related issues.

The period up to 1989 marked the development of the health care system within an environment of centralized financing and management. A number of problems with the health and demographic status of the population became visible and the failure to cope with the inefficient functioning of a number of health care sectors, as well as the poor management and suboptimal use of health system resources, gradually became more evident.

Developments since 1989

The political changes in Bulgaria started in 1989 with the development of a multi-party system. The new Constitution of the Republic of Bulgaria was adopted in 1991 and economic reform began. Reforms in the public sector followed erratic reform trajectories, with frequently amended reform principles and aims. The discussion on the need to restructure the health system into a social insurance system started in parallel with the transformation from a centrally planned economy to a market economy.

The adoption of the Health Insurance Act (1998), the Health Care Establishments Act (1999), the Act on Professional Organizations (1998) and the Act on Medicines and Pharmacies in Human Medicine (1995) provided the legal basis for the health reforms. The Public Health Act adopted in 1973 remained in force until 2004 when it was replaced with the Health Act, effective as of 2005. In certain cases, these numerous legal changes resulted in incoherencies and discrepancies between the new and existing regulations. This led to confusion about the respective roles and responsibilities of the various players in the system.

The health insurance system implementation started in 2000 and lagged behind other sectors of the economy. As of July 1999, employers had to share in the social security contributions of employees. This provided financial resources for the actual start-up of the reform. From a state-financed system based on the principle of universality and general accessibility, the health system was transformed into a social health insurance system. The reform introduced market principles, decentralization, as well as pluralism in the ownership of the health institutions and the provision of health services.

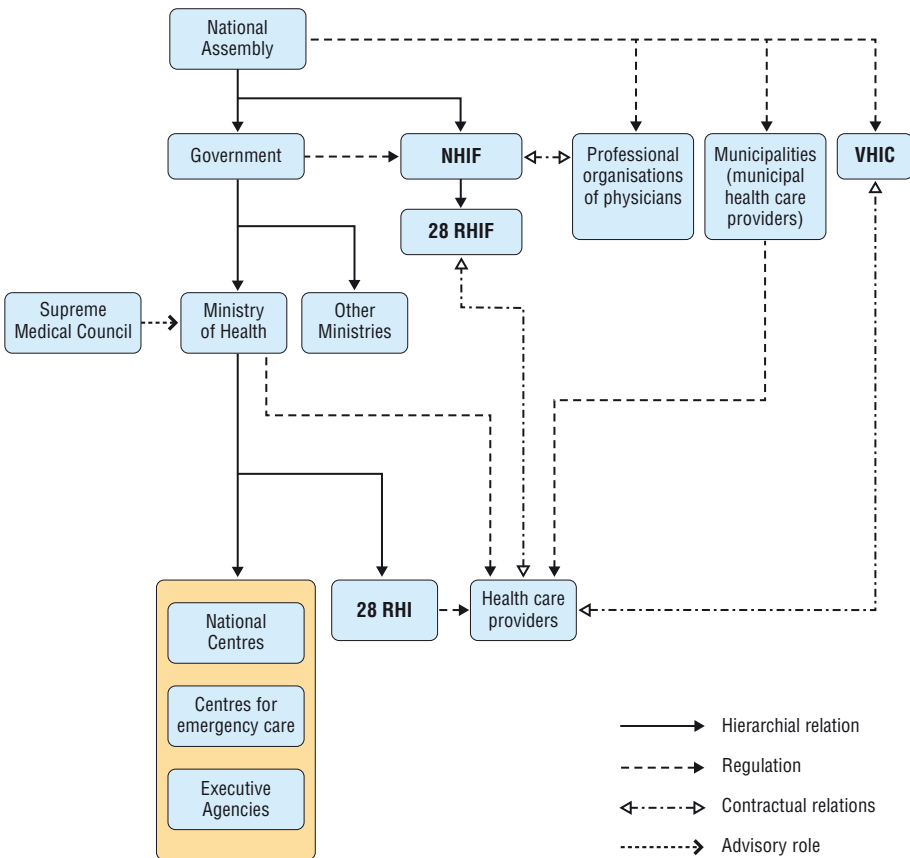
The regulatory changes gave birth to three major players in the system: patients as consumers, outpatient and hospital establishments as providers, and public and private health insurance organizations as third-party payers.

However, the incoherent implementation of the reforms led to tension and conflicts between the various health care sectors. The patient–health system relationship was strained due to organizational changes and unclear rights and obligations (see also Chapter 6 *Principal health care reforms*).

2.3 Organization

The organization of the Bulgarian health system is depicted in Fig. 2.1. The main actors in the system are the National Assembly, the Ministry of Health, the National Health Insurance Fund and the Supreme Medical Council.

Fig. 2.1
Organization of the health system in Bulgaria 2011



National Assembly

Bulgaria is a parliamentary republic and the National Assembly has an important role in the development of national health policy. It approves not only the national budget but also the budget of the NHIF. Within the legal framework of the Constitution and the Rules for the Organization and Work of the National Assembly, the health reform in the early 2000s set up a Parliamentary Commission on Health. This Commission possesses legislative authority and reviews pressing health-related issues put forward by its members as well as issues brought to its attention by other members of the National Assembly, the Minister of Health or the Director of the NHIF. Proposals to this Committee can be submitted by professionals, professional associations and nongovernmental organizations. The Commission initiates and organizes public discussions and public debates.

The Ministry of Health

The Minister of Health is the nationally responsible figure for the overall health system. In that capacity, he/she is the primary administrator of the health care budget and has executive competences in managing the national health system. The minister carries out state health policy and develops and implements the national health care strategy. Furthermore, he or she presents the annual National Health Report as well as the report on the implementation of the National Health Strategy to the National Assembly.

The minister is in command of the activities relating to protection of public health and governmental health control; emergency care; transfusion haematology; inpatient psychiatric care; medical and social care for children under three years of age; transplantation and health information; assurance and sustainable development of health interventions in health establishments; medical expertise; medical professional training and medical science. The minister monitors and is also responsible for health-related activities of the Council of Ministers, Ministry of Defence, Ministry of Interior, Ministry of Justice and Ministry of Transport.

The Minister of Health is responsible for the coordination between the actors in the system. Executive Agencies (for pharmaceuticals, transplantation) and National Centres (for example of public health, communicable diseases, health information, protection of public health) are subordinate to and funded by the Ministry of Health. The Minister of Health may also establish permanent or ad hoc consultative boards and expert work groups to support discussion and decision-making processes on particular problems such as hospital restructuring, HIV/AIDS and sexually transmitted diseases, and treatment abroad.

Other ministries

The Ministry of Health collaborates with the Ministry of Finance on matters related to the financing and distribution of funds within the system. This collaboration was strengthened when, in 2010, the Minister of Finance also became Deputy Prime Minister with executive power on health financing allocation. In practice, this means that the Minister of Health cannot make a decision related to financial issues without the Minister of Finance's approval.

Issues related to the training of medical staff necessitate collaboration with the Ministry of Education, Youth and Science. Furthermore, the Ministry of Health cooperates with the Ministry of Environment and Waters and with the Ministry of Agriculture and Food on issues related to the protection of public health, environment and food safety. The Ministry of Health also closely cooperates with the NHIF, the Social Assistance Agency, and several councils and commissions established by the Council of Ministers such as the National Council on Narcotic Substances, the National Council on Medical Expertise and the Central Ethics Commission.

The Supreme Medical Council

The Supreme Medical Council is an advisory body to the Ministry of Health. It includes five representatives from the Ministry of Health, five representatives from the Bulgarian Medical Association, three representatives from the Bulgarian Dental Association, three representatives from the Bulgarian Pharmaceutical Association, three representatives from the National Insurance Fund, one representative each from the Bulgarian Association of Professionals in Health Care, the National Association of Municipalities, the Bulgarian Red Cross Organization, and one representative from each higher medical school.

The Supreme Medical Council gives advice on national health strategy, health-related draft bills, draft budgets and the annual report of the minister, on the planning of the early admission quota of students and postgraduate students to be qualified in health care, and on issues related to medical ethics.

Supreme Board on Pharmacy

The Supreme Board on Pharmacy was established by the Minister of Health. Its composition includes five representatives from the Ministry of Health and five representatives from the Bulgarian Pharmaceutical Association, two representatives from the National Health Insurance Institute and one representative from the Departments of Pharmacy of the higher medical schools. The board advises on the main directions and priorities in the fields of pharmacy and pharmaceutical policy.

The National Health Insurance Fund

The NHIF was established in 1999 through the 1998 Health Insurance Act. It is composed of a central management and 28 Regional Health Insurance Funds. It is managed by the Supervisory Board and the Governor of the Fund, elected by the National Assembly. The NHIF budget is adopted each year by the National Assembly. The NHIF budget is the main public source of funding for the health system. Relationships between the NHIF and health care providers are based on the National Framework Contract and individual contracts with health care providers. The NHIF reimburses and guarantees access to health services for the insured population as defined in the basic benefit package (see section 3.3.1 *Coverage*). The reimbursement levels of health services and goods included in the basic benefit package are set in the National Framework Contract. The individual contracts define the specific activities that contracted health care providers have to provide to insured people. The NHIF supervises and monitors the activities of providers and imposes sanctions in case of patient rights violations.

Professional organizations

There are four professional medical organizations established by law: the Bulgarian Medical Association, the Bulgarian Dental Association, the Bulgarian Pharmaceutical Association and the Bulgarian Association of Professionals in Health Care. Membership in these associations is mandatory. They represent the rights and interests of their respective professions and members. Examples of their activities include providing comments and statements on draft bills, participating in drafting Good Medical Practice guidelines and discussing ethical issues.

Regional Health Inspections (RHI)

On the district level, public health policy is organized and implemented by 28 Regional Health Inspections, which are the local bodies of the Ministry of Health. The RHI's tasks include the collection, registration, handling, storage, analysis and provision of health information; overseeing the registration and quality of health care providers; implementing information technology in health; organizing action plans for natural disasters and accidents; coordinating activities regarding the implementation of national and regional health programmes; conducting research into the demand for human resources in health care.

Municipalities

During the decentralization process, the municipalities became the owners of a considerable share of the health care providers. As of 2011, a substantial part of specialized outpatient care, nearly 70% of multi-profile hospitals for active

treatment, and some specialized hospitals for active treatment are municipal property (National Centre of Health Informatics, 2010). Municipalities also participate in the ownership of district multi-profile hospitals (see also section 5.4 *Inpatient care*). This increased their responsibility in the health care system and population health. Local government bodies involved in health care include Permanent Committees at the Municipal Councils and municipal health care offices. The Permanent Committees investigate health needs of the residents and problems encountered in the delivery of health services, and draft proposals for improvement. The municipal health care offices organize health care within the municipalities under the responsibility of the Regional Health Inspections. In certain municipalities, so-called Public Health Councils function as advisory bodies to the Mayor's office.

Private Sector

The private sector in health care was restored with the legislative reform package of 1991. As of 2011, primary care and a large share of specialized outpatient care, dental care and pharmacies, as well as part of the hospitals, belong to the private sector. In 2009, private hospitals accounted for more than 30% of the hospitals in the country (National Centre of Health Informatics, 2010) and private inpatient beds as a percentage of all beds were 11.4%, compared to 36.2% for the EU27 average (WHO Regional Office for Europe, 2011). In 2009, private hospitals admitted 14.3% of all hospital patients. According to data from the National Centre of Health Informatics, the utilization of private hospital beds is about one and a half times lower than the country average, while bed turnover is comparable to the average values in acute hospitals (National Centre of Health Informatics, 2010). There are marked differences in the case mix between hospitalizations in private and public hospitals. Most private hospitals are specialized in surgery, obstetrics and gynaecology, and ophthalmology. There is an impression among professional society that private hospitals predominantly tend to admit patients without complications on the most profitable "clinical pathways" (see section 3.7.1 *Paying for health services*). According to the Health Care Establishments Act, private health care providers can sign contracts with the NHIF on the same terms as public providers. In addition, private providers offer health services that are not covered by the SHI system and public providers.

Private health insurance companies

Voluntary health insurance failed to develop into a substantial market for health services despite the presence of 20 licensed companies. The number of individuals covered by VHI was almost 5% in 2009 and less than 3% in 2010 (Zastrahovatel, 2010). Supervising VHI companies is assigned to the Financial

Supervision Commission (FSC) at the National Assembly. The VHI companies offer health service packages for prevention, outpatient and inpatient medical care and reimbursement of costs for medical services within and outside the scope of mandatory health insurance. The largest company has a 15.4% market share and six companies together have 70.4% of the VHI market (FSC, 2011). For more detailed information on the VHI market, see section 3.5 *Voluntary health insurance*.

Nongovernmental organizations (NGOs)

Over 100 nongovernmental organizations are active in the Bulgarian health system. Their concerns include treatment and prevention, environmental factors, patient rights and participation in the development and implementation of a national health policy. There is a trend of including NGO representatives alongside national experts in discussions relating to changes in operative regulations – for example, eight NGOs participate in the National Coordinating Committee under the HIV/AIDS Prevention and Control Programme. Furthermore, NGOs participate in the National Coordinating Council of the National Food and Nutrition Plan, the Interministerial Commission for Collaboration in Events of Natural Disasters, Accidents and other Calamities. Lastly, NGOs provide financial support to citizens in need, mainly through fundraising programmes.

Medical universities

The establishment of the Medical Faculty in Sofia in 1917 marked the beginning of medical education in Bulgaria. The Medical Academy and the Institute for Development and Specialization of Physicians were established in 1950. In 1972, the process of centralizing education led to the restoration of the Medical Academy. It included all medical faculties and medical colleges. At that time, the Medical Academy concentrated a large academic potential: over 4100 lecturers and about 10 000 students. In 1990, the medical universities received greater autonomy and as of 2011, there are four medical universities in Bulgaria: in Sofia, Plovdiv, Varna and Pleven. In addition, there are medical faculties at Sofia University and at Trakia University in Stara Zagora. These universities train masters of medicine, dentistry, pharmacy, public health, health management, and bachelors of nursing, midwifery and health management (see also section 4.2.3 *Training of health care personnel*).

2.4 Decentralization and centralization

The centralization of the Bulgarian health system started with the establishment of the Ministry of Public Health and Social Care in 1944 and the centralization of financing. In a transition period, both public and private health institutions, as well as social insurance funds, coexisted in the health system. Social insurance was abandoned in disregard of socio-economic, historical and national tradition, the Public Health Act was abolished, and a Soviet-type health system was introduced. All health institutions were nationalized. The building of a state-owned pharmaceutical distribution network started in 1955. The National Assembly introduced nationwide free medical care in 1951 based on the principle of territoriality. The polyclinics were united with the hospitals. In 1972, private medical practice was completely prohibited. Medical education and science underwent a process of centralization as well, through the concentration of all academic potential in the Medical Academy in the period 1972–1990. Until 1990, the health care system was fully state owned, based on the principles of universality and general accessibility (Apostolov & Ivanova, 1998).

The process of decentralization of health care followed the trend in general socio-political life after the changes of 1989. The Ministry of Health conducted its policy through the former Regional Health Centres to which the respective powers had been delegated. Regional Health Centres were built and functioned in each of the 28 districts. At present, they are part of the RHI together with the former RCPCPH. The system was further decentralized with the adoption of the 1998 Health Care Establishments Act (see Chapter 6 *Principal health care reforms*). With this act, a large share of the medical institutions was transformed from publicly owned state or municipal property into privately owned state and municipal property. The newly established health care providers, ambulatory care providers and part of the hospitals have been registered as commercial companies. In some cases, ownership of the capital was acquired by the state and the rights exercised by the Minister of Health, while in other cases, capital was acquired by a given municipality and the rights exercised by its municipal council. Except for emergency care, outpatient and inpatient care has been provided by private physical or legal entities since 2000. All these measures aimed at a more efficient management of health care resources through stimulating innovation and competition in a decentralized environment (Daskalova et al., 2005).

2.5 Planning

Health policy priorities are defined in the National Health Strategy. The current strategy has been developed by the Ministry of Health and encompasses the period 2008–2013. The strategy is directed towards a healthy nation with accessible and high-quality services in an efficient and financially stable health care system. Therefore, the following priorities were defined for the development of the health system in Bulgaria (Ministry of Health, 2008b):

- implementing the “Health in all policies” approach;
- improving population health through the implementation of pro-active, efficient and effective promotional, preventative and rehabilitation programmes with a focus on socially substantial diseases;
- training and development of human resources and raising their social and economic standing;
- achieving financial stability in the health care system;
- improving access, quality and efficiency of emergency and outpatient medical aid;
- restructuring and optimizing management of hospital care; and
- developing an integrated system for electronic exchange of data within the health care system.

In late 2009, a Ministry of Health working group developed a concept for restructuring public hospitals. The main idea was to guarantee inpatient and outpatient health services of good quality through an integrated approach that is aligned with the actual needs of the population. The purpose was to provide equity in access for all types of care: emergency, urgent, short-term and long-term hospitalizations. The Concept for Better Health Care in Bulgaria, adopted by the government in December 2010, envisages a more active government role in planning health system resources. In February 2011, the Cabinet approved a new National Health Map, which aims to align the health system with the health needs of the population.

2.6 Intersectorality

Intersectoral collaboration is of special importance for the effectiveness of public health programmes. Therefore, the Ministry of Health is in regular touch with all ministries that have relevance to public health. This collaboration is set

up on national, district and local levels, and its framework and responsibilities are defined in a number of laws and regulations. Special bodies have been established: national councils, permanent interministerial councils, consultative councils, permanent expert groups, and workgroups. Intersectoral national programmes and concrete action plans are being developed.

Each ministry has clearly defined responsibilities. For example, the Ministry of Finance supervises health financing and participates in health policy goal-setting; the Ministry of Education, Youth and Science is responsible for introducing health-training programmes on healthy lifestyle and training of future health workers; the Ministry of the Environment and Waters and the Ministry of Health are jointly responsible for a healthy living environment and the protection against chemical, physical and biological contamination; the Ministry of Agriculture assures food safety and is responsible for the prevention of diseases transmitted by domestic animals (for example, tuberculosis, brucellosis, salmonellosis); the Ministry of Labour and Social Policy cooperates with the Ministry of Health on a policy for safe and healthy working conditions, and on social assistance and social protection issues; while the Ministry of Transport and Communications collaborates with the Ministry of Health to prevent transport accidents.

An example of efficient intersectoral collaboration is the National Steering Committee in the Prevention and Control of HIV/AIDS Programme. It comprises high-level representatives from the Ministry of Health; the Ministry of Labour and Social Policy; the Ministry of Education, Youth and Science; the Ministry of Defence; the Ministry of the Interior; the Ministry of Foreign Affairs; the Ministry of Finance; the Ministry of Transport; the State Agency for Youth and Sport; academic institutions; eight NGOs; and three international organizations.

Intersectoral partnership also lies at the basis of a policy for providing safe and healthy working conditions. This policy is implemented within the framework of a collaboration at national, branch and local levels. The coordinator is the Ministry of Labour and Social Policy. The Ministry of Health is tasked with the management of activities to protect and enhance the health of workers as well as analyse the working environment and production process and their impact on health. In addition, the Ministry of Health is required to develop measures to reduce the risks of occupational diseases.

The Ministry of Health also participates in joint workgroups with the Ministry of Education, Youth and Science on student education and postgraduate training for medical professionals and on defining the priorities

of medical science. It also works together with the Ministry of Defence and the Ministry of the Interior on issues related to safety during national crises and emergencies. Lastly, intersectoral collaboration is also a necessary condition for implementing the System of Health Accounts as it requires participation from various ministries.

2.7 Health information management

2.7.1 Information systems

As acknowledged by the Ministry of Health in the National Health Strategy, the quality and reliability of the collected information deteriorated after 1989 and, more specifically, after the introduction of the health insurance system. Data on morbidity, visits to specialists and other data concerning outpatient care is incomplete. The use of “clinical pathways” for hospital financing led to distorted information on the frequency and structure of hospitalizations (see section 3.7.1 *Paying for health services*).

The health care providers, the Ministry of Health and the NHIF, are hindered by a partially built information system. In 2006, the National Strategy for Introducing Electronic Health Care was introduced without visible results and at the time of writing, no national level integrated information system exists. In 2010, a public debate on the development of e-health, which is one of the priorities of the Ministry of Health, was initiated. The goal is to establish an integrated information system that connects all key actors and enables data exchange. This would also enable the use of electronic patient records, registers and telemedicine.

The Concept for Better Health Care in Bulgaria (adopted in December 2010) envisions introducing an integrated information system intended to provide a real-time connection between the information systems of health care institutions and health care providers. Information technology used in Bulgaria is discussed in section 4.1.4 *Information technology*.

To ensure efficient and safe treatment according to the state of the art, an information system for dissemination of results from clinical drug trials was built and put in operation. The system is governed by the Central Ethics Committee at the Council of Ministers. Divisions of this system have been located in the hospitals.

Monitoring and evaluating the implementation of the National Health Strategy goals can be perceived as a first step in the direction of system management and accountability. The coordination between analysis, monitoring and evaluation has been assigned to the Minister of Health. For this purpose, the Minister of Health installed national units and structures as well as groups of experts. The expectation is that this programme will provide an opportunity to assess the efficiency of health care services and to detect potential difficulties; provide assessment of policies and activities with regard to their further development; enable better communication of the achievements to both professionals and patients; and improve public understanding and awareness (Ministry of Health, 2008b).

2.7.2 Health technology assessment

There is no agency conducting systematic assessments of effectiveness and cost-effectiveness of novel health technologies in Bulgaria. However, the National Centre for Public Health and Analysis participates in the European network for Health Technology Assessment (EUnetHTA). Although the idea to set up a national HTA agency is being discussed, there are no concrete results yet.

2.8 Regulation

The Bulgarian health system is regulated through legislative, administrative and market mechanisms. The supreme legislative body is the National Assembly. The governmental regulatory functions in health care are laid down in the constitution and the numerous laws related to health care and local administration. Based on the laws passed by the National Assembly, the Council of Ministers adopts secondary legislation (decrees or ordinances), regulating various aspects of health care (for example, decrees on structural changes in the health system). The Minister of Health has the right to issue ordinances, instructions and orders and therefore regulates certain functions of the national health system (for example, the ordinances on the adoption of medical standards). Furthermore, municipal councils adopt decisions based on which the mayor issues orders concerning the operation of the health system at the municipal level.

Administrative regulation is carried out through various permissions and licences issued by the Ministry of Health, the Financial Supervision Commission and other government bodies and agencies.

By introducing contractual relations between purchasers and providers, market regulatory mechanisms have been put in place. The NHIF carries out the NFC, which regulates activities and defines criteria for their implementation, such as clinical pathways, methods of prescribing medicines and the development of regulatory standards for the scope of provided services both in outpatient and inpatient care. Professional associations of physicians and dentists have regulatory influence because they negotiate the NFC, which they also sign together with the NHIF. Based on contracts between insurers (NHIF and VHICs) and health care providers, the third-party payers regulate the type, scope and quality of provider activities.

2.8.1 Regulation and governance of third-party payers

The 1998 Health Insurance Act and subsequent amendments regulate governance of third-party payers in Bulgaria – the NHIF and VHICs. In the public sector, the NHIF is responsible for guaranteeing insured individuals' access to health care according to the obligations of the National Framework Contract and by following the guidelines and strategy set out by the Ministry of Health.

The NHIF is a public non-profit organization managed by the Supervisory Board and the Governor of the Fund. The Supervisory Board consists of nine members including one representative of the organizations for patient rights protection, two representatives of employees' organizations, two representatives of employers' organizations, and four representatives of the state. The National Assembly elects the NHIF Governor and approves and passes the annual budget submitted by the NHIF.

VHI is provided by VHICs, which are joint-stock companies registered under the Commercial Act and licensed under the terms and regulations of the 1998 Health Insurance Act. VHICs are licensed and supervised by the FSC, a commission under the National Assembly, which also supervises insurance companies and pension companies. The commission grants licences for every package of health services, monitors the monthly business indicators of the companies and licenses health insurance premiums and contracts. Any amendment to the licensed packages of health services needs to be coordinated with and approved by the FSC.

The FSC regulates the accrual mechanisms for a VHIC reserve fund, the amount of the guarantee capital, and the investment rules for the available assets through secondary regulations. The objective of the FSC's control activity is

to ensure the financial provision of the contractual relationship that VHICs have with insured individuals. In addition, the Ministry of Health regulates the VHICs' activities regarding the quality of their services.

2.8.2 Regulation and governance of providers

According to the 1998 Health Care Establishments Act, health care providers are autonomous organizations registered as trade companies or cooperations. Their governing bodies are regulated by the Trade Law or Cooperations Law and depend on their legal status. In addition, the Ministry of Health issues permissions or registers all health care providers through its decentralized bodies. In 2010, the Ministry of Health reregistered all hospitals, assigning them a certain level of competency. The level of competency is assessed based on the number and proficiency of specialists and available equipment, which determine the hospital's ability and capacity to comply with clinical guidelines. The level of competency is used to determine the range and scope of activities that a given hospital can provide and aims to guarantee a certain level of health services quality. Hospitals that do not have the potential to provide adequate medical services in terms of type and scope to patients with certain needs are not allowed to provide them. This is expected to reduce the number of patients transferred between hospitals.

In 2011, the Ministry of Health updated the National Health Map in order to restructure hospitals and regulate the number of health professionals and health care providers based on demographic indicators, health status, road infrastructure and communications. Through its agencies, the Ministry of Health regulates and controls different aspects of health care providers' activity. For example, the Medical Audit Agency controls providers regarding quality and patient safety.

Furthermore, the NHIF and its regional branches (RHIF), as well as the VHICs, regulate and monitor all health care providers based on their contractual relations. The professional associations of physicians and dentists elaborate the Rules for Good Medical Practice and thus regulate health care providers' activity as well. In addition, jointly with the NHIF, they help to prepare and sign the National Framework Contract, which regulates the relations in the field of SHI.

2.8.3 Registration and planning of human resources

The Ministry of Health and the professional associations are jointly responsible for the registration and planning of health care professionals. The Supreme Medical Council (SMC) defines health personnel needs by type and number and suggests the annual number of graduate and postgraduate students to be admitted in the medical schools. In addition, the SMC defines criteria to be used in the selection of health care providers that should serve as bases for graduate and postgraduate practical training. Furthermore, professional associations are responsible for postgraduate specializations as well as continuous life-long learning. They organize educational courses and give credit points to their members for each course or scientific event participation. These credits are used in accreditation assessments as well as for the assessment of the provider's level of competency. Upon graduation, health professionals are required by law to become members of their respective professional associations. The RHI of the Ministry of Health register health professionals. The district branches of the professional associations also maintain registers of their members.

On the whole, the human resource management and planning system does not work efficiently. This is evidenced by the continuously growing shortage of health professionals for certain categories and specialties and the serious geographical differences in the number of medical personnel and intensified external and internal emigration. This ineffective human resources planning has led to shortages in specific specialties such as anaesthesiology and intensive care, neonatology, nephrology and infectious diseases. Reasons include the lack of public resources for physician postgraduate specializations and a streamlined emigration process after Bulgaria's accession to the EU. In addition, an even greater shortage exists in nursing personnel, which has led to changing nurses to doctors ratios. The low supply of medical personnel was a major argument behind the Ministry of Health's proposal to close some hospitals outlined in the Concept for Hospital Restructuring (2009).

2.8.4 Regulation and governance of pharmaceuticals

Pharmaceutical policy is a part of the state health policy in Bulgaria. The Minister of Health is responsible for its development and implementation and coordinates national medicinal products issues; participates in international organizations and institutions that carry out activities related to medicinal products; issues and revokes permissions for retail sale of medicinal products in pharmacies; and implements all other activities required by law.

An important consultative body to the Ministry of Health is the Supreme Pharmaceutical Council (SPC), which includes five representatives appointed by the Minister of Health, five representatives from the Bulgarian Pharmaceutical Union, two NHIF representatives and one representative of each pharmaceutical department of the medical universities in Bulgaria. The Minister of Health acts as chair of the commission. The SPC discusses and gives advice on the priorities in the field of pharmacy, including ethical issues, pharmacy legislation, scientific priorities and public awareness campaigns regarding medicinal products use. In addition, the Supreme Board of Pharmacy advises the Minister of Health with regard to applications and authorizations of medicines.

In addition, several specialized commissions are established under the Minister of Health. The Commission on Clinical Trials Ethics gives opinion on deontological and ethical issues in the field of clinical trials of medicinal products. In 2011, two Commissions responsible for pricing of pharmaceuticals and the formation of the Positive Drug List were merged to create the Commission on Prices and Reimbursement of Medicinal Products, which sets the maximum retail selling prices of over-the-counter medicinal products and makes decisions on the inclusion, change or exclusion of medicinal products from the PDL (see section 5.6 *Pharmaceutical care*). The Commission's decisions can be appealed by the Transparency Commission. Lastly, the Minister of Health established the Pharmacopoeia Committee as an advisory body on the current pharmacopoeia. Its activities are financed from the budget of the Ministry of Health.

The Bulgarian Drug Agency (BDA) is the national competent authority for pharmaceuticals and assesses quality, safety and efficiency of medicines on the Bulgarian market. The agency activity is financed from the Ministry of Health budget and its own revenues (for example, administrative taxes collected from pharmaceutical companies). The BDA issues permits and supervises medicinal products with regard to manufacturing, use, authorization, wholesaling, retailing, importing, safety, clinical trials and advertising. The BDA also approves investment projects for building or reorganizing existing manufacturers according to good manufacturing practice. The Agency cooperates with the European Medicines Agency, the European Directorate for the Quality of Medicines and Health, and other international organizations.

At the district level, the execution of the national pharmaceutical policy and the control over the legislative acts observation are performed by the RHI.

2.8.5 Regulation of medical devices and aids

Medical devices and aids are regulated by the Act on the Integration of Persons with Disabilities as well as the 2007 Ordinance on Procedures for Implementing and Monitoring Activities on the Provision of Aids, Devices and Equipment for People with Disabilities and Medical Devices and its 2010 amendment. This amendment included a strengthening of the supervision of medical devices and aids through the Agency for Persons with Disabilities and the Social Assistance Agency assisted by the RHI. Furthermore, requirements for the equipment and activities of Hearing Aids Centres were clarified. A register of the distributed medical devices and aids as well as pertaining documents must be kept for at least three years after the lifetime of the device has expired.

The terms and conditions of benefits for purchasing and repairing medical aids, devices, equipment and medical products are regulated by the Rules for Integration of Persons with Disabilities and the regulations for implementing these rules. Eligibility for medical devices is assessed by the Medical Advisory Committees, the Regional Expert Medical Commissions and the National Expert Medical Commission. Eligibility is determined upon a disabled individual's request. The current benefit package does not cover the costs of medical aids and devices provided to patients during their hospital stay (NFC, 2011).

2.8.6 Regulation of capital investment

As administrator of the budget, the Minister of Health is responsible for the allocation of capital investment to the state health care providers and the health system as a whole (for example, for e-health). Municipalities as well as private proprietors are free to invest in their own health care establishments. Furthermore, the state and the municipalities can finance health care providers through subsidies approved under the State Budget Act and out of municipal budgets. Subsidies are provided for the acquisition of long-term tangible assets, renovations in connection with the restructuring of the health providers and information technologies and systems. The National Health Map is foreseen as a regulatory instrument for capital investments in the public and private sector.

According to national statistics, capital costs accounted for less than 1% of the health budget for 2011. Investment from municipalities is mostly symbolic (also see section 4.1.1 *Capital stock and investments*). The Ministry of Health and the medical institutions are trying to compensate the low amount of capital investments with participation in investment projects, mainly through the use of EU funds. The share of foreign direct investment in the health care system

is only 0.04% of total foreign direct investment but, according to the National Statistical Institute, there was no foreign investment in the health system for 2009 and 2010.

At the end of 2010, the Ministry of Health obtained approval from the Operational Programme “Regional Development” to invest 74 million euros in new technology for cancer diagnostics and treatment as well as capital investments. By 2012, the funds will be spent on development and improvement of the access to oncology care, and for the restructuring of institutions for children under three years old.

2.9 Patient empowerment

2.9.1 Patient information

The Ministry of Health (through its RHI), municipal health care offices, health care providers, and patients’ organizations are jointly responsible for providing information on health and diseases. The Ministry of Health aims to develop a database of health knowledge and to promote a healthy lifestyle with a focus on reduction of behavioural risk factors (smoking, unhealthy nutrition, low physical activity, alcohol and drug abuse); biological factors (high blood pressure, increased serum cholesterol, increased body weight); stress and socially significant diseases.³ Information about health providers’ accreditation assessment is available on the Ministry of Health web page.

The NHIF is obliged by law, in accordance with the NFC, to provide information to the insured about contracted health care providers and pharmacies, patient rights, the basic benefit package and the overall organization of health services provision. All information is available on the NHIF web page. Citizens can receive up-to-date information and lodge complaints at RHIF and municipal offices.

However, citizens are not sufficiently familiar with their rights and obligations (see section 7.6 *Transparency and accountability*). In the National Health Strategy, the Ministry of Health declared that one of the weaknesses of the health system in Bulgaria is the population’s insufficient awareness of the rights and obligations of all participants in the health insurance system, that is, patients, health care providers and third-party payers. The information

³ The term is used here to describe those conditions that play the most important role in shaping a population’s morbidity and mortality profile (cf. section 1.4 *Health status*).

policy of the Ministry of Health and NHIF has been assessed as insufficient. The population is not well informed about the health system and the goals and results of the reform that introduced the insurance system. For example, insufficient information on the scope and quality of health services offered by the system as well as on patient rights and obligations have resulted in dissatisfaction among the people.

2.9.2 Patient choice

Provider choice is regulated by the Health Insurance Act and the Health Act. Bulgarian citizens are free to choose a GP, specialist, diagnostic laboratory and hospital without territorial restrictions. There are some administrative restrictions in the SHI system. For example, in order to receive specialized outpatient or inpatient care paid by the NHIF, patients need a referral from their GP or a specialist contracted by the NHIF. Nevertheless, patients still have the right to choose the provider. Every patient is also free to visit a physician, laboratory or hospital without referral, but the patient has to pay for the services out of pocket or through VHI. There is an exception to this rule: mothers are free to choose a paediatrician for their children and a gynaecologist for themselves without GP referral. Once hospitalized, patients have the right to choose a physician or a team after additional OOP payment, possibly covered by VHI.

Patients can also choose to refuse treatment or leave the hospital prematurely, but only after signing specific documents declaring that they are informed about the risks. However, in case they leave a hospital prematurely, patients are obliged to pay for the days of admissions since the NHIF does not reimburse for “incomplete” clinical pathways. Although patients have a right to choose a health care provider from the entire territory of the country, they are limited by their financial resources, an unreliable transportation infrastructure, the inconvenience of transporting sick people and relatives, and large disparities between rural and urban areas in providers’ density. Thus, in practice, the right of free choice of a provider is distorted and shows large inequalities.

2.9.3 Patient rights

An important milestone in the establishment of the health insurance system was the regulation of patient rights. Bulgarian legislation guarantees similar patient rights as adopted in the other EU Member States. Patient rights in Bulgaria are outlined in the constitution, the Health Act, the Health Insurance Act, and many other acts and regulations. Worldwide and regional regulations in the field

of human and patient rights ratified by Bulgaria, such as the United Nations universal declaration on human rights, the International Covenant on Economic, Social and Cultural Rights and the European Social Charter, are also respected.

Patient rights can be categorized into two major groups. The first embraces rights that every individual possesses as a human being, and the second includes rights of individuals covered by health insurance. The latter are regulated by the Health Insurance Act.

According to the constitution, every citizen has the right to health insurance that guarantees accessible medical care and the right to receive free health care services in cases stipulated by law. Additionally, no one can be subjected to forced medical treatment or sanitary measures except in cases provided by law.

According to the Health Act, every individual has the right to (1) health care, regardless of race, gender, age, ethnicity, religion, education, cultural beliefs, political belonging, sexual orientation and social status; (2) access high-quality health care services; (3) have more than one physician's opinion regarding diagnosis and treatment; (4) patient privacy concerning health status; and (5) clarifications from the health professionals on patient rights, responsibilities, health status and possible treatment options. The law also defines the rights of patients admitted to hospital, including the right (1) to informed consent, (2) to discontinue treatment and (3) to complain about patient rights' violations. The rights of people with mental disorders are the subject of special attention. The Health Act regulates the legal procedures for compulsory hospitalization and treatment of such patients along with the requirements for appeal against any court decisions. The law also determines the rights and the protection of patients involved in clinical trials, which are also regulated by the Law on Medicinal Products in Human Medicine. The Council of Ministers' Central Ethics Commission is another body responsible for patient safety and rights during clinical trials.

According to the Health Insurance Act, each individual covered by SHI has the right to (1) receive health services included in the NHIF basic benefit package; (2) choose health care providers; (3) receive emergency care; (4) receive information from the RHIF about health care providers who have a contract with the fund; (5) participate in the management of the NHIF; (6) make complaints to the director of the RHIF about the law or a contract violation; and (7) receive reimbursement, partially or in full, of the expenses for health care incurred abroad. In return, every individual has certain obligations: to pay health insurance contributions, to follow the physicians' prescriptions, and to pay the required cost-sharing fees.

2.9.4 Complaints procedures (mediation, claims)

As mentioned above, all patients have the right to complain about the quality and organization of medical services as well cases of corruption. Patients may lodge a complaint with different institutions and organizations at national, district and local level, such as the Ministry of Health's Medical Audit Agency, the RHI, the NHIF and RHIF, and with the professional associations' district branches. Accreditation regulation requires health care providers to establish procedures for collecting and responding to patient complaints. Furthermore, citizens frequently use patient organizations and the media as mediators in cases of patient rights' violation.

Signs of corruption can be reported on the web sites of each official institution. In 2006, a special commission for prevention and counteraction of corruption was established by the Council of Ministers. Citizens can report corruption on the Commission's web page and find information about the results from performed investigations. Furthermore, in 2009, the Ministry of Health established a national electronic register of received signs of corruption in the Ministry of Health's organization, that is, the RHI and health care providers, available on the web page of the ministry.

2.9.5 Public participation

Public participation in health system management is regulated by the Health Act and the Health Insurance Act. Yet, in practice, the opportunities for the public to influence health policy are still highly restricted. With a 2009 amendment to the Health Act, a civil council on patient rights was established at the Ministry of Health, albeit with advisory functions only. The Public Council of the Fund for Treatment of Children established by the Council of Ministers to provide financial support to children with rare diseases or in need of treatment abroad plays an active role in the fund's activity.

Insured individuals participate in NHIF management, but the number of representatives in the NHIF governing body was restricted in 2002 and 2009 and, currently, they are represented by only one person. At the local level, the public is represented in municipal committees and health councils.

Although patient organizations have been established during the reform years, the dialogue between the civil organizations and the Ministry of Health only showed progress recently. The media play an especially active and stimulating role in this process. In practice, however, this dialogue frequently refers to post factum discussion of concrete legislative or organizational changes and not to real participation in health policy development.

Many NGOs, institutions and associations, such as the Open Society Institute (OSI) Sofia, the Bulgarian Industrial Association, medical universities and several others, conduct research on patient satisfaction, public awareness and other health-related topics, providing strong evidence to support health policy development. However, there are no clear signs that decision-makers tend to use them in health priorities setting. Furthermore, a report on health policy in Bulgaria published by the OSI Sofia underlines specific managerial decisions made in contrast to the existing evidence in areas such as hospital financing, the National Health Map, postgraduate qualification, the emergency care model, mental health policy, and health statistics (Hinkov et al., 2011).

2.9.6 Patients and cross-border health care

Because Bulgaria is a Member State of the EU, individuals covered by SHI are entitled to receive services that are covered by statutory insurance in the other EU Member States as well as Iceland, Liechtenstein, Norway and Switzerland. Based on European Commission (EC) Regulation 883/2004, Bulgarian insured people can use the European Health Insurance Card (EHIC) to receive health services abroad, paid by the Bulgarian system, when on a temporary stay (for example, as tourists). Furthermore, Bulgarian insured people may ask the NHIF for pre-authorization when planning to receive treatment abroad. This care cannot be denied if it is covered by the Bulgarian basic benefit package but cannot be provided in the Bulgarian system within a medically justifiable time limit.

On producing an EHIC, insured Bulgarians 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 (cost-sharing). Health care is provided as required so that the insured person does not have to return to his or her country of insurance sooner than intended. Reimbursement does not cover travelling costs. Additional reimbursement is fully in the competence of the NHIF.

A Committee for Treatment Abroad is established at the Ministry of Health. Its purpose is to decide payment for services not covered by the NHIF basic benefit package and when certain services cannot be provided in Bulgaria and require treatment abroad. The Ministry of Health pays for treatments approved by the Committee. The Committee reviews and decides each individual case separately and advises patients who pay out of pocket or use donations.

In 2004, the Council of Ministers established a “Fund for the Treatment of Children”, subordinate to the Ministry of Health. Part of the fund’s responsibilities is to provide financial support to children up to 18 years of age who need treatment abroad. An electronic register of children who applied for financial support with detailed but anonymous information about the course of treatment and approved funds is available on the web page of the fund (<http://www.cfld-bg.com/>).

Medical examinations, tests and treatment of foreign citizens are regulated with the 2001 Ordinance for treating foreigners in Bulgaria. According to the ordinance, foreign citizens can receive health services they need from all health care providers.

3. Financing

Bulgaria has a mixed public–private health care financing system. Health care is financed from compulsory SHI contributions, taxes, OOP payments, VHI premiums, corporate payments, donations, and external funding. The total health expenditure as a percentage of GDP increased from 5.3% in 1995 to 7.3% in 2008. The structure of total health expenditure has been changing over time, especially after the introduction of the health insurance system. Private expenditure on health as a percentage of total health expenditure increased at the expense of public financing. In 2008, total health expenditure consisted of 36.5% OOP payments, 34.8% social health insurance, 13.6% Ministry of Health expenditure, 9.4% municipality expenditure and 0.3% VHI. Although OOP payments account for the largest source of revenue, public sources prevail over private sources. In 2008, public expenditure on health as a share of total health expenditure was 57.8% while private expenditure accounted for 42.2%.

The main purchaser of health services is a single payer, the NHIF, established in 1998. It is the only institution responsible for social health insurance in Bulgaria. The SHI contribution is 8% from monthly income, paid by the insured individuals, their employers or the state. Relations between the NHIF and health care providers are based on the contract model. The NHIF and the professional associations of physicians and dentists sign the NFC, which is intended to regulate the format and operational procedures of the compulsory health insurance system. Based on the NFC, providers sign individual contracts with the district branches of the NHIF (Regional Health Insurance Funds, RHIF). Providers are mainly paid prospectively for the services they will provide to the population on a fee-for-service and per capita basis. Public health services and services provided by the national centres for emergency care, state psychiatric hospitals, and health and social care children’s homes are funded by the Ministry of Health.

Private expenditure on health in Bulgaria involves OOP payments, VHI payments, payments by non-profit institutions and commercial organizations. The share of formal OOP payments (user fees and direct payments) accounted for more than 86% of all private health expenditures and 36.5% of total health expenditure in 2008. User fees exist for visits to physicians, dentists, laboratories and hospitals and apply to all patients with few exceptions (for example, children, pregnant women, chronically sick patients, the unemployed, those on lower incomes). According to the most recent research on informal payments in the health sector in Bulgaria, they present a substantial part of total OOP payments (47.1% in 2006) (Open Society Institute Sofia, 2008).

VHI is provided by for-profit joint-stock companies (VHICs) intended for voluntary health insurance only. Beyond the package covered by the NHIF all citizens are free to purchase different insurance packages. VHICs can also cover the cost of services included in the basic benefit package guaranteed by the NHIF budget. Organizational relations between purchasers and providers in the field of VHI are based on integrated and reimbursement models. Less than 3% of the population purchased some form of VHI in 2010.

3.1 Health expenditure

Bulgaria has a mixed public–private health care financing system. Health care is financed from compulsory SHI contributions, taxes, OOP payments, VHI premiums, corporate payments, donations and external funding. Bulgaria's total health expenditure as a percentage of GDP is comparable with the average for the European region but still below the EU27 average (Fig. 3.1). This indicator increased especially in the period 1996–2003 when it surpassed the EU12 average, after which it slightly decreased and has remained relatively stable since 2006 (Fig. 3.2). As can be seen in Table 3.1, the mean annual real growth rate in total health expenditure largely follows the mean annual GDP growth rate (Table 3.1).

The health expenditure increase in absolute values could be linked with the legalization of private practice in 1990 and the introduction of the health insurance system in 1998. While government health spending as % of GDP has remained relatively constant in the period 1995–2008, and government health spending as % of total government spending has decreased on balance during that period, private expenditure on health as % of total expenditure on health has grown (Table 3.1).

Table 3.1

Trends in health expenditure in Bulgaria, selected years

Expenditure	1995	2000	2005	2008
Total health expenditure in \$ PPP per capita	285	372	713	910
Total health expenditure as % of GDP	5.3	6.1	7.7	7.3
Mean annual real growth rate in total health expenditure*	1.0	2.1	1.5	1.4
Mean annual real growth rate in GDP*	1.0	2.0	1.5	1.4
Public expenditure on health as % of total expenditure on health	73.3	59.6	60.7	57.8
Private expenditure on health as % of total expenditure on health	26.7	40.4	39.3	42.2
Government health spending as % of total government spending	19.8	8.5	12.0	11.2
Government health spending as % of GDP	3.9	3.7	4.7	4.2
Out-of-pocket payments as % of total expenditure on health	26.7	40.4	38.1	36.5
Out-of-pocket payments as % of private expenditure on health	100	100	96.9	86.4
Voluntary health insurance as % of total expenditure on health	0	0	0.3	0.4
Voluntary health insurance as % of private expenditure on health	0	0	0.7	0.8

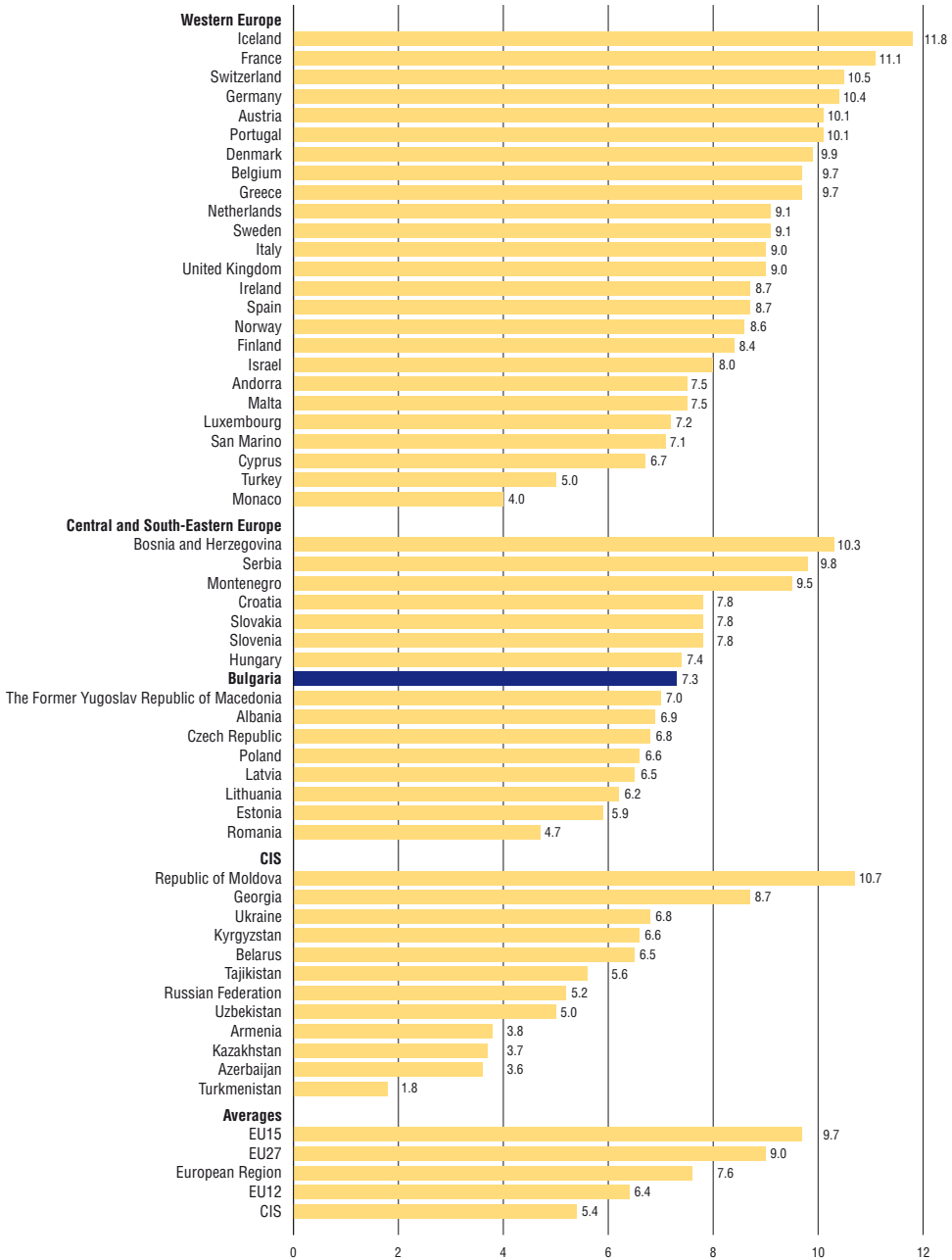
Source: WHO National Health Accounts, 2011.

Note: * Calculated as the mean of the annual growth rates in national currency units at 1995 basis.

Per capita health expenditure (in \$PPP) grew much more rapidly, from \$285 in 1995 to \$910 in 2008, which is mainly due to strong GDP growth (Tables 1.2 and 3.1), thus demonstrating an average annual growth rate of 1.1. However, it remains far below the EU average. The European average per-capita health spending was more than three times higher in 2000 (1220 US\$ PPP) and more than twice as high in 2008 (1968 US\$ PPP) compared to that of Bulgaria for the same years (WHO Global Health Observatory, 2011). From all EU Member States only Romania, the other country that joined the EU in 2007, has a lower per capita health spending than Bulgaria (Fig. 3.3).

Fig. 3.1

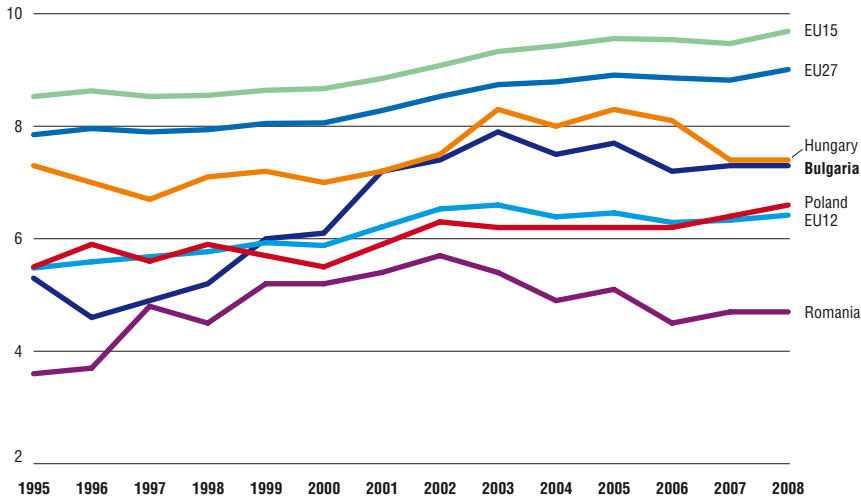
Total health expenditure as a share (%) of GDP in the WHO European Region, WHO estimates, 2008



Source: WHO Regional Office for Europe, 2011.

Fig. 3.2

Trends in health expenditure as a share (%) of GDP in Bulgaria and selected countries and averages, WHO estimates, 1995–2008



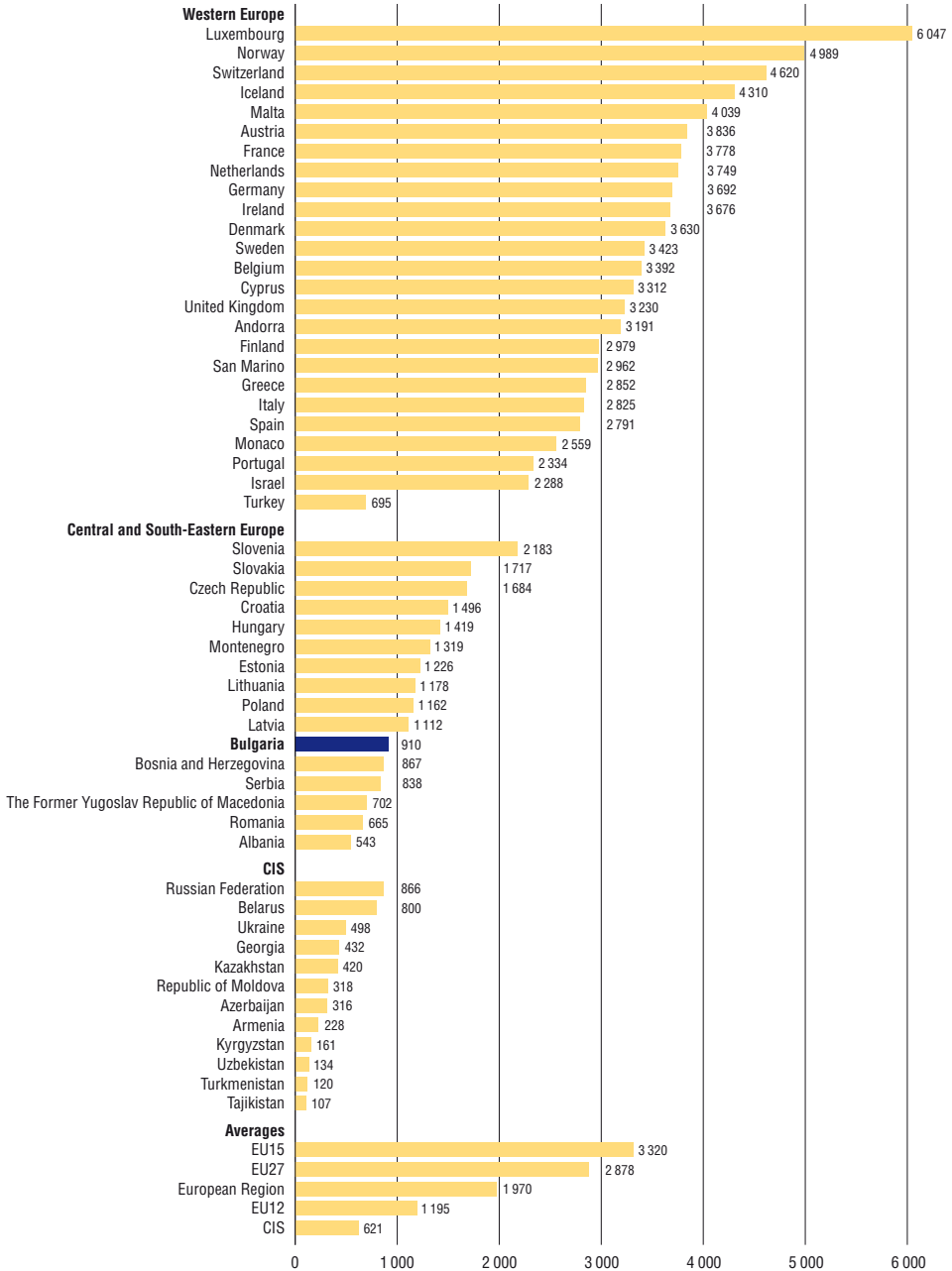
Source: WHO Regional Office for Europe, 2011.

Public expenditure on health as a share of total health expenditure has gradually decreased during the entire transition period from officially 100% in 1989–1990 to 57.8% in 2008 (WHO Regional Office for Europe, 2011). The trend is stable, with some variations over the years, reflecting the relative increase of private expenditure on health and showing the continuously growing shortage of public resources for health care. From an international perspective, Bulgaria's public share of health expenditure (57.8%) was far below the EU15 (77.5%), EU12 (73.0%) and EU27 averages (76.6%), but comparable to the average in the CIS countries (58.8%) (see Fig. 3.4).

Public expenditure on health in Bulgaria consists of health spending by the government (Ministry of Health, ministries operating parallel health systems, and the central budget), municipalities and the National Health Insurance Fund. The share of each public source from the total public expenditure on health has been changing during the transition period. Before the introduction of the insurance system in 2000, the main sources of financing were the municipalities with 42% of the overall public expenditure on health (Georgieva et al., 2007).

Fig. 3.3

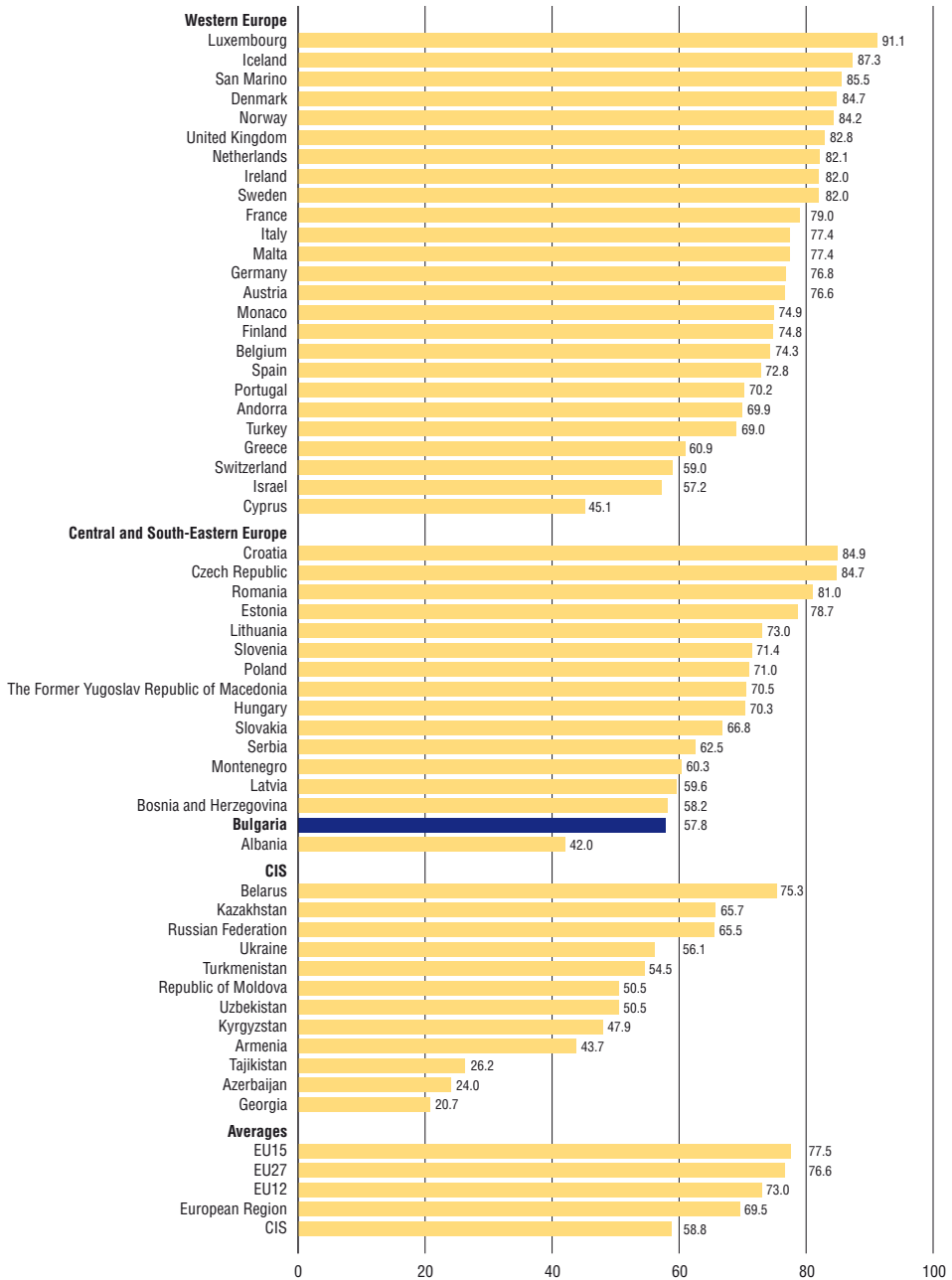
Total health expenditure in US\$ PPP per capita in the WHO European Region, WHO Estimates, 2008



Source: WHO Regional Office for Europe, 2011.

Fig. 3.4

Public sector health expenditure as a share (%) of total health expenditure in the WHO European Region, WHO estimates, 2008



Source: WHO Regional Office for Europe, 2011.

In 2008, health expenditure on curative and rehabilitation care services accounted for the largest share (53.6%) in total health expenditure, followed by medical goods dispensed to outpatients (36.8). According to National Statistical Institute data from the same year, 66.9% of public expenditure on health was on curative and rehabilitation services. Although public health services, prevention and health promotion are acknowledged as a priority by all health authorities, their share in current health expenditure is only 4.3% (see Table 3.2). Ministry of Health expenditure on prevention and public health services reached only 1.4% of total health expenditure in 2008 (National Statistical Institute, 2011a).

Table 3.2
Health expenditure by service category in 2008

Function	% of current health expenditure
Services of curative and rehabilitation care	53.6
Services of long-term nursing care	0.1
Ancillary services to health care	3.6
Medical goods dispensed to outpatients	36.8
Prevention and public health services	4.3
Health administration and health insurance	1.0
Not specified by kind	0.6

Source: Eurostat, 2011.

Hospitals absorbed 41.0% of total expenditure on health, followed by retailers (mainly pharmacies) (36.9%) and ambulatory care providers (16.7%) in 2008 (Table 3.3). The majority of pharmaceutical expenditure is paid OOP. Public expenditure for medical goods accounted for 9.2% of total health expenditure in 2008 (The State Budget Act 2008, The Law of the Budget of NHIF 2008).

Table 3.3
Health expenditure by provider in 2008

Provider	% of current health expenditure
Hospitals	41.0
Nursing and residential care facilities	0.8
Ambulatory health care	16.7
Retail sale and medical goods	36.9
Administration of public health programmes	1.8
General health administration and insurance	1.0
Other	1.7

Source: Eurostat, 2011.

3.2 Sources of revenue and financial flows

The main financial flows within the health system are shown in Fig. 3.5. The main source of revenue for the health system is OOP payments in the form of direct payments, cost-sharing and VHI premiums. Their share in total health expenditure increased from 26.7% in 1995 to 36.5% in 2008 (Table 3.4) and they accounted for more than 96% of all private health expenditures in 2007 and more than 86% in 2008 (National Statistical Institute, 2011). VHI provides only a small share and can be in the form of a community-rated premium (flat premium) or a risk-rated premium (differentiated premium). Another small part of private expenditure comes from corporate payments, donations and external funds (not included in Fig. 3.6).

Before the introduction of the SHI system, the only OOP payments in the health system were in the form of direct payments for services delivered by private health care providers. Since 2000, these direct payments were extended with cost-sharing and payments for services not covered by the NHIF. The declining state role in health system financing combined with the immaturity of the new SHI system led to a substantial increase in OOP payments, which became the dominant revenue source in 2000, amounting to 40.4% of total expenditure on health (see Table 3.4). The private share is likely to be an understatement, as the presented data on OOP payments do not include informal payments. Yet it could be assumed that they form a substantial part of OOP payments (also see section 3.4 *Out-of-pocket Payments*). The VHI market continues to play a marginal role as a source of revenue although there has been some increase in absolute values in the last few years.

Table 3.4

Sources of revenue as a percentage of total expenditure on health 1990, 1995, 2000, 2005 and last three available years

Source of revenue	1990 ^a	1995	2000	2005	2006	2007	2008
Public expenditure on health	100	73.3	59.6	60.7	56.8	57.2	57.8
Ministry of Health	100	–	17.8	17.4	11.4	12.4	13.6
Municipalities	–	–	34.2	11.0	8.4	8.8	9.4
NHIF*	–	–	7.6	32.3	37.0	36.0	34.8
Private expenditure on health	–	26.7	40.4	39.3	43.2	42.8	42.2
Out-of-pocket expenditure	–	26.7	40.4	38.1	41.9	37.0	36.5
Private health insurance (VHI)	–	–	–	0.3	0.4	0.4	0.4
Non-profit institutions serving households (e.g. NGOs)	–	–	–	0.7	0.5	0.4	0.4
Enterprises	–	–	–	0.3	0.4	0.4	–

Source: WHO National Health Accounts, 2011.

Notes: * includes transfers from general tax revenue; ^aHealth Systems in Transition: Bulgaria 2003.

The second largest source of revenue (34.8% of total health expenditure in 2008) is SHI contributions. These contributions are shared between employee and employer or paid individually by the self-employed or unemployed (see Table 3.5). For some insured, such as individuals receiving compensation for temporary capacity loss due to illness, pregnancy, childbirth or maternity leave, the contributions are paid only by the employer. Single entrepreneurs, individuals who have established limited liability companies, partners in trade companies, freelance practitioners and unemployed individuals not entitled to social support are personally responsible for paying the full contribution. The contribution is income related. In some cases, insured individuals declare which income their contributions should be based on. This income must be between the minimum assessment base (called the “minimal insurance income”) and the maximum assessment base (“maximal insurance income”). For 2011, the minimal insurance income is BGN 420 (□215) and the maximal insurance income is BGN 2000 (□1026). For some categories of insured individuals (for example, children, pensioners, low-income groups) contributions are 8% of the minimal insurance income paid by the state (see Table 3.5), that is, from

Table 3.5

Categories of insured individuals and their contributions

Category of insured individual	Contribution	Assessment base
Employed individuals	8%, shared between employer and employee in 60:40 ratio	Size of the remuneration up to BGN 2 000 (□1 026, the maximal insurance income for 2011)
Self-employed individuals, registered farmers and tobacco growers	8% paid by the insured person	Declared income between the minimal (BGN 420, □215 for 2011) and maximal insurance income (BGN 2 000, □1 026 for 2011)
Pensioners	8% paid through the state budget	Size of the pension
Children up to 18 years of age and youths up to 26 years of age if they are full-time students	8% paid through the state budget	Minimal insurance income
Unemployed individual entitled to compensation for unemployment	8% paid through the state budget	Size of the compensation between the minimal and maximal insurance income
Individuals with disabilities entitled to social support	8% paid through the state budget	Minimal insurance income
Veterans; spouses of soldiers participating in international operations and missions; injured while performing their duties as employees of the Ministry of Interior and civil servants; parents, adoptive parents or spouses who take care of disabled people in constant need of help; refugees, detainees and prisoners	8% paid through the state budget	Minimal insurance income
Unemployed individuals who are not entitled to compensation for unemployment or social support	8% paid by the insured person	Chosen income no less than half of the minimal insurance income

general tax revenue. These transfers formed 37.0% of NHIF revenues in 2010 (32.7% in 2008 and 30.7% in 2009) (The Law on the NHIF Budget for respective years). Initially, the compulsory health insurance contribution was 6%, shared between employers and employees at a ratio of 80:20. But this ratio has gradually been changed to 60:40. In 2009, the contribution rate increased to 8% and the government intends to raise it to 10%, even though the opposition parties strongly object to such a move.

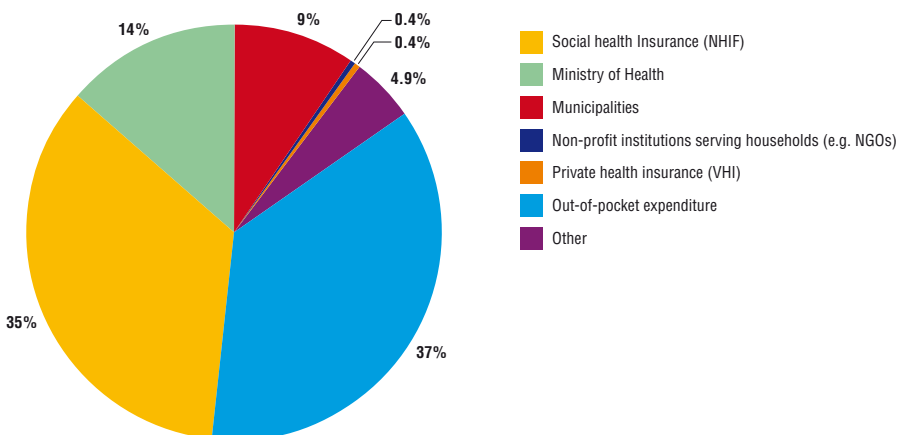
The SHI system was implemented after passing the Health Insurance Act in mid-1998, which marked the beginning of a one-year transition period for the setting up of the National Health Insurance Fund (NHIF), the main institution for compulsory SHI. The collection of health insurance contributions started on 1 July 1999, one year after the establishment of the NHIF. Initially, the NHIF only covered outpatient services. From July 2001, the basic benefit package was extended to include a limited number of inpatient services. As of 2005, all inpatient care, with some exceptions, for example inpatient mental health services, some dispensary services and HIV inpatient treatment, is covered by the NHIF. Medical care provided by health care establishments, both public and private, is paid by the NHIF according to contracted prices. Thus, the method of financing was gradually changed from financing of the “input” and of structures towards financing of activities and of the “output” of the health care providers (Dimova, Popov & Rohova, 2007).

The third main source of revenue, general taxation, is non-earmarked revenue, allocated to the Ministry of Health budget from the central budget and from revenue received by the Regional Health Inspection (RHI), the national centres and the Bulgarian Drug Authority as fee-for-service or fines and penalty charges (for more details see section 3.3.2 *Collection*). It should be noted, as mentioned above, that the government pays contributions on behalf of certain groups of individuals also from general tax revenue, but these funding streams are not visible in national health accounts data. Finally, municipalities can use local tax revenues to finance health services, while transfers from the central budget to municipalities earmarked for health make up about one quarter of the overall amount of tax revenue allocated to health care.

The relative size of each source as a percentage of total health expenditure has differed during the transition period. Revenue from general taxation has been decreasing gradually while the compulsory health insurance revenue and OOP payments have been increasing (as already shown in Table 3.4). Before the introduction of the health insurance system and the establishment of the NHIF in 1998, the main source of revenue for the health system was general taxes collected by the government and municipalities. They financed all activities of the public health system for the entire population. The OOP payments for the services of private health care providers represented a relatively small share of overall revenue. After the introduction of the insurance system in 2000, the Central Government's and municipalities' expenditure as a percentage of total public expenditure on health decreased substantially. The other sharp decrease in municipal spending, registered in 2004, was a result of the introduction of a new financing scheme for municipal and state health institutions. In that year, payments for health services provided by the municipal and state hospitals were fully shifted to the NHIF and the government and municipalities started to cover only hospital expenditure for capital investments such as medical equipment, repairs, and other investments. Thus, the NHIF became the main public source of health care financing. The share of social health insurance in total public expenditure on health increased from 13% in 2000 (Georgieva et al., 2007) to 71.3% in 2007 (National Statistical Institute, 2011).

Fig. 3.6

Percentage of total expenditure on health according to source of revenue, 2008



Source: WHO, National Health Accounts, 2011

3.3 Overview of the statutory financing system

The Bulgarian health insurance system is legally based on two pillars: social and voluntary health insurance. Since the late 2000s, the introduction of a third pillar of compulsory complementary health insurance, similar to the pension system, has been debated. The third pillar would introduce a compulsory private health insurance scheme with the goal of generating additional financial resources for the health system. However, there are serious concerns about such a scheme's ability to meet this goal. Under this system, insurance premiums are not pooled but collected in individual accounts, and so the principle of solidarity is not in place. Furthermore, time is needed to accumulate and grow (for example, through interest) substantial resources. Whereas in the pension system the point of using the resources is known and distant (which allows resources to accumulate in the individual accounts), in health care this moment is unknown. Currently there is no further development of this idea. As SHI is compulsory for all citizens and VHI is complementary, the following section refers to the SHI system only.

3.3.1 Coverage

Breadth: who is covered?

According to the Health Insurance Act (1998), all Bulgarian citizens are compulsorily insured. In addition, the following groups are covered: Bulgarian citizens who are also citizens of another country but permanently live in Bulgaria; foreign citizens or individuals without citizenship but with a long-term residence permit; and individuals with a refugee or humanitarian status or those granted the right of asylum.

There is, however, a group of individuals who are de facto not insured. In most cases these are individuals who are in need of social assistance but are not entitled to it. They are usually unemployed individuals who have difficulty in paying their contribution. As a result, they are not covered by the SHI system and also cannot afford private medical care. In 2003, it became clear that more than two million individuals were not paying their contributions, upon which the NHIF withdrew their coverage. Left without SHI benefits, these individuals had an incentive to resume paying contributions in order to regain their health insurance rights. Since 2010, citizens lose their SHI coverage if they have failed to pay more than 3 monthly contributions in the previous 36 months instead of the previous 12 months, as it is used to be prior to 2010. In early 2011, the number of uninsured individuals amounted to more than 1.7 million (23% of the population).

Scope: what is covered?

The SHI system guarantees a basic package of health services for the insured population. The NFC defines the basic benefit package. According to the NFC 2010, the basic benefit package includes:

- primary outpatient medical and dental care;
- specialized outpatient medical and dental care;
- laboratory services;
- hospital diagnostics and treatment; and
- highly specialized medical activities.

The specific goods and services that are covered by SHI are listed in a 2004 regulation by the Ministry of Health, which was last amended in December 2011. This regulation encompasses various subsections, including the primary outpatient benefit package, which includes all activities that have to be provided by GPs, and the hospital benefit package, which lists 298 so-called clinical pathways. The benefit package is broad in terms of medical services categories included, but it does not cover all services in these categories. This may leave insured individuals with the impression that they will receive all the services they need, although, in practice, many are uncovered. It is difficult for insured individuals to know which services are explicitly excluded from the basic package and have to be paid out of pocket. This causes confusion among patients in need of care.

The basic benefit package does not cover long-term nursing care; long-term care for elderly people; spa treatment; occupational health care and prevention; alternative therapy; elective cosmetic surgery; elective termination of pregnancy; and contraception. Emergency care, mental health care, renal dialysis, in vitro fertilization and transplantations are covered by the state budget or specially established funds. Planned treatment abroad can be paid by the NHIF if the patient has a prior authorization given by the fund (also see section 2.9.6 *Patients and cross-border health care*).

The National Framework Contract defines a positive list of pharmaceuticals covered by SHI and those diseases for which pharmaceutical treatment is reimbursable. The list of pharmaceuticals is based on EU regulations and the WHO essential drug list but in practice it mostly depends on the availability of resources in the NHIF budget. The list mainly includes diseases with high social impact and those defined as a national health priority. The brand names are not

specified in the positive list. This allows for reimbursement both of the patented and the generic pharmaceutical. Only pharmaceuticals prescribed by a GP (or specialist) and purchased in a RHIF-contracted pharmacy are reimbursed.

Currently, insufficient collected and pooled financial resources make it difficult for the NHIF to cover all entitlements in the basic benefit package. One of the reasons is that these entitlements are based on a regulation of the Ministry of Health instead of the financial resources and capacity of the NHIF.

Depth: how much of benefit cost is covered

The law defines user fees for each outpatient visit, laboratory test and hospital stay covered by SHI. User fees apply to all patients with a few notable exceptions: children, pregnant women, individuals with income below a certain threshold, chronically sick patients and some other groups. Until 2011, pensioners paid reduced fees. The cost of dental services and certain pharmaceuticals included in the basic benefit package is only partially covered by the NHIF. The exact prices and co-payment levels are defined by the NFC. A more detailed description is provided in section 3.4.1 *Cost sharing*.

3.3.2 Collection

Contributions pooled by the NHIF

SHI contributions are collected by the National Revenue Agency through its 28 divisions on the district level and transferred to the NHIF on a monthly basis. SHI contributions are earmarked for health and can be used only for provision of health services to the insured individuals. The contribution rate is 8% (defined by law) of an individual's taxable income or the minimum insurance income for the country (see section 3.2 *Sources of revenue and financial flows*). The state budget covers health insurance for around 2 million individuals, including pensioners; parents or spouses who take care of a disabled person with lost labour capacity of over 90% and who needs permanent help; individuals and members of families entitled to social welfare and support for underage orphans; war veterans and disabled military service personnel; individuals who have become disabled in defending their country or fulfilling their official duty; individuals applying for refugee status or right of asylum; prison inmates; individuals without income who are accommodated in homes for children and youths or social care establishments; university students up to the age of 26 years, and children younger than 18 years of age. Contributions for individuals receiving unemployment benefits are paid from the Unemployment Fund.

SHI revenue has been continuously increasing since the establishment of the NHIF. NHIF revenue for 2010 was more than four times higher compared to the first years after the introduction of the SHI system (NHIF Budget acts several years). This increase is due to a growing GDP and a health insurance contribution increase by two percentage points in 2009.

General government budget

General taxation is non-earmarked revenue, flowing to the Ministry of Health budget from the central budget (see also section 3.2 *Sources of revenue and financial flows*). The central budget tax revenue includes revenue from income tax, corporate tax and value-added tax (VAT) collected by the National Revenue Agency. The Agency was set up in accordance with the proposal of the International Monetary Fund and as part of a wider project to improve revenue collection, including income tax, VAT, patent taxes and corporate taxes, as well as health insurance and pension contributions. On 1 January 2006, the National Revenue Agency and its 28 divisions at the district level started their operations on tax administration.

In 2010, 88.4% of all state revenue came from taxes. The consumption taxes have the largest share (74.3%) of the overall tax revenue, followed by labour taxes (14.9%) and income taxes (10.8%) (The State Budget Act 2010). The amount of the tax revenue allocated for health is not fixed and is estimated annually as part of the State Budget Act. In 2010, about 5.3% of the state tax revenue was allocated to the Ministry of Health and municipalities. The transfer from the state budget to the municipalities earmarked for health activities is 24.2% of the overall amount of the tax revenue allocated for health (The State Budget Act 2010). In addition to this transfer, the municipalities use local tax revenue to finance health activities. Municipalities themselves estimate the share of the municipal budget allocated to health care annually, although this share is usually unsubstantial. Municipal budget tax revenue accumulates from some local taxes such as waste charges, building tax and asset purchase tax and is collected by municipalities. State and municipal tax rates usually respond to short-term fluctuations in the economy and, as a result, tax rates and revenues usually change annually.

3.3.3 Pooling of funds

The National Revenue Agency is in charge of pooling funds for both the central budget (general tax revenue) and the NHIF (contributions). It allocates tax revenue directly to the government agencies' accounts (ministries, etc.) within 72 hours of collection. The amount of funds distributed to each agency or sector depends on the approved budgets.

Compulsory health insurance contributions are collected by the 28 territorial directorates of the National Revenue Agency, which transfer them daily to the National Revenue Agency's pooling account. Funds received by the agency are then allocated daily to the accumulation account of the NHIF which, in turn, distributes the funds to its 28 RHIF. The NHIF budget allocation is based on population numbers and age in each district, historical allocations and estimates of future district health-related needs. The process is standardized across the country.

In order to contain cost and control expenditure, RHIF's budgets are prospective and disaggregated by line items with monthly and annual expenditure limits that are approved by the NHIF. Thus, RHIF budgets are spent in accordance with these prospectively approved line items and, in practice, RHIF manage only their administrative expenditures. However, reallocation of funds according to line items, or requesting additional funding for a certain budgetary line within the approved period (one fiscal year), is possible, but subject to NHIF approval.

The National Revenue Agency pools the revenue from general state taxation (including general income tax, corporate taxes, excise, VAT and patent tax) into the accumulating accounts of the Regional Tax Directorates at the Ministry of Finance. Taxes collected at the Regional Tax Directorate are then pooled at national level by the General Tax Directorate to create a state budget. The state budget is allocated to various ministries depending on previously approved annual budgets. Funds allocated to the Ministry of Health are mostly used for the direct funding of some expensive pharmaceuticals, state-funded hospitals and for the implementation of national programmes. Other ministries running parallel health systems also receive health care funds from the state budget. The municipalities receive earmarked health funds from the state budget, depending on the size of the municipality and according to the Act of the State Budget.

Other transfers exist between the state budget and the NHIF and between the Ministry of Health and the NHIF. The NHIF receives monthly health insurance contributions for those groups of the population that are insured by the state. The Ministry of Health pools funds to the NHIF intended for provision of special services for some uninsured groups of the population (for example, delivery care for uninsured women).

3.3.4 Purchasing and purchaser–provider relations

The organizational relations between purchasers and providers are regulated through the 1998 Health Insurance Act for both the public and private health care sector (for purchasing and purchaser–provider relations in the field of voluntary health insurance, see section 3.5 *Voluntary Health Insurance*). In the public sector, the relationship between the purchaser (the NHIF) and health care providers is based on a contract model. Both public and private providers may receive payments from the NHIF after signing a contract with the fund through its district branches. The NHIF and the professional associations of physicians and dentists sign the National Framework Contract (NFC). The NFC regulates health care providers, the scope of health services, the payment methods, the price of services, the quality of health care indicators and the mechanisms for the monitoring and enforcement of contractual agreements. Each RHIF contracts providers in the district, as long as they satisfy the requirements of the NFC. For example, contracts cannot include services that are not included or contain less advantageous provisions than those stipulated in the NFC. In some cases, the individual contract may provide a limitation on the volume of activities for which the health institution will be reimbursed by the RHIF.

The NHIF monitors medical provision and financial results of its contractual members through auditors located at the NHIF and the RHIF. Financial auditors control the implementation of the financial sections of the contracts by collecting and compiling accounting documentation and reporting on the contracted health care establishments. Both financial and medical auditors carry out planned and surprise inspections (prompted by suggestions or complaints) in accordance with the NFC.

In 2010, 9488 individual contracts were signed between provider organizations and RHIF. These included 3992 contracts with primary outpatient provider organizations; 3188 contracts with organizations providing specialized outpatient care and health diagnostics services; 2001 contracts with pharmacies; and 307 contracts with hospitals (NHIF, 2010).

3.4 Out-of-pocket payments

According to the National Statistical Institute (NSI), OOP payments amounted to BGN 1789 million (€917 million) in 2008, accounting for 36.5% of total health expenditure. In comparison, they built 38.6% of total health expenditure in 2003. According to NSI methodology, these data include direct payments

and cost-sharing but exclude informal payments. There are no official statistics about the size of each form of OOP payments. According to the most recent study, a substantial part of OOP payments (47.1% for 2006) are informal (Open Society Institute Sofia, 2008). Therefore, it can be assumed that OOP payments, already the largest source of revenue, are much higher than official data suggests.

3.4.1 Cost-sharing (user charges)

Cost-sharing was established by the 1998 Health Insurance Act in the form of co-payments (called user fees in Bulgaria) for visits to physicians, dentists, laboratories and hospitals for the use of services covered by the NHIF (see Table 3.6). User fees apply to all patients with some exceptions: children, pregnant women, unemployed individuals, those with income below a certain threshold, chronically sick patients and some other groups. User fees amount to 1% of the minimum monthly salary (MMS) per outpatient visit and 2% of the MMS per day of hospitalization up to 10 bed-days per year. These co-payments vary according to the MMS, which was set at BGN 160 (□81.80) in 2006 and at BGN 240 (□122.70) in 2010, and are paid by the patients directly to the provider at the point of delivery. Patients have to make a co-payment for dental services included in the basic benefit package. The same applies to cost-sharing in pharmaceutical care. Some pharmaceuticals included in the positive list are fully paid by the NHIF but patients have to make a co-payment for others. Co-payments are specified in the NFC (see section 3.7.1 *Paying for health services*).

Despite concerns over their regressive nature, co-payments are seen as a means of restricting unnecessary demand for health care and are an additional source of revenue for the providers, which can be used to maintain practices and procure medical equipment and consumables. Nevertheless, co-payments are a barrier and financial burden for low-income and retired individuals who visit health care providers more often than any other group (for example, for drug prescribing, consultations with specialists, diagnostic examinations). Since the current MMS of BGN 240 (□122.7) is set below the subsistence minimum, co-payments reduce the resources available for food and other basic living expenses. This was one of the reasons that user fees for retired individuals were reduced from 1% of the MMS to BGN 1 (□0.51) per outpatient visit in July 2008. The difference between the reduced and full user fee was paid to the outpatient physicians by the NHIF. As of 2011, this privilege for retired individuals was abolished, while the average pension in 2010 was BGN 263 (□134.50).

Another, indirect form of cost-sharing exists in hospitals when patients pay for luxury hotel services such as a single room, television or choice of a physician/team. The extra billing is based on the hospital's price list and can differ from one hospital to another. At the end of 2010, it became evident that big variations exist in the hospital sector with regard to the prices for choosing a physician (according to some media announcements, from approximately €25 to €5000). To remedy this situation, maximum billing levels for choosing a physician and/or team were introduced. As of 2011, hospitals can charge a patient who wishes to choose his/her doctor up to BGN 700 (€357) and a patient who wishes to choose a team up to BGN 950 (€485).

In public hospitals patients can choose from the so called "VIP" services (for example, a "VIP" room). In most private hospitals all patients pay additional fees for luxury conditions since the hospitals do not have "regular" rooms. Extra billing for luxury conditions and choice of physician are included in the total reimbursement level. These extra services are an integral part of the overall hospital stay of the patient and cannot be used separately and independently from the medical services.

VHI may cover statutory user charges, especially for hospital services, dental services and drugs (see section 3.5 *Voluntary health insurance*). When a patient receives medical or dental care paid by a VHIC, the statutory user charges listed above are not applicable.

Table 3.6

User charges for health services

Health service	Type of user charge in place	Protection
GP visit	Co-payment 1% of MMS	12 patient groups including children, chronically sick patients and the unemployed are exempt from paying user charges
Outpatient specialist visit	Co-payment 1% of MMS	Same as above
Inpatient stay	Co-payment 2% of MMS for each day of stay (up to 10 days per year)	Same as above
	Extra billing (for luxury services and choice of doctor)	No exceptions
Dental care	Co-payment The size depends on the service	Children pay smaller co-payments
Laboratory tests	Co-payment 1% of MMS or BGN 2	No exceptions
Outpatient pharmaceuticals	Co-payment The amount depends on the medicine	No exceptions

Note: MMS: minimum monthly salary.

3.4.2 Direct payments

Direct payments occur in three cases. First, patients pay for services or goods that are not included in the NHIF basic package at prices set by the provider. This includes, for example, many of the dental services as well as elective plastic surgery services, some laboratory tests, implants, glasses and various pharmaceuticals.

Second, there are direct payments for services or goods that are included in the NHIF basic package but patients prefer to receive them outside the standard patient pathway in the SHI system. For example, if a patient goes to a specialist for a regular check-up (a service which is included in the basic benefit package) without a GP's referral, he/she is expected to pay for the service. The same is also true if a patient goes directly to a laboratory, hospital or another GP who is not his/her regular GP. Patients have different motivations for such behaviour. They may want to access the services they need more rapidly or demand elective services. But the most important reason is that people often face administrative and other obstacles to services they need while following the standard patient pathway (for example, the GP refuses or delays a referral to a specialist, lab or hospital because of exhaustion of the monthly limits set by the NHIF). A direct payment also occurs when a doctor refers a patient for consultation or tests to a non-contracted health provider. Unless the patient has VHI that covers the service, the patient must pay for the treatment out of pocket.

Third, uninsured individuals also have to pay directly for medical services or goods, unless they visit an emergency centre in a life-threatening situation. Since 2001, health facilities have been developing their own fee-for-service price lists. Over the last 10 years, health service prices have been steadily increasing.

3.4.3 Informal payments

Informal payments include all unofficial payments for goods and services that are supposed to be free and funded from pooled revenue as well as all official payments for which providers do not give a receipt. Before the democratic changes in 1989, the only form of informal payment was gift-giving in acknowledgement of provided medical services. This practice was widespread. Monetary informal payments were unpopular not only in health care but also in all other spheres of public life. When private practice was restored in the early transition years, together with formal payments, informal (monetary) payments started emerging. As of 2011, because of formal and informal payments, the

practice of gift-giving is not as widespread as it used to be. The delay of the health care reform in Bulgaria in addition to other problems led to an increase of corruption practices.

In a survey conducted in 1994, 43% of 1000 respondents reported having paid cash for officially free services in state health facilities (Delcheva, Balabanova & McKee, 1997). A survey in Sofia in 1999 found that 54% of those asked had made informal payments for publicly covered (at that time) services (Delcheva, 1999). According to most recent research, a substantial part of the OOP payments (47.1% in 2006) are still informal, including payments for services for which patients have not received a financial document (Open Society Institute Sofia, 2008).

Patients usually pay informally to have shorter waiting times for services, to access a specialist without referral, or to secure better conditions and service quality in hospitals. Individual spending on items such as pharmaceuticals or other consumables during hospitalization can also be considered an informal payment. According to a nationally representative survey funded by the Open Society Institute and the Soros Foundation, approximately 25% of hospital patients faced the problem of “unregulated payments” for check-ups, tests, treatment and/or surgery in Sofia in 1999 (Delcheva, 1999). Inclusion of hospital care in the SHI benefit package has brought some reduction in informal payments for consumables, materials and/or medicines used during hospitalization. Yet it has not affected informal payments to doctors, nurses and hospital attendants. According to a nationally representative survey conducted in 2006, 22.4% of the patients in hospitals indicated that they had paid for medical activities in an unregulated way (for surgical operations, consultations, etc.), 11.4% had paid hospital attendants and 7.3% had paid nurses (Dimova, Popov & Rohova, 2007). In 2006, informal payments in the hospitals amounted to 11.7% of all out-of-pocket payments for inpatient care (Open Society Institute Sofia, 2008).

The percentage of informal payments in outpatient care (primary and specialized) is higher. While informal payments in hospitals can be attributed to corruption practices, in outpatient care they are mostly related to the non-issuing of a receipt. For example, GPs are obliged to give a receipt to the patient for every user fee paid by the patient. Practice shows that very often this does not happen. Thus, according to the quoted Open Society Institute’s research, in 2006, the informal payments in GPs’ practices and in specialized

outpatient practices were respectively 61.1% and 53.7% of the overall OOP payments. Open Society Institute reports that in 2006 the informal payments for medical services were BGN 75.5 million (□38.6 million).

According to nationally representative research conducted in 2006 as part of the most comprehensive analysis of the Bulgarian health care reform to date, 66.2% of the medical professionals expressed the view that the organization and the financial model of the Bulgarian health care system itself created incentives for corruption and other financial abuses (Dimova, Popov & Rohova, 2007).

3.5 Voluntary health insurance

The opportunity to provide voluntary health insurance was introduced along with the social health insurance system by the 1998 Health Insurance Act. However, the VHI market is still limited and covers only a relatively small share of the population. VHI is provided by for-profit joint-stock companies intended for voluntary health insurance only. These VHICs can operate after receiving a licence from the FSC. VHICs provide extra insurance for any individual. Beyond the package covered by the NHIF, all citizens are free to buy different insurance packages. VHICs can also cover the cost of services included in the basic benefit package guaranteed by the NHIF budget.

3.5.1 Market role and size

VHI covers complementary services not covered by the NHIF (such as specific lab tests and drugs), supplementary services (for example, better service and free choice of a hospital physician) and certain services included in the NHIF benefit package (visits to specialists, hospital treatment, prophylaxis, etc.). This means that for some services individuals with VHI have double coverage. For most services the level of NHIF and VHI coverage is not clearly defined, thus the benefits from VHI are not visible enough for the population. Although VHI was introduced in 1998, VHI expenditure still only amounted to 0.4% of total health expenditure and 0.9% of private health expenditure in 2008 (see Table 3.1).

According to research on VHI market development conducted by the FSC in 2010, the number of voluntary insured individuals is decreasing in comparison with the previous year but revenue from collected premiums is growing. The number of the health insurance contracts with both individuals and groups at the end of June 2010 was 6184 (5285 less than the same period of 2009), and the

number of individuals covered by VHI was 200 886 or approximately 2.6% of the population compared to almost 5% in 2009 and 4.7% in 2008. At the same time, the revenue from collected premiums increased by 5.9% on an annual basis in 2010 in comparison with 2009 (Zastrahovatel, 2010).

The main factors that hamper VHI market development are the breadth of coverage (almost universal) guaranteed by the NHIF and the low income of the population.

3.5.2 Market structure

Although individuals, families and companies may purchase VHI, only certain high-income groups and some companies can afford it. Most VHIC clients are companies motivated by tax reliefs. However, because these tax reliefs are not substantial, VHIC corporate clients are driven primarily by the desire to increase their employees' satisfaction and reduce costs incurred by sickness and absenteeism. According to an analysis of the voluntary health insurance competitive environment, performed by the Commission on Protection of Competition (CPC) in 2009, individual VHIC clients account for approximately 2% while the rest are corporate clients. The most vulnerable groups, such as the elderly and those with chronic diseases, as well as children, cannot afford VHI due to high insurance premiums and low income.

According to the CPC, two-thirds of all licensed VHICs are active. The VHICs can be categorized into three groups: (1) companies that are part of an insurance group or financial conglomerate (they are the largest group with 75% of all VHICs), (2) companies created as autonomous health insurers, and (3) newly licensed companies that do not operate or their activity is highly limited. All participants in the market are for-profit joint-stock companies. At the end of June 2009, around 30% of the VHICs were owned by foreign entities (Commission on Protection of Competition, 2009).

The number of VHICs has increased gradually since the introduction of VHI. There were 2 licensed VHICs in 2001, 6 in 2003, 10 in 2006 and 20 in 2010. The biggest company has a 15.4% market share and six companies together have 70.4% of the VHI market (FSC, 2011).

3.5.3 Market conduct

Each VHIC provides a defined and licensed benefit package. A benefit package can be established or changed with the approval of the FSC. The packages offered by the VHICs are:

- improvement of health and disease prevention;
- outpatient health care;
- inpatient health care;
- dental care;
- health services supporting social activities;
- reimbursement of costs; and
- other plans (for example, complex medical care).

A breakdown of VHI revenues and corresponding claims per benefit package type can be seen in Table 3.7.

Table 3.7

Structure of revenues from premiums and paid claims according to benefit package type, %

Year	2009			2010 (nine months)		
	Revenue from premiums	Claims	Claims ratio*	Revenue from premiums	Claims	Claims ratio*
Improvement of health and disease prevention	13.9	11.8	48.2	15.1	13.5	49.2
Outpatient health care	22.9	26.4	65.5	21.8	26.1	65.4
Inpatient health care	15.1	5.8	21.8	13.9	5.5	21.7
Dental care	2.8	3.7	75.1	3.9	3.9	54.5
Health services supporting social activities	1.7	0.2	6.8	1.9	0.2	5.1
Reimbursement of costs	10.1	14.1	79.2	11.1	13.6	67.0
Other plans (for example, complex medical care)	33.5	38.0	64.5	32.2	37.1	63.1
All	100	100	56.8	100	100	54.8

Source: FSC, 2011a.

Note: *benefits paid as a proportion of revenue from premiums.

Each package is offered with two options, either (1) minimum/basic; or (2) extended/luxury or full option. The options differ from one another in the number of services that are covered by the fund. The choice of a certain package and option is negotiated between the insured individuals and the insurance company. The VHI policies involve responsibilities for the company and the patient, family or the employer. Usually contracts are signed on an annual basis but there is also the possibility of a shorter (one month) or longer period (three years).

Individuals with VHI can choose between a reimbursement and a benefits-in-kind model. If they choose the reimbursement model, they first pay the provider out of pocket after which the health insurance company reimburses the insured person fully or partially for health costs. The reimbursement amount is set in advance in the insurance contract or the contract can specify that the subscriber is to receive a fixed amount connected with treatment expenses. If patients choose the benefits-in-kind model, the VHIC pays contracted health care providers directly for providing predetermined health services and goods. The most common payment mechanism is fee-for-service.

For each VHI package, the insured individuals pay premiums. The way of payment is settled in the contract between the insured person and the VHIC. Premium levels as well as the time limit and the way of payment are defined according to existing company tariffs, which are approved by the FSC. The individual and family VHI policies use risk rating; sex and age as well as previous and current illnesses determine the premium level. For corporate clients, the insurance premium is community rated and does not depend on the sex and age of the insured individuals. Instead, the risk is distributed among the people in the group. The factors that determine the premium level are staff number, branch in which the company operates, whether the company has branches or not, periodicity of payment and contract time limit.

VHICs selectively contract with both private and public health care providers or they can establish their own health providers and pharmacies. In both cases, the level of provider remuneration is determined by the market.

The profitability of the VHI market has been increasing in the last two years. Administrative costs and benefits paid as percentages of premiums have decreased, which is a prerequisite for profit growth (Table 3.8). In spite of the overall VHI market profit in 2009–2010, some VHICs suffered substantial losses.

Table 3.8
Financial indicators for VHICs

	2007	2008	2009	2010 (nine months)
Administrative costs as % of premium revenue	32.5	31.2	30.5	28.8
Loss/profit in thousands BGN	-2 497	-7 776	220	721
Claims ratio, benefits paid as % of total premium revenue	60.4	69.6	56.8	54.7

Source: FSC, 2011b.

3.5.4 Public policy

The VHI market is regulated and supervised by the Financial Supervision Commission (FSC) and the Minister of Health. The FSC is independent from the government and reports its activity to Bulgaria's National Assembly. The FSC licenses VHICs and approves the benefit packages and tariffs. It also regulates relations between the VHICs and insured individuals on the one side and the VHICs and health care providers on the other. The Commission also approves all changes in VHIC status and activities. It has the power to apply administrative measures and sanctions on VHICs in cases regulated by law. The Minister of Health monitors the quality and access of the medical services provided through the VHI.

VHI activities are not subjected to VAT. Employers use tax breaks of up to BGN 60 (€31) per month for each insured person. Individuals with VHI can also reduce their taxable income by up to 10%. Nevertheless, the level of this discount, together with the insurance brevity, has not substantially motivated employers and individuals to purchase VHI so far.

The development of the VHI market has caused a great deal of debate among political and professional groups. Strengthening the VHI role in health system financing is an aim acknowledged by the policy-makers but there is no clear vision of the appropriate changes in both SHI and VHI. Some ideas under consideration are the establishment of a third pillar of health insurance for compulsory complementary health insurance, or the abolition of the NHIF monopoly through introduction of a free choice of fund for compulsory health insurance.

3.6 Other financing

3.6.1 Parallel health systems

Parallel health systems are run by the Ministries of Defence, Transport, Informational Technology and Communications, Internal Affairs, Justice, and the Council of Ministers. The ministries own and manage health care facilities, including five military multi-profile and three long-term care hospitals, two transport multi-profile hospitals and a diagnostic-consultative centre, a Medical Institute with a multi-profile hospital and regional health care facilities, two specialized hospitals, fourteen medical centres for prisoners, and one multi-profile governmental hospital. All health care facilities except those run by the

Ministry of Justice can sign a contract with the NHIF and can serve patients from outside the ministries. The health care facilities owned by the Ministry of Justice are predominantly financed through the Ministry's budget but can also receive payments from the NHIF for individuals covered by SHI. The relation between the Ministry of Justice's health care facilities and the NHIF are not legislatively clarified. There is no detailed information about the size of financing parallel health systems. In the State Budget Act, information can be found only on the budget subsidy for the Council of Ministers hospital. In 2010, this subsidy was BGN 14 474 600 (□7.4 million).

3.6.2 External sources of funds

Since the mid-1990s, the Bulgarian health system has received substantial foreign assistance, including governmental loans, international projects, and grants from various governments, institutions and organizations. External financing was highest during the first period of the health care reform process (1992–2001) but has decreased since. According to WHO data, external resources on health amounted to 1.4% of total health expenditure in 1996, less than 1% in the period 1997–1999, 2% in 2000, after which point they gradually fell to 0% in 2008. However, it is likely that these data include only external financing received by the government and Ministry of Health but do not capture foreign assistance received by other institutions.

Dimova, Popov and Rohova (2007) provide the most comprehensive collection on external financing based on generally accessible sources. The major share of foreign aid was received from World Bank loans and EU programmes, which were allocated for structural changes in the health system. These included:

- the PHARE projects (30 million ECU for the health reform), of which 10 million ECU were aimed at the restructuring of the national network for emergency care, 3.15 million for medical staff training, 5.65 million for the introduction of the health insurance system, and 460 thousand for the reform in the pharmaceutical sector) (1992);
- 1.8 million US dollars from the EU for the training of general practitioners (1992);
- 50 million US dollars to support the introduction of the health insurance system from the World Bank and 12 million ECU for transplantations from the PHARE and TEMPUS programmes (1993);
- 45 million ECU in the framework of PHARE for the hospitals and a loan of 35 million ECU from the World Bank (1994);

- a credit of 100 million German marks from the Siemens company for updating X-ray equipment (1996);
- 10 million Swiss francs for the delivery of sterilization systems in 13 hospitals (1996);
- 2 million Danish kroner for the equipment of four centres for patients with diabetes in university clinics (1996); and
- 15 million ECU contracted with the EU for a three-year programme including oncological diseases in women and control of the quality of medical care (1996).

47.2 million US dollars were loaned for a project aimed at the restructuring of the health care sector, of which 26 million were loaned from the World Bank, 11 million came from the Social Development Fund of the EU and 2.3 million presented financial aid without compensation from the PHARE Programme of the EU. The project was divided into four programmes – the first (2.3 million US dollars) included an analysis of health policy and management, the establishment of a division at the Ministry of Health for health policy analysis and the organization of intensive training of top managers in health care establishments; the second concerned primary health care (14.5 million US dollars) – for the repair and purchase of transportation vehicles; the third was directed to emergency care (13.3 million US dollars) – for the equipment of 21 emergency wards in the united district hospitals, emergency admission wards in 45 district hospitals and the purchase of 125 ambulances; the fourth programme was aimed at reorganizing blood donation and the establishment of a national system for haemotransfusion (1996).

In 2000, 3 million Swiss francs were granted without compensation to the NHIF by the Swiss government, 500 000 US dollars were given by each Japan and Spain, and 163 000 euros were allocated by the European Commission (EC) for training programmes. The Spanish government granted US\$ 400 000 for training in hospital management and 600 000 German marks, secured by the German government, were intended for the training of NHIF employees. The EC procured 1.2 million euros for the institutional construction of the NHIF and the training of those employed in health care administration, while USAID supported with 2.5 million US dollars the development of a concept for hospital financing.

At the beginning of 2001, the World Bank released a loan amounting to approximately 60 million US dollars to be used for the completion of the NHIF information system construction, for physicians' training and support for hospital care.

The WHO provides constant technical assistance focusing on the development of health reforms and new health policy; mother and child health; infectious and chronic diseases; and health promotion. After joining the EU, Bulgaria has been receiving external financing mainly from EU funds and the PHARE programme, including:

- 1.6 million euros from PHARE (phase 2) for screening and early diagnosis of tuberculosis, oncological, cardiovascular and hereditary diseases for disadvantaged ethnical minorities (2008–2009);
- 1.45 million euros from PHARE (phase 3) for deinstitutionalization through provision of services to risk groups (2008–2009); and
- 1.1 million US dollars from the UN Population Fund for improving sexual and reproductive health of young people in Bulgaria.

There are currently six ongoing projects that are financed through the EU Operational programme "Human resources development" with a total value of BGN 53.6 million (27.5 million euros). The projects focus on early diagnosis of cancer, accreditation of health care providers, continuous education of medical professionals, health information systems, treatment of acute conditions and patient awareness (Ministry of Health, 2010a).

3.6.3 Other sources of financing

A relatively small amount of revenue, compared to other sources, comes from voluntary charitable donations by individuals, private companies, foundations and NGOs. According to the National Statistical Institute, the charitable donations averaged BGN 19 million (near €10 million) per year for the period 2003–2008. Their share in total health expenditure decreased from 0.8% in 2003 to 0.4% in 2008. In accordance with the Labour Code, regular check-ups are required for employees of public and private companies. This ensures that employers contract with occupational health institutions in order to provide their employees with the required health services. Information about the size of these payments is shown in Table 3.9.

Table 3.9

Employers' payments for health services, as a % of THE

Year	2003	2004	2005	2006	2007
BGN million	1.22	7.12	8.13	13.74	15.41

Source: National Statistical Institute, 2010c.

3.7 Payment mechanisms

3.7.1 Paying for health services

Bulgarian health care providers are paid through mixed payment methods depending on the type of the payer/purchaser. In SHI, providers are mainly paid prospectively for the services they provide to the population on a fee-for-service and per capita basis. The actual payment levels are agreed in a contract before the treatment takes place in order to reduce a payer's financial risk. Payments are made after the provision of services on a monthly basis. When health care providers have a contract with a VHIC, they are usually paid retrospectively on a fee-for-service basis. The payment methods currently in use are presented in Table 3.10.

Table 3.10

Provider payment mechanisms

	Ministry of Health	NHIF	VHICs	Cost-sharing	Direct payments
Public health services	GB	-	-	-	FFS
Social care	GB	-	-	-	-
GPs	-	C, FFS	FFS	UF	FFS
Ambulatory specialists	-	FFS	FFS	UF	FFS
Hospitals	PD*	CP	FFS	UF	FFS
Dentists	-	FFS	FFS	FFS	FFS
Laboratories	-	FFS	FFS	FFS	FFS

Notes: GB: global budget; C:capitation; FFS: fee for service; PD:per diem ; CP: case payment (through clinical pathways); UF: user fee (1 or 2% of MMS); * in dispensaries as well as psychiatric hospitals and wards.

Public health services, provided mainly by the Regional Health Inspections (RHI), are funded by the Ministry of Health through global budgets (see section 6.1 *Analysis of recent reforms*). The RHI budgets are calculated on the basis of historical data (that is, based on the previous year's allocation adjusted

for inflation and budget growth). Some services provided by the RHI are paid directly by the user on a fee-for-service basis (for example, laboratory tests provided at request).

Other health care facilities that are funded by the state budget allocated by the Ministry of Health are the national centres for emergency care, state psychiatric hospitals, and health and social care children's homes. State psychiatric hospitals and health and social care children's homes are paid per diem by the Ministry of Health, covering all services and expenses per patient per day (nursing, overheads, food, etc.) as well as capital investments.

Primary care is funded mainly on a per capita basis (for services provided by GPs) and on a fee-for-service basis (for services provided by dentists). Primary medical care is paid by the NHIF on a contractual basis according to the National Framework Contract. The contracts are based on monthly per capita payments per insured person on the GP's patient list. Capitation rates differ from one age group to another. According to the NFC 2010, the GP receives BGN 1.26 (€0.64) monthly for a patient in the age group 0 to 18; BGN 1.05 (€0.54) for a patient in the age group 18 to 65, and BGN 1.37 (€0.7) for a patient over 65 years.

Additional payments are made to GPs for:

- prophylactic activities within the Child Health Programme, including immunizations of included individuals;
- prophylactic activities within the Maternal Health Programme (regular medical check-up of included individuals);
- dispensary examinations (“Dispensary Programme”);
- prophylactic activities for compulsorily health-insured individuals aged over 18 years;
- working in a remote settlement or a settlement with poor infrastructure and other complicated conditions; and
- examination of compulsory health-insured individuals from other districts.

All these activities are paid on a fee-for-service basis, with rates also settled in the NFC. GPs also receive a user fee for each patient visit (1% of MMS). They are paid fee-for-service for services not covered by the basic benefit package (for example, issuing a medical certificate). Primary care is also paid fee-for-service by patients who are not included in a GP's patient list or are uninsured.

Dental care is paid on a fee-for-service basis by the NHIF and the patients or by the patients only. The NHIF and the Bulgarian Dentists' Union negotiate prices for a limited number of dental services included in the basic benefit package. The NHIF's remuneration to providers of dental outpatient care is specified in the National Framework Contract and covers only a defined proportion of the total price of dental services. For example, according to the NFC 2010, the contractual price of a detailed prophylactic check-up for oral status determination is BGN 8.24 (□4.21). The NHIF pays part of this price (BGN 6.44, □3.29) and the patient pays the rest. The basic benefit package includes six primary, four specialized surgical, and six specialized child outpatient dental services.

Specialized outpatient care and laboratory services are paid on a fee-for-service basis. The National Framework Contract of 2010 defines the following fees for specialized outpatient services:

- patient's first visit to a specialist – BGN 14.50 (□7.41) (for comparison: BGN 11.50, □5.88 in 2005); and
- second visit for the same illness(es) and condition(s) – BGN 8.00, □4.09 (BGN 5.50, □2.81 in 2005).

Specialized outpatient care providers also receive payments for:

- prophylactic examinations for individuals included in the Child Health and Maternal Health Programmes and individuals aged over 18 years, who are part of defined risk groups. The rates of these payments are the same as the regular visit payments;
- physiotherapeutic treatment courses;
- highly specialized medical activities;
- medical expertise activities; and
- case payments (clinical pathways: see below) to specialized outpatient care providers (medical centres, medical and dental centres, diagnostic-consultative centres) with beds for supervision and treatment for up to 48 hours, if care fulfils the requirements for the implementation of clinical pathways.

The exact rates for these activities as well as the diagnostic test rates are defined in the National Framework Contract. Specialists receive user fees for each patient visit (1% of MMS).

Hospitals receive funding mostly through case-based payments called “clinical pathways”. These were introduced in 2001 as part of the National Framework Contract, based on a single flat rate per pathway. In 2001, there were 158 diagnoses grouped in 30 clinical pathways. The number of clinical pathways increased gradually to 298 in 2006 and remained the same in 2010.

The flat rate for a clinical pathway reimbursed by the NHIF has changed as well. It is calculated based on the cost of medical activities, auxiliary services provided to patients during hospitalization or temporary disability and up to two outpatient medical examinations and consultations after the patient has been discharged from hospital. Clinical pathways are developed and estimated by the NHIF; pathway rates are subject to negotiation between the NHIF and the Union of Bulgarian Physicians (UBP). Clinical pathways rates are, in practice, more representative of NHIF’s ability to pay than the real costs of hospital services. Additional to the price of certain clinical pathways, hospitals receive payments for medical products such as cochlear implants, cardiac prostheses, etc.

Hospitals also receive user fees (2% of MMS per day of hospitalization up to 10 days per year) from people covered by SHI and admitted on a clinical pathway, fees for elective services or services not covered by the NHIF paid directly by the patients, and payments from VHI companies.

Most pharmaceuticals are paid directly by patients at market prices. Some pharmaceuticals (predominantly intended for chronic disease treatment), which are covered by SHI, are paid fully or partially at levels settled in the NFC. Certain highly expensive pharmaceuticals (for example, for treatment of cancer) are paid by the Ministry of Health (see also section 5.6 *Pharmaceutical care*).

3.7.2 Paying health care professionals

Health personnel reimbursement differs from one professional group to another in terms of remuneration methods and rates. Doctors’ reimbursement methods depend on whether they work in primary, specialized or hospital care.

General practitioners are owners of their practices by law and their income is put together by monthly NHIF payments minus expenditures for maintaining their practices. GPs’ expenditures are mostly for rental of offices and facilities, medical equipment, materials and nursing staff. The largest share of the average monthly income of GPs is derived from capitation (63%) (NHIF, 2011), followed by payments from the Child Health Care Programme (11%) and the Dispensary Programme (11%) (Adamov, 2010; Ministry of Finance, 2010). Another sizeable

part of GPs' revenue comes from user fees and direct payments. The average monthly payment made by the NHIF to a GP was BGN 1897 (□970) in 2007, BGN 2234 (□1142) in 2008 and BGN 2344 (□1198) in 2009. The revenue to expenses ratio (revenue received from the NHIF divided by expenses) was 1.33 in 2009 (Ministry of Finance, 2010).

If they are self-employed, outpatient specialists, as well as dentists, are paid on a fee-for-service basis with different rates depending on the service provided (see section 3.7.1 *Paying for health services*). The methods of paying personnel and paying for services are identical.

When outpatient specialists and dentists are hired on a labour contract basis in public or private medical or dental centres, their income usually consists of a salary plus a work-volume-related bonus. The doctors' salary and bonuses are negotiated between employer and employee. The bonus is usually 35% to 40% of the income generated from the NHIF and OOP payments. In accordance with the Collective Labour Agreement in the field of health care of 2010, the contractual minimum basic monthly salary of a single specialty physician is BGN 610 (□312) and of a dual specialty physician – BGN 640 (□327) (Adamov, 2010). The average monthly payment made by the NHIF for a specialist was BGN 1210 (□619) in 2007, BGN 1359 (□695) in 2008 and BGN 1403 (□717) in 2009. The revenue to expenses ratio (revenue received from the NHIF divided by expenses) was 1.54 in 2009 (Ministry of Finance, 2010). In the same way as GPs, specialists also receive substantial revenue from user charges and private payments in addition to NHIF payments.

For inpatient care, mechanisms for paying doctors are dependent on the health institution (private or public). Generally, combinations of various payment mechanisms are used, as the type of health institution and their ownership status determine the prevailing mechanism. Doctors working in the state and municipal hospitals are mostly salaried with additional performance-related bonuses. The latter include amounts for services rendered under NHIF agreement or paid by patients and other sources. The funds for additional remuneration depend on the financial status of the hospital and generated income. In the case of public hospitals experiencing financial difficulties, the additional remuneration is insubstantial or missing. According to the Collective Labour Agreement in the field of health care of 2010, the minimal monthly salary (without additional bonuses) for a physician directly participating in diagnostic-therapeutic activities is BGN 580 (□297). This regulation is assigned

both to public and private hospitals. As a comparison, the MMS for the country for 2010 was BGN 240 (□123) and the average monthly salary was BGN 857 (□952) (National Statistical Institute, 2011d).

In private hospitals, payment mechanisms are directly negotiated between the employer and the employee under labour contracts for all personnel categories (doctors, health specialists, dentists, pharmacists, management and administration staff, auxiliary personnel). In most cases, variable performance-related bonuses contribute substantially to health personnel income.

Physicians and other health personnel working in health institutions funded by the Ministry of Health budget, such as national centres and RHI, are predominantly salaried. The minimal starting salaries settled in the Collective Labour Agreement in the field of health care are lower than in the commercial public and private hospitals and outpatient care establishments.

Nurses and other health workers (physiotherapists, laboratory assistants, dental auxiliaries and assistant pharmacists) employed in other health establishments usually receive a monthly salary. At the employer's discretion they can also receive performance-related bonuses in addition to their salary. The size of these incomes varies widely. For example, the minimal annual earning for physiotherapists is BGN 19 000 (□9714) and the maximum BGN 32 000 (□16 360); registered general nurses receive between BGN 15 000 (□7669) and BGN 24 000 (□12 270) per year. The minimal start salaries settled in the Collective Labour Agreement in the field of health care depend on the type of institution and position and vary from BGN 400 (□205) to BGN 500 (□256) per month (REED Specialist Recruitment, 2009).

Pharmacists who work in hospitals are paid identically with hospital physicians and other health workers. Those working in pharmacies and drug stores receive a salary negotiated between employer and employee on a market basis.

4. Physical and human resources

The planning and distribution of outpatient health care facilities in Bulgaria are based on a territorial principle outlined in the National Health Map and district health maps. Yet the lack of limits on the maximum number of health care establishments per district and the lack of clear rules and regulations on hospital care have caused rapid development of such establishments in the late 2000s. Investment for state and municipal health establishments is financed from the state or municipal share in the establishment's capital. For local hospitals, municipality funding for new investment and maintenance costs has shown a downward trend. The Ministry of Health runs various programmes for investment in medical infrastructure that health care establishments can apply to.

Imperfections in the organization of primary health care, a geographically uneven distribution of general practitioners, and the lack of incentives for primary and specialized medical practices led to increased utilization of specialized care and increased hospitalization rates. The number of acute beds per population in Bulgaria is above the EU27 average while the average length of stay is slightly below the EU27 and EU15 averages. Both indicators show a decreasing trend.

The use of information and communication technologies by households has increased considerably in recent years, as has the number of people using the Internet for health-related information. In 2006, a national strategy for e-health was adopted, but an integrated information exchange system on the national level is still lacking.

In the first quarter of 2009, health workers accounted for 4.9% of the total workforce. Compared to other countries, the relative number of physicians and dentists is particularly high but the relative number of nurses remains well below the EU15, EU12 and EU27 averages. Bulgaria is faced with increased professional mobility, mainly due to the development of technology, accessible

transport and communications. The migration of medical specialists has become a serious challenge: during the first nine months of 2010, more than 340 physicians and 500 nurses left the country.

Medical education is provided by four medical universities and two medical faculties in other universities, while training for paramedical personnel is available at 10 medical colleges. The Council of Ministers determines the requirements for obtaining both higher education degrees and specializations. Professional specialties in health provision are determined by the Ministry of Health and require a state examination by the State Examination Commission in Sofia. Continuous medical education is organized and credited by the Professional Associations in accordance with the Health Act.

4.1 Physical resources

4.1.1 Capital stock and investments

In 2009, there were 306 hospitals in Bulgaria (National Centre of Health Informatics, 2010). The Health Care Establishments Act adopted in 1999 defined hospital types based on different criteria and regulated the restructuring of existing public health care institutions (for more details see section 5.4). Until 1999, most hospitals were publicly owned (Health Care Establishment Act, 1999).

In 2008, the Law of Regional Development divided the country into six regions: North-western, North-central, North-eastern, South-western, South-central, South-eastern (Law of Regional Development, 2008; Article 4 Paragraph 3). An analysis conducted by the Ministry of Health to support the development of a concept for restructuring the hospital system revealed substantial regional inequalities in the hospital sector. The main goal of this concept is to provide equal access to hospital care across the country (Ministry of Health, 2009).

The south-western region has the highest number of hospitals (about 109), mostly because of the district and capital city of Sofia. The north-central, north-western and south-eastern regions do not have any hospitals meeting the requirements for high technology and high specialization according to modern standards in all medical specialties. The south-central and north-eastern regions are the most disadvantaged, the former being the only region without a university hospital.

Uneven distribution, oversupply of certain medical services, underuse of medical equipment and duplication of activities are reported for various hospitals. As a result, staff gradually become disqualified and unable to deliver good quality services, which forces patients to seek care elsewhere. This is particularly the case with local hospitals that are on the one hand focusing on outpatient care for local residents but which also provide – with lower quality and volume – services that are also available at district hospitals.

Before the health insurance system was introduced, both recurrent costs and investments of public health care institutions were financed fully from the state budget. Currently, the state and municipalities provide subsidies approved under the State Budget Act and from municipal budgets. These subsidies are reserved for the acquisition of long-term tangible assets, maintenance and restructuring costs, information technologies and systems, etc.

Capital costs covered by the Ministry of Health budget with municipal participation for state-owned hospitals rose from BGN 6.1 million (€3.1 million) in 2000 to BGN 17.7 million (€9.0 million) in 2009, totalling BGN 115.1 million (€58.8 million) for the entire decade. The major share of these costs has been allotted to hospital building renovations and purchasing of medical equipment. Since the restructuring of district hospitals in 2000, ongoing funding of capital/life cycle/maintenance has been provided mainly by the state. As a rule, the share of municipal funding for hospital maintenance is symbolic. On the few occasions when municipalities provide funds for new investment or maintenance purposes, these do not have a substantial effect on the condition of district hospitals. There is also a lasting downward trend in the funding provided to municipal hospitals for investment and maintenance. It thus becomes clear that capital investment is a problematic field that may need to be prioritized in the health policy agenda.

In 2004, a revolving investment fund was established under the Investment Programme of the Ministry of Health: the “Reforming the Health Sector” project financed through a loan agreement between the World Bank and Bulgaria. The fund provides interest-free leasing to hospitals for investing in medical infrastructure such as equipment and furnishings. Its main purpose is to create a sustainable scheme of investments in the health care system, which will be based on objective needs assessments and adequate planning. For this purpose the fund’s selection process is transparent with clear criteria, and recipients are closely observed for compliance and quality achievement. Contracts with 30 health care establishments were made in the first phase of the fund (which concluded in October 2007), amounting to €5million, while

23 further contracts have been signed since (€3.5 million). The money was integrated in each hospital's reimbursement process. Detailed information about equipment purchased for each institution and for amounts due is kept by the Ministry of Health.

State-owned medical institutions can apply for funding under the “Regional Development” operational programme for 2007–2013, approved by the European Commission in 2007. BGN 148 million (€75.7 million) has been allocated to Bulgaria and is made available through the programme “Support for reconstruction, renovation and equipping of public health establishments in urban agglomerations” with the Ministry of Health as the beneficiary. BGN 79.9 million (€40.9 million) has been planned for hospitals, with approximately 20 hospitals from all six regions being eligible to apply. Depending on the project, a maximum of BGN 5–10 million (€2.5–5 million) can be provided for repairs, reconstruction and furnishings. The goal is improving quality and equity of hospital service provision by transforming these hospitals into high-technology establishments that offer highly specialized medical services uniformly across the country. Another BGN 58 million (ca. €30 million) is available for the modernization of radiological equipment. The concept for restructuring the system of hospital care (Ministry of Health, 2009) envisages three radiotherapy centres to be financed by the scheme. If the operational programme is successful, Bulgaria will be eligible for European funding for health care to the amount of €3 billion as of 2014 (Ministry of Regional Development and Public Works, 2010).

4.1.2 Infrastructure

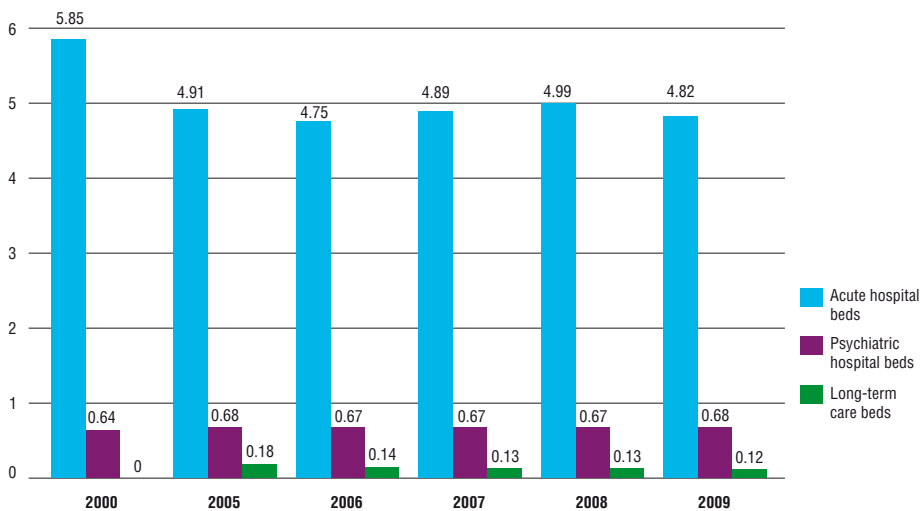
Hospital care is provided by establishments that are mostly commercial companies owned by the state, by the municipalities or by private individuals. A general increasing trend in hospital numbers has been observed in recent years, which is more pronounced for private establishments. In 2001, there were 56 984 beds in 293 inpatient care establishments and 367 beds in a total of 1190 outpatient facilities. In comparison, in 2009, there were 50 041 beds in 352 inpatient care establishments and 856 beds in 1715 outpatient facilities (National Statistical Institute, 2010d). There were 4.6 hospitals per 100 000 population in 2008, a figure that is higher than the EU average (2.64) and only second to Finland's 5.82 (WHO Regional Office for Europe, 2010).

Fig. 4.1 shows how the numbers of acute-care hospital beds, psychiatric hospital beds and long-term care beds in Bulgaria have changed since 2000. A downward trend in bed numbers in acute care in the period 2000–2006 can

be observed, which appears to have levelled off after that. Bed numbers in psychiatric hospitals and long-term care institutions, by contrast, have remained approximately constant. There is also a decreasing trend in the average length of stay (ALOS): from 13.7 days in 1990, it dropped to 6.8 days in 2009, which is below the EU average. The closest figures among comparator countries are shown by Romania (Fig. 4.2). In Bulgaria, home care had the longest ALOS (15.4 days), followed by continuing and long-term treatment (12.8 days), active treatment (7.3 days) and reanimation and intensive care (4.1 days) (Georgieva et al., 2007). These indicators, however, do not reflect variations in ALOS for individual hospitals.

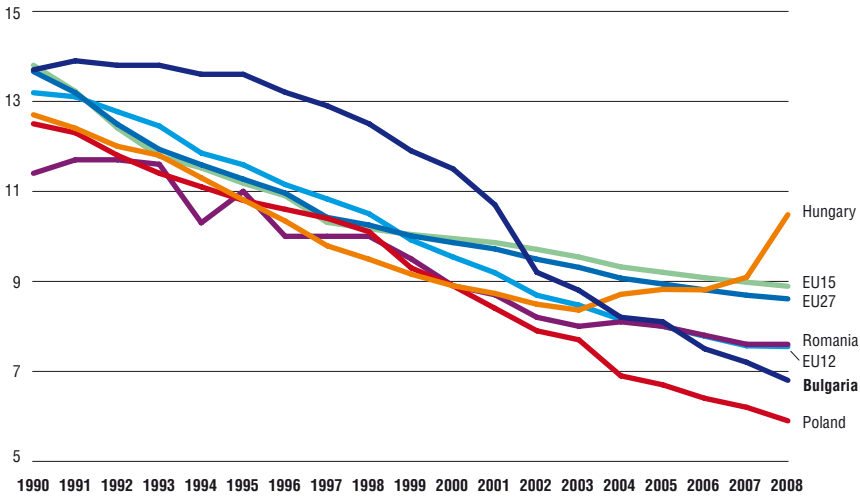
Fig. 4.1

Mix of beds in acute-care hospitals, psychiatric hospitals and long-term care institutions per 1 000 population, 2000–2009



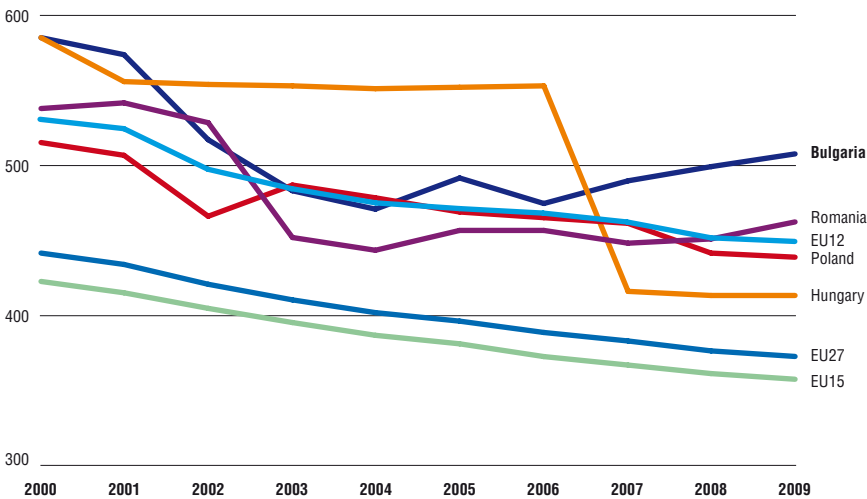
Source: WHO Regional Office for Europe, 2010 (for acute and psychiatric hospital beds); National Statistical Institute, 2010e (for beds for long-term care).

Fig. 4.2
Average length of stay (days), all hospitals, 1990–2008



Source: WHO Regional Office for Europe, 2010.

Fig. 4.3
Acute-care hospital beds per 100 000 population in Bulgaria and selected countries, 2000–2009



Source: WHO Regional Office for Europe, 2010.

Fig. 4.3 compares acute-care hospital beds per 100 000 population in selected countries. The 20% decline in bed numbers in the 2000–2004 period reflects the large national effort and political will to follow the reforms at that time. Despite these efforts, the number of acute hospital beds per 100 000 population is still much higher compared to EU12 and EU27 averages as well as all comparator countries.

The Concept for Better Health care in Bulgaria adopted by the government in 2010 includes the restructuring of the hospital system to improve its efficacy (Ministry of Health, 2010b). The main priorities in this field are as follows:

- inspection of the hospital network and elimination of structures that do not comply with European medical standards and redundant establishments;
- consolidation of hospital wards in order to optimize the number of beds (the number of beds in acute care in 2012 is projected to be 3.5/1000);
- development of so-called “hospitals for further treatment and long-term treatment”;
- development of indicators for monitoring hospital efficiency and norms for the standard volume of the diverse medical and surgical services provided; and
- introduction of more effective methods for hospital financing, and a continuous increase in hospital care quality.

4.1.3 Medical equipment

As mentioned above, establishments that are at least partly state- or municipality-owned use subsidies to pay for big-ticket medical equipment. In the process of the transformation of health establishments into commercial companies, tenders for contracts for the delivery and installation of machines, devices and other equipment needs to be submitted according to the Public Procurement Act. All invitations to tender need to be published on the web site of the *State Gazette* and are registered in the Public Procurement Register (Public Procurement Act 2004). Currently, the material and technical infrastructure of state and municipal health establishments is obsolete and requires substantial funding in order to modernize buildings and medical equipment. According to the Ministry of Health, the proportion of diagnostic imaging technologies is on a relatively good level, with the exception of MRI and radiotherapy services,

although the numbers are still lower than the European classification goals (see Table 4.1). Furthermore, the uneven geographical distribution may create inequity of access (National Centre of Health Informatics, 2009).

Table 4.1
Items of functioning diagnostic imaging technologies

Item	Number of devices (2008)*	Per million population (2005)**	European classification goals (per million)*
MRI units	19	3	5–10
CT scanners	151	16	10–19
PET scanners	2 (2010)	–	–
Radiotherapy equipment	30	n/a	–
Angiographs	26	n/a	–

Sources: *Ministry of Health, 2009, **Eurostat.

4.1.4 Information technology

According to data from the National Statistic Institute, the use of information and communication technologies (ICT) by households has considerably increased in recent years. In 2009, the share of regular Internet users was 39.7%, while 31.7% of the households possessed a computer. The age group most active is that between 16 and 24 years of age and the proportion of individuals spending time on the Internet within this group reached 75.1% in 2009. The share of enterprises with Internet access was 83.9% in 2009 and the number of employees using the Internet for professional purposes at least once per week is growing. The number of individuals using the Internet to search for health-related information grew from 14.7% of the population in 2004 to 23.5% in 2009 (National Statistical Institute, 2010f).

Research on electronic communications in the EU shows, however, that Bulgaria has the lowest access to personal computers, Internet connections and electronic trade. Furthermore, Bulgaria is among those countries where cable Internet is still more common than ADSL (along with Romania, Latvia and Lithuania) (European Commission, 2010c).

According to expert assessment conducted by the NHIF, 90–95% of GPs used computers in 2004. By the end of 2005, this number reached 100% because at the end of 2004, 5471 GPs obtained computers from the NHIF through a programme with the World Bank. However, by the end of 2005, only 75% of the GPs and 8.5% of the physicians in specialized ambulatory care reported their activity in electronic format. Software for electronic reporting to the NHIF

has been introduced in 154 hospitals in the country, out of which 110 submit reports digitally (in addition to hard copies). All hospitals have Internet access but most are still a long way away from efficient IT use.

In 2006, a national strategy for the development of e-health was developed and approved. A uniform information system for document turnover (DocFlow) was introduced. The Ministry of Health has also started providing access to registers and e-services (Ministry of Health, 2006). The strategy aims at:

- building an integrated information system for information exchange among employees in the health sector (medical, educational, scientific, financial and administrative units);
- introducing an electronic health card (with a microprocessor that allows access to personal health information), also called a health passport;
- implementing software applications for complex data processing in real time (electronic referrals, prescriptions, laboratory data etc.);
- developing comprehensive hospital information systems that will be connected to each other and to external applications;
- creating digital-only patient files;
- building electronic infrastructure to facilitate the normal functioning of the health system (networks, connection devices, etc.);
- laying the groundwork for telemedicine services;
- improving the standardization and security of information;
- increasing awareness of and training in electronic applications in the field; and
- developing and applying good practice standards and operational compatibility norms.

Implementation of the strategy is financed on a project-oriented basis. Funding sources include, among others, the state budget, European development projects and public–private partnerships and donations.

4.2 Human resources

4.2.1 Health workforce trends

In Bulgaria, health workers are plentiful, with the notable exception of nurses, and there is an upwards trend in the number of university-educated personnel. Variations in numbers among different professional groups within the system exist along with the dynamic change of personnel numbers over time (see Table 4.2) (WHO Regional Office for Europe 2010; Ministry of Health, 2010e; Adamov et al., 2010).

Table 4.2

Health care personnel in Bulgaria per 1 000 population, 1990–2008

	1990	1995	2000	2005	2008
Physicians (total)	3.17	3.46	3.37	3.64	3.60
Primary care doctors (GPs)	–	–	0.67 ^a	0.68	0.63
Nurses	6.21 ^a	5.75 ^a	3.85	4.04	4.24
Midwives	0.84	0.79	0.51	0.45	0.44
Dentists	0.68	0.65	0.83	0.84	0.82
Pharmacists	0.49	0.22	0.12	0.05*	0.05*
Laboratory technicians (clinical and radiology) ^a	0.88	0.84	0.73	0.75	0.75
Dental technicians ^a	0.33	0.29	0.16	0.18	0.19
Pharmaceutical assistants*	0.47	0.18	0.08	0.03	0.03

Sources: WHO Regional Office for Europe, 2010; ^aThe National Centre of Health Informatics, 2010.

Note: *Pharmacists working in health establishments.

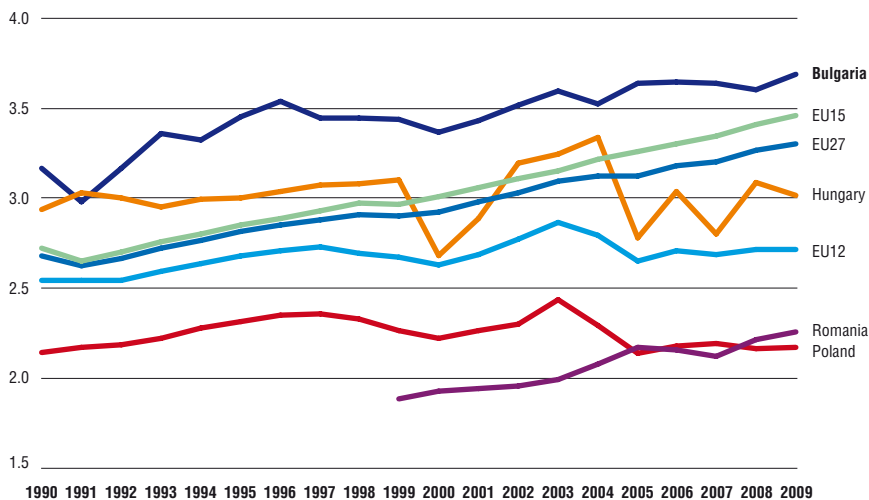
The number of GPs is low compared to that of specialists. In Bulgaria, general medicine was introduced as a specialization in 2001, while already in 2000, specialists in internal medicine and paediatrics were given the opportunity to retrain as general practitioners (GPs) in order to meet the needs of the new health insurance system. These doctors were not originally trained as GPs, and an official requirement to obtain this training in order to act as a gatekeeper has been repeatedly postponed (the target date at the time of writing is 2015). Beneficiary surveys indicate a lack of trust in family doctors, low uptake of preventative examinations and frequent bypassing of primary care in favour of direct contact with specialized services. Inequities are important: the total number of GPs is relatively low (0.63 per 1000 inhabitants compared with an EU average of 0.85 in 2008), and 17.8% of the positions in disadvantaged areas conditions remain unfilled (World Bank, 2009). The number of GPs dropped by 8% between 2000 and 2008 and more are expected to retire in the next few

years, since the average age among GPs is over 50. This decrease may also be partially explained by a restriction to the number of students admitted to medical faculties in the early 1990s.

In the period 1990–2008, the number of physicians per population in Bulgaria has been steadily increasing. During this period the figure has been constantly above the EU15, EU12 and EU27 averages, and much higher than the corresponding averages for Romania and Poland, which were among the countries with the lowest physician density in the region (see Fig. 4.4). In Bulgaria in 2009, the highest density was observed for specialists in internal medicine (2.0 per 10 000 population), followed by gynaecologists and paediatricians (1.8 per 10 000 population) and surgeons (1.6 per 10 000 population), a distribution that has been relatively constant in the past few years (National Statistical Institute, 2010a).

Fig. 4.4

Number of physicians per 1 000 population in Bulgaria and selected countries, 1990–2009



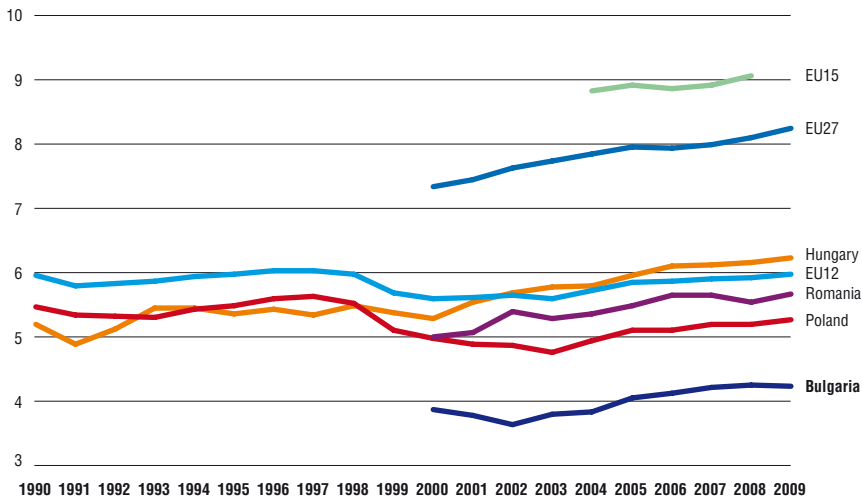
Source: WHO Regional Office for Europe, 2010.

The number of nurses per 1000 inhabitants showed an almost twofold decrease between 1990 and 2002 (from a peak at 6.2 in 1990 to its nadir at 3.6 in 2002) (Table 4.2). Fig. 4.5 shows that Bulgaria has a very low proportion of nurses compared to the EU averages and other countries in the region. There is a slight upward trend in the number of nurses since 2005, but most trained nurses seek employment abroad due to both low recognition and inadequate

remuneration. This results in considerable losses for the nursing workforce. In contrast, the number of midwives per population is higher than the EU27 average but also shows a declining tendency. In summary, in 2008 Bulgaria was above all European averages in terms of the number of physicians, but had one of the lowest numbers of nurses in the European Region (see Fig. 4.6).

Fig. 4.5

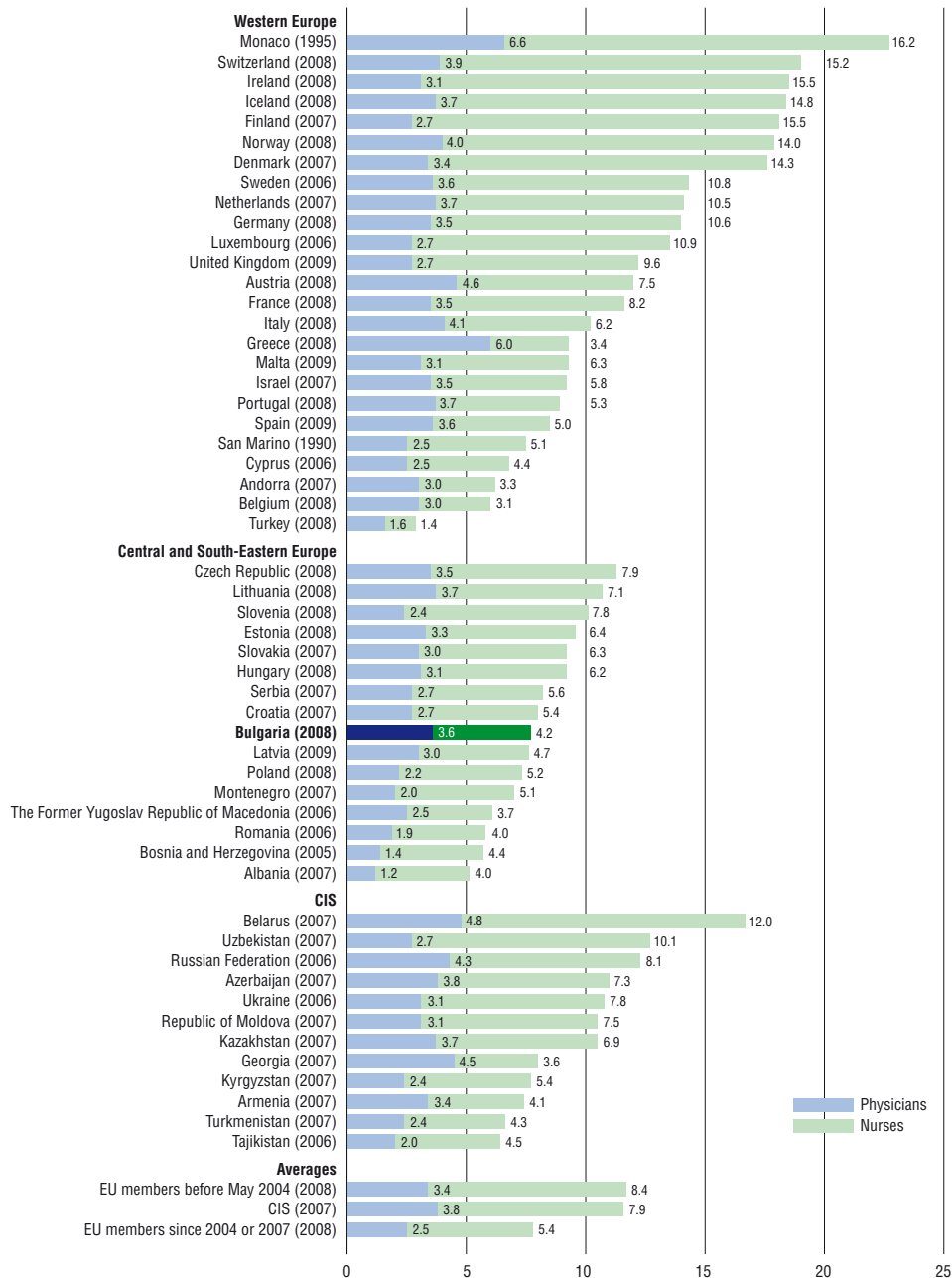
Number of nurses per 1 000 population in Bulgaria and selected countries, 1990–2009



Source: WHO Regional Office for Europe, 2010.

Fig. 4.6

Number of physicians and nurses per 1 000 population in the WHO European Region, 2008 or latest available year

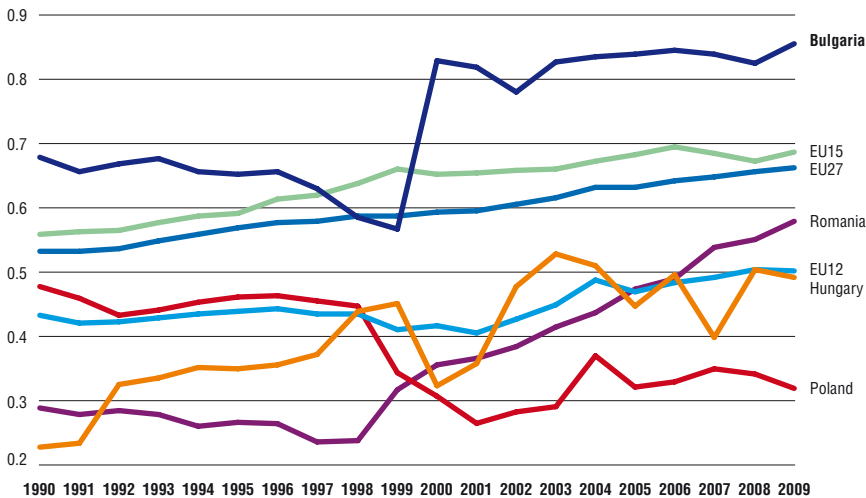


Source: WHO Regional Office for Europe, 2010.

Bulgaria has been, and still is, one of the countries with the highest density of dentists in Europe. The number has been growing steadily since 1990 and reached its highest number of 0.84 per 1000 population in 2006 with a slight decline since (Table 4.2). The number was approximately 40% higher than that of the EU12 average and approximately 25% higher than the EU average (Fig. 4.7). The phenomenon can be explained by increased admissions for dental degrees in the 1970s and 1980s and a lack of pricing regulations for dental services in the 1990s (Georgieva et al., 2007). The huge jump in the number of dentists between 1999 and 2000 is the result of a law adopted in late 1999 that introduced compulsory registration before dentists were allowed to practise. The number of dentists is expected to increase further because of the establishment of a new Faculty of Dentistry at the Medical University of Varna. The number of dental technicians, on the other hand, has been declining (Table 4.2) and has always been characterized by unequal geographical distribution.

Fig. 4.7

Number of dentists per 1000 population in Bulgaria and selected countries, 1990–2009



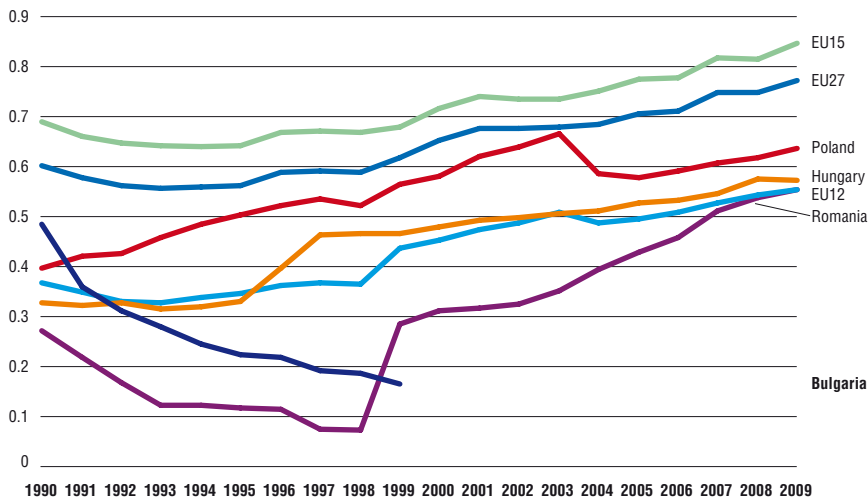
Source: WHO Regional Office for Europe, 2009.

The number of pharmacists grew steadily until 1990, exceeding the EU12 average (Georgieva et al., 2007). Yet this trend has changed radically, with the numbers decreasing from a high of 0.48 pharmacists per 1000 inhabitants in 1990 to 0.12 pharmacists per 1000 inhabitants in 2000, ranking Bulgaria among those countries with the lowest densities of pharmacists in the EU in that year

(see Fig. 4.8). Unfortunately, no newer data is available. The substantial drop in the numbers of pharmacists and assistant pharmacists after 2000 shown in Table 4.2 is due to the fact that only those employed in the pharmacy network of health care establishments are included in the totals. This change in data collection makes the numbers unreliable and explains why no newer data in the WHO Health for All (HFA) database is available. The general drop in numbers is partly to be attributed to a large proportion of professionals being employed by foreign private pharmaceutical companies in the country, which offer higher salaries and flexible working hours. Two new Faculties of Pharmacy established at the medical universities in Plovdiv and Varna are expected to contribute to a gradual increase in the number of pharmacists in the future.

Fig. 4.8

Number of pharmacists per 1 000 population in Bulgaria and selected countries, 1990–2009



Source: WHO Regional Office for Europe, 2010.

The use of complementary and alternative medicine (CAM) to improve individual health is spreading in Bulgaria. The Health Act (2005) legitimized alternative treatments, such as homeopathy, acupuncture, acupressure and other non-traditional methods as well as the use of non-medicinal products of organic and mineral origin. All providers of CAM have to register with their district centre for health care and declare the methods they will practise. Only graduates with a master's degree in medicine or dental medicine may practise homeopathy. All other alternative healers are allowed to practise with

a bachelor's degree in medicine or even once they have successfully completed four semesters of medical studies. There are currently 1666 master's degree holders in medicine and dental medicine who have completed a homeopathy course (Adamov et al., 2010).

4.2.2 Professional mobility of health workers

Migration in Bulgaria has been evolving as a result of democratic changes, the eastward enlargement of the EU, and economic and cultural globalization. Before 1989, Bulgaria had a very limited migration profile, but after the democratic transition it became a full participant in the migration processes on both the European and the worldwide level. Professional mobility grew mostly due to rapid technological development, better transportation and communication as well as open borders.

In 2000, 1856 Bulgarian doctors were employed in OECD countries with 6.2% of all doctors holding degrees from Bulgarian institutions currently migrating to these countries (Moutafova, 2009). This exodus of medical specialists is developing into a serious problem for the Bulgarian health care system: in 2009, approximately 450 physicians left the country, while in the first nine months of 2010, 340 physicians and 500 nurses also left. Physicians relocate mostly to Germany (which offers the best working conditions and is therefore currently the host country of choice), France, the United Kingdom and the United States, while interest in Bulgarian specialists has been expressed by Norway, Sweden and Australia. Attractive destinations for nurses are the United Kingdom, Italy, Spain and Greece. Most of them begin working as hospital attendants or in private clinics. European hospitals actively recruit young health workers at various international seminars and forums and offer attractive work and specialization opportunities. Bulgarian specialists meet all European requirements for employment in the health sector.

Push factors are complex: lack of funds in the health system, lack of modern medical equipment, low work satisfaction and prestige, a series of failed health reforms, etc. One of the main issues, however, is the low wage level in the public sector, which is below the European averages. Increased professional mobility particularly affects the workforce of certain medical specialties, such as anaesthesiology, obstetrics and gynaecology, pulmonology and psychiatry, and impacts on the fields of epidemiology and infectious diseases control, adversely affecting both access and quality of care. This outflow of health

professionals poses a serious challenge to the Bulgarian health system but could be prevented by an adequate health workforce policy tackling low remuneration and substandard work conditions.

4.2.3 Training of health care personnel

Currently, doctors are trained at four medical universities and two medical faculties. The medical universities in Sofia, Plovdiv and Varna have four faculties each: medicine, dentistry, pharmacy and public health. The medical university in Pleven has three faculties: medicine, public health and health care. The Faculty of Medicine in Stara Zagora was founded as a higher medical institute for training specialists of medicine within the Medical Academy of Sofia. It remained an independent institution until 1995, when it was merged with the Thracian University – Stara Zagora. On the other hand, the Faculty of Medicine, which had been a unit of Sofia University – “St Kliment Ohridski” – between 1917 and 1950, was restored in 2003 and became a part of that university.

Undergraduate medical education lasts six years and includes five years of theoretical training and one year of practice, culminating in five state exams during the final year. In the early 2000s, the curriculum was reorganized to include a 90-hour course in family medicine and corresponds fully with the requirements of the ordinance for the acquisition of a master’s degree in medicine in the country. Once they have completed their residency and postgraduate qualification, doctors need to register with the Ministry of Health and obtain a certificate of professional qualification.

Dentistry training lasts five years followed by six months of practical training. The curriculum includes fundamental and dental disciplines, with hours on special dental subjects progressively increasing from the first to the fifth year. Students complete their studies with a state exam.

Pharmacists train for five years and studies are organized in three levels: the first level aims at providing fundamental professional knowledge, while the second is oriented towards specific knowledge and skills for the pharmaceutical profession. Students can major in either General or Industrial Pharmacy, a choice to be made after the sixth semester. The third level is practical training and takes place in pharmacies, drug stores, pharmaceutical firms and/or pharmaceutical laboratories for drug control recognized as training centres. The degree is awarded either upon successfully taking the state exam or defending a master’s thesis. Medicine, dentistry and pharmacy training is offered only on a full-time basis and students graduate with a master’s degree.

All Public Health faculties at medical universities offer training in bachelor's and master's degrees in various specialties: health care management, public health, nursing and obstetrics, management of nursing and obstetrics care. The increased demand for this type of training in recent years has led to the establishment of separate faculties for Public Health within medical universities.

Nurses and midwives are trained at medical universities. Their education lasts four years and results in a bachelor's degree. These professionals can continue their studies in specific programmes and obtain a master's degree, an option chosen by more than half of the graduates (55%), for further development, increased competitiveness and higher remuneration (Tornyova & Shopov, 2008). Postgraduate education is provided by the Nursing Association and is not compulsory.

Paramedical personnel (medical and X-ray laboratory technicians, assistant pharmacists, rehabilitators, dental mechanics, etc.) can receive training at ten medical colleges, six of which are included in medical universities. Those colleges with accreditation under the Law on Higher Education offer professional bachelor's degrees in the field of health care. College training programmes and curricula were updated during the implementation of the EU-funded PHARE Project on the development of paramedical education in Bulgaria, in collaboration with experts from France and Belgium. Under the same project a bachelor's programme in health care management for nurses and paramedical specialists was developed and is offered at three university centres: in Sofia since 1995, Pleven since 1996 and Plovdiv since 1997 (Georgieva et al., 2007).

Based on a proposal of the Minister of Education, Youth and Science, as well as suggestions by the universities, the Council of Ministers approves state requirements for obtaining higher education degrees and specialty titles of the regulated professions (medical doctors, dentists, pharmacists, nurses, midwives and all paramedical professions). The council also approves the number of admissions for undergraduate and graduate students according to academic capacities and needs of the professional fields and specialties of the regulated professions.

Professional specialties to be acquired by medical and nonmedical personnel in the health system are regulated by an ordinance of the Ministry of Health. The Supreme Medical Council and other advisory committees at the Ministry of Health provide expert advice on training curricula or changes in the nomenclature of specialties. The Committees also make suggestions to

improve training and to define training costs. The universities organize, register, conduct and supervise training for the acquisition of specialty titles. Practical training takes place at universities, accredited health care establishments, the Regional Health Inspections (RHI) and other health institutions specified by the Minister of Health. Most specialties take at least four or five years of training, with the exception of general practice, which lasts three years and consists of a theoretical and a practical part. Nurses and midwives can also specialize in accordance with the ordinance mentioned above, for one year. All specializations require a final state examination before the State Examination Commission in Sofia.

Continuous medical education is offered and organized by the Bulgarian Medical Association in accordance with the Health Act. There are different forms of training: courses, seminars, conferences, congresses, presentations, workshops, distance learning, etc. Physicians can choose the courses they wish to take. A credit system is used to assess the medical specialists' performance at these trainings, but its criteria require improvement.

4.2.4 Doctors' career paths

Upon graduation, health professionals are required by law to become members of their respective professional associations by registering with the RHI. Once medical students have become a Master of Medicine, they usually apply for the acquisition of a specialty. After becoming specialists, doctors can start working in hospitals. A promotion during a doctor's hospital career is based on specialty and length of service. Promotion proposals are made by the heads of clinics or departments and approved by the hospital management.

Another option for doctors is to start working as GPs after successfully completing the required three-year training. GPs are gatekeepers in the Bulgarian health care system and in most cases prefer to work in individual practices: only 21% of GPs worked in group practices in 2008 (Komitov & Genev, 2009).

Since the mid 2000s, the profession of pharmaceutical representatives has become very attractive due to the flexible working hours and good salaries. Also increasingly popular in recent years is pursuing a career abroad. The basic requirements for applicants are a completed medical education, a confirmation of the obtained specialty title and working experience in a certain area and mastery of the host country language.

4.2.5 Other health staff career paths

Registered nurses, regardless of their educational background, are entitled to take specialist training courses. Nurses and midwives with a bachelor's and master's degree specializing in health care management can participate in competitions for managerial posts (senior nurse/midwife, chief nurse/midwife, directors of public nurseries). The Health Care Establishment Act regulates the requirements for this career path. The job openings are announced by the employer in the central or local press.

5. Provision of services

In Bulgaria, health services are delivered by a network of various health care providers, operating in the public or in the private sector. Public health services are provided by the state and organized and supervised by the Ministry of Health. Public health activities and programmes are implemented mainly by the ministry's local branches, the Regional Health Inspections (RHI), and by several national centres.

The Health Care Establishment Act stipulates the distinction between outpatient and inpatient care. The GP is the central figure in primary care and acts as a gatekeeper for specialized ambulatory and hospital care. The number of GPs in Bulgaria has been slowly declining and their geographical distribution does not reflect the needs of the population. Ambulatory care is also provided by specialized outpatient facilities, including individual and group practices, medical and medico-dental centres, diagnostic-consultative centres and stand-alone medico-diagnostic or medico-technical laboratories. They are autonomous health care establishments, most of them with a contractual relationship with the National Health Insurance Fund (NHIF). All primary and the majority of specialized outpatient facilities are privately owned.

Inpatient care is delivered mainly through a network of public and private hospitals, divided into multi-profile and specialized hospitals. There are also other inpatient health care establishments such as comprehensive cancer centres, centres for dermato-venereal diseases and hospices. Bulgaria has a relatively high hospitalization rate, reflecting the underutilization of ambulatory care services and the lack of integration and coordination of different levels of care.

Long-term care is underdeveloped regarding both community-based services and inpatient care provided by specialized hospitals. Health care reforms after 1989 focused predominantly on ambulatory care and the restructuring

of the hospital sector is still pending on the government agenda. Thus, both an oversupply of acute care beds and an undersupply of long-term care and rehabilitation services remain.

In 2001, a mental health care reform was introduced, aiming to improve outpatient and community-based services and to prioritize care provided by the family and in the social environment. Institutions for residential mental care include specialized psychiatric hospitals, mental health centres, psychiatric wards in multi-profile hospitals, as well as a number of social homes for people with mental disorders. Despite efforts to deinstitutionalize psychiatric patients, hospitalizations have shown an increasing trend.

The regional centres for emergency care and hospitals' emergency wards are the key units in the organization of emergency care. There is one centre in each of the 28 districts and along with their municipal branches they cover the entire country. First aid (or urgent care) is also provided by GPs. The main challenges faced in this field are the shortage of medical professionals (especially physicians) and the lack of medical equipment.

5.1 Public health

Public health services in Bulgaria are provided by the state and financed mainly by the state budget (see section 3.7.1 *Paying for health services*). In addition, municipalities implement and finance local programmes, while the NHIF pays for some services provided by GPs (such as immunizations). The Ministry of Health is the competent authority in public health. It is responsible for health protection and state sanitary control. Its responsibilities include the development and financing of national public health programmes, data collection and the preparation of annual health status reports. At the district level, international, national and local health programmes are coordinated by the Regional Health Inspections (RHI), which are the decentralized branches of the Ministry of Health. The Principal State Health Inspector, appointed by the Prime Minister at the proposal of the Minister of Health, supervises and organizes state sanitary control, health promotion and disease prevention activities, communicable disease control, etc. The principal inspector functions as a coordinator and supervisor of the provision of public health services in the health care system and in other sectors (parallel systems) such as defence, transport, internal affairs and justice.

There are 28 RHI, the offices of which are located in each administrative district, so their network covers the entire country, being centrally managed and financed by the Ministry of Health.

The functions of the RHI are as follows:

- the sanitary control of public places, products and activities pertinent to human health and of environmental factors;
- the control of communicable diseases, including anti-epidemic control and surveillance of infectious and parasitic diseases;
- health promotion and integrated disease prevention;
- laboratory testing of environmental factors and assessment of their impact on population health;
- monitoring and assessment of noise in urbanized areas, control of food and water pollution;
- consultation and expertise in the field of public health protection;
- elaboration and implementation of public health programmes and projects; and
- postgraduate training in public health protection.

The public health network in Bulgaria also includes several national centres, which are engaged in public health protection and promotion:

- The National Centre of Radiobiology and Radiation Protection – the centre is responsible for control of parameters related to the working and living environment; assessment and reduction of public exposure to ionizing sources; dosimeter control of personal external and internal exposure; and risk assessments for the overall population and for particular groups.
- The National Centre of Infectious and Parasitic Diseases – the centre monitors and conducts research on infectious and parasitic diseases and is involved in anti-epidemic control and the prevention of infectious disease outbreaks.
- The National Centre of Drug Addictions – it coordinates and provides methodological guidance on drug abuse and addiction-related issues, including the prevention, treatment and rehabilitation of people abusing drugs (with and without addiction), specialized control over their treatment process and the provision of expertise on drug addiction.

- The National Centre of Public Health Protection – the centre provides methodological support and expertise in public health protection, as well as consultations to the health administration and to health care establishments; assesses the impact of environmental and other risk factors on health; conceives and implements programmes for health promotion and disease prevention; and carries out scientific research.
- The National Centre of Health Informatics – the centre is responsible for providing information on, among others, health status in the country and on the health care system, its structures and resources.

In 2011, the latter two centres were merged into one – the National Centre for Public Health and Analysis, which combines the responsibilities and activities of both centres.

The Ministry of Health and its bodies utilize an intersectoral and multi-level approach in their work, collaborating with institutions from other sectors at a national and local level, such as the Ministry of Environment and Water and its regional inspectorates, the Ministry of Labour and Social Policy, the Ministry of Education, Youth and Science, the Ministry of Agriculture and Foods, the State Agency for Child Protection, and municipal councils and local administrations (see section 2.6 *Intersectorality*). The public health network also includes nongovernmental organizations (NGO) such as Roma community organizations and associations of patients with chronic diseases.

Environmental health

Environmental factors that affect public health are controlled by the Ministry of Health and the Ministry of Environment and Water through their regional inspectorates. The Minister of Health is responsible for the organization of epidemiological studies examining the relationship between environmental pollution and health status and assessing related health risk. The RHI monitor, analyse and evaluate influencing factors at a district level and suggest measures to reduce their impact.

Substantial measures concerning health hazards were taken during Bulgaria's accession to the EU. Bulgarian legislation was revised towards achieving European standards in areas such as consumer and health protection, environment, social policy and employment. Some of these legislative documents were prepared by the Ministry of Health in collaboration with other ministries. A national action plan for environmental health (2008–2013) has started in the meantime. Its main goals are reducing and preventing public health risks due to the impact of environmental factors as well as improving

the environment and quality of life. Priority is given to primary prevention aimed at improving the environment and reducing population exposure (air, water, soil, noise, electromagnetic fields, air in living quarters, etc.). The national action plan also envisions actions to support health prevention and mitigate environmental threats. Other important goals include raising patient awareness, increasing citizens' involvement in decision-making and fostering timely detection, diagnosis and treatment in order to reduce morbidity and mortality in the population.

Communicable diseases

The 2004 Health Act provides general principles for the control of communicable diseases and epidemic outbreaks. The law determines certain diagnoses for which patients are subject to mandatory isolation and hospital treatment. The Minister of Health determines which communicable diseases are subject to notification, registration and reporting. Health care establishments, specialized institutions providing social services and RHI are responsible for case registration. Any medical professional who diagnoses a reportable communicable disease must inform the RHI and the patient's GP.

RHI deliver summarized information to the National Centre of Public Health and Analysis on a daily basis and the latter synthesises received data and prepares daily and weekly epidemiological bulletins by diagnosis. The information is sent to the Ministry of Health, the National Centre of Infectious and Parasitic Diseases and the RHI and is used for epidemiological surveillance and as feedback. Cases of influenza and acute respiratory diseases, epidemic outbreaks and outbreaks of nosocomial infections have to be reported immediately to the Ministry of Health and the National Centre of Infectious and Parasitic Diseases. Diagnosing, counselling and reporting of HIV/AIDS cases is regulated by an ordinance of the Minister of Health.

The system for notification and surveillance of communicable diseases and epidemic outbreaks is efficient and enables timely and adequate measures. However, this is not the case with non-communicable diseases, for which data is often unreliable, incomplete or not available.

The Minister of Health determines the terms and methods of immunization. According to the Bulgarian immunization calendar, vaccination and revaccination are scheduled according to age groups. The GPs provide vaccination for tuberculosis, hepatitis B, diphtheria, tetanus, pertussis, poliomyelitis, rubella, measles, mumps, haemophilus influenza B and pneumococci, which are compulsory and covered by SHI. There are also targeted immunizations, which are performed in certain cases, as well as recommended immunizations. The

latter can be requested and paid for by patients and can be carried out by the GP or in the RHI. In emergency epidemic situations or substantial declines in immunization coverage, the Minister of Health can order compulsory vaccination and revaccination outside the immunization calendar. Immunization rates in Bulgaria are at a satisfactory level: for example, there was a 95.9% rate for measles in 2008, which is above the EU27 and the European Region averages. Despite the high national immunization coverage with the MMR (measles-mumps-rubella) vaccine, there are groups of vulnerable individuals, particularly members of the Roma community, who are still susceptible to infection. In 2009, an outbreak of measles was detected in Bulgaria, following an eight-year period without indigenous measles transmission. Most cases are identified among the Roma community living in the north-eastern part of the country (Marinova et al., 2009).

Occupational health

The organization of occupational health services is regulated mainly by the 1997 Law on Health and Safety at Work. It stipulates that employers have to arrange, at their own expense, occupational health services for their employees in order to minimize work-related health risks. These services are chiefly preventative: surveillance of working environment to assess risk; evaluation and monitoring of employees' health status and working ability; statutory health surveillance by screening of workers exposed to specific hazards; and provision of information to employers and employees, counselling and guidance about health risks and their prevention. Occupational health professionals also advise on planning and organization of work and working practices, including the design of work places.

Based on the Law on Health and Safety at Work, occupational medicine facilities have been established in accordance with European practices. The providers of occupational medicine services are either independent legal entities or legal entities created by a particular enterprise or health care establishment. The staff of such providers must include a physician specialized in occupational medicine and a person with higher technical education and three years professional experience in occupational safety and health at work. Occupational medicine facilities have to be authorized by the Ministry of Health. At the end of 2010, there were 466 authorized providers across the country (Ministry of Health, 2010c).

Health promotion

The National Health Strategy 2008–2013 includes several tasks related to health promotion and health education. A wide range of activities and programmes has been undertaken to encourage healthy attitudes and behaviour, such as

information, education and communication campaigns in accordance with the WHO Health Calendar, training for health professionals, and surveys on the level of health knowledge of the population and medical staff. At a national level, health promotion is supervised by the Department of Public Health of the Ministry of Health, while at a district level, activities are coordinated by the departments of health promotion of the RHI. The National Centre of Public Health and Analysis is responsible for the coordination, implementation and evaluation of many national health promotion and education programmes. NGOs are very active in the field of health promotion as well.

Examples of health promotion and education programmes include:

- National Programme for the Limitation of Smoking;
- National Programme for the Prevention of Alcohol Abuse;
- National Anti-Drug Strategy;
- National Action Plan for Food and Nutrition;
- National Programme for the Prevention and Control of HIV/AIDS and Sexually Transmitted Infections; and
- National Programme for the Prevention and Control of Tuberculosis, etc.

Despite the different efforts and programmes in the field of health promotion and education, results are still unsatisfactory. Very important concerns are the risk factors related to smoking, alcohol abuse and unhealthy nutrition: population nutrition shows trends that adversely affect health while expert estimates place the number of Bulgarians with alcohol abuse issues between 230 000 and 300 000. Alcohol consumption among adolescents is spreading and the age of initial use has fallen to around 12.5 years. Over the last decade, the proportion of regular smokers has been increasing, especially among women and young people. The country has about 3 million smokers and two-thirds of children are exposed to passive smoking (Ministry of Health, 2008b). Mortality attributed to smoking-related causes is very high in comparison to the EU average (see section 1.4 *Health Status*).

For years health promotion and education have been neglected in Bulgaria. The health care reform process and health policy focused on medical care and priority was given to treatment at the expense of prevention. This resulted in a lack of initiatives in the field of health promotion, inadequate funding of existing initiatives and lack of integration between public health programmes and other health policy measures (Dimova, Popov & Rohova, 2007).

Reproductive health

Reproductive health is safeguarded by the state by means of promotion and consultation, access to specialized medical care, prevention and treatment of sterility etc. In the past decade, several centres for reproductive health have been established, some of them as a part of public or private health care establishments and others as independent medical practices or medical centres. Many of these centres also provide assisted reproduction (in vitro fertilization). In 2009, the Ministry of Health created the Assisted Reproduction Fund, which finances up to three in vitro rounds per person. Until July 2010, more than 7800 couples applied for financial support and over 5200 requests were granted (Ministry of Health, 2010e).

Several programmes for improving sexual and reproductive health have been implemented in Bulgaria. They include educational campaigns, dissemination of informational material, development of educational centres for sexual and reproductive health at the RHI and training of GPs and other health professionals. They are mainly aimed at young people. Educational programmes for students as well as peer education initiatives are carried out in schools. Training GPs in family planning has been included in the system of continuous medical education. The majority of these activities were carried out as part of two large projects of the Ministry of Health, the Ministry of Education, Youth and Science and the UN Population Fund – “Implementation of the National Programme on Reproductive Health” (2000–2004) and “Improving Sexual and Reproductive Health of Young People in Bulgaria” (2004–2009). NGOs also actively participate in initiatives to improve reproductive health. The Bulgarian Association of Sterility and Reproductive Health was established in 1998.

Maternal and child health

Maternal and child health is one of the main priorities of public health policy in Bulgaria. Every woman has free access to health services from the beginning of pregnancy to the 42nd day after childbirth. Prenatal and postnatal services include promotion and training in nutrition and newborn care, as well as regular check-ups and prenatal diagnosis and prevention of congenital disorders provided at primary and specialized ambulatory care facilities. Women have special rights during pregnancy and the postpartum period: they are entitled to free-of-charge ambulatory care and free choice of hospital for delivery.

There are a number of programmes and initiatives to improve child health and to reduce infant mortality. Medical offices in schools, nursery schools and social institutions for children have been established to provide first aid services. Medical professionals working in these offices are also responsible

for organizing and conducting health education programmes. Other initiatives in this field aim to improve quality of medical services and disease prevention. The 2010 National Framework Contract puts the emphasis on child health, making it one of the priorities in health policy. Children are now entitled to unlimited access to paediatric care. The contract also provides incentives for regular medical check-ups for children and young people up to the age of 18, conducted by the GPs.

Nonetheless, challenges remain in ensuring access to quality child health services for rural populations and vulnerable groups, such as the Roma population and children with disabilities (Rechel et al., 2009).

Screening

There are several screening programmes for cervical, breast, prostate and colorectal cancer, osteoporosis etc. In general, however, these efforts to reduce risk are of insufficient intensity and duration. For example, in 2007, Bulgaria was the only EU country without a mass mammography-based breast cancer screening programme (European Commission, 2008). Informational and screening programmes for high-risk population groups are also organized for diabetes and osteoporosis (screening for women over 60 years of age). Unfortunately, limited resources do not allow for screening of the entire population, and the programmes are usually restricted to certain districts and high-risk groups. In 2009, a National Screening Campaign for cervical, breast and colorectal cancer was initiated within which a National Screening Register and screening centres are to be created. The National Framework Contract 2011 envisages the introduction of mandatory screening for prostate and breast cancer but only for people over 50 years of age. Free anonymous testing for HIV/AIDS and hepatitis B and C is available.

The National Programme for the Prevention of Hereditary Diseases, Predispositions and Congenital Malformations is implemented at the national level and funded by the Ministry of Health. It encompasses mass screenings for early detection of genetic disorders and selective postnatal DNA screening. Neonatal screening programmes covered about 95% of all newborn babies in recent years (Ministry of Health, 2008a).

Despite the various public health programmes and initiatives, results have not been entirely satisfactory. According to a nationwide survey conducted in 2006, medical specialists assessed health promotion and disease prevention programmes as relatively poor (Dimova, Popov & Rohova, 2007). The specialists were of the opinion that the health care reform had impacted negatively on prevention, putting patients at a disadvantage. They proposed prioritizing

health protection activities (prophylaxis, prevention and health promotion) and improving the organization of screening programmes. These opinions were shared by managers at different levels in the health care system.

5.2. Patient pathways

Patient pathways through the health care system depend on the type and severity of the condition. Other influencing factors include type of insurance (SHI or VHI) as well as patient attitudes and wishes. In general, GPs act as gatekeepers and are the main point of entry into the health care system. A prescription or a referral from a GP or specialist is required for prescription-only medicines or laboratory testing. Specialized care covered by SHI can be accessed only on referral from a GP. If the patient wishes to access this care directly, he or she will be charged extra. The only other directly accessible primary care professionals are the dentists (see section 5.12 *Dental care*). Patients using services covered by complementary VHI can visit a medical specialist directly, depending on the type of insurance. In case of emergency, patients can contact their GP, call an ambulance or go directly to the hospital emergency ward (see section 5.5 *Emergency care*).

A generalized pathway of a patient in curative, non-emergency care using services covered by SHI could be as follows:

- The patient visits his/her GP and the GP refers him/her for laboratory tests or prescribes medicines and home treatment directly.
- The patient visits a medico-diagnostic laboratory for the tests.
- Depending on the results, there are three possibilities: (a) the GP assigns further medical tests or prescribes medicines and home treatment; (b) if necessary, the GP refers the patient to a specialist for further consultation; or (c) the GP refers the patient to inpatient treatment.
- Specialist care can be accessed at a diagnostic-consultative centre (DCC), a medical centre or an individual or group specialist practice, within a few days of referral. The specialist then refers the patient for inpatient treatment or prescribes medicines and home treatment.
- Admission to a hospital must take place within a few days after the referral is issued. Waiting times vary based on diagnosis and the patient's condition and also depend on hospital waiting lists. Treatment (conservative or surgical) is initiated; the patient can be transferred to another hospital during the course of treatment.

- Once treatment is completed and the patient is discharged from the hospital, there are two possibilities: (a) if necessary, the patient can be institutionalized for continuous treatment and rehabilitation; or (b) follow-up or ongoing treatment and rehabilitation are coordinated by the GP. In both cases a medical report is prepared, which describes the diagnostics, treatment and rehabilitation completed and includes recommendations regarding the continuation of the therapeutic regimen.

5.3 Ambulatory care

Major reforms in ambulatory care were introduced in 1998–1999. The Health Care Establishments Act stipulates the separation of outpatient and inpatient care and determines the nomenclature for different types of health care establishments. New types of primary and specialized outpatient health care facilities were established accordingly. The change in ownership regime transferred all primary and a large part of specialist ambulatory care to the private sector. Currently, ambulatory care in Bulgaria includes a wide variety of providers for both primary and specialist outpatient services, such as GPs, specialist practices, medical centres, laboratories and nursing homes.

Primary care

Primary care is provided mainly by the GPs, who are independent practitioners contracted by the NHIF, but privately operating their medical practices. According to the Health Care Establishments Act (1999), there are two types of practices in primary care: individual and group practices. Bulgarian citizens have a free choice of GP and may switch GPs two times per year. In 2007, 87% of the population had a GP (Ministry of Health, 2008a).

GPs function as gatekeepers, making referrals to outpatient specialist and inpatient services. Children and pregnant women have direct access to paediatricians and gynaecologists respectively. There is a limited number of patient referrals available to each GP. The number of referrals is pre-defined on a monthly basis by the RHIF according to the GP's patient list and the performance of the previous month. Approximately 70% of all contacts are treated at the general practice and the rest are referred to secondary care (Vekov, 2008).

The basic benefit package of health services to be provided by GPs is determined in an ordinance of the Ministry of Health and reimbursed by the NHIF. Primary care is provided in accordance with the NFC. GPs provide basic examinations, diagnostics and treatment as well as consultations and are responsible for prescribing medications from the Positive Drug List. They

are also responsible for family planning training, preventative activities (immunization), health promotion and health education. Approximately two-thirds of all GP visits are for the purpose of diagnosing or treating patients with acute or chronic conditions, while the remaining third are for preventative purposes. The latter have shown an increasing trend in recent years (National Health Insurance Fund, 2008; National Health Insurance Fund, 2009).

The number of GPs contracted by the NHIF is specified in the National Health Map. Since 2004, the number of GPs in Bulgaria has been decreasing (Table 5.1). In 2010, 4681 GPs provided primary care corresponding to one GP per 1615 citizens. Individual practices prevailed (3768): only 19.5% of GPs worked in group practices in 2010 (National Health Insurance Fund, 2010b).

The distribution of GPs varies geographically and is also determined via the National Health Map. In recent years, working practices have exceeded the envisioned number only in districts with medical universities and university hospitals. These variations cause inequitable access to health services, particularly for individuals in rural areas (Ministry of Health, 2008a). In 2010, the average number of insured people per GP differed widely across the country – from 1425 people per GP in the city of Sofia to 2417 in the Kardzhali district (National Health Insurance Fund, 2010b). Moreover, the large number of patients in some practices hampers quality of care. There is a general lack of GPs in rural areas, with some villages only visited by a GP once or twice per week. Another factor negatively affecting primary care quality is the extremely low share of GPs with a specialty in general medicine – only 5.1% in 2009 (National Statistical Institute, 2010g).

The most common infringements of the NFC in primary care, as identified by RHIF inspections, are related to the delivery of preventative services and the violation of working times. Patient complaints are connected to denial of referral to specialist medical care or provision of home visits, compromised freedom of choice etc., but these problems are attributed to the organization of the health system rather than the physicians themselves (National Health Insurance Fund, 2007; 2008). In general, citizens evaluate primary care services provided and the work of the GPs positively (Dimova, Popov & Rohova, 2007).

Specialized ambulatory care

Specialized ambulatory care is delivered by a network of specialist practices, centres for diagnostics and treatment and diagnostic laboratories. The provision of specialized ambulatory care also includes services provided by former dispensaries, which were transformed into mental health centres,

comprehensive cancer centres and centres for dermato-venereal diseases in 2010, According to the Health Care Establishments Act, specialized outpatient facilities may be registered as:

- individual or group practices for specialized medical care in a certain medical field;
- medical and medico-dental centres with at least three doctors/dentists who are specialists in different medical (or dental) fields;
- diagnostic-consultative centres (DCC) consisting of at least 10 physicians in various specialties, as well as laboratory and imaging sections; and
- stand-alone medical laboratories, consisting of two types: (1) medico-diagnostic laboratories performing lab tests and analyses as well as image diagnostics and (2) medico-technical laboratories producing specific medical devices (for example, orthodontic laboratories).

Before 1999, specialized ambulatory care was provided only at polyclinics located in urban areas (predominantly in district centres). After that, most polyclinics became DCCs, owned by the municipalities and regulated by the respective municipal council. The remaining specialized ambulatory care providers mostly follow the private practice model. All specialized outpatient facilities are registered under the Commercial Law as trade companies. Patients have a free choice of specialist.

Similarly to primary care, individual practices for specialized ambulatory care are more common, but their number has decreased substantially since 2007. In contrast, the number of medical centres and stand-alone laboratories has doubled compared to 1999 (see Table 5.1).

Table 5.1

Outpatient medical care providers, 2000–2009

Providers by type	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
General practitioners ^a	n/a	5 143	5 293	5 352	5 361	5 232	5 122	4 980	4 786	4 949
Individual practices for specialized medical care ^b	5 422	n/a	n/a	n/a	6 422	5 623	6 323	6 329	3 204	3 099
Group practices for specialized medical care ^b	42	n/a	n/a	n/a	124	116	139	156	112	124
Medical centres ^b	292	328	418	456	454	495	575	636	588	590
Medico-dental centres ^b	33	26	46	43	44	47	47	56	37	33
DCCs ^b	104	104	106	103	107	105	104	109	115	115
Stand-alone medico-diagnostic and medico-technical laboratories ^b	467	592	783	793	828	854	907	1 072	888	928

Sources: ^aNational Statistical Institute, 2010g; ^bNational Centre of Health Informatics, (various years).

Note: n/a = not available.

Most specialists in ambulatory care have a contract with the NHIF. The package of specialized health services includes primary and secondary examinations, preventative check-ups, dispensary observation, rehabilitation activities, highly specialized medical activities and determining eligibility for temporary disability if the patient's condition requires a longer sick leave. About 50% of the specialized services reimbursed by the NHIF are primary examinations (National Health Insurance Fund, 2008; 2009).

Among specialists, obstetricians, neurologists, surgeons and cardiologists are the most plentiful. There is a shortage in some specialties, such as clinical toxicology, medical parasitology, internal medicine and allergology (Ministry of Health, 2008a). The distribution of specialists varies geographically. The majority is located in district centres and in the capital, which hinders access to specialized ambulatory care in rural areas.

In 2007, a person with SHI made an estimated 0.92 primary, 0.61 secondary and 0.2 visits to outpatient specialists (Vekov, 2008). The average number of total visits per insured patient was thus 1.73 (8% more than in 2005). The number of secondary consultations has been increasing and, in 2007, there were 65 secondary visits for every 100 primary consultations (Ministry of Health, 2008a). Recent data about outpatient contacts in primary care are not available.

5.4 Inpatient care

According to the 1999 Health Care Establishments Act, hospitals in Bulgaria can be multi-profile (with at least two specialized wards) or specialized (usually gynaecological, surgical, paediatric or psychiatric). Hospitals can also be classified according to treatment duration as hospitals for active treatment (for short stays), continuing and long-term treatment hospitals and/or rehabilitation hospitals. University hospitals are affiliated with the four universities and two faculties of medicine in the country. They are multi-profile or specialized hospitals, determined by the Council of Ministers, and train students as well as health professionals at a postgraduate level. The number of each type of hospital is presented in Table 5.2. Inpatient care is also provided by centres for dermato-venereal diseases, comprehensive cancer centres and mental health centres (the former dispensaries).

Table 5.2

Number of hospitals in Bulgaria, 2000–2009

Hospitals by type	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Multi-profile hospitals	127	127	127	126	127	125	122	123	123	122
Specialized hospitals for active treatment	28	29	29	28	28	29	31	30	30	29
Specialized hospitals for continuing and long-term treatment	12	12	10	10	9	9	9	7	7	6
Specialized hospitals for continuing, long-term treatment and rehabilitation	8	7	9	9	9	10	10	11	11	12
Specialized hospitals for rehabilitation	25	25	25	24	24	22	22	22	22	22
Psychiatric hospitals	11	11	11	11	11	12	12	12	12	12
Hospitals of other administrations	16	11	14	7	7	9	9	15	15	10
Private hospitals	18	20	24	32	40	45	54	74	85	93

Source: National Centre of Health Informatics (various years).

Another way to categorize hospitals is based on location (the area served) and on the ability to provide highly specialized care. According to these criteria, there are national hospitals (university hospitals, national centres), district hospitals and local (municipality) hospitals. National hospitals deliver highly specialized care (usually tertiary care) for cases that cannot be treated at local or district level. District hospitals are located in the district centres, include almost all medical specialties and ensure services for cases that cannot be solved at the local level. They are required to have 24-hour emergency wards, clinical pathology and transfusion haematology wards and units for forensic medicine. Local hospitals are multi-profile or specialized and are located in smaller towns, usually consisting of several wards in the basic specialties (paediatrics, obstetrics and gynaecology, internal medicine, neurology, general surgery and physiotherapy). This classification is not related to patient access to hospital care; since 2004, patients have a free choice of hospital throughout the country. The aforementioned division is relevant to the ownership transformation which took place in 1999. Hospitals were mostly owned by the state with only a few exceptions. This changed in 1999 in the following ways:

- university hospitals and other national hospitals are still owned by the state;
- district hospitals are owned by the state (51%) and the municipalities of the district (49%);
- local (municipal) hospitals are owned entirely by the municipalities; and
- private hospitals are enterprises (including Ltd, PLC, etc.).

This change in ownership meant a reconstitution and registration of all health care establishments in accordance with the requirements of Commercial Law. Ownership rights of state-owned hospitals are exercised by the Minister of Health, and of municipal hospitals, by the respective municipal council. Hospitals under other administrations (the ministries of defence, internal affairs, transport and justice) are entirely state-owned and the rights are exercised by the respective minister.

Thus, hospital care is currently provided by public and private health care establishments. The number of private hospitals has risen substantially in the past 10 years and in 2009, they represented 30.4% of all hospitals in Bulgaria. The majority are specialized in surgery, ophthalmology, obstetrics and gynaecology and orthopaedics. Between 2000 and 2009, the number of hospitalized patients in private hospitals increased more than 32 times. In 2009, the 93 private hospitals in Bulgaria had a total of 5292 beds (National Centre of Health Informatics, 2010).

Generally, the management of hospitals is organized by the owner of the respective unit, depending on the form of registration (as Ltd, PLC, etc.). The basic requirements and principles are postulated in the Health Care Establishments Act. Hospitals are led by a manager with executive power. Managerial positions in public hospitals are obtained through a competitive selection process organized by the respective owners (the Ministry of Health, other ministries or the municipal councils). Hospital managers sign a three-year managerial contract with the hospital owner and are usually physicians with additional qualification in health care management. According to the Health Care Establishments Act, all hospitals must have a nursing manager (a head nurse). Other managerial positions (medical director, financing director, administrative director, heads of departments and wards) depend on the structure of each hospital and are recruited for by competitions organized by the hospital manager. Collective organs with advisory functions (Medical Council, Nursing Council and commissions) are typically involved in the management.

In general, Bulgaria has a high number of hospitals: 4.6 per 100 000 population in 2008, compared to an EU average of 2.62 (WHO Regional Office for Europe, 2010). Currently, acute hospitals prevail, while the number of hospitals (and hospital beds) for continuing and long-term care is insufficient. There is a long-postponed hospital reform, associated mainly with the “restructuring” of hospitals, aiming to restore this balance, but it remains one of the unresolved and the most debated issues in health care.

In 2008, Bulgaria had one of the highest admission rates in the EU with 24.1 inpatient admissions per 100 people, while the average for the EU was 17.7 (WHO Regional Office for Europe, 2010). The underutilization of ambulatory care services and the lack of cooperation between inpatient and outpatient care providers are both reflected in the rate, which was comparable only to that of Romania. In 2008, 8.4% of all hospitalizations could have been avoided if definite treatment had been provided in ambulatory care. Moreover, approximately 40% of patients were admitted twice in one year (Vekov, 2008). Many patients are hospitalized for social rather than medical reasons. The cooperation between the hospital network and social establishments is unstable mainly because of different statuses, institutional affiliations and responsibilities.

Several hospitals in Bulgaria have inadequate or poorly maintained buildings, the equipment is old and the conditions of stay are far from satisfactory. Among the challenges faced by the public sector, lack of investment and shortage of medical specialists, especially in smaller hospitals, cause serious problems and have a negative impact on the quality of services provided (Ministry of Health, 2007; 2008a). A great number of hospitals have accumulated financial debt in recent years.

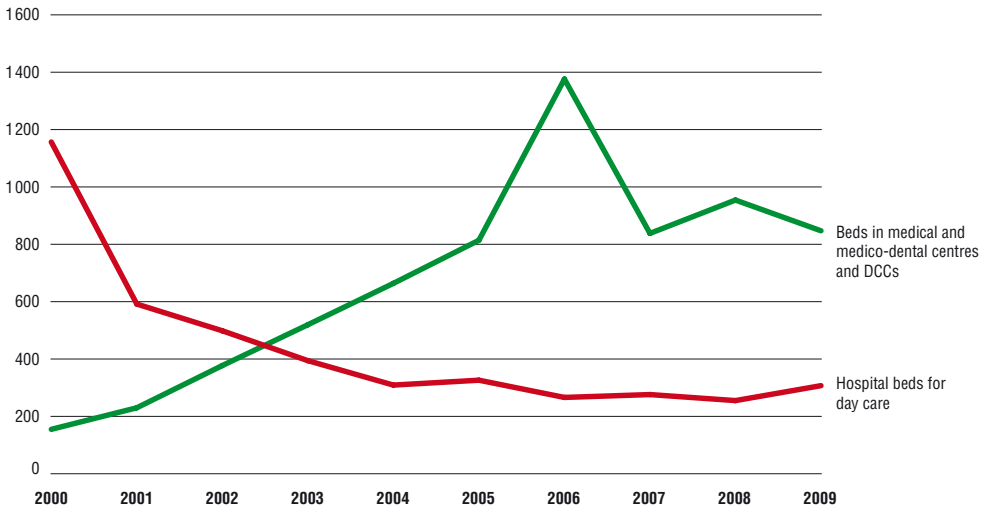
5.4.1 Day care

The share of one-day admissions in hospitals is not substantial. Since 2000, the number of hospital beds for day care has been decreasing (Fig. 5.1). In 2009, their share was just about 0.7% of all hospital beds or 0.4 beds per 10 000 population (National Centre of Health Informatics, 2010). Information about one-day admissions is not available but the utilization of day care beds has been declining since 2005. Usually beds for day care are created in surgical wards (for day surgery), as well as for mental care services, rehabilitation, palliative care, etc. Medical and medico-dental centres and DCCs can have up to ten beds for short-term observation and treatment. The number of such beds has risen more than four times since 2000 (Fig. 5.1). There is a clear trend to shift day care services from hospitals to outpatient care providers. National policy to replace inpatient care with less expensive but more effective outpatient or home care is currently in place only for mental care (see section 5.11 *Mental care*).

In 2010, the Ministry of Health introduced changes to the ordinance of the basic benefit package of services covered by SHI, according to which 12 new “clinical pathways” for one-day admission should be developed, spanning the specialties of, among others, gynaecology, endocrinology, gastroenterology, urology and cardiology.

Fig. 5.1

Beds for day care, 2000–2009



Source: National Centre of Health Informatics (various years).

5.5 Emergency care

In Bulgaria, emergency care is provided by centres for emergency care and hospital emergency wards. Depending on the urgency, patients can contact their GP, call an ambulance or go directly to an emergency ward. Patients without an acute life-threatening illness or injury have to contact their GP. According to the NFC, GPs are obligated to be available around the clock and to provide so-called urgent care. This means that the GP must treat the patient and, if necessary, refer the patient to a hospital. In practice, however, the majority of patients call an ambulance or go directly to emergency wards. Therefore, centres for emergency care are often overburdened with providing non-emergency services that should instead be dealt with by GPs. The centres normally respond to all calls, leading to a waste of human, material and financial resources.

In the 1990s the emergency care network, just like the entire health care network, used to be extensive but inefficient and ineffective. Emergency care was provided by a fragmented network of ambulatory and hospital institutions with no clear definition of responsibilities and links to each other. There was no separation between acute primary care and emergency services. Important changes were made by the central government under the Project on Health Sector Restructuring (1996–2001), funded by the World Bank. These also

affected the status of emergency care, which was completely separated from outpatient and inpatient health care. Since 2001, emergency care services have covered the entire country with a regional centre for emergency care (RCEC) in each of the 28 administrative districts. Based on the National Health Map, there are also 192 emergency care branches in municipalities. In 2007, there was another round of restructuring in the emergency care network whereby the ownership of emergency wards was transferred to district hospitals. Previously these units were governed by the RCECs. Such wards can be created in any hospital.

The Ministry of Health is responsible for the organization, planning and financing of all activities related to the provision of emergency care. The RCECs' and hospitals' emergency wards are the key units of service provision. All health care establishments in Bulgaria are obliged to provide emergency medical procedures free-of-charge, regardless of patient citizenship, address or social security status.

The RCECs are public establishments, financed by the Ministry of Health through its budget. They provide emergency care to ill and injured people at home, on the spot of the incident and during transportation to the hospital. Each centre comprises an administrative department, a district coordination office and branches for emergency care across the served district. The centres are headed by directors who are contracted by the Minister of Health. Their responsibilities include emergency care for sick and injured people, specialized transportation of patients, donors, organs and blood, and training of medical professionals. In 2007, the RCECs employed about 7500 people, including 1500 physicians, 2200 other medical professionals and approximately 2000 drivers (Ministry of Health, 2008a). These formed 372 teams, each of them serving between 20 000 and 30 000 people. The number of teams in each centre depends on the population and size of the area served, but overall numbers have been decreasing in recent years (Ministry of Health, 2008a).

Despite these reform efforts, emergency care in Bulgaria is still characterized by inadequate staffing levels with shortages of physicians and paramedical staff. This negative trend is particularly pronounced in the district of Sofia city and six other districts. Low wages, bad working conditions and limited career opportunities increase staff turnover, particularly among physicians (Ministry of Health, 2008a). Among the challenges in delivering effective emergency care are also the lack of sufficient medical equipment, a shortage of ambulances, and the underdeveloped road and communication infrastructure, particularly in rural areas. Mountainous terrain and the lack of sanitary air transport impede transportation of critically ill people living in remote areas.

The analysis of emergency care indicators in recent years leads to the following conclusions:

- the number of total emergency care contacts has been increasing in recent years, which is indicative of the inadequate capacity in primary and specialized outpatient care;
- records indicate that actual emergencies account for approximately 75% of all calls; and
- in 2007, approximately 14% of the people who sought emergency care in RCECs were hospitalized (Ministry of Health, 2008a).

In many cases, the population uses emergency care to directly access specialized medical care. For patients without SHI this is also a way to obtain medical care free-of-charge.

Planned changes in emergency care are connected with the establishment of GP posts for patients to contact during nights and weekends. This change is intended to improve access to primary emergency care.

5.6 Pharmaceutical care

In the early 1990s, the Bulgarian pharmaceutical industry was highly centralized; production and distribution were under the monopoly of the State Pharmaceutical Company. In 1995, the Law on Medicinal Products and Pharmacies in Human Medicine was proposed and passed by the National Assembly, shifting the overall system of drug supply to the private sector. Pharmacies and pharmacists were among the first health care facilities and health professionals that were privatized or allowed to operate their own private business. Pharmaceutical legislation was changed and amended many times during the next few years and in 2007, the Law on Medicinal Products in Human Medicine was completely revised in order to comply with EU law. It regulates the manufacturing, import, wholesale and retail of drugs.

The drug policy is a part of the state health policy and is carried out by the Minister of Health. According to the Law on Medicinal Products in Human Medicine (2007), there are several advisory bodies to the Ministry of Health such as the Pharmacopoeia Committee and the Supreme Pharmaceutical Council (see section 2.8.4 *Regulation and governance of pharmaceuticals*). The Bulgarian Drug Agency (BDA) is a specialized body under the Minister of Health, which assesses and supervises the quality, safety and efficacy of medicinal products (drugs and medical devices). It is responsible for the

authorization and monitoring of pharmaceuticals in Bulgaria, but also has a shared responsibility for authorization throughout the EU. The BDA authorizes the production and import of medicinal products, registers and licenses the wholesaler and the chemists, and grants permissions for clinical trials. The state regulates and controls the entire pharmaceutical system. The licensing and registration of pharmacies fall under the responsibility of the Ministry of Health, which is also responsible for supplying expensive medications for oncological or rare diseases.

Currently, there are 28 domestic pharmaceutical manufactures and 15 third-country importers (outside the EU) registered by the BDA (Bulgarian Drug Agency, 2010a; b). The main domestic pharmaceutical manufacturers emerged from the former Bulgarian pharmaceutical companies after their privatization and restructuring. Domestic production accounts for 30–40% of the pharmaceutical market (Bulgarian Drug Agency, 2009). Foreign manufacturers operate through representative offices, which perform only promotion and marketing activities, or by local subsidiaries who distribute medicinal products to wholesalers, pharmacies or health care establishments. There are about 680 foreign manufactures, the medicinal products of which are registered in Bulgaria. Many foreign companies have established local subsidiaries, licensed as wholesalers.

According to the Law on Medicinal Products in Human Medicine, the wholesale of medicinal products can be carried out by natural persons or legal entities holding a permit issued by a regulatory authority of an EU Member State. If the warehouses are located in Bulgaria, a wholesale authorization from the BDA is needed. The authorized wholesalers may also import registered medicinal products. Approximately 160 wholesalers are currently licensed by the BDA, some of them with divisions in several cities (Bulgarian Drug Agency, 2010c).

Pharmaceutical manufacturers and importers are entitled to distribute their products based on the manufacturing or import licence. They can participate directly in procurement tenders organized by the Ministry of Health, the NHIF or by hospitals. Public health care establishments are supplied by wholesalers, manufacturers or importers and purchasing is regulated through the Public Acquisition Act. Commercial relations between wholesalers and retailers are not regulated except with regard to wholesaler mark-up, which is specified in an ordinance of the Ministry of Health.

Retail sale of medicinal products is carried out by pharmacies and drug stores. Hospitals and the other health care establishments providing inpatient services can operate pharmacies but only for their own needs. According to the

Ministry of Health register, there are currently 4226 pharmacies in Bulgaria, including pharmacies in health care establishments (Ministry of Health, 2010d). Their number has been rising in recent years but seems to have levelled off due to the fact that each licensed pharmacist may only manage one pharmacy. Most pharmacies in Bulgaria are owned by independent entrepreneurs. A natural person or legal entity may own up to four pharmacies.

Retail sale of prescription-only pharmaceuticals is allowed only in pharmacies. Over-the-counter pharmaceuticals for personal use are available both at pharmacies and at drug stores. There are 939 drug stores in Bulgaria, registered by the BDA (Bulgarian Drug Agency, 2010). The Law on Medicinal Products in Human Medicine explicitly forbids the sale of prescription-only pharmaceuticals in other outlets, as well as on the Internet. Nevertheless, the law allows some exceptions for settlements without a pharmacy. In this case physicians or dentists may also sell drugs but only with the Ministry of Health's permission. The list of pharmaceuticals that can be dispensed by physicians is determined in an ordinance of the Minister of Health.

The Bulgarian pharmaceutical market has been growing since 1999, with the phenomenon continuing in the past two years despite the economic crisis. In 2009, the value of the total pharmaceutical market reached BGN 1553 million (approximately €800 million), which constituted an increase of 27% compared to 2004 (Bulgarian Drug Agency, 2009). Hospital consumption represented 18.4% of the total market, while private purchases accounted for 63.4%; and the remaining 18.2% were ambulatory care pharmaceuticals reimbursed by the NHIF and the Ministry of Health. In 2009, over-the-counter pharmaceuticals represented 16.6% of the total market (Bulgarian Drug Agency, 2009).

Insured people have access to medicinal products covered totally or partially by SHI. The state budget subsidizes pharmaceuticals for the inpatient care of oncological patients, those with certain infectious (for example, tuberculosis) and rare diseases as well as dialysis and transplantation patients. A special Ministry of Health commission compiles the Positive Drug List determining which pharmaceuticals are covered by SHI and the state budget. The Positive Drug List comprises four groups of medicinal products:

- outpatient drugs reimbursed by the NHIF as stipulated by the Health Insurance Act;
- pharmaceuticals purchased by public hospitals, centres for emergency care, inpatient psychiatric facilities, medico-social care centres for children and centres for transfusion haematology which are not included in the basic benefit package;

- pharmaceuticals for oncological and rare diseases as well as for dialysis and transplantation patients, which were financed by the Ministry of Health through the state budget until 2011 and are now funded by the NHIF;
- pharmaceuticals for AIDS and infectious diseases financed by the Ministry of Health through the state budget.

The Positive Drug List is organized in pharmacological groups with relevant international non-proprietary names and includes the defined daily dose (DDD), the reference value for the DDD and the reference price. Pharmaceuticals included in the list are selected on the basis of several criteria such as efficacy, therapeutic effectiveness, and safety as well as on the basis of pharmacoeconomic analysis.

Reimbursement levels of pharmaceuticals covered by the SHI are determined according to the NHIF budget for the respective year (capped for outpatient drugs) and are specified in the Reimbursement List. In recent years, expenditures for pharmaceuticals represented approximately 20% of the NHIF payments (Law on the Budget of the NHIF 2008; 2009; 2010). Reimbursement may be also provided under VHI coverage.

The price of pharmaceuticals is regulated by the Ministry of Health. A special Ministry of Health commission approves the prices of medicinal products included in the Positive Drug List and determines the maximum prices of prescription-only pharmaceuticals. The ex-factory price of a given product in the Positive Drug List is calculated based on a system of international price comparisons with eight key (Romania, France, Estonia, Greece, Slovakia, Lithuania, Portugal and Spain) and five additional (Belgium, Czech Republic, Poland, Latvia and Hungary) EU Member States. The lowest price in these countries is set as the Bulgarian ex-factory price.

Reference prices are generally used to determine reimbursement levels. The mark-up of wholesalers and pharmacies is set by the Ministry of Health, depending on the producer (or importer) price per package and varies from 24% to 31% in total. It is set in an ordinance of the Ministry of Health. For over-the-counter pharmaceuticals, the commission only registers maximum retail prices, suggested by the producer or importer.

Retail medicine consumption in Bulgaria was $\square 65$ per capita in 2008, while total consumption (including hospital sales) amounted to $\square 80$ per capita and was among the lowest in the EU (Trifonov, 2010). The prices of pharmaceuticals have been decreasing since 2002 but remain high: according to the 2006

national representative study, patients often cannot afford prescribed medicines (Dimova, Popov & Rohova, 2007). Moreover, co-payments for pharmaceuticals covered partially by SHI are also considerably high.

5.7 Rehabilitation/intermediate care

Rehabilitation and physiotherapy are provided by ambulatory individual or group practices and centres and in specialized wards at multi-profile hospitals or in specialized rehabilitation hospitals and sanatoria. SHI covers most outpatient rehabilitation services for patients on referral from a GP or specialist. The range of services in ambulatory care includes manual therapy, special physical exercise programmes, thermo-therapy, bathing and electromagnetic wave therapy. Regarding inpatient care, in 2010, the NHIF reimbursed hospitals for services provided according to nine “clinical pathways”. The Ministry of Labour and Social Policy subsidizes part of the services provided in specialized hospitals and sanatoria through the Pension Fund.

In 2009, there were a total of 5392 beds for physiotherapy and rehabilitation in Bulgaria or 7.1 beds per 10 000 population (National Centre of Health Informatics, 2010). In the same year, there were 12 hospitals for continuing, long-term treatment and rehabilitation with 840 beds; 22 specialized hospitals for rehabilitation with a total number of 3293 beds; and multi-profile hospitals with physiotherapy and rehabilitation wards with a total number of 519 beds. There were also 4 sanatoria with 740 beds for rehabilitation services. The bed occupancy rate for physiotherapy and rehabilitation was 70% (or 253 days) in 2009 and the average length of stay was 9.8 days (National Centre of Health Informatics, 2010). Besides hospital care, rehabilitation and spa treatment supervised by specialists is also carried out in a number of hotel-like establishments at seaside, mountain and spa resorts throughout the country.

5.8 Long-term care

Long-term care is provided both in institutions (residential care) and in communities (home care). Some services are state funded, financed by the Ministry of Health or the Ministry of Labour and Social Policy, others are subsidized by the municipalities. In some cases, the services are paid for by the patient’s family.

Institutions for residential care include continuing and long-term treatment hospitals, medico-social care centres and different types of residential homes. In 2009, there were 1738 hospital beds for long-term care, 356 of which were in the 6 continuing and long-term treatment hospitals and 840 beds were in 12 continuing, long-term treatment and rehabilitation hospitals (National Centre of Health Informatics, 2010). Multi-profile hospitals can open wards for continuing and long-term care, specialized for children or for adults. Hospitals (or wards) for continuing and long-term treatment are intended especially for patients whose recovery time is expected to be long, or for chronically sick patients who require physical and mental support.

Besides hospitals, there are also centres for medico-social care and residential homes. The medico-social care centres are health care establishments where medical professionals and other specialists offer continuous medical observation and specific care for chronically sick patients of all ages. They also provide specialized home care for those with chronic diseases and medico-social problems. The various residential homes provide accommodation for those requiring constant nursing care (for example, people with dementia) or for people who need less intensive home care. They are owned by the state or municipalities or are private homes (licensed according to the Social Assistance Act of 1998). In 2008, there were 32 medico-social care centres for children and 299 specialized institutions for residential care (see Table 5.3). Nursing homes (mainly private) can also provide residential care for adults with physical disabilities or with chronic diseases.

Table 5.3

Institutions for residential care and medico-social care centres, 2008

Institutions by type	Number	Capacity (places)	Number of residents
Homes for physically disabled adults	27	1 638	1 530
Homes for mentally ill adults ^a	58	4 689	4 401
Homes for people with sensory disabilities	5	158	134
Homes for elderly	100	6 072	5 340
Homes for mentally ill children and youth	26	1 612	1 502
Homes for children deprived of parental care	82	5 522	4 277
Medico-social centres for children	32	3 864	2 771

Source: National Statistical Institute, 2010.

Note: ^aIncluding homes for adults with dementia, homes for adults with intellectual disabilities and homes for adults with mental disorders.

The quality of services in residential homes varies considerably and depends largely on the managerial team as well as on the ownership and financing type. There is a recognized and widely discussed need for child protection reforms

and more family-type institutions and services. The interrelation between health care establishments and social institutions is often characterized by ineffectiveness, lack of cooperation and disintegration of services.

Community services include centres for social rehabilitation and integration, for children and youth and for people with cognitive impairment, as well as social educational-professional establishments, houses for temporary accommodation, etc. They are provided by the municipality or NGOs and financed by the municipality budgets or different national and international funds.

Elderly care is organized by municipal social assistance services. Adults with physical disabilities living in the community can register for services for social rehabilitation and integration. Community services for seniors and adults with physical disabilities provided at home (the so-called home care patronage) include social, medico-social and/or medical services. For the provision of home care services, the municipal council can hire attendant personnel or can contract with private providers, which are licensed in conformity with the law. Home care is also offered by residential homes, nursing homes and medico-social care centres.

The main problems of long-term care are outlined by the Ministry of Labour and Social Policy (2010a) as follows:

- insufficient volume and range of services and uneven distribution across the country;
- lack of comprehensive rehabilitation of people with disabilities;
- lack of community-based alternatives to residential care; and
- insufficient and inadequate coordination between RHI, Regional Directorates for Social Assistance and municipal administrations.

5.9 Services for informal carers

The provision of services for the elderly or for people with physical or mental disabilities at home remains underdeveloped in Bulgaria. The burden of care for these patients falls largely on family members and relatives. Most informal carers provide care for long periods and that limits their options for employment in the formal sector. Since 2003, the Ministry of Labour and Social Policy has implemented the “Assistants of People with Disabilities” programme,

which started as a part of the National Programme “From Social Benefits to Employment”. The programme’s components included the creation of positions for “personal assistants” and “social assistants” and, later, for “home assistants”:

- the “personal assistant” provides permanent home attendance to seriously ill or disabled children or adults to meet daily needs;
- the “social assistant” provides services aimed at preventing social marginalization and supporting social integration; and
- the “home assistant” helps with personal hygiene, household maintenance, food preparation, etc.

The programme aims to reduce the number of people in residential care institutions by keeping them in a family environment as well as to create jobs in the social sphere, thereby expanding options for unemployed people. Eligible assistants sign an agreement with an authorized employer (either the office of the Social Assistance Agency, municipal administration or an authorized firm) who is responsible for their performance. A specialized medical body determines those eligible for an assistant based on health status. There were 6230 personal assistants in 2003, compared to 13 900 personal and 2800 social assistants in 2006 (Ministry of Labour and Social Policy, 2009). In 2010, the budget of the “Assistants of People with Disabilities” programme was reduced (due to financial restrictions related to the economic downturn in 2009–2010) and the number of personal assistants dropped to 4000. In the same year, social and home assistants provided care to 5900 people with disabilities (Ministry of Labour and Social Policy, 2010b).

The programme’s results have been positive for all stakeholders involved so far. Patients have better living standards and easier access to social assistance and health care. Assistants have achieved legal employment status and, as a result, are entitled to benefits and rights under labour legislation.

5.10 Palliative care

The basic principles of palliative care are regulated by the Health Act (2004) and aim to ensure the best possible quality of life for patients and their families. According to the law, palliative care provision involves the GPs, outpatient and inpatient health care establishments and hospices. Care is delivered by teams consisting of a doctor, a nurse, a social worker, a psychiatrist or psychologist (if

needed), a clergyman of the respective religion (if requested), and volunteers, usually working as caregivers. Everyone involved in the provision of palliative care undergoes a special training course.

In 2003, the NHIF started to reimburse palliative care services. The clinical pathway “palliative care for terminal cancer patients” can be carried out only in inpatient health care facilities, including hospitals for continuing and long-term treatment, multi-profile hospitals for active treatment with palliative care units, and comprehensive cancer centres with inpatient beds (the former dispensaries for oncological diseases) and has a duration of 20 days.

Palliative care is also provided by hospices and medico-social care centres (nursing homes). The number of hospices is growing: between 2005 and 2009, their number rose by 79% and in 2009, there were 59 functioning hospices in the country with 659 beds (National Centre of Health Informatics, 2010). The majority are privately owned and some of them are owned by the municipalities, by NGOs or by religious organizations. Some hospices and medical centres provide palliative services at the patient’s home, which are usually paid for by the patient. There are also municipal and donor-financed schemes but with limited duration and coverage. Nevertheless, very few public resources are committed to palliative care, hindering patient access. In most cases, patients are tended to at home by family, mainly because of financial reasons. The other option for elderly patients or patients in a terminal condition are informal carers (usually retired nurses, see previous section).

Moreover, the availability of palliative care facilities is insufficient. Most of them are concentrated in the big cities. The key challenges facing the development of palliative care in Bulgaria are the great geographical disparities in the distribution of specialized facilities, the lack of qualified staff, the limited range of services financed by the NHIF and the inadequate integration and coordination of care.

5.11 Mental health care

Mental health reform was introduced alongside general health reform in Bulgaria. Before 2001, few changes had been made in the provision of mental health care, which relied heavily on the traditional institutional model with limited outpatient services and which lacked integration with the social system. There were no options for the psychosocial rehabilitation of mental patients. Most specialized psychiatric hospitals were isolated and the substantial distance from the patients’ residence hindered their reintegration.

To cope with these challenges the National Programme for Mental Health (2001–2005) was introduced in 2001. It was revised and extended into a Mental Health Policy (2004–2012) along with a National Plan for Mental Health Policy Implementation (2004–2010). The main goals of the policy include protection and improvement of the population's mental health, countering stigma and discrimination, and integration of mental health care into the health system. It provides an integrated approach to prevention, treatment and rehabilitation of mental diseases. The policy is oriented towards multifunctional and community-based organizations coordinated with social assistance, education and employment services. The action plan is implemented in collaboration with local administration, government bodies and NGOs.

The basic regulations on mental health care are included in the Health Act (2004). According to the law, the state, the municipalities and NGOs are responsible for safeguarding mental health by providing accessible and quality health care and organizing active prevention of mental disorders, training programmes, mental health promotion, etc. The municipalities provide options for psychosocial rehabilitation as well as material and social support for people with mental disorders.

The Health Act affirms the following basic principles for mental health care provision:

- minimizing limitation of personal freedom;
- respecting patients' rights and reduction of institutionalization;
- stimulating self-assistance and mutual assistance as well as ensuring social and professional support for those who need it;
- building an efficient network for outpatient psychiatric care; and
- giving priority to care provided by the family and community.

The law establishes detailed rules for involuntary detention (emergency hospitalization and compulsory treatment). In both cases, the patient has the same rights as other citizens unless he or she is found to be of diminished capacity. The court makes decisions regarding compulsory treatment. The conditions and procedures relating to the treatment of people with mental disorders are regulated by an ordinance of the Minister of Health. The Medical Standard of Psychiatry, adopted with an ordinance of the Ministry of Health in 2004, sets the quality requirements of mental care services.

Mental health care is provided both by outpatient and inpatient facilities. Ambulatory services are provided by GPs, by individual psychiatric practices and by psychiatrists' offices in DCCs and medical centres. In 2010, the NHIF contracted 388 outpatient facilities to deliver such services (National Health Insurance Fund, 2010). These are unevenly distributed across the country and concentrated predominantly in the three largest cities (Sofia, Plovdiv and Varna).

Inpatient care is provided by specialized psychiatric hospitals and psychiatric wards in multi-profile hospitals, as well as by the mental health centres (former dispensaries for psychiatric diseases). In 2009, there were 12 psychiatric hospitals with 2685 beds, 12 mental health centres with 1530 beds and 964 beds in multi-profile hospitals (National Centre of Health Informatics, 2010). Since 2001, the number of psychiatric hospital beds has been reduced by 11.3% and in 2009, the psychiatric network had a total of 5179 beds. Despite the implementation of different measures for improving access to outpatient care between 2001 and 2009, hospitalizations increased by more than 40%. In 2009, psychiatric beds represented 10.8% of the total number of hospital beds or 6.8 beds per 10 000 population (National Centre of Health Informatics, 2010). Some hospitals also have day-care units.

Mental health centres provide outpatient and inpatient care, as well as preventative treatment and some social services. They implement programmes for the identification of people with mental disorders and for early diagnosis, continuous treatment and mental health promotion. The centres fulfil many of the functions of a community care unit, including observation and counselling of patients, so-called "home care patronage" and programmes on psychosocial rehabilitation and social adaptation. They also have inpatient departments for active treatment of acute mental patients. Generally, mental health centres have more patients than specialized psychiatric hospitals, as the latter tend to patients with chronic conditions and the length of stay is substantially longer.

Emergency mental care is provided by mental health centres, specialized psychiatric hospitals, psychiatric wards at multi-profile hospitals and the RCECs. When the condition of the patient requires continuing treatment after the emergency, this needs to occur within 48 hours.

Furthermore, the Ministry of Labour and Social Policy and the municipalities support mental health care through a network of state or municipal social establishments (see section 5.8). This network includes: centres for social rehabilitation and integration (241 with 6927 places in 2008); day-care centres for children and young people (82 with 2583 places in 2008); day-care centres for adults with cognitive impairment (31 centres with 806 places in 2008);

homes for children and youngsters with cognitive impairment (26 homes with 1612 places); and homes for adults with cognitive impairment (58 homes with 4689 places in 2008) (National Statistical Institute, 2010g). Specialized social institutions have multidisciplinary teams, including physicians, nurses, social workers and paramedics.

Mental health care is financed by the NHIF based on the NFC, as well as through the state and municipal budgets. Since the late 1990s, some NGOs have been establishing communities for the treatment of people with addiction to drugs. Funding has come from charities, relatives of the affected and through various projects.

According to a WHO report in 2001, the number of psychiatrists in Bulgaria was relatively high compared with other countries in Europe (9 per 100 000 population). This number varied across countries, between 0.06 per 100 000 in low-income countries to 9 per 100 000 in high-income countries (WHO, 2001). However, since 2001, their number has been falling and in 2009 there were 565 psychiatrists in Bulgaria or 7 per 100 000 population (National Centre of Health Informatics, 2010). Bulgaria is now behind both the EU15 average (12.9/100 000) and the EU12 average (8.9/100 000) (WHO Europe 2010a). The number of psychotherapists also seems inadequate. The number of other health professionals working in the field of mental health is not exactly known but, based on expert opinion (Master Plan for Health Services in Bulgaria, 2006), is insufficient.

Mental morbidity in Bulgaria was 2696.2 per 100 000 in 2000 (National Centre of Health Informatics, 2003) and decreased to 2270.3 per 100 000 in 2009 (National Centre of Health Informatics, 2010). Regarding severe mental disorders, the most prevalent diagnoses were cognitive impairment (519.4/100 000 in 2009), affective disorders (388.4/100 000 in 2009) and schizophrenia (374.7/100 000 in 2009). The prevalence of severe mental disorders in the total population was relatively low (1.5%). According to an international epidemiological study (Ministry of Health, 2008a), common mental disorders (less severe mental problems, which do not lead to a dramatic disturbance in social functions) are widespread. They accounted for 20% of total morbidity among adults in 2006. The most prevalent diagnoses in this category were anxiety disorders (13.1%), followed by depressive disorders (8.5%).

The main problems and challenges in mental health care are:

- a focus on treatment rather than on the prevention of mental disorders;
- a lack of programmes for early diagnosis;

- inadequate governance, municipal and intersectoral coordination; and
- insufficient training and lack of mental health professionals (Ministry of Health, 2008a).

There is a gradual trend in Bulgaria towards community-based care but the pace of transition is still very slow – places in day-care centres are limited and unevenly distributed across the country. Integration and communication between different providers is constrained, jeopardizing continuity of care. At the primary care level, mental health services are underdeveloped. Re-hospitalization, extensive stays and even lifetime institutionalization are still common among chronically sick mental patients. Many reports show that the conditions for patients in hospitals and social institutions are below any acceptable standards. In theory, mental health care is one of the priorities of the health policy agenda, but to date this is not visible in practice. Instead, mental health care lacks sufficient resources for sustainable implementation and continuation of initiatives.

5.12 Dental care

Dental care is delivered in outpatient and inpatient facilities. According to the Health Care Establishments Act (1999), there are several types of outpatient dental care facilities:

- individual or group practices for primary dental care;
- individual or group practices for specialized dental care;
- medico-dental and dental centres; and
- stand-alone dental-diagnostic and orthodontist laboratories.

Regulations for outpatient dental care facilities are similar to those for primary and specialized medical care. General dentists work in individual and group primary practices, while dentists with further specializations work in individual and group specialized practices, as well as in dental or medico-dental centres. Medico-dental centres must include at least three doctors and/or dentists with different specialties and dental centres must include at least three dentists with different specialties. Dental care is delivered mainly in outpatient facilities; inpatient dental treatment is provided by specialized surgery wards in hospitals.

In 2009, there were 33 medico-dental centres, 49 dental centres and over 3000 individual and group practices for primary or specialized dental care (Table 5.4). As in medical care, individual practices prevailed, although the number of group practices for primary dental care has been increasing since 2004. Outpatient facilities are predominantly privately owned.

Table 5.4

Outpatient dental care providers, 2000–2009

Providers by type	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Individual practices for primary dental care	6 765	n/a	n/a	n/a	7 758	7 483	7 863	7 888	4 658	4 724
Group practices for primary dental care	39	n/a	n/a	n/a	142	146	181	216	210	241
Individual practices for specialized dental care	163	n/a	n/a	n/a	152	132	155	147	81	67
Group practices for specialized dental care	n/a	n/a	n/a	n/a	1	1	1	1	2	1
Dental centres	82	70	70	60	56	53	52	66	51	49
Medico-dental centres	33	26	46	43	44	47	47	56	37	33

Source: National Centre of Health Informatics (various years).

Note: n/a = not available.

Although the number of dentists in Bulgaria is relatively high in comparison with other EU countries (see section 4.2.1), there are substantial disparities in geographical distribution. The majority of practices are concentrated in the big cities. The number of dentists per 10 000 people varied greatly across the country in 2009 – from 13.3 in Plovdiv and 11.8 in Sofia city to 4.8 in the Targovishte and 4.9 in Razgrad districts (National Centre of Health Informatics, 2010).

Dental care facilities operate similarly to health care establishments for ambulatory medical care. They are free to contract with the NHIF and provide services covered by the basic benefit package and can also contract with VHI companies. Patients can directly access primary dental care but SHI covers only a few services.

For some special categories of insured people (children deprived of parental care, prisoners, young people up to the age of 18 with mental disorders), dental services are fully covered by the NHIF. Otherwise, the NHIF only partially reimburses dental services provided and patients have to make out-of-pocket payments. For children and teenagers up to the age of 18 the NHIF covers one examination and four dental procedures per year; for adults there is a reimbursement of three dental services per year specified in the NFC. Patients

must pay any other services. This explains the uneven geographical distribution of dental care facilities and dentists: their density correlates with the wealth of the district (Zafirova et al., 2010). Hospital dental care is reimbursed by the NHIF based on nine clinical pathways.

5.13 Complementary and alternative medicine

The provision of alternative care is legal in Bulgaria. The Health Act (2004) defines a range of complementary and alternative medical services that are available:

- use of non-medicinal products of organic and mineral origin;
- non-traditional physiotherapy methods;
- homeopathy;
- acupuncture;
- iris, pulse and auricular methods of medical testing; and
- nutrition and dietetics.

Homeopathy can be practised only by physicians and dentists. Other methods of alternative medicine can be applied by degree-holding physicians, dentists, pharmacists, nursing professionals with a degree obtained at a medical college or with a bachelor degree obtained at a medical university, and by those who have attended special training for at least four semesters at a medical university.

Providers of alternative medical treatment have to register their services at the RHI. These oversee the implementation of legal requirements, treatment effects and patient complaints. Patients have to be registered in a visitor's book and necessary patient data (including health problems and treatment performed or prescribed) have to be collected. Alternative medical services are not covered by the NHIF and are paid out of pocket by the patients.

5.14 Health services for specific populations

The Roma population, one of several ethnic minority groups in Bulgaria, represents approximately 5% of the entire population (according to the 2011 census data). Ensuring access to health care for the more than 325 000 members of the Roma community has been problematic. They have the highest birth rate and the highest death rate. Infant mortality rate is about three times higher

than for other ethnic groups. Life expectancy is 10 years shorter; the morbidity of chronic diseases is substantially higher (Ministry of Health, 2005). Poor living conditions, limited access to safe water and inadequate sanitation render the Roma vulnerable to communicable diseases, including hepatitis A and tuberculosis. They are almost 10 times more exposed to severe poverty than other Bulgarians. Roma community members also comprise a substantial part of the street children, homeless and sex-worker populations (Ministry of Health, 2005). A survey in 2004 found that only 54% of the Roma was covered by SHI (Ministry of Health, 2005). SHI is compulsory for all Bulgarian citizens, but cultural patterns, low levels of education and frequent migration hinder the implementation of legal regulations for the Roma community and have contributed to inequalities in access to health care.

The Government of Bulgaria has adopted some important measures aimed at overcoming access barriers for the Roma population and promoting Roma health. The National Plan “Decade of Roma Inclusion 2005–2015” and the Strategy against Poverty and Social Exclusion have been established and implemented. The Government has also adopted a Health Strategy for Disadvantaged Ethnic Minorities in order to solve the health problems of specific populations, including the Roma community.

National and local programmes aiming to integrate the Roma community into the health care system are implemented in collaboration with NGOs. Roma people are trained as mediators in charge of enhancing community health knowledge at the national level. These mediators are expected to serve as a link to health care establishments, facilitate specific health status tests and coordinate local programmes. At the local level, training programmes, including family planning and sexually transmitted disease prevention, are implemented by medical experts.

The project “Integration of Minority Groups with Special Focus on Roma” was implemented between 2004 and 2009, and supported by the Ministry of Health. In partnership with municipal authorities, conditions were created to bring health care services closer to the Roma population, by opening medical and dental outpatient departments, equipping mobile laboratories and providing consultations in areas with a high concentration of Roma people. A screening programme was also initiated. However, there remains a comparatively large group of the population (people and families with low income, the undereducated and the unemployed, including Roma) who continue to face substantial barriers to health care access. There are some studies about barriers Roma children face when accessing health services. Among the most important

barriers are poverty, administrative and geographical obstacles, low levels of parental education, and lack of ways to accommodate the cultural, linguistic and religious specifics of this population group (Rechel et al., 2009a).

The provision of medical services for prisoners is regulated by an ordinance of the Ministry of Health and the Ministry of Justice. Medical care is provided by medical centres and specialized hospitals in prisons, which are owned by the Ministry of Justice. If needed, other health care establishments can deliver health services for prisoners.

Military personnel and police personnel have direct access (without referral) to the health care establishments owned by the Ministry of Defence and the Ministry of Internal Affairs respectively. They also have access to regular health care since all are obliged to have SHI.

6. Principal health reforms

Health care reform since 1989 passed through three stages. The first stage (1989–1996) was characterized by the abolishment of the state monopoly in the health system, building a decentralized health care administration, and the emerging idea for the introduction of a health insurance system. During the second stage (1997–2001), the new health insurance system was introduced through the landmark laws on health insurance, health care establishments and the professional organizations of physicians and dentists. In the third stage (2002 to the present), the legislative foundation of the health care reform was completed with the adoption of new laws and amendments and additions to the existing regulatory acts. Efforts during the third stage aimed to decrease the number of individuals without SHI coverage and to secure the financial stability of the system (mainly by raising the health insurance contribution from 6% to 8%). Yet the efforts did not lead to the desired results.

Several changes were made in the structure and management of the health system. The autonomy of the NHIF was restricted, which substantially increased the role of the state in the NHIF management. Amendments to the Health Law in 2009 installed a civil council on patient rights at the Ministry of Health. In 2010, the former dispensaries were transformed and renamed into mental health centres, comprehensive cancer centres, and centres for dermatovenerological diseases. In February 2011, the Cabinet approved a new National Health Map, which aims to set minimum and maximum numbers of health care providers by type and district, based on the actual needs of the population.

The development of national medical standards for different medical specialties, as anticipated by the 2004 Health Act, is still ongoing at the time of writing. New standards were developed, the number of covered medical specialties increased and previously existing standards improved. In 2010, a new Medical Audit agency was established as part of the Ministry of Health.

The agency's main functions are monitoring health service quality and patient safety. At the same time, the accreditation of health care institutions, long considered one of the basic elements of the quality management system, is no longer obligatory.

According to the National Health Strategy 2008–2013, future developments will be aimed at public health, pharmaceutical care, human resource development, an integrated information system and financial sustainability, as well as participation in the EU institutions' activities and effective acquisition of EU Structural Funds. There are also plans for changes in the field of voluntary health insurance and hospital payment mechanisms.

6.1 Analysis of recent reforms

The health care reform in the last twenty years passed through three definite stages, which differed in terms of significance, intensity, and effects of the reforms (Dimova, Popov & Rohova, 2007). The first stage (1989–1996) was characterized by the abolition of the state monopoly in the health system through the re-establishment of the private sector; restoring professional associations of physicians and dentists; and building a decentralized health care administration. Furthermore, the idea emerged that the introduction of a SHI system was the only way to effectively reform health system financing. The efforts during this stage were virtually all directed to the implementation of some essential changes, but did not constitute a systemic health system reform.

The second stage (1997–2001) witnessed the most substantial changes in the health system to date. The adoption of a reform package, consisting of laws on health insurance, health care establishments and the professional organizations of physicians and dentists, combined with pharmaceutical legislation elaborated during the first stage, formed the core of the health care reform. These laws aimed to establish regulation of the democratic and market development of the medical care in Bulgaria. The most essential changes were:

- a health insurance system was introduced through the establishment of the National Health Insurance Fund (NHIF) and the legalization of voluntary health insurance (1998);
- the state monopoly in health care was abandoned;
- the organizational and structural functioning of the health system was changed;

- contractual relations between the NHIF and health care providers were introduced as well as new payment mechanisms;
- management of health care providers was decentralized; and
- the professional associations of physicians and dentists were assigned certain rights and liabilities related to the regulation of the health system.

During this period, the major element of the systemic health care reform was achieved. The former health system was abolished, and the normative, organizational and structural ground was prepared for a new health system, corresponding to the new type of political, economic and public relations in the country.

In contrast with the second stage, the third stage (2002–present) is characterized by delayed and hesitant development of reform initiatives. This frequently involved inconsistent and contradictory measures, which changed the initial reform direction. The most essential result was the completion of the legislative foundation of health care reform by adopting new laws and amendments and additions to existing regulatory acts. Of crucial importance for the health system were the Health Act, which substituted the 1972 Public Health Act, and the Professional Organizations of Nurses, Midwives and Associated Medical Specialists Act (2005). In addition, some amendments were made to the basic health legislative acts elaborated in the previous reform stages (Box 6.1). However, the majority of the changes in the third stage did not substantially affect the design and functions of the system. Lastly, several strategies, concepts and plans (for example, for restructuring hospital care) were developed at different moments, but none was fully implemented.

Box 6.1

Major reforms and policy initiatives

First stage (1989–1996)

- 1989 Beginning of democratic transition
- 1990 Re-establishment of Bulgarian Medical Association
- 1991 New Constitution of the Republic of Bulgaria
- 1991 Local Self-Government and Local Administration Law
- 1991 Regulation on Medical and Dental Private Practice
- 1994 Government decree on contracting out for general services
- 1995 National Health Strategy
- 1995 Pharmaceuticals and Human Medicine Pharmacies Act

Box 6.1 cont'd**Second Stage (1997–2001)**

- 1997 Law on Health and Safe Working Conditions
- 1998 Health Insurance Act
- 1998 Act on the Professional Organizations of Physicians and Dentists
- 1999 Act on Narcotic Substances and Precursors Supervision
- 1999 Health Care Establishments Act
- 1999 Law on Foods
- 2000 First National Framework Contract (yearly basis)
- 2001 National Health Strategy

Third Stage (2002–present)

- 2002 Law on the Harmful Influence of Chemical Substances and Mixtures Protection (amendments and additions in 2005, 2006, 2007, 2008, 2010)
- 2003 Law on Blood, Blood Donation and Blood Transfusion (amendments and additions in 2006, 2007)
- 2004 Hospital Financing Reform
- 2004 National Drug Strategy
- 2004 Act on Transplantation of Organs, Tissues and Cells (amendments and additions in 2005, 2006, 2009)
- 2004 Health Act, Amendments and additions (2005, 2006, 2007, 2008, 2009, 2010)
- 2005 Law on Ratification of the Framework Convention on Tobacco Control
- 2005 Professional Organizations of Nurses, Midwives and Associated Medical Specialists Act (amendments and additions in 2005, 2006, 2007, 2008)
- 2005 Law on Professional Organizations of Medical and Dental Physicians (changed title in 2005; amendments and additions in 2005, 2006, 2007, 2008)
- 2005 Amendments and additions of the 1999 Health Care Establishments Act (2005, 2006, 2007, 2008, 2009, 2010)
- 2005 Amendments and additions of the 1998 Health Insurance Act (2005, 2006, 2007, 2008, 2009, 2010)
- 2005 Amendments and additions of the 1999 Act on Narcotic Substances and Precursors Supervision (2005, 2006, 2007, 2008, 2009, 2010)
- 2005 Amendments and additions of the 1997 Law on Health and Safe Working Conditions (2005, 2006, 2007, 2008, 2009, 2010)
- 2005 Amendments and additions of the 1999 Law on Foods (2005, 2006, 2007, 2008, 2009, 2010)
- 2006 Law on Ratification of the Additional Protocol to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings
- 2006 Strategy for e-health implementation in Bulgaria
- 2007 Law on Pharmaceutical Products in Human Medicine (suspended the 1995 Pharmaceuticals and Human Medicine Pharmacies Act)
- 2007 Law on Medical Products (amendments and additions in 2008, 2009, 2010, 2011)
- 2008 Law on Acknowledgment of Professional Qualifications
- 2008 National Health Strategy 2008–2013

Individuals without coverage

The efforts to decrease the number of individuals without health insurance coverage, which was also mentioned in the previous *Health Systems in Transition* profile on Bulgaria (Georgieva et al., 2007), have continued without success. The problem became apparent in 2003 when the National Insurance Institute (the organization responsible for contributions collection) was able to provide data on the health insurance status of the population after development of its information system. In response, the NHIF stopped reimbursements for uninsured individuals. According to Ministry of Health data from March 2004, the largest share of uninsured individuals, which were more than two million in 2003, was presented by Bulgarian citizens living abroad as well as groups with low socioeconomic status (Markova & Kirov, 2007). Amendments to the Health Insurance Act were made in December 2004 to tackle the high level of the uninsured. First, individuals living abroad more than 183 days per year were relieved of their obligation to pay health insurance contributions. Second, the state became responsible for covering pensioners, people with disabilities from wars, children under the age of 18 and citizens receiving certain social security benefits. As a result the number of uninsured individuals decreased. In 2004, their number stood at 1.4 million, which then further fell to 1.1 million in 2005 (Bulgarian National Audit Office, 2006). In 2006, the Bulgarian National Audit Office concluded that the legislative changes did not lead to a substantial decrease in the overall number of individuals without coverage. There was a substantial decrease only in the number of uninsured individuals in the lowest income bracket (Bulgarian National Audit Office, 2006). Since 2010, individuals lose their coverage after not having paid three monthly contributions in the last 36 months instead of in the last 12 months. The extension of this period, however, did not affect the number of temporarily and long-term uninsured individuals (the largest part of them with low or no income). It merely meant that the uninsured had more time to run up more debt. In early 2011, the media reported that the number of uninsured individuals amounted to more than 1.7 million (23% of the population).

Financial stability of the health system

In 2009, the compulsory SHI contribution increased from 6% to 8% of income. This, along with the increase of the minimal insurance income, raised NHIF revenue by 67% in 2009 compared to 2008. However, the system continued to experience lack of financial resources. In interviews, the Minister of Health and his deputies declared that the state hospitals had a debt of more than BGN 340 million (□174.4 million) to their suppliers in 2009. In 2010, they continued to accumulate debt, a fact widely publicised by the media. Municipal hospitals

also experienced financial difficulties. A fundamental reason for system underfunding rests with the prices of health services. Prices are not established on the basis of real service costs but on the finances available at the NHIF. Prices are thus determined by the NHIF and not through market mechanisms.

The lack and inefficient use of financial resources by health care providers are recognized as two of the most essential weaknesses of the health system (Ministry of Health, 2008b). Arguably, the financial problems of the system are due in a greater degree to payment mechanisms (which do not promote efficiency) than to the incapability of the providers to use resources efficiently. Although there is no doubt that more resources need to be channelled to the system, payment methods still do not reward efficiency or good performance, which complicates efficient purchasing of health services. If this system as well as its lack of incentives does not change, the health system will keep absorbing financial resources ad infinitum (Dimova, Popov & Rohova, 2007).

Health system structure and management

Changes with the greatest impact on the health system were those introduced in the management of the SHI system. The relative autonomy of the NHIF was restricted twice (in 2002 and 2009) and the control by the government on its management was substantially strengthened. Established as an independent autonomous public institution, the NHIF has lost a substantial part of its independence in the years after 2002. Initially, the state, employers and insured individuals were presented equal in rights in the NHIF supreme governance body (the Assembly of Representatives). In 2002, with a Health Insurance Act amendment, the number of employers' and insured individuals' representatives was reduced. This substantially strengthened the role of the state in NHIF management. Changes in 2009 included the abolishment of the Assembly of Representatives and the Control Council as well as a second reduction of the number of citizen and other nongovernment representatives in the NHIF managing body. Consequently, the NHIF was turned almost into a subordinate structure of the Ministry of Health. These changes aimed at strengthening the control of the state on public resources but in practice they violated some of the basic principles of the health insurance system. Thus, the centralization of the NHIF management further alienates citizens from the health system and substantially decreases trust in the public institution (NHIF). It can be assumed that the problem of the great number of individuals without SHI coverage will deepen.

Civil participation in the management of the health system and health policy formation is not only a manifestation of democracy. It enables the development of the system to be oriented toward the citizens' needs, desires and expectations (Dimova, Popov & Rohova, 2007). Although many patient organizations and organizations for patient rights protection have been established, their potential to influence health policy and health system development has been unsubstantial. An encouraging fact was that with the 2009 amendment to the Health Law, a civil council on patient rights was established at the Ministry of Health. This council includes representatives of different patient organizations. It only has advisory functions in the field of patient rights. The law also stipulates requirements for patient organizations in terms of their structure and activities.

Together with these changes in the health legislation many other smaller amendments and additions were made. These changes did not substantially affect the design and functions of the system. In 2010, with amendments and additions of the Law on Health Care Establishments, some types of health care establishments were changed. The former dispensaries were renamed mental health centres, comprehensive cancer centres, and centres for dermatovenerological diseases. Centres for medico-social care for children were transformed into centres for chronically sick patients (nursing homes). At the beginning of 2011, the RHC merged with the RCPCPH, forming the new Regional Health Inspections (RHI). The RHI combine functions of the former two institutions and have reduced staff mainly at the expense of vacant positions and retired individuals.

Approved by the cabinet in February 2011, the new National Health Map describes the minimum and maximum number of providers the NHIF can contract with. The map also defines a list of hospitals that the NHIF is obliged to contract. These hospitals are 100% or 51% state property. The NHIF is free to contract municipal and private hospitals up to the maximum number of providers defined in the National Health Map for each district based on specific selection criteria. However, the NHIF selection criteria are still not sufficiently clear. For that reason, in 2011, the NHIF contracted with all health care providers that met the requirements stipulated in the NFC in spite of the National Health Map limits. Undoubtedly, the National Health Map is a necessary instrument for control over public expenditure on health. However, because of the monopoly status of the NHIF and the underdeveloped VHI market, it may negatively impact the municipal and private health care providers and thus limit patients' access to the system.

Quality management of the health care services

The establishment of national medical standards for different profile specialties, as anticipated by the 2004 Health Act, is still ongoing at the time of writing. New standards were developed, the number of covered medical specialties increased, and previously existing standards improved. As of 2011, there are 56 medical standards (Ministry of Health, 2011a). The standardization of medical practice is a positive step towards quality improvement but there are some concerns among professionals about the quality of the standards themselves.

Starting in 2010, the accreditation of health care providers, long considered one of the basic elements of the quality management system, is no longer obligatory and has become voluntary instead. As accreditation has no effect on the remuneration a given provider receives, the providers are no longer motivated to seek it. In addition, experience showed that patients did not base their selection of provider on accreditation. Instead, a Medical Audit agency was established in 2010, as part of the Ministry of Health. The agency's main functions are monitoring health service quality and patient safety. Since its inception, the agency has mainly performed audits, a large share of which was provoked by patients' complaints and notifications.

Other key players in the quality management system (also discussed in the previous edition, Georgieva et al., 2007) are the NHIF and professional associations of physicians and dentists. Reimbursement per case through clinical pathways, which is the financing mechanism used by the NHIF to reimburse hospitals (see section 3.7 *Payment mechanisms*), is also used as a quality assurance mechanism to monitor care. The NHIF created a department to conduct medical auditing for all contracted health care providers. The professional associations of physicians and dentists are responsible for drafting rules and guidelines for good medical and dental practice. They are also responsible for lifelong learning and continuous medical education as part of the quality assurance system.

6.2 Future developments

The National Health Care Strategy for 2007–2012, as described in the previous *Health Systems in Transition* profile on Bulgaria (Georgieva et al., 2007), was transformed into the National Health Strategy 2008–2013, confirming the initial nine strategic goals: (1) assuring conditions for health promotion and prevention; (2) providing guaranteed health services with improved quality and access; (3) improving outpatient medical services; (4) restructuring hospital

management and increasing effectiveness; (5) assuring drugs and medical products to match the population's needs and means; (6) developing human resources; (7) creating an integrated system for electronic exchange of data in health care; (8) assuring the financial stability of the national health system; and (9) achieving effective membership in the EU.

According to the NHCS Action Plan the imminent activities are in the field of:

- public health (implementation of a number of national targeted programmes focusing on treatment and prevention of socially important diseases; raising public awareness on healthy lifestyles; improving the public health protection network, etc.);
- pharmaceutical care (establishing strict control over quality, safety and efficiency of drugs);
- human resource development (improvement of the quality of education of managerial personnel at all levels, improved curriculums);
- an integrated system for electronic exchange of data in health care;
- financial stability of the national health system (increasing the public financing of health care, raising public awareness on voluntary health insurance); and
- participation in the activities of EU institutions and effective absorption of EU Structural Funds.

Although in the Action Plan most of the planned activities in the field of quality improvement and hospital sector restructuring had to be implemented by 2011, many of them were not realized. Examples include the establishment of a system for patient safety in consonance with European practice, linking payment with accreditation assessment, and expansion of the network of long-term care institutions and rehabilitation hospitals.

Several amendments to the Health Insurance Act are under preparation at the time of writing. They envisage allowing general insurance companies to offer VHI. This would repeal the requirement that only companies solely intended for voluntary health insurance may provide VHI. VHI (which can cover prophylaxis activities together with the other benefit packages) will be replaced with insurance that may only cover certain risks. The motive for the suggested changes is an EC requirement. The Association of the VHICs does not support the project. The main reasons are that the VHICs will no longer be allowed to offer benefit packages, especially those aimed at preventative care and prophylaxis (see section 3.5.3). Thus, the essence of the current VHI system would be changed substantially.

At the end of 2010, in interviews, the Minister of Health declared that from 2012 the clinical pathways will be replaced with diagnostic-related groups (DRGs) as instruments for paying hospitals. According to other announcements from the beginning of 2011, the introduction of electronic health records will be delayed and an integrated system for electronic exchange of data cannot be built earlier than 2020 (Ministry of Health, 2011b).

Although there is some uncertainty about what specific changes will be made in the health system, the priorities for its future development are clear. The main priorities can be found in the Biennial Collaborative Agreement between the Ministry of Health of Bulgaria and the WHO Regional Office for Europe 2010/2011. The medium-term priorities for collaboration for 2008–2013 are: (1) to improve organization, leadership and management of health system and service delivery, including crisis preparedness aspects; (2) to reduce the health, social and economic burden of communicable diseases; (3) to strengthen health promotion and prevention of non-communicable diseases; (4) to improve surveillance and monitoring systems for environment and food safety; and (5) to reduce the health consequences of emergencies, disasters, crises and conflicts, and minimize their social and economic impact.

7. Assessment of the health system

In the early 1990s, the health care reform in Bulgaria had two main objectives. The first was to improve population health. The second was to establish a health system that would correspond to population health needs while being based on democratic and market principles. Twenty years later, these objectives have not been achieved and the need for health system reform seems even greater. Improvements in the nation's health status have been disappointing, with the main health indicators remaining well below the EU averages. Citizens as well as medical professionals are dissatisfied with the health care system. The main principles that the new health care system was built on have not been respected. Although health expenditure increased nearly three times since the introduction of SHI, the system continues to experience a lack of financial resources, low population health status and large inequities on all levels.

Bulgarian citizens suffer from inadequate financial protection and an uneven distribution of financial burden. Equity within the health care system is a challenge, not only because of differences in health needs, but also because of socioeconomic disparities and territorial imbalances in the system. Population services vary substantially in terms of quality and access in the different districts. Poverty is a serious barrier in access to health care, especially in a system heavily reliant on formal and informal out-of-pocket payments.

7.1 Stated objectives of the health system

The reform of the health care system in Bulgaria at the beginning of the 1990s had two main objectives (Dimova, Popov & Rohova, 2007):

- the discontinuation of the negative trends in health status and its further improvement;

- the establishment of a new system that would correspond to population health needs and be based on democratic and market principles.

Twenty years later, these objectives have not been achieved and the need for further reform remains.

Major population health indicators suggest that the health reform did not reach its main goal, which was to put an end to the deterioration of the population's health status. Improvements in this respect are unsatisfactory, leaving the main health indicators below the EU averages (see section 7.4.1 *Population health*). For example, life expectancy at birth increased between 1997 and 2009, mainly due to the substantial decrease in infant mortality but it was still well below EU average. A major reason for the much lower life expectancy in Bulgaria is the comparatively high mortality rate among those aged 40–59 years. Although age-standardized death rates have been declining after peaking in 1997, crude mortality rates have been continuously increasing since then, due to increased mortality in the aforementioned age group. Mortality rates from diseases of the circulatory system and cancer accounted for over 80% of deaths in Bulgaria in 2009. This indicates that there is substantial scope for health system interventions, particularly in relation to public health and lifestyle changes but also to the treatment of hypertension and stroke. Positive developments can be observed in infant and maternal mortality rates, as well as in those for communicable diseases, which have fallen since the early 1990s. Despite the overall decrease, infant mortality in Bulgaria was still nearly twice the EU27 average in 2008. There are also substantial geographical differences in infant mortality across the country, and mortality in rural areas is nearly twice that of urban areas.

The second objective of the health care reform in Bulgaria was to create a liberalized, economically stable health system that would be focused on the patient. The envisaged health system had to strike an acceptable balance between market forces and public regulation. The new Bulgarian health system possesses these characteristics. It is no longer a state monopoly and the private sector is well developed in outpatient and inpatient care as well as in pharmaceutical manufacturing and distribution. Some state functions in the health sector have been shifted to district and municipal administrations. There are contractual relations between third-party payers and health care providers. Individual participation in health financing is gradually being developed. However, some measures taken during the reform process were contradictory to these principles, and this has taken the health system in a new direction.

In the mid-90s, the establishment of Regional Health Care Centres (now Regional Health Inspections) supported the decentralization process, but at the same time their functions were limited to elementary administrative and bureaucratic responsibilities. Two of the most essential managerial functions – planning and regulation of the health system – are performed entirely at the national level.

Although the role of the private sector has increased, the state remains in ownership of many health care providers. It owns all university hospitals and national centres, the specialized hospitals at national level, the centres for emergency medical care, psychiatric hospitals, centres for transfusion haematology and dialysis, as well as 51% of the capital of district hospitals.

The introduction of market mechanisms in the health system has been an important step towards its liberalization. However, except for the pharmaceutical sector, the market for health services has not yet been comprehensively developed. There are several obstacles to the implementation of market principles in the health sector, including the considerable share of state ownership, administrative requirements for health care providers and payment mechanisms, which may work in the direction of assuring equitable access and quality of care but also result in lack of competition and restricted possibilities for technological innovation. Moreover, the most important monopoly in Bulgaria's health sector is in the field of health insurance. Due to the monopolistic status of the NHIF, there is also no competition and market in the health insurance sector and health care providers do not have the power to negotiate the scope and price of services provided on an individual basis.

The development of the system and the emergence of new health care establishments during the last few years seem rather chaotic or, at best, subject to random influencing forces (Hinkov et al., 2010). The regulatory framework for opening and registering new health care establishments and for the contracting process (mainly for hospital care) does not correspond to actual population needs and health infrastructure ends up being largely determined by those activities that generate the highest revenue for providers. This creates perverse incentives and a misuse of scarce resources that result in a discrepancy between demand and supply of health services.

On a positive note, the government has made serious steps towards implementing the “health in all policies” strategy to guarantee intersectoral cooperation. This cooperation is defined in a number of legislative and

normative acts and is carried out at national, district and local levels by inter-institutional commissions, councils and expert teams (see section 2.6 *Intersectorality*).

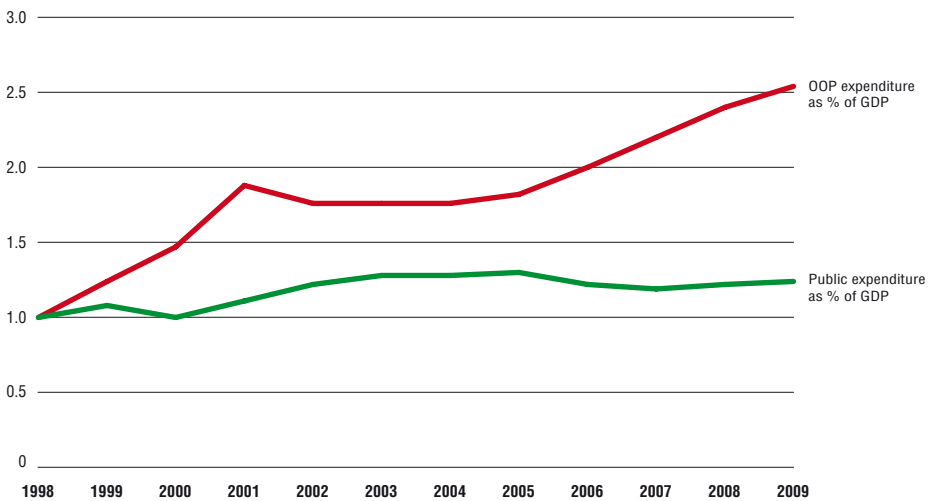
7.2 Financial protection and equity in financing

7.2.1 Financial protection

The relatively high (compared to the EU average) percentage of out-of-pocket payments in Bulgaria evidences the inadequate financial protection the SHI system provides to the citizens. Since 1998, private spending growth has substantially outpaced the public expenditure growth rate on health (Fig. 7.1).

Fig. 7.1

Growth index in public and private health expenditures as a percentage of GDP



Source: Atanasova, Moutafova & Pavlova, 2010.

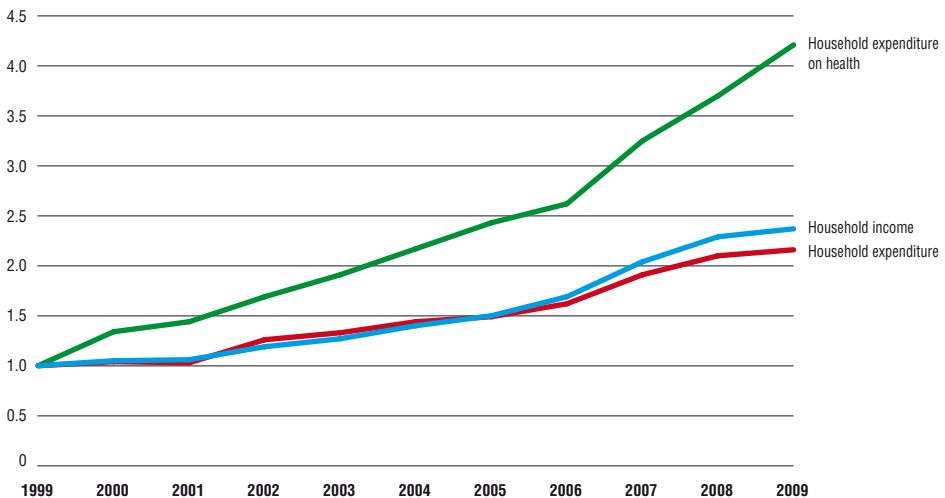
Note: The index calculation base is the value for 1998.

Data analysis shows a strong correlation ($R=0.759$) between health expenditure per capita and private payments (OOP payments). Further analysis shows that over 57% of the private spending increase is caused by the underfunding of the health system from public sources (Atanasova, Moutafova & Pavlova, 2010). This provides strong evidence for the insufficient financial protection of the population.

Since 1999, household spending on health has increased every year in absolute values and as a percentage of total household expenditure. As a percentage of total household spending, spending on health increased from 2.9% in 1999 to 5.3% in 2009. During the same period, the growth in household expenditure on health substantially outpaced the growth in households' income as well as expenditure (Fig. 7.2). Unsurprisingly, household expenditure on health moved from penultimate ninth largest consumer spending category in 1999 to fourth largest in 2009 (National Statistical Institute, 2011b).

Fig. 7.2

Growth index in household income, household expenditure and household expenditure on health



Source: Atanasova, Moutafova & Pavlova, 2010.

Note: The index calculation base is the value for 1999.

Overall OOP spending on health nearly doubled between 2003 and 2008 (see Table 7.1). For the same period, the mean annual inflation was 8.8% while the mean annual inflation in health care was only 4.9% (NSI, 2011e; own calculation). Looking at the OOP spending on type of service, the largest growth was observed in inpatient services, which grew by more than four times in the same period. This can be explained by the dysfunctional primary care system and the increasing numbers of hospital admissions.

Table 7.1

OOP household spending on health by type of service in million BGN and EUR

Type of services	2003			2008		
	BGN	EUR	%	BGN	EUR	%
Pharmacies	746.9	381.9	74.4	1 392.1	711.8	71.1
Outpatient services	181.6	92.9	18.1	259.7	132.8	13.3
Inpatient services	75.3	38.5	7.5	306.3	156.6	15.6
Total	1 003.8	513.2	100	1 958.19	1 001.20	100

Source: National Statistical Institute, 2010b.

According to a national survey conducted in 2005, high prices have made pharmaceuticals and certain services unaffordable for a large portion of the population: 23.2% declared that they lacked the financial means to purchase the prescribed medications, while 56.0% could not always afford all prescribed drugs necessary for their treatment. In addition, 28.7% said that they lacked the financial means to pay OOP for medical services and 49.9% blamed the health care reform for their increased spending on health (Dimova, Popov & Rohova, 2007). According to research conducted in 2009, 70% experience continuously high monthly household OOP spending. Only 28% of citizens could afford this without having to be deprived of something else (food, clothes, etc.). For more than 80% of respondents, health spending has increased during the health care reform (Petev, 2009).

7.2.2 Equity in financing

One of the health reform goals was to establish a financing system based on solidarity and social justice in the distribution of financial burden but this goal was not achieved. While in the SHI system the financial burden is distributed among the insured people, their employers and the state, as contributions are income-related (see section 3.2 *Sources of revenue and financial flows*) there is an upper assessment base for the contribution rate (BGN 2400, □1227 for 2011), which has a regressive effect. In other words, the more an individual's income exceeds this assessment base, the lower the relative financial burden becomes. It is true that these individuals pay higher taxes in absolute values, part of which flows back to the health system. However, tax revenue used for the health system forms only a small share of total health funding and therefore does not substantially improve equity in financing (5.3% of the state tax revenue was allocated to health in 2010; tax revenue accounted for 23% of total expenditure on health in 2008, see sections 3.2 and 3.3.2). It should also be noted that part of the NHIF budget originates from tax revenue in the form of a state contribution on behalf of certain groups of individuals (see section 3.2 *Sources*

of revenue and financial flows), which would likely have a progressive effect on financing. Moreover, the substantial number of uninsured people (part of them high-income, self-employed people who do not trust the insurance system) (see sections 3.3.1 *Coverage* and 6.1 *Analysis of recent reforms*) exacerbates financing inequity.

The weak financial protection of the population results in a relatively high share of OOP payments compared to public financing and leads to more inequity. Individuals on lower income pay proportionally more than those on high income because user fee rates, which form an important part of OOP payments, are the same for everybody and only few exceptions for vulnerable groups exist. The highest financial burden is thus born by the low- and middle-income groups.

7.3 User experience and equity of access to health care

7.3.1 User experience

Although health system reforms should be patient-centred, several studies indicate that in general this aim is not met. In Bulgaria, consumers' perception of the overall system and of the health services they receive remains largely negative.

According to the 2009 European health interview survey, the share of the Bulgarian population reporting an unmet need for medical examination or treatment was 7.5% (Eurostat, 2011). Although this figure represents an improvement over past results (15.8% in 2007 and 11.8% in 2008), it remains among the highest in the EU. While different factors influence these results, they are mainly related to the large number of uninsured people, shortages of GPs in some districts, difficult access to specialized medical care, and financial difficulties among some population groups. Indeed, the lowest income group also reported the highest unmet need – 19.2% (Eurostat, 2011).

Although Bulgaria does not routinely conduct systematic surveys to gauge public perception of the health system, in 2006 and 2007, two national studies assessed citizen satisfaction with regard to health care reform. The 2006 survey showed that, in general, medical services were viewed quite negatively: overall, 10.5% of respondents reported that the care provided to them or to their relatives in the previous year was totally unsatisfactory, while 39.9% indicated that it did

not meet all their expectations. In the capital and district cities, these statements were supported by 53.4% and 54.4% of respondents, respectively. Just 40.6% regarded medical care as efficient, timely and able to meet their expectations (Dimova, Popov & Rohova, 2007).

Respondents to the 2006 survey frequently cited defects in health system organization and occasionally physician performance to explain their dissatisfaction. Other specific problems included drug prices, insufficient financing, excessive bureaucracy and lack of medical equipment. Approximately a third of respondents considered that corruption among medical staff and quality of medical care were grave shortcomings. The majority supported the statement that health care reform had had a negative effect on health care, while 25% saw no substantial change. Positive evaluations were given only by 17.5% of respondents, but even these opinions were tempered by the perception that reform was being carried out at rates slower than necessary (Dimova, Popov & Rohova, 2007).

The 2007 national survey reported similar findings. Most citizens expressed a lack of satisfaction (38%) or considerable dissatisfaction (43%) with the radical reforms of 1998/99, and 47% believed that the quality of services had deteriorated, while 46% believed that it had remained the same. Access to specialized outpatient and inpatient care was poorly rated, while corruption, bureaucracy and the excessive time wasted were mentioned as the main negative outcomes of reform efforts. On the other hand, waiting lists were not perceived as a major problem, except for some highly specialized services in university hospitals (Vekov, 2009).

In 2009, a European Commission survey assessed consumer opinion on health care. Although the questions differed somewhat from the aforementioned studies, the survey showed that, in general, population perception of health services has worsened. Most Bulgarians rated health care provision in the country as bad (74%), whereas only 22% judged it as good (European Commission, 2010a), earning Bulgaria the lowest rank among EU countries. When asked how current health care provision compared to that received five years ago, the majority reported that the situation had deteriorated (49%), while 39% said that it had stayed about the same and only 5% thought that it had improved. Moreover, Bulgarians were not optimistic about the future of the health system: 57% expected it to remain the same for the next year and 25% expected it to worsen (European Commission, 2010a).

7.3.2 Equity of access to health care

The constitution guarantees equal rights to health care for all insured citizens; nevertheless, certain population groups (people at social disadvantage, unemployed or disabled individuals or those with other particular needs) experience problems accessing services, a fact that negatively affects their health status.

Poverty is a serious barrier in access to health care, especially in a system heavily reliant on OOP payments. In 2009, the Bulgarian GDP per capita in PPS was still the lowest in the EU, while the at-risk-of-poverty rate was one of the highest in the EU (Eurostat News Release, 2010). The most affected populations comprise rural residents, poorly educated individuals, ethnic minorities and the unemployed (WHO, 2005).

Equity within the health care system is a challenge, not only because of differences in health needs, but also because of socioeconomic disparities and territorial imbalances. Population services vary substantially in terms of quality and accessibility in different districts. According to Hinkov (2010), the diversion of more than half of available resources within the insurance system to hospital care, and the uneven distribution of resources across the country without justifiable grounds, have restricted population access to other basic medical services.

Although the national average is 1500 registered patients per GP, in some districts this number may be as high as 2500 patients. Meanwhile, individual practices may have 3000 to 4000 patients and, in extreme cases, up to 7000. In some of the sparsely populated and remote areas (for example the districts of Smolyan, Kardzhali, Blagoevgrad and Yambol), the local health centre is located in one town or village, which often coincides with the district capital (Ministry of Health, Strategy for Restructuring of Hospital Care 2010). Access to GPs in villages is even more limited than the above numbers suggest. According to a survey, GPs are available only 2.5 days a week in certain small villages compared to everyday accessibility in cities (United Nations Development Programme, 2003).

Finally, the territorial imbalances in access to primary medical care are evident after examining the level of implementation of the National Health Map. According to the old National Health Map (prior to 2011), the number of primary health care providers was 7.4% higher than stipulated in the map overall, but there was substantial geographical variance. For example, the number of primary health care providers in Sofia was 28% more than the

National Health Map requirements, while in the district of Razgrad there was a shortage of 33% (Zlatanova & Zlatanova-Velikova, 2008). According to the 2011 National Health Map, such territorial imbalances continue to exist.

Inequities in hospital care exist in terms of the number, geographical location, service spectrum and organization of establishments, as well as resource distribution across districts. National statistical data show that hospital care is most developed in the south-west, where 29.0% of all health care establishments and 29.2% of all hospital beds are concentrated. In that region, the proportion of specialized hospitals (41.5%) is the highest in the country. This is partly due to the fact that 27.9% of the population lives in this region, which also houses the administrative centre of the state as well as the health system. A great part of the most highly qualified and scientific medical potential of the nation is also concentrated here. By contrast, only 10.8% of hospitals are located in the north-east, accounting for 9.8% of the total number of hospital beds. A district-by-district analysis of specialized care provision indicates that for some specialties (internal medicine, anaesthesiology, intensive care, clinical allergology, rheumatology and oncology), care is not guaranteed or is inadequate, which results in access problems and lower quality of medical care (Ministry of Health, 2009).

In 2008, the World Bank reported that the districts of Lovech (population 157 407) and Pernik (population 139 677) had seven hospitals each, while in Smolyan (population 129 000) there were eight hospitals (World Bank, 2009). In contrast, the north-central, north-western and south-eastern regions did not have a single hospital that met requirements in terms of specializations and technologies. This disproportionate concentration of hospitals tends to coincide with an oversupply of certain medical services, insufficient utilization of medical equipment and redundancy of activities.

Similar to the situation with hospitals, the distribution of specialists according to geographical area and medical specialty shows substantial disparities. For the last few years, admissions for medical students have been relatively stable, but due to growing emigration, shortages of both physicians and (to a greater degree) nurses are expected to persist. This shortage is particularly pronounced in small towns, villages and municipalities, further impairing access to medical services provided by local hospitals. Substantial disparities among districts are also reported in terms of their supply of physicians – from 47.1 per 10 000 inhabitants in Sofia to 23.8 in Razgrad.

In addition, there are considerable differences in the level of job vacancies in the health and social sector between planning regions. For example, in the South-West region, there were five times more job vacancies than in the South-East in the year 2000. Seven years later, the disparity was even more pronounced, with 6.5 vacancies in the South-West for every one in the South-East region (National Statistical Institute, 2001, 2008). These figures are important in assessing the effectiveness of human resource planning and distribution across the population.

Another factor contributing to access and health inequity is the share of private (mostly OOP) expenditure on health, which reached 42% in 2008 (WHO Regional Office for Europe, 2011). This burden falls disproportionately on poorer households, the uninsured and other vulnerable groups that face serious financial and organizational-administrative barriers to accessing health care services, including preventative services, diagnostics, treatment and rehabilitation. Moreover, those with greater health needs face the risk of further impoverishment due to inequitable access to health services and ill health (WHO report, 2010).

Among the groups with problems in accessing health care services are people with disabilities. According to the National Health Strategy (Ministry of Health, 2008a), 850 000 people in Bulgaria have a medically assessed degree of disability, while only 13% of them obtain income derived from work. Their access to health care services is further limited by infrastructure within medical institutions (which is not adapted to their needs), by the inadequate quality of the working-capacity assessment expertise, and by the substantial delay in the pronouncement of decisions made by the Territorial Expert Board of Physicians. As a result of this delay, some of these individuals are without any form of income for three to six months.

Likewise, there are no specialized health care services for children at risk or substitute care to relieve parents. Day centres and other similar facilities are insufficiently developed, increasing the risk of social isolation.

The government, as the coordinating figure between health care institutions and minority groups and communities, has accepted as one of its major tasks the application of protective networks for ethnic minorities. It has developed and adopted a number of strategic documents to address the problems experienced by disadvantaged populations, such as the Strategy to Combat Poverty and the Health Strategy, which deal with vulnerable ethnic minorities, as well the Action Plan for 2005–2015 and the Decade for Roma Inclusion 2005–2015. In order to tackle health inequity and access problems, outpatient care facilities

need to be brought nearer to minority communities. In addition, these groups need to gain more awareness of their rights and responsibilities, as well as of the health risks affecting them. Therefore, the Ministry of Health declared back in 2005 that professional capacity must be built up to communicate effectively with these groups (Ministry of Health, 2005).

7.4 Health outcomes, health service outcomes and quality of care

7.4.1 Population health

A summary of recent changes in Bulgaria's health status, analysed more extensively in section 1.4 *Health status*, shows that:

- although life expectancy at birth has been showing a positive trend reaching 73.4 in 2008, comparable to the values in some other EU12 countries, it is nevertheless the lowest among all EU Member States and six years below the EU27 average (79.5) (WHO Regional Office for Europe, 2011);
- although the last few years have seen a slight decrease in overall mortality rates, reaching 14.2 deaths per 1000 population in 2009, mortality in Bulgaria is still substantially higher than in any other EU country (National Centre of Health Informatics, 2010; WHO Regional Office for Europe, 2011);
- whilst cardiovascular mortality has decreased in the last decade, it is still the highest in the EU and several times higher than the EU average (WHO Regional Office for Europe, 2011);
- with respect to cancer mortality, Bulgaria has a relatively moderate position in the EU. However, contrary to the tendency of reduction of deaths due to malignant neoplasms in the EU, this type of mortality has been consistently increasing in Bulgaria since 2000 (WHO Regional Office for Europe, 2011); and
- child mortality (both infant and under-five) has been decreasing, but Bulgaria still falls behind the EU average and even the average of the EU12. Of particular concern is the perinatal mortality rate, which is twice as high as the respective values for the EU12 (WHO Regional Office for Europe, 2011).

Population health status is not only a result of received care but also depends on the socioeconomic, cultural, political and environmental context in which people live. Substantial improvements in population health are conceivable only as a result of comprehensive improvements in complex determinants: the rise in the material welfare of families; favourable tendencies in their working and living conditions; increased social cohesion; positive changes in behavioural patterns (for example a healthy lifestyle); overall socioeconomic and political dynamics as well as better organization and performance of the health system.

In Bulgaria, the positive tendencies in population health status summarized above, as subtle and fragmented as they seem to be, are mainly attributable to the stabilization of the political situation in the country starting from 2000–2001, and especially to the economic upsurge in the mid-2000s. Unfortunately, there are no comprehensive studies on the contribution of the health care system to health improvements. Some partial and questionable evidence from the post-communist era (1990/1991 and 2000/2002) is available in a study on avoidable mortality in Europe by Newey et al. (2003). Results show that treatable mortality was highest in Bulgaria and Romania among all 20 European countries surveyed, suggesting that Bulgaria has a considerable way to go before achieving health outcomes comparable to the EU15 or even some of the EU12.

Given the way the reform process has been unfolding in the last decade, and considering the inconsistencies and weaknesses analysed in the previous chapters, there is no reason to believe that the health system will begin to deliver good outcomes in the near future. Certain indirect signs support this conclusion. For example, the inadequate progress made on some subtypes of child mortality can be attributed to deficiencies in the health care system. Particularly striking is the discrepancy in the SDR from acute respiratory infections, pneumonia and influenza in children under five in Bulgaria (30.7 per 100 000) compared to the EU27 (5.2), EU15 (1.3) and EU12 (21.2) (WHO Regional Office for Europe, 2011).

In general, the reform agenda is still pending while new problems continue to emerge, circumstances that explain the overall high public dissatisfaction with health care system performance (See section 7.3.1 *User experience*).

7.4.2 Health service outcomes and quality of care

As mentioned in the previous edition (Georgieva et al., 2007), the quality of medical care was and remains one of the most substantial problems. The unsatisfactory health status of the Bulgarian population combined with the

overall dissatisfaction with the health system, underlines the problem of health service quality. Sixty-eight per cent of citizens evaluate the overall quality of health care as bad and 72% (the highest percentage in EU) think that the quality of health care in Bulgaria is worse than in the other EU Member States (European Commission, 2010b).

Currently, there is no quality management system that encompasses reliable quality indicators and mechanisms for monitoring and continuous quality improvement. Analysis of health services outcomes and quality of care is hampered by lack of data on key indicators both at national and organizational level. Thus, international comparisons on the quality of medical services cannot include any assessment of the situation in Bulgaria. Such data exist only in the field of preventative care.

Bulgaria has traditionally had relatively high vaccination rates for measles, diphtheria, tetanus, pertussis and other infectious diseases, especially in the years before the introduction of the health insurance system (Table 7.2). Once this system was established, however, access to these preventative health services started to decline. Fortunately, some vaccination rates (for example, against measles) are rising, but on the other hand, so is the incidence of some vaccine-preventable diseases; measles incidence has risen from between 0 to 0.9 per 100 000 in the period 1996–2008 to 29.7 in 2009 (WHO regional Office for Europe, 2011).

Table 7.2

Preventative care indicators

% children vaccinated against:		1980	1990	2000	2009
Measles	BUL	98	100	88.6	96.1
	EU	n/a	79.8	90.4	93.2
Diphtheria	BUL	98	100	93.3	94.1
	EU	74.4	87.1	95.6	95.3
Tetanus	BUL	98	100	93.3	94.1
	EU	74.4	87.1	95.6	95.3
Pertussis	BUL	98	100	93.3	94.1
	EU	74.3	87.0	95.6	95.3

Source: WHO Regional Office for Europe, 2011.

Indirect information about the quality of medical activities can be gathered from reports by the NHIF and the Ministry of Health. According to the 2010 NHIF annual report, 177 hospitals (out of a total 306) were audited in 2009 by the NHIF. The results showed numerous cases of medical malpractice (NHIF, 2010b):

- violation of the diagnostic-therapeutic process (clinical pathways, medical standards) in 44.4% of the audited hospitals;
- violation of the NHIF's indications for hospitalization – 42.2%;
- violation of the indications for discharge – 30.4%;
- failure to ensure the continuity of inpatient care – 23.9%;
- incomplete clinical pathway – 11.7%, and unmet requirements for minimal inpatient stay – 5.2%; and
- failure to comply with national medical standards – 5.2%

In 2009, the NHIF audited 5924 outpatient medical and dental care providers and found 3280 cases of discrepancies between agreed and provided care (NHIF, 2010b).

The newly created Ministry of Health Executive Agency Medical Audit (EAMA) received 553 complaints from patients in 2010, 73% of which were related to the quality of care (failure to comply with medical standards and untimely or inadequate care) and 14% to corruption. There were 175 hospitals found to be in violation of patient rights regarding timeliness and quality of medical care, and appropriate information from the physician. Malpractice was registered in 9% of the cases (Ministry of Health, 2011c). According to the European Commission's Special Eurobarometer on patient safety and quality of care, 15% of Bulgarians have experienced an adverse event although the vast majority of them (89%) have not reported it (European Commission, 2010b).

Recently, a number of these cases have emerged in the media, raising public sensitivity to the patient safety issue; nearly two-thirds of Bulgarians think there is a risk of patients being harmed by care received both in and out of hospital (European Commission, 2010c). Some of the known adverse events have occurred as a result of medical errors arising from poor clinical decisions, while others are rooted in organizational problems. One of the biggest challenges in the field of patient safety is the absence of a system for reporting medical errors and the lack of national statistical data on patient safety indicators. As a result, the accurate measurement of patient safety in Bulgaria is currently impossible. The development of indicators for quality assessment based on the international experience is one of the EAMA tasks for 2011 (EAMA, 2011).

7.4.3 Equity of outcomes

In Bulgaria, stark inequities in health outcomes exist according to territorial, ethnic, age, gender, educational and professional qualification criteria. Since the early 1990s, the repercussions of socioeconomic inequalities on health have gained prominence as an important public health issue. The lack of economic opportunity and social security as well as the uncertain professional prospects for young people have a direct correlation with both their reproductive behaviour and mobility, two factors contributing to a declining population. However, while the overall fertility rate among Bulgarians is low, the opposite is true for ethnic minorities, especially the Roma population. This fact combined with low cultural integration, illiteracy and social isolation puts them among the groups at the highest risk in Bulgarian society.

With regard to territorial inequalities, health status in villages is substantially lower than in cities. Maternal and child mortality reflect the isolation of rural residents from the overall social and health care network (United Nations Development Programme, 2003); a child is about three times less likely to survive if born in a village than in a city. This risk is heightened by the combination of permanent residency status and inclusion within an ethnic minority.

Health status among vulnerable population groups is characterized by lower life expectancy, shorter healthy life expectancy, higher morbidity and increased mortality. The Report on the Nation's Health (Ministry of Health, 2008a) indicates that poverty among the Roma and Turkish ethnic communities is eleven and three times more common, respectively, than among Bulgarians. For ethnic minorities, unhealthy behaviour such as poor diet, smoking, alcohol abuse and illicit drug use as well as lower immunization rates and poorer living conditions are also more common. Naturally, this translates to increased incidence of infectious morbidity and greater epidemic and overall health risks.

7.5 Health system efficiency

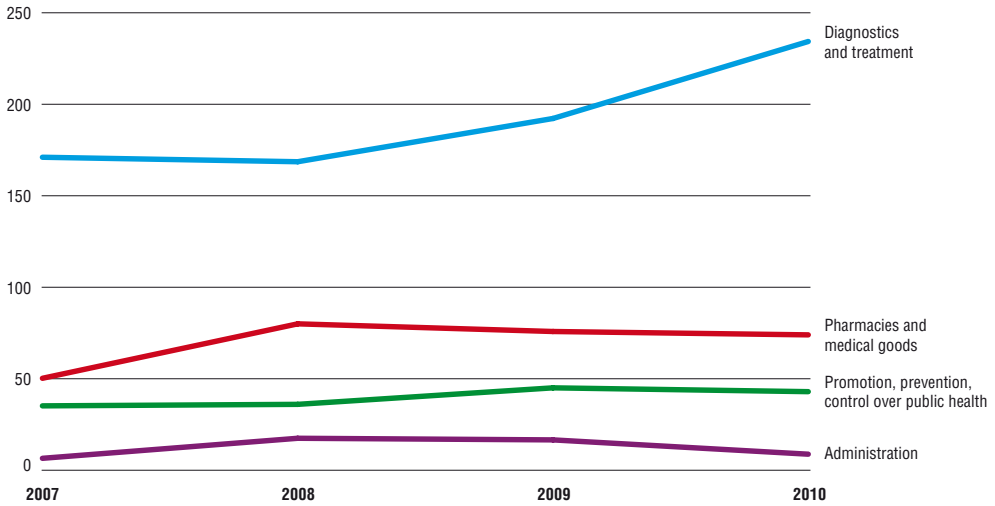
7.5.1 Allocative efficiency

Health professionals and policy makers have recognized the lack and inefficient use of financial resources as two of the most essential weaknesses of the health system (see also Chapter 6 *Principal health care reforms*). There is an opinion (predominantly among professionals) that inefficient use is a larger problem

than the lack of financial resources. The inefficient use of financial resources results from payment mechanisms (for example, clinical pathways) that do not promote efficiency and from the failure to allocate financial resources efficiently. Priority setting is mainly based on available resources rather than on evidence about measures with proven effectiveness and cost-effectiveness. Some clear signs, related to the population health status and the system's financial stability, reflect the poor allocative efficiency:

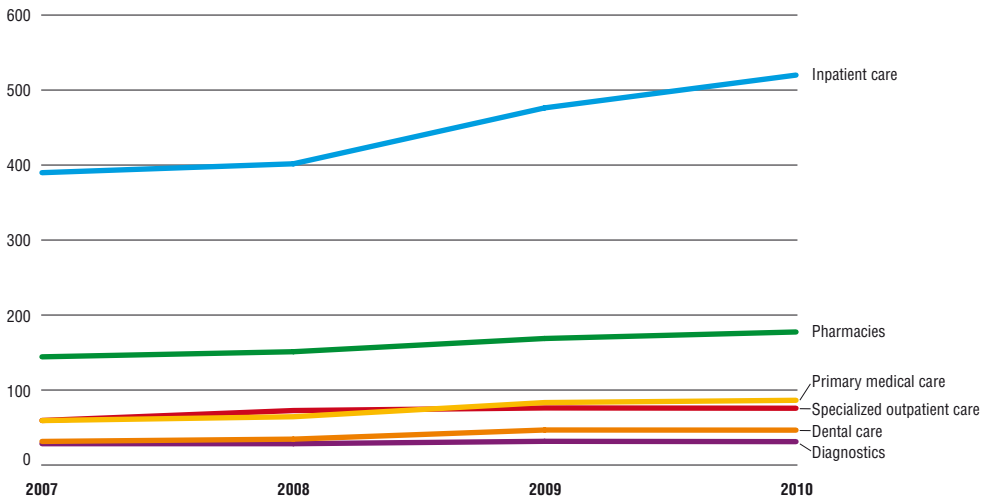
- Although health expenditure has increased nearly three times since the introduction of the SHI system, the results have remained unsatisfactory. The system continues to experience a lack of financial resources, the nation's health status has improved but not substantially, and large inequities continue to exist. Both the continuous increase in private expenditure on health and the increase in public expenditure reflect ineffective public resource allocation. The increase in Ministry of Health expenditure on diagnostics and treatment (mainly inpatient) (Fig. 7.3) and the increase in NHIF spending on hospitals (Fig. 7.4) is much higher than in the other expenditure categories. Primary care, prevention and promotion are neglected, which leads to increased needs of inpatient services.
- There are substantial inequalities between public hospitals regarding payments they receive from the Ministry of Health and/or municipalities. For example, municipal hospitals received BGN 61.2 (€31.3) per patient in 2008 while the university and national hospitals received BGN 193.3 (€98.7) per patient in the same year (National Centre of Health Informatics, 2009b). NHIF payments per patient depend on the patient's condition and therefore can vary from one hospital to another; the disproportions in financing by the Ministry of Health and municipalities indicate a prioritization of large hospitals compared to small hospitals.
- Some attempts on behalf of the NHIF to achieve allocative efficiency on a district level have also failed. Although there are financial incentives to encourage GPs to work in rural areas, substantial geographical differences in access still exist (also see section 7.3.2 *Equity of access to health care*).

Fig. 7.3
Ministry of Health expenditure by service category in million EUR



Source: The State Budget Act, selected years.

Fig. 7.4
NHIF expenditure by service category in million EUR



Source: The Law on the NHIF Budget, various years.

7.5.2 Technical efficiency

The technical efficiency of the Bulgarian health system is difficult to assess due to the lack of data on performance indicators. One 2007 study on health care competitiveness analysed three activity indicators: (1) outpatient contacts per person per year, (2) bed occupancy rate, and (3) average length of inpatient stay (Delcheva, 2007). The first indicator was evaluated based on data taken from NHIF reports, which show that visits to GPs and specialists in outpatient care dropped abruptly after the year 2000 (from 5 per capita in 2000 to 3 in 2001 and 2002). By contrast, the EU average was 6.7–6.8 visits for the same approximate period (2000–2005). The decrease is attributed to a number of factors, including informal payments to GPs (not all visits are fully reported), insufficient funds for specialized outpatient care, strict limits in the issuance of referrals, and the redirection of patients to private medical practice (Delcheva, 2007).

Another study related to this indicator was conducted in 2004 and analysed the correlation between the number of patients registered with GPs and the average annual number of medical examinations per registered individual (Zlatanova & Zlatanova-Velikova, 2008). The predictive model showed that as the number of registered patients approached 3500, the average annual number of medical examinations per person grew as well; when this value was exceeded, GP activity receded, and efficiency decreased dramatically.

The bed occupancy rate is one of the few indicators that is comparable to that of other EU countries. In 2001, the occupancy of hospital beds was 66.3%, while in 2008, it was 76.9% (National Centre of Health Informatics, 2009). For the same years, the EU values of this index were 76.7% and 75.5% respectively (WHO Regional Office for Europe, 2010). The average length of stay has also improved, from 11.5 days in 2000 to 6.8 days in 2009 (see section 4.1.2).

In contrast, the inpatient admission rate increased substantially from 2000 to 2009, reflecting the inefficiency and underutilization of outpatient services and the high levels of avoidable hospitalization (see section 5.4 *Inpatient care*). Other contributors to this rise include ineffective hospital treatment (leading to rehospitalizations) and a lack of cooperation between inpatient care and social care providers (many patients are hospitalized for social rather than medical reasons). Moreover, the proportion of one-day admissions and utilization of beds for same-day care is unsubstantial.

Although the aforementioned problems are well known and widely discussed, only sporadic measures with limited success have been implemented to increase the utilization of outpatient and home care services and to reduce the number

of hospital beds and hospital admissions. In 2009, the NHIF introduced stricter requirements for providers, which caused financial pressure on hospitals and led to reductions in beds and hospital wards. However, that did not actually increase efficiency. In fact, national policy to replace inpatient care with less expensive but more effective outpatient or home care exists only in the field of mental care. Likewise, there is no policy regarding the use of nursing homes and hospices; these services are not funded by the NHIF, which limits access for patients who need continuous care.

In recent years, a trend of increasing use of emergency services has been observed; the share of service users tended to by Regional Centres for Emergency Care grew from 42.2% in 2007 to 53.4% in 2009 (National Centre of Health Informatics, 2010). Because citizens have no payment obligations for emergency care, this modality has become the preferred gateway to the health care system. Moreover, GPs have no incentive to provide home visits, and patients call emergency services for problems that may only require ambulatory care. As a result, Regional Centres for Emergency Care and emergency hospital wards are overloaded and less able to provide adequate care for real emergencies, which account for about 75% of all cases (see section 5.5 *Emergency care*).

With regard to health technology, it is worth noting that the cost of pharmaceuticals has been growing steadily since 2000. The Ministry of Health and the NHIF undertook some measures to reduce public costs by introducing international price comparisons and regulating pharmaceutical prices on the Positive Drug List (see section 5.6 *Pharmaceutical care*). Despite these initiatives, the cost of pharmaceuticals born by the Ministry of Health grew by 69% from 2008 to 2010, in contrast to the relatively stable expenditures made by the NHIF. The positive fact is that since 2003, the market share of generics has exceeded that of branded drugs. However, at the same time, the prices of generic drugs have been rising, while the prices of patented products have remained relatively stable (Trifonov, 2010).

7.6 Transparency and accountability

As mentioned in section 2.9.3, the health care reform process has led to important progress with regard to patient empowerment. Patients now have more legal protection and the freedom to choose their health care provider. However, despite the sound legal basis, evidence of malpractice and lack of patient protection continues to appear.

One of the reasons for this is lack of information and transparency. In a 2006 survey on health care reform, most citizens recognized that they were not aware of their legal rights with regard to health insurance. Due to the predominance of informal information sources, such as friends and family, approximately a quarter of them were unsure of the quality of the information they had (Dimova, Popov & Rohova, 2007). These results underline the shortcomings of the information campaigns undertaken during the reform process, which were often limited to providing facts and stopped short of promoting a more proactive behaviour for information seeking.

Another problem regarding system transparency has to do with the practice of informal payments. Patients identified corruption as one of the main problems in the health care system (Vekov, 2009; MBMD, 2010) and attributed this to the 1998/1999 reform (Dimova, Popov & Rohova, 2007). In one 2010 survey, 22% of respondents reported having made informal payments to specialists, 17% to hospitals and 9% to GPs. It is no surprise, then, that citizens cited corruption as a top priority for future reforms (MBMD, 2010).

Although Bulgarians do formally enjoy more rights, they are still unable to actively participate in the decision-making process regarding the health system, the quality of health care services or the allocation of funds. Indeed, the trend is towards less civil participation rather than more. In 2002 and 2009, amendments were added to the Health Insurance Act to reduce patient representatives in the NHIF supreme governance body (see section 6.1 *Analysis of recent reforms*), a clear contradiction to the democratic principles enshrined in the establishment of the NHIF. Similarly, the Law on Local Governance and Local Administration (1991) envisages civil participation in the formulation of municipal health policy, but a 2006 survey found no indications of effective citizen involvement in debates on hospital policy at national or local level (Dimova, Popov & Rohova, 2007). Thus, despite the creation of many organizations representing patients, their potential to influence health policy and health system development remains unsubstantial.

However, there are a few faint but encouraging signs. The 2009 amendments to the Health Act regulate the establishment of a civil council at the Ministry of Health, comprising representatives from different patient organizations. Its role is limited to consulting on patient rights and the structure and activities of the participating organizations are bound by stipulations within the law. By mid-2010, there were four patient organizations that met the requirements of the Health Act.

The Health Act (2004) establishes the mechanisms by which state health policy is managed and implemented by the Council of Ministers, while health system priorities are set out in the National Health Strategy. After consultation with the Supreme Medical Council, the Minister of Health proposes a strategy for adoption, which must then be approved by the Council of Ministers and, subsequently, by the National Assembly. The adopted strategy and the national health programmes are based on an assessment of health needs and demographic trends as well as the resource capacities of the national health system. They are financed by the state budget.

The latest National Health Strategy was adopted in 2008 and covers the 2008–2013 period. Key development priorities are related to the quality of and access to health services, restructuring and efficient management of hospital care, human resources development, financial sustainability of the system, e-health, etc. The strategy also sets out indicators for assessing and monitoring implementation, deadlines of envisaged activities and institutional responsibilities. An annual report is published on the Ministry web site (<http://www.mh.government.bg>) and submitted to the National Assembly.

One of the principal problems in health policy and health care reforms is the low awareness among professionals (not only the providers but, most importantly, the managers) and citizens about the priorities and objectives of the system. Since radical reforms began in the late 1990s, communication with citizens and health professionals has been grossly neglected. The isolation of health care professionals from the principles, tasks and the scope of the health care reform had particularly negative consequences because those responsible for implementing reforms were not familiar with its objectives and content (Dimova, Popov & Rohova, 2007).

8. Conclusions

The Bulgarian health system, similarly to the health systems in other EU countries, is characterized by limited statism. The system has evolved under market conditions, but with a substantial role of the state, the authorities of which have the responsibility for health care (Popov, 2007). Both public and private ownership forms of physical resources and funds exist. Regional, sub-regional and municipal authorities influence the management of health resources and organizations at the local level. Health providers and professional associations are autonomous players. The health system is financed from various sources, namely health insurance funds, state and local budgets, and out-of-pocket payments. Market mechanisms apply regardless of the forms of property. The population and their health needs are covered by compulsory health insurance.

Although the Bulgarian health system possesses the characteristics of a democratic, liberalized, and market-oriented health system, it suffers from substantial weaknesses, which result in an unsatisfactory population health status. Health inequalities between the urban and rural populations as well as inequalities in access to the health system continued to grow during the entire reform process. The improvement rate of population health status, as reflected in some health indicators, has been insufficient to achieve the reform goals.

The health system is economically unstable. Health care establishments, most notably hospitals, are suffering from underfunding. A transparent regulatory framework for pricing is absent. Price formation is not based on real costs, but rather on available funding in the NHIF budget. Due to the monopolistic status of the National Health Insurance Fund, market mechanisms play no role in public insurance, although this was an objective of the overall health care system. Today, a great number of individuals are not covered by statutory health insurance, while the VHI market is underdeveloped.

The limited functions of the Regional Health Inspections, the symbolic role of the municipal authorities in the management of fully or partly municipality-owned health establishments, the missing civil participation in health policy as well as the dominant role of the state in the National Health Insurance Fund, provide strong evidence for the system's lacking democratic accountability. These failures are accompanied with corruption in, and user dissatisfaction with, several aspects of the system. The majority of citizens are not satisfied with the performance of the health system and express their discontent to health care providers and professionals. Providers, in turn, have become isolated and passive towards society. Furthermore, the gradual introduction of financing from health insurance, first in outpatient care and later in hospitals, led to conflicts between professionals working in these two sectors. The substantially higher incomes of the primary care physicians and the partially higher incomes of those working in specialized care generated justified discontent among hospital doctors. This situation, together with insufficient hospital financing, fuelled the expansion of informal payments and corruption, which were an additional factor for distrust in the health system and its reform. This distrust along with the economic circumstances force highly qualified Bulgarian physicians and nurses to migrate, a phenomenon that further exacerbates the situation.

Twelve years after the introduction of the health insurance system, the aforementioned failures suggest that the problems are not only due to its immaturity but also due to misconceptions in its development and implementation. The reform started and continued impulsively without a clear vision. It was not perceived as a long-term process of implementing a new system, but as a limited series of short-term, individual actions. For example, democratization was understood as substituting management on various levels, but not as introducing new structures and approaches to management. The new economic relations between the key players in the health care system led to pay rises and a quick establishment of the National Health Insurance Fund instead of substantially new relations and roles promoting effectiveness and efficiency. The absence of a comprehensive state plan for health system reform, developed, approved and supported by the state organs (National Assembly, the Council of Ministers, the Ministry of Health), has been a major conceptual shortcoming and has led to a cascade of errors: neglectful communication of the objectives, content and terms of the reform to citizens and professionals; slow, hesitant and erratic reform implementation; and unclear definition of the roles and responsibilities of the various actors in the health system.

The absence of a long-term vision and political consensus resulted in inconsistent health policy and reform implementation. Some of the main objectives and elements of the reform were gradually abolished or never realized, such as independence of the National Health Insurance Fund; equal participation of state, employers and insured individuals in the fund's management and control; independence and equity of health care providers; and using evidence-based health policy. The abandonment of these elements has also given rise to instability, insecurity and distrust in the system.

On these grounds, the need for further reform seems even greater than in the early 1990s. The major challenge remains improving population health. This entails not only substantially improving health indicators but also reducing health and access inequalities. The National Health Strategy 2008–2013 outlined the implementation of a number of national targeted programmes focusing on treatment and prevention of socially important diseases; raising public awareness on healthy lifestyles; and improving the public health network. However, the biggest challenge in this field is systematic monitoring and registration of population health status in order to restrict preventable mortality.

In terms of health system organization, the government's intentions are related predominately to changes in the hospital sector: restructuring the hospital network by merging hospitals and creating large hospital complexes; changing the legal status of the state hospitals; and improving hospital financing methods through the introduction of DRGs.

To make a sustainable reform effort, health care policy should be approved by the majority of political parties represented in the National Assembly and not exclusively on governmental concepts that are usually omitted by the next government. The national significance of health reform requires that these decisions be agreed upon and widely supported by a large constituent base, including civil organizations, trade unions, municipalities and the scientific community.

9. Appendices

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9.2 List of laws and regulations

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Regulation No. 27 on the recognition of organizations for protection of patients' rights as representative organizations. *State Gazette* No. 106, 12 December 2008.

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Law of Regional Development. *State Gazette* No. 50, 30 May 2008.

Law of the Budget of NHIF 2008. *State Gazette* No. 113, 28 December 2007.

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9.3 HiT methodology and production process

The Health Systems in Transition (HiTs) profiles are produced by country experts in collaboration with the Observatory's research directors and staff. They are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile reviews. 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 Organisation for Economic Co-operation and Development (OECD) and the World Bank. The OECD Health Data contain over 1200 indicators for the 34 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 on 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 European Union (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 consists of nine chapters.

1. Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.
2. Organization and governance: provides an overview of how the health system in the country is organized, governed, planned and regulated, as well as the historical background of the system; outlines the main actors and their decision-making powers; and describes the level of patient empowerment in the areas of information, choice, rights, complaints procedures, public participation and cross-border health care.
3. Financing: provides information on the level of expenditure and the distribution of health spending across different service areas, sources of revenue, how resources are pooled and allocated, who is covered, what benefits are covered, the extent of user charges and other out-of-pocket payments, voluntary health insurance and how providers are paid.
4. Physical and human resources: deals with the planning and distribution of capital stock and investments, infrastructure and medical equipment; the context in which IT systems operate; and human resource input into the health system, including information on workforce trends, professional mobility, training and career paths.
5. Provision of services: concentrates on the organization and delivery of services and patient flows, addressing public health, primary care, secondary and tertiary care, day care, emergency care, pharmaceutical care, rehabilitation, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health services for specific populations.
6. Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.
7. Assessment of the health system: provides an assessment based on the stated objectives of the health system, financial protection and equity in financing; user experience and equity of access to health care; health outcomes, health service outcomes and quality of care; health system efficiency; and transparency and accountability.
8. Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
9. Appendices: includes 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 report is finalized which 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 with each other to ensure that all stages of the process are as effective as possible and that HiTs meet the series standard and can support both national decision-making and comparisons across countries.

9.4 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. It 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.

9.5 About the authors

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