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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 policymakers 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 Regional Office for Europe's

European Health for All database, data from national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development Health Data, data from the International Monetary Fund, 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 contact@obs.who.int.

HiTs and HiT summaries are available on the Observatory's web site (<http://www.healthobservatory.eu>).

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The Health Systems in Transition (HiT) profile on Bulgaria was produced by the European Observatory on Health Systems and Policies and Medical University – Varna “Prof. Dr P. Stoyanov”, which is a member of the Health Systems and Policy Monitor (HSPM) network.

The HSPM is an international network that works with the Observatory on country monitoring. It is made up of national counterparts that are highly regarded at national and international level and have particular strengths in the area of health systems, health services, public health and health management research. They draw on their own extensive networks in the health field and their track record of successful collaboration with the Observatory to develop and update the HiT.

This edition was written by Antoniya Dimova, Maria Rohova, Stefka Koeva, Elka Atanasova, Lubomira Koeva-Dimitrova and Todorka Kostadinova (Medical University – Varna “Prof. Dr P. Stoyanov”, Bulgaria). It was edited by Anne Spranger (Berlin University of Technology), working with the support of Ewout van Ginneken, Co-ordinator of the Observatory’s Berlin Hub. The European Observatory on Health Systems and Policies’ Research Director responsible for the Bulgarian HiT was Reinhard Busse (Berlin University of Technology). The basis for this edition was the previous HiT, which was published in 2012 and written by Antoniya Dimova, Maria Rohova, Emanuela Moutafova, Elka Atanasova, Stefka Koeva, Dimitra Panteli and Ewout van Ginneken.

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The Observatory team working on HiTs is led by Josep Figueras, Director, Elias Mossialos, Martin McKee, Reinhard Busse (Co-directors), Ewout van Ginneken and Suszy Lessof. The Country Monitoring Programme of the Observatory and the HiT series are coordinated by Anna Maresso. The production and copy-editing process of this HiT was coordinated by Jonathan North, with the support of Caroline White and Hugh Allan.

LIST OF ABBREVIATIONS

BDA	Bulgarian Drug Agency
BGN	Bulgarian National Currency (Bulgarian Lev)
CEMC	Centres for emergency medical care
CIS	Commonwealth of Independent States
CME	Continuous medical education
CoM	Council of Ministers
CPC	Commission for Protection of Competition
CT	Computed tomography
DALY	Disability-adjusted life year
EAMA	Executive Agency Medical Audit
EC	European Commission
EU	European Union
EU13	The 13 countries that joined the European Union in 2004, 2007 and 2013
EU15	European Union Member States before May 2004
EU28	European Union Member States at July 2013
FFS	Fee-for-service
FSC	Financial Supervision Commission
GDP	Gross domestic product
GERB	Citizens for European Development of Bulgaria
GP	General practitioner
HFA	Health for All (WHO operated database)
HTA	Health Technology Assessment
ICD	International Classification of Diseases
MMS	Minimum monthly salary
MoH	Ministry of Health
MRI	Magnetic resonance imaging
NATO	North Atlantic Treaty Organization
NCPHA	National Centre of Public Health and Analyses

NCPRMP	National Council on Prices and Reimbursement of Medicinal Products
NFC	National Framework Contract
NGO	Nongovernmental organization
NHIF	National Health Insurance Fund
NHIS	National Health Information System
NHS	National Health Strategy
NRA	National Revenue Agency
NSI	National Statistical Institute
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket
PDL	Positive drug list
PPP	Purchasing power parity
PPS	Purchasing power standards
RHI	Regional Health Inspectorate
RHIF	Regional Health Insurance Fund
SDR	Standardized death rate
SEMC	Subsidiaries for emergency medical care
SHI	Social health insurance
UN	United Nations
VAT	Value added tax
VHI	Voluntary health insurance
VHIC	Voluntary health insurance company
WHO	World Health Organization
YLD	Year lived with disability
YLL	Year of life lost

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ABSTRACT

This analysis of the Bulgarian health system reviews developments in its organization and governance, health financing, health care provision, health reforms and health system performance. With the 2015 National Health Strategy 2020 at its core, there have been ambitious reform plans to introduce more decentralization, strategic purchasing and integrated care into the Bulgarian social health insurance system. However, the main characteristics of the Bulgarian health system, including a high level of centralization and a single payer to administer social health insurance, remain intact and very few reforms have been implemented (for example, the introduction of health technology assessment). There are multiple reasons for this, of which political fragility and stakeholder resistance are among the most important.

Overall, Bulgaria marked notable progress on some health indicators (for example, life expectancy and infant mortality) but generally progress lags behind EU averages. What is more, the system has not been effective in reducing amenable mortality, as reflected in the unsteady improvement patterns in mortality due to malignant neoplasms. This is despite an increase in total health expenditure as a percentage of gross domestic product to 8.2% in 2015. The overall high out-of-pocket spending (47.7% of total health spending in 2015) has been growing and is increasingly worrisome. It evidences the low degree of financial protection by the Bulgarian social health insurance system and exacerbates the already considerable inequities along socioeconomic and regional fault lines. For instance, there are regional imbalances of medical professionals, which are more concentrated in urban areas, and accessibility to physicians is further deteriorating, especially in rural areas. Current reforms have to tackle these challenges and build consensus among stakeholders of the health system to unlock the standstill.

EXECUTIVE SUMMARY

■ Introduction

Bulgaria is a comparatively small European country in the eastern part of the Balkan peninsula with a population of 7.1 million inhabitants in 2016. The country is a parliamentary representative democratic republic with a multiparty system and free elections. Bulgaria has been undergoing a dramatic demographic crisis fuelled by negative population growth and negative net international migration, leading to a steady and continuous population decline and steep drop of the working-age population. In parallel, the country has undergone a profound transformation from a centrally planned to an open market economy. The whole process has been protracted and uneven, marked by recessions and booms. In 2007, Bulgaria became a member of the European Union (EU) and this has given a strong impetus to the country's development. Regardless of the comparatively stronger economic performance in 2015–2016, Bulgaria is still facing serious economic and social challenges, with worryingly high levels of poverty and significant regional variances in all related indicators. The lack of political stability (as indicated by the frequent changes in government in the period 2013–2017) has greatly undermined reform efforts in a number of fields, including health care.

There has been progress in certain demographic indicators such as life expectancy (74.5 years in 2015), as well as in some mortality and morbidity indicators such as infant mortality (6.6 deaths per 100 000 births in 2015). Nevertheless, Bulgaria is lagging behind other EU Member States and shows unsteady improvement patterns. The three leading causes of mortality are cardiovascular diseases, malignant neoplasms and diseases of the respiratory system. Cardiovascular diseases caused two-thirds of all deaths in 2015, far above the EU average, but the second cause, cancer, is below the European average. The prevalence of risk factors, such as persistent high

alcohol consumption and smoking, is often higher than the EU average and likely to add to the high overall mortality rates and low healthy life expectancy in Bulgaria.

■ Organization and governance

The health system in Bulgaria is highly centralized with the main national actors being the National Assembly, the Council of Ministers and the Ministry of Health, the National Health Insurance Fund (NHIF), and the professional organizations of physicians and dentists. The Ministry of Health is responsible for the overall organization and functioning of the health system (for health legislation, coordination and supervision of the various subordinated bodies, planning and regulating health care providers, as well as financing specific types of health services).

A health insurance system, with compulsory and voluntary health insurance, was established by the 1998 Health Insurance Act. Social health insurance (SHI) is administered by a single payer, the NHIF. The NHIF finances medical and dental services included in the benefit package and medications listed in the Positive Drug List (PDL). The benefit package and prices of services are negotiated between the NHIF and professional associations of physicians and dentists annually. Voluntary health insurance (VHI) is provided by for-profit joint-stock insurance companies for general and life insurance, which directly contract both insured individuals and providers.

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, health system activities, and physical and human resources.

Health care providers are autonomous self-governing organizations. All primary medical and dental care, pharmaceuticals, most specialized outpatient (or ambulatory) care and some hospitals are provided by the private sector. The state owns 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 district hospitals.

As stipulated in the 1998 Health Insurance Act, it is compulsory for all Bulgarian citizens to be insured under the health system. 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.

■ Financing

Bulgaria has a mixed public–private health care financing system. Health care is financed from compulsory SHI contributions, taxes, out-of-pocket (OOP) payments, VHI premiums, corporate payments, donations and external funding. Following the introduction of social health insurance in the late 1990s, total health expenditure as a percentage of gross domestic product (GDP) increased steadily and stood at 8.2% in 2015. Except for Slovenia, Bulgaria spent more on health as a percentage of GDP than all new EU Member States. Although both public and private health expenditure contributed to the increase of total health expenditures, the growth rate of private expenditure outpaced that of public spending. Private expenditure on health – mainly OOP – has grown from 39.1% in 2000 to 48.9% of total expenditure in 2015, and constitutes the largest source of financing in Bulgaria. Comparing only OOP expenditure, Bulgaria records the largest share among all EU countries with 47.7% of total health expenditure in 2015. This poses a financial burden on the population, especially for pharmaceutical care, which accounts for approximately two thirds of overall OOP expenditures. Corporate payments are ranked second in private health expenditures, whereas VHI only plays a marginal role contributing less than 1% to Bulgarian health financing.

The role of public financing decreased steadily since the transition period to an SHI system in the late 1990s and accounted for slightly more than half of total health expenditures in 2015. Public financing mainly stems from SHI contributions managed through the NHIF, which made up 41.9% of total health expenditures. General government expenditure continued to decrease and stood at 9.2% of total health expenditures in 2015. Roughly 60% of SHI revenues are mobilized through income-related SHI contributions paid by

employees and employers. In addition, SHI contributions paid by the state on behalf of 11 population groups, such as children and pensioners, make up approximately one third of the total contribution revenue but cover two thirds of the total population. By law, all Bulgarian citizens must be insured with the NHIF; however, a significant share of the population (up to 12%) is de facto uninsured.

The NHIF acts as the main purchaser of health services (since 1998). Relations between the NHIF and health care providers are based on a contract model. The NHIF and professional associations of physicians and dentists sign the National Framework Contract, which is intended to regulate the formal and operational procedures of the compulsory health insurance system. The benefit package includes primary and specialized outpatient medical care, outpatient diagnostic services, dental care and inpatient services that are regulated by clinical pathways and procedures. Providers are mainly remunerated prospectively for the services they provide to the population on a fee-for-service and per capita basis. Public health services, emergency care, and state psychiatric hospitals are funded by global budgets of the Ministry of Health. Approximately half of current health expenditure is spent on curative and rehabilitation services. Despite reform efforts to contain overall hospital activity through decreasing the number of public hospitals and beds, introducing ceilings to hospitals, and establishing clinical and ambulatory (or outpatient) procedures, inpatient care accounts for the largest share of curative and rehabilitative care expenditure.

■ Human and physical resource

The structure and distribution of physical and human resources in the Bulgarian health sector are characterized by imbalances and substantial disproportions. The hospital sector in Bulgaria has traditionally been marked by overcapacity and yet it is subject to further growth. In 2016, there were 321 hospitals with a total of just below 50 000 beds. The increase in both the number of hospitals and the number of beds is mainly driven by the private sector, whereas the number of public hospitals (under state and municipal ownership) has been comparatively stable. There are considerable regional variations for inpatient facilities in favour of more urban settlements.

More than 120 000 people, or roughly 5.5% of all full-time employees, are working in the health care sector in Bulgaria. The number of physicians

per 1000 population has been steadily growing from 3.27 in 1990 to 4.16 in 2016, which puts Bulgaria above the EU28 average (3.5 per 1000 population). There are far more medical specialists than general practitioners (GPs), with the latter making up only 16.6% of the total physician workforce, which is the second lowest ratio in the EU after Greece. What is more, the number of GPs has been steadily decreasing.

Rapid ageing and an outflow of physicians due to emigration result in large regional discrepancies and insufficient coverage in some fields. Although the number of nurses has stayed comparatively stable at a very low level, Bulgaria still records the lowest nurse per physician ratio of all EU Member States, with 1.1 nurses per physician. This is contrasted by the highest density of practising dentists per 1000 population in the EU in 2016.

Overall, Bulgaria is lagging behind in the process of introducing new professional roles or diversifying and expanding competences of existing professions.

■ Provision of services

In Bulgaria, health services are provided by a network of various health care providers, in either the private or public sector. Public health services are provided by the state and organized and supervised by the Ministry of Health. Various public health programmes are mainly implemented by the ministry's local branches, the Regional Health Inspectorates, several national centres and by municipalities.

The Health Care Establishment Act (1999) 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 declining and access to primary care in rural and remote areas is still a challenge. 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 NHIF. The majority of outpatient facilities are privately owned. The distribution of specialists across the country is characterized by large regional imbalances.

Inpatient care is delivered mainly through a network of public and private hospitals, divided into multi-profile and specialized. There are also

other inpatient health care establishments such as comprehensive cancer centres, centres for dermato-venereal diseases, and the newly established centres for comprehensive service for children with disabilities and chronic diseases. 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. For years, both an oversupply of acute care beds and a (growing) undersupply of long-term care services have remained.

The centres for emergency medical care with their subsidiaries and hospitals' emergency wards are the key units in the organization of emergency care. In 2014, the Ministry of Health undertook several reforms aiming to improve the infrastructure and material resources; ensure sustainable development of human resources; and ensure efficient organization, coordination and management of the emergency medical care system.

Pharmaceutical care in Bulgaria is part of the state health policy and under the responsibility of the Minister of Health. The Bulgarian pharmaceutical market is one of the smallest in the EU, but it is nevertheless among the fastest growing sectors of the Bulgarian economy.

Dental care is delivered in outpatient and inpatient facilities. The regulations for outpatient dental care facilities are similar to those for primary and specialized medical care. The majority of dental practices are concentrated in the big cities. Only selected dental care services are fully covered by SHI, whereas the majority of procedures are paid for by the patient.

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, Bulgaria still relies on traditional psychiatric services and outpatient and community-based services are not responding sufficiently to identified needs.

■ Reforms

Despite ambitious intentions to reform the health system, no significant changes to the design and functions of the system have been realized since

the mid-2000s. The improvement in strategic planning after 2015, as reflected in the new National Health Strategy 2020, coincided with a fragile political situation. Reform initiatives were resisted by stakeholders in the health system and promising legislative ideas and changes, which were expected to address the most pressing problems of the health system such as system effectiveness and efficiency, financial stability, population coverage and equity, were struck down in the courts before some of them could enter into force. Instead, most of the recent changes aim at strengthening control over public spending and cost containment, and include pharmaceutical prices regulation, introduction of ceilings to hospital admissions per hospital and clinical pathways, as well as the introduction of standards for financial management of the state hospitals.

Only a few changes aiming to increase efficiency have been successfully implemented, such as the introduction of Health Technology Assessment in 2015. The other changes aiming to raise efficiency, for example the reorganization of the benefit package into a basic and a complementary part and transformation of some inpatient services to ambulatory settings, and the introduction of selective contracting through National and Regional Health Maps, were repealed in the courts. In early 2018, the Ministry of Health presented new plans to introduce selective contracting and to make changes in the benefit package, but it is too early to judge on future implementation.

The 2017 government declaration and the 2018 EU presidency programme laid down reforms that aim to improve prevention of diseases and increase the accessibility of pharmaceuticals. Discussions on possible approaches to secure financial stability and to increase efficiency continue.

■ Assessment of the health system

The current national health strategy, NHS 2020, focuses on a convergence of Bulgarian health indicators with the EU average. Although, there has been notable progress in several indicators such as infant mortality rate, life expectancy and an uptake of prevention efforts, there is still considerable room for improvement. The underperformance in the field of cardiovascular mortality and lack of substantial results in reducing cancer mortality could be partly attributed to deficiencies in the health system (especially so for screening, early detection and diagnosis). What is more, the growing

percentage of OOP payments in Bulgaria, which is already far above the EU average, highlights the inadequate financial protection provided by the SHI system to citizens. Overall, OOP spending on health increased more than threefold between 2003 and 2015 and accounted for 47.7% of total health spending in 2015. Inevitably, this has adverse implications for the accessibility of health care and puts many disadvantaged groups (those on low income, residents in rural areas, ethnic minorities, those suffering from chronic diseases, and older people) at a high risk of impoverishment and forgone care. Citizens as well as medical professionals are dissatisfied with the performance of the health system and the quality of care, for which a national monitoring system or standardized data are lacking.

The Bulgarian health system is further challenged by regional imbalances of medical professionals, which are concentrated in urban areas. Access to physicians is further deteriorating, especially in primary care. Inpatient care remains the dominant sector and records the highest hospital admission rates for heart failure (1334.9 per 100 000 population), diabetes mellitus (721.2 per 100 000 population), and asthma (183.0 per 100 000 population) among all EU countries in 2015. In contrast, the outpatient care sector remains small, and its share in total health expenditures is the lowest in the EU. There has been some progress in terms of accountability and transparency in the health system, which is an encouraging sign.

■ Conclusion

Although new principles, such as autonomy, contractual relations and market regulation were introduced in the late 1990s, in practice, the decision-making process in the Bulgarian health systems is highly centralized. At the same time, the unstable political situation, the frequent turnover of health system leadership, as well as a lack of political consensus and long-term vision, have contributed to discontinuous and inconsistent policy implementation. Some of the fundamental principles of the health insurance system, such as the independence of the NHIF, the equal participation of state, employers and insured individuals in the fund's management, and the use of evidence-based health policy, have been gradually abolished or never realized. The abandonment of these elements has also given rise to instability, insecurity, distrust in the system and resistance to reforms.

The need to improve dialogue with citizens and professionals is crucially important for reforms to succeed. The health system requires substantial changes and solutions, which can happen only with political will and public support. The basis for any such overhaul is a set of common principle and shared values. The national significance of health reform requires that these decisions be agreed upon and widely supported by a large constituency, including civil organizations, trade unions, municipalities and the scientific community.

Introduction

Bulgaria is a comparatively small European country in the eastern part of the Balkan peninsula with a population of 7.1 million inhabitants in 2016. The country is a parliamentary representative democratic republic with a multiparty system and free elections. Bulgaria has been undergoing a dramatic demographic crisis fuelled by negative population growth and negative net international migration, leading to a steady and continuous population decline and steep drop of the working-age population. In parallel, the country has undergone a profound transformation from a centrally planned to an open market economy. The whole process has been protracted and uneven, marked by recessions and booms. In 2007, Bulgaria became a member of the European Union (EU) and this has provided a strong impetus to the country's development. Regardless of the comparatively stronger economic performance in 2015–2016, Bulgaria is still facing serious economic and social challenges, with worryingly high levels of poverty and significant regional variances in all related indicators. The lack of political stability (as indicated by the frequent changes in government in the period 2013–2017) has greatly undermined reform efforts in a number of fields, including health care.

There has been progress in certain demographic indicators such as life expectancy (74.5 years in 2015), as well as in some mortality and morbidity indicators such as infant mortality (6.6 deaths per 100 000 births in 2015). Nevertheless, Bulgaria is lagging behind other EU Member States and shows unsteady improvement patterns. The three leading causes of mortality are cardiovascular diseases, malignant neoplasms and diseases of the respiratory system. Cardiovascular diseases caused two thirds of all deaths in 2015, far above the EU average, but the second cause, cancer, is below the European

average. The prevalence of risk factors, such as persistent high alcohol consumption and smoking, is often higher than the EU average and likely to add to high overall mortality rates and low healthy life expectancy in Bulgaria.

■ 1.1 Geography and sociodemography

Bulgaria occupies the eastern portion of the Balkan peninsula in the south-eastern part of the continent, along the Black Sea. At 110 372 km² it is a comparatively small European country (NSI, 2018h). Bulgaria's longest boundary (609 km) is with Romania to the north, in most parts along the Danube River. To the west its neighbours are Serbia and the Former Yugoslav Republic of Macedonia. Greece and Turkey border the country to the south and the Black Sea is its natural eastern boundary (a total of 378 km) (Fig. 1.1).

FIG. 1.1 Map of Bulgaria



Source: Authors' own compilation.

Bulgaria is remarkable for its 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. The climate ranges from a temperate continental climate in the northern part of the Balkan Mountains and a warmer Mediterranean in the southern part of the country, while the Black Sea has local influence in the coastal areas.

The country is divided into 28 administrative-territorial units, called “districts”. Although Bulgaria has no administrative regions, the term “regional” is often used in English to designate these decentralized units. Thus, for statistical purposes six regions have been created, called “statistical regions”, which are aggregations from the 28 districts (north-western, north-central, north-eastern, south-western, south-central and south-eastern). Situated in the western part of the country, the capital, Sofia, is the country’s largest city, and lies almost at the geographical centre of the Balkan peninsula. Its population is above 1 million (1.3 million in 2016), which is almost four times as large as the population in each of the next biggest cities, Plovdiv (343 000) and Varna (335 000; NSI, 2018e). The share of people living in urban areas has been steadily increasing throughout the last few decades and stood at 74.3% in 2015 (Table 1.1).

According to the latest population census (2011), the vast majority of Bulgarian citizens (84.8% of the population) declared their ethnic identity as Bulgarian. Turks form an additional 8.8%, Roma 4.9% and other ethnic minorities (Armenian, Greek, Jewish, Russian, Tatar and others) 1.5% (NSI, 2011). In the 2011 census, 76% of the population responded that they were Eastern Orthodox Christian, 10% Moslem and 14% indicated “other” or did not state their religion.

Demographic development in Bulgaria has continued to be a major challenge. Table 1.1 provides some basic sociodemographic information about the country. Since 1990, the number of people has been consistently shrinking by almost 20% or 1.5 million to 2015. The total population stood at 7.1 million people in 2016.

The two causes for the continuous population decline remain the natural population decrease and negative net migration. A natural population decrease (deaths outnumber live births in a given year) has occurred since 1990 and in 2016, the natural increase was –6 per 1000 population (or an absolute decrease of 42 600 people) (NSI, 2017f; Eurostat, 2018).

TABLE 1.1 Trends in population/demographic indicators, selected years

	1980	1990	1995	2000	2005	2010	2015	2016	EU28 (2016)
Total population (in millions)	8.90	8.70	8.40	8.20	7.70	7.40	7.20	7.10	510.30
Population, female (% of total)	50.20	50.60	51.00	51.30	51.30	51.30	51.40	51.40	51.00
Population ages 0–14 years (% of total)	22.20	20.50	18.10	15.90	13.70	13.20	13.90	14.10	15.60
Population ages 65 years and above (% of total)	11.80	13.00	14.90	16.20	17.40	18.20	20.00	20.40	19.20
Population ages 80 years and above (% of total)	1.50	2.10	2.50	2.10	3.20	3.90	4.60	4.70	5.40
Population growth (average annual rate of change in %)	0.40	1.80	0.44	0.49	0.75	0.66	0.64	-0.60	0.00
Population density (per km ²)	80.10	78.80	76.00	73.80	70.50	68.10	66.10	65.70	120.70
Fertility rate (births per woman)	2.10	1.80	1.20	1.30	1.40	1.60	1.50	1.50	1.60
Birth rate, crude (per 1 000 population)	14.50	12.1	8.60	9.00	9.30	10.20	9.20	9.10	10.00
Death rate, crude (per 1 000 people)	n/a	12.45	13.44	12.86	11.78	11.60	11.78	12.86	11.78
Death rate, crude (per 1 000 population)	11.10	12.50	13.60	14.10	14.80	14.90	15.30	15.10	10.30
Age dependency ratio (% of working-age population)	51.80	50.30	49.30	47.60	45.10	46.70	51.90	52.80	53.70
Age dependency ratio [old (aged 65+) as % of working-age population]	18.00	19.80	22.60	24.50	25.30	26.80	30.40	31.10	29.90
Age dependency ratio [young, (aged 0–14) as % of working-age population]	33.50	30.50	26.70	23.10	19.80	19.80	21.50	21.50	23.70
Urban population (% of total population)	62.10	66.40	67.80	68.90	70.60	72.30	73.90	74.30	75.00
Proportion of single-person households	n/a	n/a	n/a	n/a	18.40	19.50	28.80	30.50	32.20
Literacy rate in population aged 15 and above (%) ^a	95.10	97.20	97.90	98.40	n/a	n/a	n/a	n/a	n/a

Sources: World Bank, 2017; Eurostat, 2018; ^aUnited Nations, 2017.

Note: n/a: Not available.

Emigration has also accelerated the population decline since 2000. In 2015, the number of Bulgarians leaving the country (13 800 persons) was still larger than the number of foreigners entering (9500 persons) Bulgaria. This was despite a 10% increase in immigration rates to Bulgaria in 2015, mostly from countries like Syria, Russia and Turkey and from other EU countries (many as students). Hence the share of foreigners in the total population was 1.9% (OECD, 2017).

A large share of native Bulgarian emigrants is young [68% of emigrants were younger than 40 years in 2016 (NSI, 2017b)], seeking better working and social living conditions abroad or migrating for study purposes. Although at the beginning, economic contraction and high unemployment were partly responsible for the emigration, the trend has continued even after the economic environment stabilized. The major countries of destination for Bulgarian emigrants are Greece, Germany, Spain and the United Kingdom. According to estimates by the International Organization of Migration, 14% of Bulgaria's citizens live abroad (EU Commission, 2017a; see also Chapter 4.2.2 *Professional mobility of health workers*).

Bulgaria has an ageing population, similar to other EU Member States. The share of the population under 15 years of age (14.1% in 2016) continues to decrease, while the share of people of older age (aged 65 years and older; 20.4%) is rising. Similarly, the share of people older than 80 years has doubled from 2.1% in 2000 to 4.7% in 2016 (see Table 1.1).

One direct negative effect of the aforementioned population decrease and ageing is the decline of the working-age population. In 2015, only 65.6% of the total population was of working age (Table 1.1; Eurostat, 2018). As a result, the old-age dependency ratio (ratio of the relative size of people over 65 years to the "working-age" population aged 15–64 years) was 31.1 in 2016. Although this indicator is lower compared with some EU countries (Germany, Italy, Greece, Finland), it ranks highest among newer EU Member States (Eurostat, 2018).

Another point of concern is the low total fertility rate. In 1997, the total fertility rate plummeted to exceptionally low levels of 1.09 live births per woman (Vassilev, 2005). More recently, total fertility rates have increased and stabilized at around 1.5 live births per woman (1.53), which is close to the EU28 average (1.58) and a little below the EU15 average (1.6 in 2015; Eurostat, 2018).

The corresponding crude birth rate has been 9.1 per 1000 population in 2016. The number of live-born children each year decreased to 64 984 in 2016 (NSI, 2018h).

In terms of mortality, the crude death rate has ranged around 14 to 15 deaths per 1000 population since 2000 and has even increased over the last few years. In 2016, Bulgaria recorded the highest crude death rate in the EU28 (15.1 versus 10 deaths per 1000 population; Eurostat, 2018).

■ 1.2 Economic context

After the demise of communism, Bulgaria has undergone a profound transformation from a centrally planned to an open market economy. In 2016, Bulgaria was classified by the World Bank as an upper-middle income country with a gross domestic product (GDP) per capita (current US\$) of US\$ 7351, up from US\$ 4513 in 2006 (World Bank, 2017).

Yet, the whole transition process has been protracted and uneven, marked by deep recessions and booms. In a first phase of transition from 1989 to 1996, a series of reforms was launched that lacked a clear vision towards economic restructuring, trade and price liberalization, and privatization. These reforms were ad hoc, slowly implemented and often inconsistent. The problematic initial stage of transition was due to a spectrum of “contextual” factors: specific legacies (cultural and historic); unfavourable starting conditions; political polarization and lack of consensus on the transition path; major flaws in the institutional environment and inadequate policies (Nikolov et al., 2004). As a result, with an unstable monetary sector and inefficient central bank supervision, Bulgaria plunged into a severe financial and economic crisis in 1996–1997, characterized by a dramatic deterioration of all macroeconomic indicators (for more information on the causes, nature and mechanics of the financial and economic collapse, see Dobrinsky, 1997, 2000; Berlemann, Nenovski & Hristov, 2002). The economic and social turbulence triggered a political crisis and a change towards comprehensive structural reforms in the late 1990s. These included an acceleration of privatization, financial stabilization, bank rehabilitation, business restructuring, as well as measures to mitigate unemployment. In combination with the prospect of EU accession, these laid the foundation for nearly a decade of exceptionally high economic growth (2000–2008) and a consequent improvement of living standards (Table 1.2). In 2007, Bulgaria became a member state of the EU.

However, the global economic downturn after 2008 had a severe effect on the Bulgarian economy, resulting from inherited weaknesses (see Nikolov

TABLE 1.2 Macroeconomic indicators, selected years

	1980	1990	1995	2000	2005	2010	2015	2016
GDP (current US\$, millions)	19 839	20 632	13 063	13 148	29 822	50 610	50 199	52 395
GDP PPP (current international US\$, millions)	24 651	45 228	44 692	52 049	78 696	110 660	130 990	136 848
GDP per capita (current US\$)	2239	2367	1554	1609	3894	6843	6993	7351
GDP per capita, PPP (current international US\$)	n/a	5188	5317	6371	10 275	14 963	18 249	19 199
GDP growth (annual %) ^a	n/a	-9.10	2.90	5.00	7.20	0.00	3.6	3.40
Government expenditure (% of GDP) ^a	n/a	n/a	41.30	41.40	33.9 ²⁰⁰⁶	36.20	40.70	35.50
Government surplus/deficit (% of GDP) ^a	n/a	n/a	-7.20	-0.50	1.8 ²⁰⁰⁶	-3.10	-1.60	0.00
Tax revenue (% of GDP) ^a	n/a	n/a	19.30	20.30	21.8 ²⁰⁰⁶	19.20	21.00	21.40
General government gross debt (% of GDP) ^a	n/a	n/a	59.3 ¹⁹⁹⁷	71.20	26.80	15.30	26.00	29.50
Value added in industry (% of GDP)	54.40	49.20	28.40	25.80	28.20	27.30	27.90	28.00
Value added in agriculture (% of GDP)	14.60	17.00	14.75	12.60	8.50	4.80	4.80	4.40
Value added in services (% of GDP)	30.90	33.80	56.90	61.60	63.30	67.80	67.30	66.90
Labour force (total, in million)	4.10	4.08	3.77	3.43	3.32	3.42	3.34	3.31
Unemployment (total, % of labour force) ^a	n/a	1.70	15.90	16.20	10.10	10.30	9.10	7.60
At-risk-of-poverty rate (% of population) ^{b, c}	n/a	n/a	n/a	n/a	n/a	20.70	22.00	22.90
GINI index (World Bank estimate)	n/a	30.7 ¹⁹⁹²	n/a	n/a	35.7 ²⁰⁰⁶	35.7	37.4 ²⁰¹⁴	n/a
Real interest rate	n/a	n/a	10.50	3.90	2.00	8.30	5.10	5.20
Official exchange rate, BGL per US\$ (annual average)	n/a	0.002	0.067	2.11	1.56	1.47	1.76	1.77

Sources: World Bank, 2017; ^aEurostat, 2018; ^bNSI, 2017i.

Notes: n/a: not available. PPP: purchasing power parity. ^cAt-risk-of-poverty rate is defined as the share of households that are below the poverty line, which is defined as 60% of the median equalized disposable income.

et al., 2004), political instability and frequent changes of government between 2013 and 2017. Economic performance has recovered only recently. As a result of growing domestic consumption and strong external trade, GDP grew by 3.6% in 2015 and 3.4% in 2016. Fiscal consolidation has improved and is supported by better revenue collection. In 2016, the government recorded a balanced budget and one of the lowest ratios of government debt-to-GDP in the EU (29.5%; Table 1.2). The unemployment rate declined to a 7-year-low of 7.6% in 2016, which is below the EU average.

Regardless of the latest economic recovery, Bulgaria is still facing serious economic and social challenges. In 2016, GDP per capita in purchasing power standards was the lowest within the EU28 and 51% below its average (Eurostat, 2018). The labour force and employment sector exhibit serious structural weaknesses, exacerbated by the demographic situation: a high share of long-term unemployment (59.6% of all unemployment in 2016); a high inactivity rate for certain age groups (for example, the labour participation rate of women has been declining from 55% in 1990 to 49% in 2016 and is now below the EU average of 51%); and high regional variations in unemployment rates (Sofia district, Plovdiv and Varna performing best, with an unemployment rate of 6–7%, and the district of Shoumen, Silistra and Vidin with unemployment rate in the range of 16–17% in 2016). There is a relatively high unemployment rate among young people – 19.3% in 2015.

As a result of higher economic growth and better employment opportunities total poverty has been declining. According to World Bank data, moderate poverty (US\$ 5/day) declined slightly by one percentage point between 2015 and 2016 to 13.7%. There is also a slight decrease of extreme poverty (less than US\$ 1.90/day; World Bank, 2017). However, the share of population at risk of poverty¹ remained one of the highest in the EU in 2016 (22.9%), with only Romania registering a higher value (25.3%). Despite a decrease, Bulgaria still has the highest at-risk-of-poverty or social exclusion (AROPE) rate² in the EU – 40.4% of the population – followed by Romania (38.8%) and Greece (35.6% in 2016; Eurostat 2018). Moreover,

1 People at-risk-of-poverty, who have an equivalized disposable income below the risk-of-poverty threshold, set at 60% of the national median equivalized disposable income after social transfers.

2 AROPE defines the share/number of people who are at-risk-of-poverty or severely materially deprived or living in households with very low work intensity.

Bulgaria has the highest material deprivation rate³ in the EU – more than 46.9% in 2016, down from around 60% in 2011 (Eurostat, 2018). With such unfavourable social and living conditions indicators and its demographic situation, Bulgaria has a key challenge to improve its economic development and much will depend on structural reforms in areas like education, the pension system and health care.

■ 1.3 Political context

According to the constitution from 1991, Bulgaria is a parliamentary representative democratic republic with a multiparty regimen and free elections on the basis of universal suffrage. The constitution introduces 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 a four-year period by popular vote. The constitution also provides for a Grand National Assembly, which is convened on special occasions such as the adoption of a new constitution, territorial changes or change in the form of government. The parliament has widespread powers including the passage of legislation, approving the state budget; scheduling the presidential elections; and electing and removing the prime minister, as well as cabinet (on the prime minister's motion). 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 (CoM), and to pass normal legislation. A three quarters majority is needed to approve constitutional changes. The CoM is the principal body of the executive branch. The chairman of the CoM (the prime minister) is elected by the National Assembly.

Political life in the transition period has been characterized by significant instability and volatility, which has a profound effect on the economy, social conditions and the pace of reforms. Over the past ten years, Bulgaria

³ 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, 1-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.

has had eight cabinets and only one government (2005–2009) lasted a full four-year term. Between 2013 and 2017 alone, the country had three interim governments. The latest, the 44th National Assembly, was elected in March 2017 by proportional representation. The centre-right Citizens for European Development of Bulgaria party (*GERB*) secured 32.7% of the national vote and 95 seats in the parliament, followed by the Bulgarian Socialist party (27.2%, 80 seats), United Patriots (9.1%, 27 seats), Movement of Rights and Freedoms (known as *DPS*) (9%, 26 seats) and the newly formed, populist *Volya* (Will) party with 4.2% and 12 seats. The current government is a coalition between *GERB* and the United Patriots. This is the third *GERB* government led by Prime Minister Boiko Borisov, after none of his previous two cabinets lasted a full term.

Bulgaria also has a president who is directly elected for a five-year term with a limit of two consecutive terms. The president serves as head of state and commander-in-chief. The president has the power to veto legislation and return it to parliament for further debate. However, the veto can be revoked by the National Assembly with a majority of more than half of all members. The president also promulgates laws. The current president is Rumen Radev (since 2016).

The judiciary system is administered by the Supreme Court of Cassation, the Supreme Administrative Court and the courts of appeal, regional courts, courts-martial and district courts.

The Supreme Administrative Court rules on the legality of legislation, including health legislation (see Section 6.1 *Analysis of recent reforms*). All judicial matters are overseen by the Supreme Judicial Council, which is in charge of the self-administration and organization of the judiciary. 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 parliament by a two thirds majority. Over the last few years, important changes to legislation have been repealed frequently by the Constitutional Court (see Section 6.1 *Analysis of recent reforms*).

The Governors of the regions 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, municipalities have been devolved substantial responsibilities for health care, education and social affairs.

Bulgaria joined the EU in 2007, but is not part of the Schengen agreement or the Eurozone. Bulgaria held the rotating presidency of the Council of the EU in the first half of 2018. In the health sector, the priorities were child nutrition, and effectiveness and availability of pharmaceuticals. Bulgaria joined the North Atlantic Treaty Organization (NATO) in 2004. Bulgaria has been a member of the United Nations 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 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, Bulgaria has made good progress in the creation of a consolidated democratic governance system with a working parliament, sound government structures and active civil society. The accession to the EU has given a strong impetus to this process. However, general political instability has greatly undermined reform efforts. Although initial legislative and institutional framework has been put in place, tackling high-level corruption, organized crime, judicial independence and dissatisfaction with the political process continue to be a challenge and serious problems remain to be addressed (Freedom House, 2017).

■ 1.4 Health status

Life expectancy

Similar to other EU countries, life expectancy at birth has been steadily increasing in Bulgaria since 1980. Life expectancy at birth for both sexes increased by 3.1 years between 2000 and 2015 and stood at 71.2 years for males and 78.2 years for females. However, the improvement has been much slower than in most of the EU Member States. In 1980 total life expectancy in Bulgaria was 71.1 years and only 1.7 years below the EU average, but the gap had widened to 5.9 years in 2015. The difference from the EU

average life expectancy for females was 5.1 years and 6.7 years for males in 2015 (Eurostat, 2018). In the same year, Bulgaria recorded the lowest life expectancy for females among all EU Member States. The gender gap of life expectancy is substantial. In contrast to many other EU Member States, the gender gap remained stable and was 6.9 years in 2015 (compared with an average of 5.4 years in the EU28 average; Table 1.3).

In 2015, healthy life expectancy at birth was 65 years for women and 61.5 years for men. Data suggest a moderate improvement in the expected lifespan spent in good health, by 3 years overall between 2010 and 2015 (Table 1.4).

The leading cause for disability measured in years lived with disability (YLD) in Bulgaria is low back and neck pain, accounting for 18.8% of total YLD, followed by sensory organ diseases (10.4%) and depressive disorders (6.8%) (Table 1.5). When both the disability and premature deaths are combined and the years of healthy life lost are estimated, the primary cause for disability-adjusted life years (DALYs)⁴ is ischaemic heart disease (18.6%), followed by cerebrovascular disease (11.2%) and low back and neck pain (6.3%) (Table 1.5).

TABLE 1.3 Mortality and health indicators, selected years

	1980	1990	1995	2000	2005	2010	2015	EU28 (2015)
Life expectancy at birth, total (years)	71.1	71.2	71.0	71.6	72.5	73.8	74.7	80.6
Life expectancy at birth, male (years)	68.4	68.0	67.4	68.4	69.0	70.3	71.2	77.9
Life expectancy at birth, female (years)	73.9	74.7	74.9	75.0	76.2	77.4	78.2	83.3
Mortality rate, SDR per 100 000 population	n/a	n/a	2034	2042	1861	1688	1660	1036
Mortality rate, men, SDR per 100 000 population	n/a	n/a	2441	2409	2291	2092	2060	1287
SDR all causes, men, 0–64 years	501	550	618	561	553	496	525	282
SDR, all causes, men, > 65 years	8416	8245	8318	8283	7918	7356	8400	5435
Mortality rate, women, SDR per 100 000 population	n/a	n/a	1697	1744	1530	1382	1361	849
SDR, all causes, women, 0–64 years	267	252	258	251	230	210	227	140
SDR, all causes, women, > 65 years	6692	6260	6329	6356	5625	5085	6041	3775

Source: Eurostat, 2018; WHO HFA 2017.

Notes: n/a: not available; SDR: standardized death rate.

4 Defined as the sum of years of life lost due to premature death and years lived with disability.

TABLE 1.4 Healthy life expectancy, selected years

	2006 ^a	2010	2015	EU28 (2015)
Healthy life expectancy at birth, male (years)	66.2	63.0	61.5	62.6
Healthy life expectancy at birth, female (years)	71.9	67.1	65	63.3
Healthy life expectancy at age 50 years, males	20.9	18.2	17.7	18.4
Healthy life expectancy at age 50 years, female	25.3	20.9	20.0	19.0
Healthy life expectancy at age 65 years, males	11.4	8.9	8.7	9.4 ^b
Healthy life expectancy at age 65 years, females	13.7	9.9	9.5	9.4 ^b

Source: Eurostat, 2018.

Notes: ^aDefinition differs; ^bBreak in time series.

TABLE 1.5 Leading causes for years lived with disability (YLD) and disability-adjusted life-years (DALY), as percentage of total YLD and DALY, 2015

		DALY (% of total)			YLD (% of total)
NONCOMMUNICABLE DISEASES		89.9	NONCOMMUNICABLE DISEASES		89.5
1.	Ischaemic disease of the heart	18.6	1.	Low back and neck pain	18.8
2.	Cerebrovascular disease	11.2	2.	Sense organ diseases	10.3
3.	Low back and neck pain	6.3	3.	Depressive disorders	6.8
4.	Sense organ diseases	3.5	4.	Diabetes	5.8
5.	Lung cancer	3.4	5.	Skin diseases	4.3
6.	Diabetes	3.1	6.	Migraine	3.9
7.	Hypertensive heart disease	2.9	7.	Oral disorders	3.4
8.	Other cardiovascular and circulatory diseases	2.4	8.	Anxiety disorders	2.7
9.	Depressive disorders	2.3	9.	Osteoarthritis	2.7
10.	Colorectal cancer	2.1	10.	Iron deficiency anaemia	2.6

Source: IHME, 2016.

Notes: DALY: disability-adjusted life-year; YLD: years lived with disability.

Mortality and incidence

In 2015, age-standardized death rate (SDR) for all causes stood at 1660 per 100 000 population and was the highest in the EU, well above its average of 1035. The high SDR are in the same range as countries like Romania (1529), Hungary (1500), Lithuania and Latvia (both 1489) and almost double the SDR of the countries with the lowest SDR rates (France 858 and Spain 872; Eurostat, 2018).

An analysis of the causes of mortality in Bulgaria (Table 1.6) shows that, similar to other countries in the EU, diseases of the circulatory system and cancer (malignant neoplasms) were, by far, the leading causes of death.

The SDR for diseases of the circulatory system recorded the highest values in the late 1990s and has been decreasing since 2000. This decrease is partly associated with improved health-related behaviour (for example, avoiding an unbalanced diet, low rate of smoking and higher physical activity) as well as better health promotion and treatment (OECD/EU, 2016). However, this reduction in the SDR for circulatory diseases between 2005 and 2015 (by 12%) was outpaced by the reduction in other EU28 Member States and the EU average. Consequently, it remains the highest in the EU, Bulgaria being the only country with an SDR for circulatory diseases measured as a four-digit number, 1133 deaths per 100 000 population, which was three times higher than the EU28 average (381.4 deaths per 100 000 population) in 2015 (Eurostat, 2018). The most common causes of deaths from diseases of the circulatory system are cerebrovascular diseases and ischaemic heart diseases. In Bulgaria, as well as in the EU28, the death rate from ischaemic heart disease fell between 2005 and 2014 by over 30%. However, in 2015 ischaemic heart diseases accounted for 201.3 deaths per 100 000 population in Bulgaria, compared with an EU28 average of 127.4 deaths per 100 000 population.

More significant is the difference in the trend for Bulgaria and the EU28 average for malignant neoplasms (cancer), the second leading cause of mortality. In the EU28 there has been a consistent reduction of the SDR relating to cancer by 10% between 2005 and 2015. In Bulgaria, the reduction was 3% between 2005 and 2015; Eurostat, 2018). A similar pattern is registered for specific types of cancer. The SDR for breast cancer in EU28 in 2015 was 18.8 deaths per 100 000 population (11.7% lower compared to 2005). In Bulgaria, albeit with lower values, the SDR for breast cancer has not shown any substantial signs of reduction: after a decline from 18.7 to 15.8

between 2005 and 2010, it rose again to 18.7 deaths per 100 000 population in 2015. As with circulatory diseases the difference in the trends of cancer indicators is to a certain extent indicative of the general performance of the health system. The general decrease of cancer mortality has been attributed to more effective secondary prevention strategies, early detection and diagnosis, and greater access to quality care (Coleman et al., 2011; Health System Performance Comparison, 2013).

After circulatory diseases (causing 68.2% of all deaths) and cancer (14.6%), respiratory diseases were the third most common cause of death in Bulgaria with 60.4 deaths per 100 000 population (3.7% of all deaths; Eurostat, 2018). Still, the SDR for Alzheimer disease, as well as SDRs for certain infectious and parasitic diseases, HIV, dementia, pneumonia, asthma, rheumatoid arthritis, accidents, external causes of morbidity and mortality in Bulgaria are lower than the corresponding EU28 average death rates (Table 1.6).

In 2015 the incidence indicators for a number of diseases were higher than the EU28 average and EU15 average: cardiovascular disease incidence in Bulgaria was 1944 per 100 000 population compared with EU28 average (1186) and EU15 average (1064); neurological disorders incidence was 9441 per 100 000 population, with EU28 average rate 9157 and EU15 rate 9002; diabetes incidence per 100 000 population in Bulgaria was 362, higher than the EU28 average (290) and EU15 average (285). Cancer incidence per 100 000 population rose from 362 in 1995 to 397 in 2000, 547 in 2010 and 599 in 2015 but it was still lower than the EU28 average (688) and EU15 average (733). The incidence rate of tuberculosis has been steadily decreasing since the beginning of 2000 to 32.6 cases per 100 000 population in 2015. The number of the newly registered cases in 2015 was 1660, 30% less than the previous year (NCPHA, 2017). Yet, the incidence rate of tuberculosis is still twice the EU28 average (16.9 cases per 100 000 population) and more than three times the EU15 average (10.8 cases per 100 000 population) (IHME, 2016). The HIV/AIDS incidence per 100 000 population is comparatively low in Bulgaria: 2.08 in 2005, 1.87 in 2010 and 2.02 in 2015, compared with 3.44 for EU28 and 3.73 for EU15 in 2015 (IHME, 2016). According to the health authorities the number of registered individuals with HIV infection by the end of 2015 was 2267, the number of new cases in 2015 was only 224: 85% men and 15% women. Forty-five new AIDS cases were registered the same year (MoH, 2018d).

TABLE 1.6 Main causes of death, selected years; standardized death rate per 100 000 population

CAUSES OF DEATH	1995	2000	2005	2010	2014	2015	EU28 (2015)
All causes, all ages	2034.4	2041.5	1861.4	1688.2	1646.5	1660.1	1036.0
Communicable diseases							
Certain infectious and parasitic diseases (A00–B99)	3.7	10.2	9.0	8.3	6.2	8.2	17.4
Tuberculosis (A15–A19)	n/a	4.5	3.6	2.6	1.7	1.5	0.9
HIV/AIDS (B20–B24)	n/a	0.0	0.0	0.1	0.2	0.2	0.7
Noncommunicable diseases							
Malignant neoplasms (C00–C79)	230.4	218.1	249.7	226.9	242.4	241.9	260.6
Cancer of colon, rectosigmoid junction, rectum, anus and anal canal (C18–C21)	30.8	32.8	36.4	34.5	34.9	34.1	30.4
Cancer of trachea, bronchus and lung (C33–C34)	44.3	39.0	47.0	43.4	45.5	44.8	54.0
Breast cancer (C50)	16.8	16.8	18.7	15.8	19.0	18.7	18.8
Cervical cancer (C53)	n/a	n/a	n/a	n/a	4.7	5.1	2.1
Prostate cancer	n/a	n/a	n/a	n/a	13.6	13.8	14.8
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	1.5	2.4	2.3	1.9	2.2	1.9	3.1
Diabetes mellitus (E10–E14)	34.1	32.1	27.7	25.1	20.9	25.1	23.2
Mental and behavioural disorders (F00–F99)	4.0	4.1	1.6	1.2	1.1	1.3	43.4
Alzheimer's disease and other degenerative diseases of the nervous system	n/a	n/a	1.2	2.1	1.8	2.3	20.0
Dementia	n/a	2.0	0.2	0.2	0.3	0.3	38.0
Mental and behavioural disorders due to use of alcohol	n/a	1.1	0.7	0.4	0.3	0.4	3.1
Diseases of the nervous system and the sense organs (G00–H95)	n/a	12.4	12.8	14.8	15.32	16.4	42.1
Diseases of the circulatory system (I00–I99)	1374.0	1418.0	1288.4	1176.0	1131.0	1133	381.4
Ischaemic heart disease (I20–I25)	437.1	365.0	298.8	206.4	195.4	201.3	127.4
Cerebrovascular diseases (I60–I69)	401.0	385.1	377.3	345.9	352.6	332.9	85.1

Diseases of the respiratory system (J00–J99)	91.1	78.7	72.7	61.4	58.2	60.4	88.4
Asthma and status asthmaticus	n/a	2.7	1.7	0.6	0.6	0.5	1.4
Diseases of the digestive system (K00–K93)	51.2	42.6	47.0	45.3	52.5	53	43.1
External causes							
External causes of morbidity and mortality	6260	6329	6356	5625	5085	6041	3775
Transport accidents (V01–V99, Y85)	16.0	12.9	11.8	9.8	9.0	9.6	5.8
Suicide and intentional self-harm (X60–X84)	19.9	19.5	13.5	11.8	9.9	9.3	10.9
Ill-defined and unknown causes of mortality (R95–R99)	9.9	29.1	21.7	19.7	7.7	29 ^{a,2014}	21 ^a

Source: Eurostat, 2018; ^aWHO Regional Office for Europe, 2018.

Infant mortality indicators

Bulgaria has progressed significantly in reducing infant mortality rates in the last decade. Between 2000 and 2015 infant mortality decreased from 13.3 to 6.6 per 1000 live births, to the lowest level ever recorded in the country. Under-5-year mortality also decreased from 21 per 1000 live births in 2000 to 10 per 1000 live births in 2015. Nevertheless, Bulgaria still lags behind the EU28 average: infant deaths per 1000 live births are approximately twice the EU28 average (3.7) and the second highest rate in the EU after Romania (7.6 per 1000 live births) (NCPHA, 2016; OECD/EU, 2016). There are significant regional differences in the infant mortality rate per 1000 live births: ranging from the lowest in Kyustendil (3.2) and Sofia-capital (2.5) and the highest in Sliven (21.6) and Lovech (12.9). In general, the infant mortality in rural areas (10.9) has been nearly double the rate in urban areas (5.2) (NCPHA, 2016).

The neonatal mortality rate is more sensitive to the quality of medical care, and roughly halved from 7.5 in 1980 to 4 per 1000 live births in 2015, but is still twice the EU28 average (2.5). The post-neonatal mortality rate (from day 29 to day 365 per 1000 live births), which reflects, to a large extent, socioeconomic conditions, demonstrates an even more impressive decline, from 7.1 per 1000 in 2000 to 2.6 per 1000 in 2015 (compared with an EU28 average of 1.2). A similar situation exists for perinatal mortality rates (the sum of stillbirths plus the deaths before day six inclusive), which decreased from 12.2 in 2000 to 9.1 in 2015, and are much higher than the EU28 average (6.1 in 2015).

The estimated maternal mortality ratio per 100 000 live births (Table 1.7) shows a steady downward trend and stood at 11 in 2015 but is still higher than the EU28 average (8) (World Bank, 2017).

TABLE 1.7 Maternal, child and adolescent health indicators, selected years

INDICATOR	1980	1990	1995	2000	2005	2010	2015	EU28 (2015)
Adolescent pregnancy rate (per 1000 women aged 15–19 years) ^b	78.9	70.3	55.6	43.9	42.8	43.7	41.1	10.9
Termination of pregnancy (abortion) rate per 1000 live births ^a	1217	1375	1349	833	588	418	421	203
Infant mortality rate (0–1 year per 1000 live births) ^a	20.2	14.8	14.80	13.31	10.4	9.4	9.3	3.6
Under-5-year mortality rate (per 1000) ^b	28.7	22.1	23.1	21.0	15.9	13.0	8.2	4.2
Neonatal mortality rate (per 1000 live births) ^a	10.4	7.7	7.8	7.5	6.3	5.2	4.2 ²⁰¹³	2.5
Post-neonatal mortality rate (per 1000 live births) ^a	9.9	7.1	7.0	5.9	4.2	4.2	3.1 ²⁰¹³	1.2
Perinatal infant mortality rate (per 1000 births) ^a	15.0	11.1	11.8	12.2	12.0	11.4	9.1	6.0
Estimated maternal mortality ratio (per 100 000 live births) ^a	n/a	25.0	24.0	21.0	15.0	11.0	11.0	8.0
Syphilis incidence rate (per 100 000) ^a	n/a	4.0	20.1	19.8	6.7	n/a	4.9 ²⁰¹³	4 ²⁰¹³
Gonococcal infection incidence (per 100 000) ^a	n/a	61.1	23.2	6.7	2.8	n/a	1.3 ²⁰¹³	11 ²⁰¹³

Sources: NCPHA, 2016; ^aWHO Regional Office for Europe, 2018; ^bWorld Bank, 2017.

Notes: n/a: not available; SDR: standardized death rate.

Risk factors

Smoking is the most preventable risk factor. In 2014, Bulgaria had the highest level of smoking in the EU: the share of people at the age of 15 years and above who smoked daily in Bulgaria was 27.3%, far above the EU average (18.4%). The proportion of young smokers aged 15–24 years is also high: 20.5% in Bulgaria and 15.5% in EU28 (Table 1.8).

The EU data suggest that alcohol consumption indicators in Bulgaria are similar to or slightly higher than the EU28 average. However, while there is a tendency for alcohol consumption to gradually fall in many European

countries, it has risen in Bulgaria. Along with Lithuania, Croatia, Belgium and Austria, Bulgaria has one of the highest levels of alcohol consumption in the EU (OECD/EU, 2016). Additionally, Bulgaria is not in line with the EU averages in some other lifestyle indicators determining good health, such as high blood pressure and fruit consumption (De Backer et al., 2016). In line with the overall tendency of increased obesity worldwide and in the EU, obesity in Bulgaria has also been rising, albeit more moderately. The share of self-reported obesity among adults in 2014 (15%) was slightly lower than the EU28 average (16%; Table 1.8). However, between 2001/2002 and 2013/2014 Bulgaria (along with Greece and Malta) was among the countries with the largest increase of self-reported overweight rates (including obesity) among 15-year-olds, reaching some 20% of the respective population (Table 1.8).

Historically, vaccination coverage in Bulgaria has been very high, but has dropped below the EU average in recent years. In 2015, coverage against measles was 91.5%, diphtheria, pertussis, tetanus (% of children aged 12–23 months) 90.7%; against poliomyelitis 90.7%; HepB3 (% of 1-year-old children) 91.6%.

TABLE 1.8 Selected determinants of health, 2014

INDICATOR	BULGARIA	EU28
Share (%) of people aged 15 and above who smoke daily	27.3	18.4
Share (%) of women aged 15 and above who smoke daily	19.9	15.1
Share (%) of people age group 15–24 years who smoke daily	20.5	15.5
Alcohol consumption among adults (litres per person aged 15+)	11.3	10.0
Share (%) of self-reported overweight and obesity among 15-year-olds ^a	20.0	18.0
Share (%) of self-reported overweight and obesity among adults ^a	15.0	16.0
Share (%) of people 15 and above who have eaten fruit at least once a day	38.4	50.1
Share of (%) people 15 and above who have eaten vegetable at least once a day	35.4	55.7

Sources: EC, 2017b; ^aOECD/EU, 2016.

2

Organization and governance

The health system in Bulgaria is traditionally highly centralized with the main national actors being the National Assembly, the CoM and the Ministry of Health (MoH), the National Health Insurance Fund (NHIF) and the professional organizations of physicians and dentists. The MoH is responsible for the overall organization and functioning of the health system (for health legislation, coordination and supervision of the various subordinated bodies, planning and regulating health care providers, next to its function of financing specific types of health services).

A health insurance system, with compulsory and voluntary health insurance, was established by the 1998 Health Insurance Act. Social health insurance (SHI) is administered by a single payer, the NHIF. The NHIF finances medical and dental services included in the benefit package and medications listed in the Positive Drug List (PDL). The benefit package and prices of services are negotiated between the NHIF and professional associations of physicians and dentists annually. Voluntary health insurance (VHI) is provided by for-profit joint-stock insurance companies for general and life insurance, which directly contract both insured individuals and providers.

While the insurance system (both SHI and VHI) covers diagnostic, treatment and rehabilitation services as well as medications for the insured individuals, the MoH is responsible for providing and funding public health services, emergency care, transplantations, transfusion haematology, tuberculosis treatment and inpatient mental health care. The MoH 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, health system activities, and physical and human resources.

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

As stipulated in the 1998 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.

■ 2.1 Overview of the health system

Health policy priorities are determined by the CoM and the MoH through the Government Programme and the National Health Strategy. At the district level, state health policy is organized and implemented by the Regional Health Inspectorates (RHIs). The Bulgarian health system is based on an insurance model consisting of compulsory SHI and VHI. The SHI is administered by a single payer – the NHIF – while VHI is provided by for-profit joint-stock insurance companies for general and life insurance. 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 MoH.

The SHI system was created with the 1998 Health Insurance Act; the NHIF was established as an autonomous public institution independent from the executive power (the government). The NHIF organization includes one central office located in Sofia, 28 branches – one in each district, called Regional Health Insurance Funds (RHIFs) and municipal offices of the RHIFs. The supreme governing body of the NHIF includes representatives of the government, employers, syndicates and patient representatives. The main

purpose of the NHIF is to guarantee equal access to the health system for insured individuals. The NHIF finances medical and dental services included in a benefit package as well as medications (see Subsection 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 national framework contracts (NFCs) respectively for medical and dental services. The NFCs define the rights and obligations of the NHIF, health care providers and insured individuals, organizational procedures and control mechanisms. Based on the NFCs, providers sign individual contracts with the RHIFs. The RHIFs contract all public or private health care providers operating in their territory that meet criteria stipulated in the NFC. This means that the RHIFs cannot selectively contract health care providers, although such an attempt was made in 2016 (see Section 6.1 *Analysis of recent reforms*).

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, transfusion haematology centres, mental health centres, comprehensive cancer centres, centres for dermato-venereal diseases, homes for medico-social care, centres of complex care for children with disabilities and chronic conditions (2015), hospices, dialysis centres, and cell banks. Irrespective of ownership, 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 2018, the private sector encompasses primary care, much of the specialized outpatient medical and dental care, pharmacies and some hospitals. All outpatient and inpatient care providers, as well as mental health centres, comprehensive cancer centres, centres for dermato-venereal diseases, and dialysis centres can contract with the NHIF and VHI companies (VHICs). They can also receive out-of-pocket (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 MoH and municipalities in addition to the NHIF and OOP payments (based on a specified methodology).

Inpatient psychiatric care, emergency care, medico-social care for children, transfusion haematology as well as public health services are organized and financed by the MoH. There are 27 regional centres for emergency care, one in each district (with the districts Sofia and Sofia City sharing one centre), which have branches in the smaller towns in the district, 12 state psychiatric hospitals, one national and 28 regional centres for transfusion haematology. Public health services are provided by 28 RHIs, which are the district structures of the MoH. The public health network also includes various other institutions designated for highly specialized tasks (see Section 5.1 *Public health*).

■ 2.2 Historical background

Developments before 1989

Bulgaria had one of the most advanced health legislations in Europe in the first few decades of the twentieth century, embracing social health insurance, public health, and improving the health of designated population groups such as mothers and children dating back as early as 1903 (Box 2.1).

The restructuring of the Bulgarian health care system to a centralized government system started in 1949 with the replacement of the principles of a Bismarckian insurance model with the principles of socialist health care. Nationwide free medical care was introduced in 1951. 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. The physicians' and chemists' cooperatives, as well as private medical practice were prohibited in 1972. 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 from 1949 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.

BOX 2.1 Health system developments until 1949

- 1879 Establishment of the Supreme Medical Council
- 1888 Law on Public Health Protection
- 1891 Request for the introduction of compulsory state insurance of adults, sick and injured workers, managed by their representatives
- 1901 Union of the Bulgarian Physicians founded
- 1903 Law on Public Health Protection
- 1904 Law on Control over Food and Drink Products
- 1905 Union of the Bulgarian Dentists founded
- 1906 Introduction of illness insurance for the state workers and members of their families
- 1918 Act on Worker Insurances for Illness and Injury
- 1924 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 the building of hospitals, nursing homes, dispensaries, community facilities and worker homes.
- 1929 Act on Public Health (adopted to replace the Act on Public Health of 1903) defined sanitary and anti-epidemic standards, combating social diseases and health educational activities (abolished 1951).
- 1946 Act on Health Protection of Mother and Child set up a stable system intended to provide health care for mothers and children.

Sources: Balabanova, 2001; Popov, 2009; Konstantinov, 2017.

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 (Dimova, Popov & Rohova, 2007).

In 1989–1996, the state monopoly in the health system was abolished through the re-establishment of the private sector, restoration of the professional associations of physicians and dentists, shifting almost the entire pharmaceutical providing system to the private sector, and building a decentralized health care administration. The idea of SHI as the only way to effectively reform health system financing emerged. The efforts during this stage were almost all directed to the implementation of some essential changes but did not constitute a systemic health system reform.

The 1997–2001 period witnessed the most substantial changes to the health system to date. The adoption of a reform package, consisting of the Health Insurance Act (1998), the Health Care Establishments Act (1999), the Act on Professional Organizations (1998), combined with the Act on Medicines and Pharmacies in Human Medicine (1995) provided the legal basis for an SHI system. These laws aimed to establish regulation of the democratic and market development of medical care in Bulgaria. The most essential changes were:

- A health insurance system was introduced through the establishment of the NHIF along with VHI (1998). Collection of SHI contributions started in 1999. This provided financial resources for the actual start-up of the reform first in the outpatient sector in 2000, and in 2001 in the hospital sector. From a state-financed system based on the principle of universality and general accessibility, the health system was transformed into an SHI system.
- The reform introduced market principles, decentralization, as well as pluralism in the ownership of the health institutions and the provision of health services. Management of health care providers was decentralized and contractual relations between the NHIF and health care providers were introduced together with new payment mechanisms;
- The professional associations of physicians and dentists were assigned certain rights and liabilities related to the regulation of the health system.

After the reforms of the pharmaceutical sector (1995) and the curative sector (1998–2001), the public health system was finally changed in 2005. The Public Health Act adopted in 1973 remained in force until 2004 when it was replaced with the Health Act, effective as of 2005.

The entire reform process was strongly criticized due to the inconsistent and partial, often contradictory measures, and the isolation of the health professionals and general public from the political process (for more details see Dimova, 2007).

Further changes (up to 2014/2015) to the overall management of the health system, such as merges of local public health administrations into RHIs, structural changes in the pharmaceutical sector governance and the 2015 introduction of health technology assessment (HTA) (see Section 6.1 *Analysis of recent reforms*).

■ 2.3 Organization

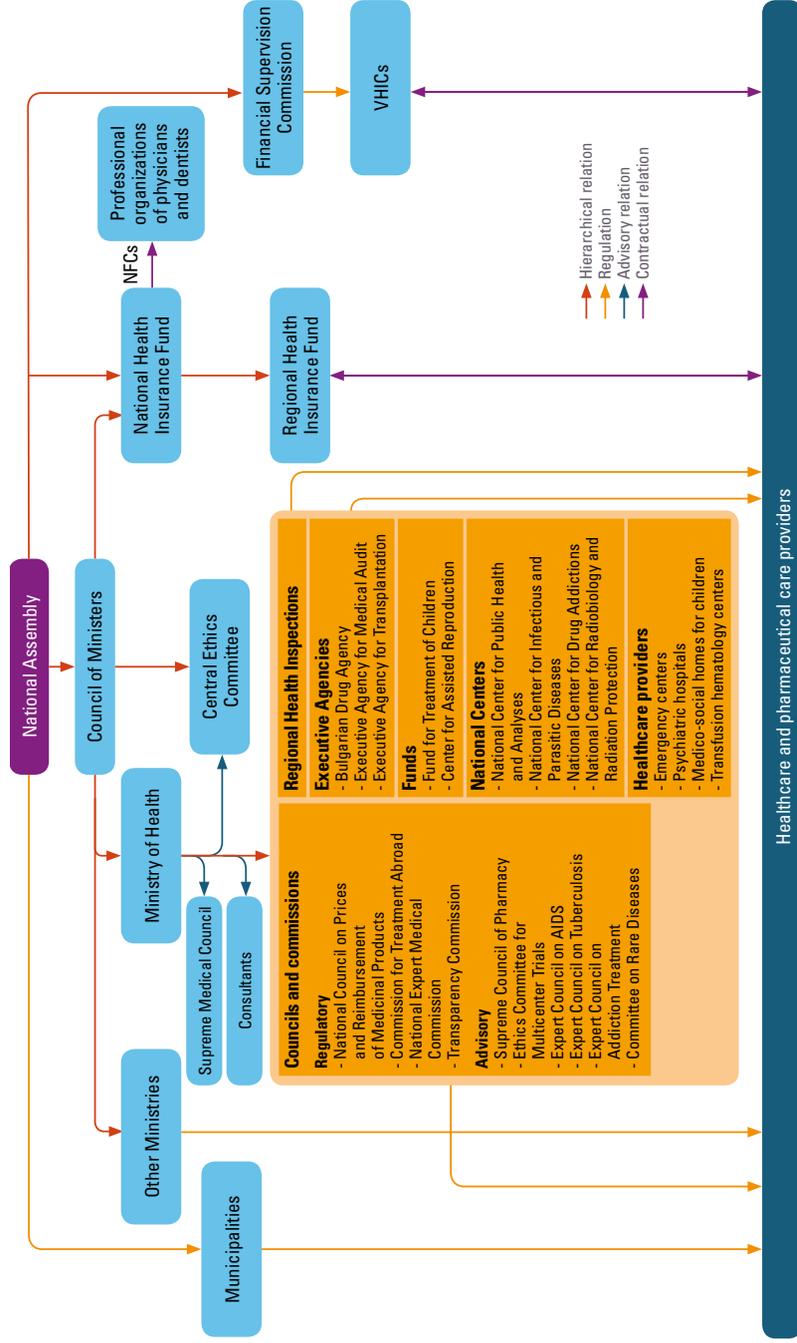
The main actors in the system are the National Assembly and its Parliamentary Health care Committee, representing the legislative power, the CoM and the MoH representing the executive power, and the NHIF and the professional organizations of physicians and dentists, representing the public and non-government sector (Fig. 2.1). In recent years, the judicial power presented by the Supreme Constitutional Court and the Supreme Administrative Court gained particular importance in health reforms implementation since it has the power to abolish normative acts of the legislative and executive power and frequently did so (see Section 6.1 *Analysis of recent reforms*).

National Assembly

The National Assembly has an important role in the implementation of national health policy by adopting laws, including the state budget and the budget of the NHIF, approving the National Health Strategy, electing the director of the NHIF, and exercising parliamentary control over the executive power.

The Parliamentary Committee on Health care (early 2000s) discusses all legislative acts, strategies, proposal, statements and other health-related documents, which need to be voted by the Parliament. Proposals to the Committee can be submitted by professionals, professional associations and

FIG. 2.1 Organization of the health system in Bulgaria, 2018



Source: Authors' own compilation.

nongovernmental organizations (NGOs) as well. The Committee initiates and organizes public discussions and public debates.

The Council of Ministers

As stipulated by the 2005 Law on Health, state health policy is governed and carried out by the CoM, made up from all ministers and the Prime Minister. The CoM, at the proposal of the Minister of Health, approves the National Health Strategy, which has to be consequently adopted by the National Assembly, and national health programmes. In addition, a wide range of issues affecting the health system is ruled and regulated through CoM decrees. For example, terms and procedure for exercising the right of access to medical care; the national health map; the state representatives in governance of the NHIF including the chair of its Supervisory Board; conditions, rules and procedure for regulating and registering the prices of medicinal products; consumer fees are regulated through CoM decrees at a proposal of the Minister of Health. All structures that are subordinated to the MoH are regulated by the CoM as well.

The Ministry of Health

The Minister of Health is the nationally responsible figure for the overall governance of the health system, protection of public health and the state health control; emergency care, transfusion haematology, inpatient psychiatric care, transplantation and medical professional training. The Minister of Health is responsible for the coordination between all actors in the system, as well as for the intersectoral coordination. The Minister of Health serves as a principal of all state health care establishments under the MoH as well as monitors and bears responsibility for health-related activities of the CoM and other ministries. Executive Agencies (such as for transplantation, pharmaceuticals), national councils and commissions (such as for price regulation and treatment abroad) and national centres (for example of public health and assisted reproduction) are subordinate to and funded by the MoH.

The Minister of Health also establishes permanent or ad hoc consultative boards and expert working groups to support discussion and decision-making processes on particular problems such as HIV/AIDS and sexually transmitted diseases and addiction treatment. The MoH's structures with regulatory functions are described in Section 2.8 *Regulation*.

Supreme Medical Council and consultants

The Supreme Medical Council and national consultants in medical specialties support the minister in the governance of the health system. The Supreme Medical Council is an advisory body to the MoH, which includes five representatives appointed by the Minister of Health, five representatives from the Bulgarian Medical Association, three representatives from the Bulgarian Dental Association, three representatives from the Bulgarian Pharmaceutical Union, three representatives from the NHIF, one representative each from the Bulgarian Association of Nurses, the National Association of Municipalities, the Bulgarian Red Cross Organization, and one representative from each higher medical school. The Minister of Health chairs the council without the right to vote.

The Supreme Medical Council gives advice on the national health strategy, health-related draft bills, draft budgets and the annual report of the minister, scientific priorities in medicine and dental medicine, ethics in medicine and biomedicine, medical education and specialization.

The Minister of Health appoints consultants by medical specialties, who advise the Minister on health and health care providers.

Regional Health Inspectorates

At the district level, public health policy is organized and implemented by 28 RHIs, which are the local bodies of the MoH. The RHIs perform activities on the state health control at district level; control and registration of health care providers; collection and analyses of health information; coordination and implementation of national health programmes; monitoring of environmental and other factors and activities with importance for the population health; laboratory analyses and tests.

Other ministries

The MoH collaborates with the Ministry of Finance on matters related to the financing and distribution of funds within the system.

Issues related to the training of medical staff necessitate collaboration with the Ministry of Education, Youth and Science. Furthermore, the MoH 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 MoH also closely cooperates with the NHIF, the Social Assistance Agency, and several councils

and commissions established by the CoM such as the National Council on Narcotic Substances, the National Council on Medical Expertise, the Central Ethics Commission and the Council “*Partnership for Health*”.

The National Health Insurance Fund

The NHIF was established through the 1998 Health Insurance Act. It is composed of a central management and 28 RHIFs. It is managed by the Supervisory Board and the Governor of the Fund and elected by the National Assembly. The NHIF budget is adopted by the National Assembly each year and represents the main public source of funding for the health system. Relationships between the NHIF and health care providers are based on the NFC and individual contracts. The NHIF pays for health services and goods for the insured population as defined in the benefit package and the PDL (see Subsection 3.3.1 *Coverage*). The reimbursement levels of health services included in the benefit package are set in the national framework contracts for medical and dental services. 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 Union and the Bulgarian Association of Nurses, Midwives and Associated Medical Specialists. Membership in these associations is mandatory for each of these professional groups and in turn they represent the rights and interests of their members. Examples of their activities include continuous professional education, providing comments and statements on draft bills, participating in drafting Good Medical Practice guidelines and discussing ethical issues.

Municipalities

Municipalities are owners of a considerable share of the health care providers, most of which are for specialized outpatient care, but also of multi-profile and some specialized hospitals. Municipalities also participate in the ownership of district multi-profile hospitals (also see Section 5.4 *Inpatient care*). 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 local 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 RHIs.

Private sector

The private sector in health care was restored with the legislative reform package of 1991. A majority of the pharmaceutical network has been provided by the private sector since the mid-90s while all primary medical and dental care and part of the specialized care became private with the introduction of SHI in 2000. As of 2018, a large share of specialized outpatient care, as well as a share of hospitals, are also provided by the private sector. The number of private hospitals increased substantially from 18 in 2000 to 111 in 2016 (with an increase in beds from 206 in 2000 to 11 195 in 2016; NCPHA, 2017). According to the 1999 Health Care Establishments Act, private health care providers can sign contracts with the NHIF on the same terms as public providers.

Chains of health care providers have an important market share. One of the biggest chains, the *Bulgarian Cardiac Institute* (2007) expanded to one multi-profile hospital, five specialized hospitals in cardiology and seven medical centres. Furthermore, a pharmaceutical wholesaler, a manufacturer of generic and innovative medicines, and an insurance company providing VHI are part of a conglomerate with the Institute.

Another leading chain of health care providers, *City Clinic* (2010), owned three hospitals and three medical centres. In 2016, the Turkish health care group *Acibadem* entered the Bulgarian health care market by merging with City Clinic and acquiring Tokuda Hospital, and thus became the biggest chain of multi-profile health care providers in Bulgaria. In 2018, another Turkish chain of hospitals, *MedicalPark*, announced its entry into the Bulgarian health care market.

Insurance companies providing VHI

General insurance and life insurance companies, relicensed under the 2003 Insurance Code, provide VHI. All insurance companies are commercial joint-stock companies, supervised by the Financial Supervision Commission (FSC) (see Section 3.5 *Voluntary health insurance*). Insurance companies sign contracts with both health service users and providers. Premiums are

risk-adjusted or community-rated, based on individual contracts for medical insurance. Benefits could be in-kind or as a reimbursable lump sum up to the predefined limit on a contractual basis. Insurers selectively contract with private and public health care providers.

As of 2016, 23 companies (16 general insurance and seven life insurance companies) provide some kind of private health insurance (FSC, 2017a, 2017b).

Nongovernmental organizations

Over 100 NGOs operate in the health system, more than 70 of which are patients' organizations. Their activities address a wide range of issues such as patient rights protection and for those patients suffering from specific diseases, public health problems and health policy development. Some patient organizations act as providers of integrated health and social services (as an example see Struckmann et al., 2017) and financial support to citizens in need, mainly through fundraising programmes.

The Public Council on Patient Rights, under the MoH, was established in 2009 and further regulated in 2011. This council includes seven representatives of organizations for patients' rights protection, one representative of an organization for people with disabilities, and respectively one representative of the MoH, the Ministry of Labour and Social Policy, the NHIF, the Bulgarian Medical Association, the Bulgarian Dental Association, the Bulgarian Pharmaceutical Union and the Bulgarian Association of Nurses, Midwives and Associated Health Professionals. However, no further information about the council activities is available.

Additionally, patient organizations participate actively with their representatives in the public councils for the subordinated agencies, councils and funds with the MoH, such as the public council of the Centre Fund for Treatment of Children and the Commission on Rare Diseases.

■ 2.4 Decentralization and centralization

The health system in Bulgaria was highly centralized in the period from 1949 to 1990 (see Section 2.2 *Historical Background* and Dimova et al. 2012). The entire health care provider and pharmaceutical network was fully nationalized, based on the principles of free and general accessibility and universality. The MoH centrally organized the allocation of resources, including human

resources. Medical education and science were fully centralized with the establishment of the Medical Academy in the 1970s, embracing medical institutes in Sofia, Plovdiv, Varna, Pleven and Stara Zagora.

Decentralizing reforms after 1990 (such as the restoration of professional organization, regional structures of the MoH and the NHIF establishment) aimed to transform the health system into a liberalized, market-oriented and democratic system. However, governance is still relatively centralized and rests with the MoH and the CoM.

In the mid-1990s, the establishment of regional health centres as local branches of the MoH (which merged with the former Regional Inspections for Protection and Control of Public Health to the currently existing RHIs) was meant to support decentralization, but their functions were limited to elementary administrative and bureaucratic responsibilities, while the most essential managerial functions, planning and regulation were performed entirely at the national level.

Additionally, the NHIF has lost a substantial part of its independence since its establishment in 1998–1999. The autonomy of the NHIF was restricted twice through legislative changes in its governing bodies, such as the Assembly of Representatives, Governing Board and Control Board (in 2002 and 2009). Governmental control of its management was substantially strengthened (for more details see Dimova et al., 2012). This added to the highly centralized management structure of the NHIF.

Contractual relations between the RHIFs and health care providers are based on a centralized negotiation process between the NHIF and professional organizations of physicians and dentists resulting in formalized NFCs for medical and for dental care, which specify all services and prices at national level (see Section 2.1 *Overview of the health system*).

Although the private sector expanded substantially, the state remains as the owner of many health care providers. Surprisingly, although substantial responsibilities for health care, education and social affairs have been devolved to municipalities since 1992 and respectful budgets are being transferred, they continue to play an insignificant role in health policy development. As owners of health care providers, municipalities bear responsibilities predominantly to control the activities of their own establishments and less for public health policy development.

In 2015, an attempt to decentralize resource planning and contracting was made with the introduction of new regional and national health maps.

However, the attempt failed after the supreme constitutional and administrative courts abolished several legislative acts that would have been necessary for its implementation (see Section 6.1 *Analysis of recent reforms*).

In general, almost all decentralizing reforms aimed to shift responsibilities to the lower levels both in geographical and organizational terms (that is, to the regions, or subordinated bodies), but without appropriate delegating rights. This led consequently to reform failure (see Section 6.1 *Analysis of recent reforms*) and the preservation of a relatively high degree of centralization.

■ 2.5 Planning

The MoH is responsible for strategic planning in the Bulgarian health system. Health policy priorities are defined in the National Health Strategy, with the current one specifying goals for the development of the health system in Bulgaria by 2020 (NHS 2020; see Section 7.1 *Stated objectives of the health system*).

The NHS 2020 is built on three main priority areas for development of the health system until 2020, sets five clearly defined and measurable strategic goals (see Section 7.1 *Stated objectives of the health system*) and stresses the need to follow a sustainable long-term strategy in the health care system.

The CoM is responsible for the overall coordination and management of the implementation of the NHS 2020 (across various ministries and institutes). The MoH is responsible for the action plan to guide implementation (but without any sanctions in case of implementation delays).

The action plan elaborates on activities, monitoring indicators, deadlines, leading institution and partners, and distribution of responsibilities across various institutions such as the National Centre of Public Health and Analyses (NCPHA; for more details on involved institutions see Section 2.6 *Intersectorality*), sources of funding, and the financial plan for 2016–2020. The overall budget for implementation of the NHS 2020 in Bulgarian lev (BGN) is BGN 25 032 million (€12 799 million), of which BGN 353 100 (€180 537) is funding by the EU Operational Programmes (MoH, 2015c). The external funding is to be used for:

- Implementing the policies under the first priority area for the development of the health system by 2020;

- Emergency care development;
- Assuring human resources in the health system;
- Health technologies, innovations, and investment; and
- e-health development.

There are three planning documents of particular importance with regard to the organization of the health care system, that are based upon the NHS 2020:

- The 2009 *Concept for Restructuring of Hospital Care*, last amended in 2014, which serves as a key document in the process of planning and adequate usage of public funds and funds from the EU operational programmes. The concept is focusing on the restructuring of municipal hospitals in accordance with their financial stability and health needs of the population, development of activities and equipment of the district hospitals, and development of high-tech regional hospitals. The concept does not involve the private hospital sector.
- The *Concept for the Development of the Emergency Medical Care System in Bulgaria (2014–2020)*, addressing the overall distribution of emergency care structures (see Section 5.5 *Emergency care*).
- The Concept of Deinstitutionalization of Children from Homes for Medical and Social Care in relation with the National Strategy “*Vision for Deinstitutionalization of Children in the Republic of Bulgaria*” 2020. The concept envisages the closure of homes for medical and social care for children up to 3 years of age that are operated by the MoH, preventing the placement of children up to 3 years of age, and the development of integrated community-based social and medical services. As a result of the concept, the number of homes for medical and social care for children up to 3 years of age fell from 32 in 2010 to 16 in 2017 (NSI, 2018i).

One of the main barriers for good planning is the lack of an integrated information system at national level (see Subsection 2.7.1 *Information systems*).

■ 2.6 Intersectorality

An intersectoral approach to health is embedded in a variety of national strategic documents. The National Development Programme: Bulgaria 2020, adopted by the CoM in 2012, addresses the most important health determinants including economic development, transport infrastructure, environment, social inclusion and standards of living (CoM, 2012a).

Next to this overarching national strategy, the NHS 2020 puts special emphasis on intersectoral collaboration also with the nongovernmental sector. The strategy takes into account a number of good practices, such as the Concept of Deinstitutionalization of Children from Homes for Medical and Social Care 2020; the National Programme on Safety and Health at Work 2013; the National Concept for Promoting Active Ageing in Bulgaria (2012–2030); and the National Programme for Prevention of Non-Communicable Diseases (2013–2020).

Specific roles in the implementation of the NHS 2020 are assigned to the Ministry of Labour and Social Policy, Ministry of Environment and Water, Ministry of Education and Science, Ministry of Agriculture, Food and Forestry, Ministry of Transport, Information Technology and Communications, Ministry of Youth and Sports, Ministry of Interior, Ministry of Finance, professional associations, trade unions and patient organizations.

All institutions and organizations are presented in the NHS Action Plan either as leaders responsible for the planned activities institutions or as partners. For instance, the Ministry of Finance regulates and supervises finances and so 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 the future health workforce. The Ministry of the Environment and Waters and the MoH are jointly responsible for a healthy living environment and for 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 and salmonellosis). The Ministry of Labour and Social Policy cooperates with the MoH on a policy for health and social services integration, safe and healthy working conditions, and on social assistance and social protection issues. The Ministry of Transport and Communications collaborates with the MoH to prevent transport accidents. The MoH also participates in joint working groups 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 Interior on issues related to safety during national crises and emergencies.

The MoH works with the Ministry of Tourism on the implementation of the National Strategy for Sustainable Development of Tourism in the Republic of Bulgaria 2014–2030 with regard to rehabilitation, medical and spa tourism development.

At an operational level, the intersectoral collaboration is realized through permanent or ad hoc national councils and expert groups, constituted with specific health-related tasks (see Section 2.3 *Organization*). An example of efficient intersectoral collaboration is the Prevention and Control of the HIV/AIDS Programme. It comprises high-level representatives from the MoH; 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.

However, in some cases, the lack of integrity in public policies may hamper intersectoral initiatives for better health. In 2015, the Minister of Health and the Minister of Youth and Sports jointly announced a draft law on a Public Health Tax, according to which foods and drinks containing salt, sugar, trans fats, caffeine and taurine above the predefined quantity should be taxed. The main goal of the law is to improve population health by nudging dietary habits and to limit the production of unhealthy food and save health expenditure in the long-term (Dokova & Dimova, 2015). However, due to the strong opposition, including by some government representatives such as the Minister of Finance and the Minister of Economy, the draft law was abandoned.

■ 2.7 Health information management

■ 2.7.1 *Information systems*

Although e-health has featured in the health policy agenda since 2006, there are only partial achievements in this field. In 2006, the National Strategy

for Introducing Electronic Health Care was launched, but no action was taken on its implementation. In 2010, a public debate on the development of e-health, which was one of the priorities of the MoH at that time, was initiated. The goal was to establish an integrated information system, connecting all key actors and enabling real-time data exchange. This was perceived as a prerequisite for the introduction of electronic patient records, registers and telemedicine.

As of 2018, health care providers, the MoH and the NHIF, are still operating fragmented information systems. Health care establishments operate parallel information technologies and databases, and exchange data electronically with the NHIF and the NCPHA. The latter two institutions (among others) consolidate this information into databases at the national level. However, there is no unified system in place that enables communication between different information systems and databases (Salchev, 2016).

Since the mid-2010s, there has been some progress: the MoH issued an Ordinance (2016) on unified health information standards, to be applied by health care establishments, as a prerequisite for the National Health Information System implementation; and several standards for electronic health record architecture, data exchange security and protection, interface specifications and clinical data storage were specified.

In 2017, the MoH announced a project on the development and implementation of a National Health Information System (NHIS), financed through the EU Operational Programme “Good Governance”. The project – worth BGN 12 million (€6.135 million) – included the development of health registries, implementation of a pharmaco-therapeutic expert system flagging possible drug interactions, building an online platform of the NHIS, introduction of an electronic health record, referral, and prescription. The NHIS is endorsed by the NHS 2020 and the Strategy on the development of E-Government in the Republic of Bulgaria (2014–2020). The MoH is responsible for building the NHIS in partnership with the NHIF.

■ 2.7.2 *Health technology assessment*

Systematic assessment on the therapeutic efficacy, effectiveness and safety and cost-effectiveness of pharmaceuticals was introduced in 2016. A special HTA commission was established at the NCPHA. The HTA commission consists

of 13 members: representatives of the MoH (3), the NHIF (2), the National Council on Prices and Reimbursement of Medicinal Products (NCPRMP) (3), the Bulgarian Drug Agency (BDA) (2), and the NCPHA (3).

HTA is applied for medicines belonging to a new “International no proprietary name” group, which is not included in the relevant annex of the PDL and includes:

- health problem analysis (presence or absence of alternative treatment of disease, the presence or absence of drug alternative to treat the disease, expected number of patients),
- comparative analyses of therapeutic efficacy, effectiveness and safety,
- analysis of pharmaco-economic indicators,
- analyses of financial indicators (including budget impact analyses),
- ethical considerations.

A pharmaceutical company applying for a drug to be included in the PDL has to provide an obligatory set of documents, prepared based on comprehensive methodology outlined in the HTA Ordinance. This set of documents is assessed by experts (physicians, pharmacists and economists), appointed by the commission out of a list of experts with expertise in the field of the respective drug. The commission at the NCPHA is responsible for the final recommendation to the NCPRMP, which maintains the PDL. In case of a positive recommendation by the HTA commission, the NCPRMP decides on the exact reimbursement level of the new drug. The NCPRMP can include a medicine with a negative assessment of its clinical efficacy or cost-efficiency in the PDL as well. However, the therapeutic effect of such medicines has to be traced and analysed 3 years after the medicine’s inclusion in the PDL. All HTA reports are published on the commission website (NCPHA, 2018b).

■ 2.8 Regulation

The Bulgarian health system is regulated through legislative, administrative and market mechanisms. The governmental regulatory functions 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 CoM adopts legislative acts such as decrees, ordinances or decisions, regulating various aspects of health care (for example, structural changes in the health system, or changes in the budget of the MoH). The Minister of Health has the right to issue ordinances, regulations, instructions and orders in cases that are explicitly regulated by health laws and concern the functioning of the health system (for example, the adoption of medical standards). Furthermore, municipal councils adopt decisions, based on which the mayor issues orders concerning health care initiatives and activities at the municipal level.

Administrative regulation is carried out through various permissions and licences issued by the MoH, the FSC 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, clinical and ambulatory procedures, methods of prescribing medicines and the development of regulatory standards for the scope of provided services in both outpatient and inpatient care. Professional associations of physicians and dentists have regulatory influence because they negotiate national framework contracts (for medical and for dental activities), which they also sign together with the NHIF. Based on contracts between insurers and health care providers, the third-party payers determine 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 insurance companies.

The NHIF is managed by the Supervisory Board and the Governor of the Fund. The Supervisory Board consists of 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, including the Executive Director of the National Revenue Agency (NRA). The quota of state-nominated members was decreased in 2011 and as a result representatives of patients, syndicates and employers prevail (see Section 6.1 *Analysis of recent reforms*). The Chairman

of the Supervisory Board and the other three representatives of the state are appointed and dismissed by a decision of the CoM upon a proposal of the Minister of Health. The National Assembly elects the Governor of the Fund. RHIFs are supervised by directors, who represent the NHIF at the regional level.

While the scope of medical care covered by SHI is enacted in the Health Insurance Act (1998), the benefits package guaranteed by the NHIF budget is ruled through ordinances of the Minister of Health.

The National Assembly passes the annual budget of the NHIF and also approves its annual budget report and the activity report. Monthly and quarterly financial performance reports are published on the NHIF's website. The Bulgarian National Audit Office exercises control over the NHIF's budget execution and the authorities of the NRA are responsible for controlling revenues from health insurance contributions and interests.

Companies providing VHI are licensed and supervised by the FSC. The FSC grants licences for all insurance types including VHI (sickness insurance and accident insurance) and monitors routinely business indicators of the companies. Further, the FSC supervises the activity of the insurance companies and the observance of legal requirements, financial indicators of the companies and the reliability of the information provided. The objective of the FSC's control activity is to ensure the financial provision of the contractual relationship that insurance companies have with insured individuals.

■ 2.8.2 *Regulation and governance of providers*

According to the Health Care Establishments Act (1999), health care providers are independent legal subjects registered as trading companies or cooperative enterprises. Exceptions are some state-owned providers such as centres for emergency medical care, centres for transfusion haematology, psychiatric hospitals and homes for medico-social care for children, as well as health care establishments owned by other ministries. Governing bodies of providers are regulated by the Commercial Act or Cooperatives Act and depend on the legal status of the company – sole proprietor, limited liability company, joint-stock company, or cooperative. In addition, the Minister of Health issues permissions for inpatient health care establishments in compliance with the requirements set out in the Health Care Establishments Act and in the 2010 ordinance of

the MoH regarding the structure, activity and internal order of hospitals and homes for medico-social care for children. A special commission chaired by the Minister of Health assesses the population needs regarding medical care based on the National Health Map. Outpatient health care providers and hospices have to be registered by the respective RHI.

Since 2010, the MoH has re-registered all hospitals, assigning them a certain level of competency. The level of competency is assessed based on the requirements of the medical standards concerning number and proficiency of specialists, and available equipment, and shows 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 service quality.

The MoH regulates and controls different aspects of health care providers' activity through designated agencies and RHIs. The Executive Agency Medical Audit (EAMA) controls providers regarding quality, patient safety and patients' rights; the Executive Agency for Transplantation supervises the conformity with the requirements of the medical standards concerning transplantation. Furthermore, the NHIF and its regional branches (RHIFs) regulate and monitor all health care providers based on their contractual relations. The professional associations of physicians, dentists and pharmacists elaborate on the Rules for Good Medical Practice (respective Good Pharmaceutical Practice) and so regulate health care providers' activity as well. The control of compliance with the Rules of Good Medical (or Pharmaceutical) Practice, medical standards, requirements of the Health Insurance Act and the NFC are also carried out through joint inspections by RHIFs, EAMA, RHIs and the professional associations.

■ 2.8.3 *Registration and planning of human resources*

The MoH and the professional associations are jointly responsible for the registration and planning of health care professionals. The RHIs, together with professional associations and the Supreme Medical Council, explore the needs of medical and non-medical specialists and suggest the annual number of postgraduate students to be admitted to medical schools. In addition, the Supreme Medical Council defines criteria to be used in the selection of health care providers, which are involved in graduate and postgraduate practical

training. The Minister of Health determines annually the number of places for postgraduate training in specialties subsidised by the state following the goals and priorities of the national health strategy. The Minister of Health is also responsible for planning, coordination and control of postgraduate training activities for the acquisition of a medical specialty.

Upon graduation, health professionals are required by law to become members of their respective professional associations. The membership of health professionals who do not practice their profession is voluntary. The MoH compiles information of those graduated in specialties related to health care. The regional branches of the professional associations also maintain registers of their members.

Overall, the human resource management and planning system does not work efficiently. This is evidenced by the growing shortage of health professionals for certain categories and specialties and severe geographical disparities in the number of medical personnel. Reasons include also a streamlined emigration process after the accession to the EU and internal migration (see Section 4.2 *Human resources*).

■ 2.8.4 *Regulation and governance of pharmaceuticals*

The Minister of Health is responsible for pharmaceutical policy development and implementation and coordinates national medicinal product issues, and participates in international organizations and institutions that carry out activities related to medicinal products.

An important consultative body to the MoH is the Supreme Pharmaceutical Council, 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 council. The Supreme Pharmaceutical Council discusses and gives advice on the priorities in the field of pharmacy, pharmacy ethical issues, pharmacy legislation, scientific priorities in the field of pharmacy, and public awareness campaigns regarding medicinal products use. Another advisory body to the Minister of Health is the Pharmacopoeia Committee.

In addition, several specialized commissions are established under the Minister of Health. The Central Commission on Ethics gives opinion on

deontological and ethical issues in the field of clinical trials of medicinal products. The NCPRMP sets price limits for prescription medicines and registers the maximum retail selling prices of over-the-counter medicinal products. The Council makes decisions for inclusion, changes or exclusion of medicinal products from the PDL, which includes also the Reimbursement List (see Section 5.6 *Pharmaceutical care*). The decisions of the NCPRMP can be appealed to the Transparency Commission.

The BDA is the national competent authority for pharmaceuticals and supervises quality, safety and efficiency of medicines. The agency's activities are financed from the MoH budget and own revenues (administrative fees). The BDA issues permits and supervises medicinal products with regard to manufacturing, use, authorization, wholesaling, retailing, importing, parallel export, 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. The agency coordinates its activities with RHIs in the field of control of medicinal products. Expert Council on Retail of Medicinal Products is set as a consultative body to the Executive Director of the BDA. Another of the responsibilities of the BDA is the maintenance of registers of drug manufacturers, importers, wholesalers, retailers, intermediates, parallel export, authorized and registered medicinal products and clinical trials.

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

■ 2.8.5 *Regulation of medical devices and aids*

Medical devices and aids are regulated by the Law on Medical Devices (2007) and its amendments (most recently in 2016). The competent authority involved in registration and supervision of medical devices is the BDA. The agency registers medical devices, manufacturers, wholesalers, issues permissions for trade and clinical trials, and exercises control over storage, trade, clinical trials and safety of medical devices. The BDA maintains a list of medical devices, which are covered by the NHIF, the state budget, by the budget of the Ministry of Labour and Social Affairs, and by the health care establishments.

Medical devices are launched in the market if they meet legislative requirements. The manufacturers are responsible for the assessment of compliance with requirements and standards after permission from the BDA.

Medical devices and aids, as well as facilities for disabled persons, are also regulated by the Law on Integration of Persons with Disabilities (2004). The Minister of Labour and Social Policy in coordination with the Minister of Health annually approves lists of such medical devices and aids. People with disabilities, according to their needs, are entitled to financial support for the medical devices and aids, except for those paid for by the NHIF. The Agency for Persons with Disabilities registers the retailers and supervises the provision of aids, devices and facilities for people with disabilities.

■ **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. Municipalities, as well as private proprietors, are free to invest in their 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, information technologies and systems, and financial stabilization of health care establishments.

■ **2.9 Patient empowerment**

■ **2.9.1** *Patient information*

The MoH (through its RHIs), municipal health care offices, health care providers and NGOs are jointly responsible for providing general information on health and diseases. The MoH, the RHIs and the NCPHA provide detailed information for citizens to improve health literacy and promote healthy lifestyles. The National Programme for Prevention of Chronic Non-communicable Diseases (2014–2020) embraces several campaigns with a

particular focus on behavioural risk factors, which sets a more systematic approach toward prevention and prophylaxis of chronic diseases. Additionally, many other national public health programmes (such as the one for tuberculosis) also include different informational and educational initiatives to improve health literacy (see Section 5.1 *Public health*).

In general, patients with access to the Internet can obtain a wide range of information through institutions' websites, patients' organizations and other NGOs, and health care establishments. In addition, many national and regional registers of health care providers, pharmacies and pharmaceuticals are publicly available.

The NHIF is obliged to provide information to the insured persons about contracted health care providers and pharmacies, patient rights, the basic benefit package and the overall organization of health service provision. All this information is also available on the NHIF web page. Citizens can receive up-to-date information and lodge complaints at RHIFs. Health care establishments with a contractual relationship with the NHIF must inform their patients about health services covered by SHI, co-payment and contractual relations with private health insurers.

Information on the quality of providers and provided services is scarce. Information about health care providers' accreditation assessment is available on the MoH web page. However, since 2015, the accreditation of health care establishments has been voluntary except for providers who want to carry out practical training of students. Bulgaria still lacks a unified system to assess the quality of health services and facilities, which would enable patients to make an informed choice based on performance of providers. Patients rely mostly on informal sources for information on the quality of health care such as family and friends, recommendation by physicians (see Subsection 7.3.1 *User experience*) and often use internet forums and chats with questionable reliability.

Based on a legislative amendment passed in 2009, patients have the right to access information regarding their health status as well as having the right to access their health relevant documentation. Before giving their informed consent, physicians must provide patients with all necessary information. According to a 2018 amendment to the Act on Health Insurance, every insured person is entitled to receive from the NHIF all available information about the medical and dental care he/she has received during the last 5 years and its price covered by SHI.

■ 2.9.2 Patient choice

Patient choice is regulated by the Health Insurance Act (1998), Health Act (2004) and by ordinance of the MoH (2006). Bulgarian citizens are free to choose a general practitioner (GP), outpatient specialized health care provider and hospital without territorial restrictions. However, there are some administrative restrictions in the SHI system. For example, 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, with the consequence that the patient has to pay for the services out of pocket or through VHI. There is an exception to this rule: pregnant women and mothers are entitled to choose a gynaecologist or a paediatrician for their children without a referral and free.

Once hospitalized, patients have the right to choose a physician or a team after additional OOP payment, possibly covered by VHI. Health care establishments determine prices for choosing a physician or team, but price ceilings are set by an ordinance of the MoH. After hospital admission, patients can pay for additional services such as a private room, special menu, etc. not covered by SHI. 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 consequent risks.

Although patients have a right to choose a health care provider across the country, different barriers in access to health care services exist (such as unreliable transportation infrastructure, disparities in providers' density), which in practice violate the right of free choice (see Subsection 7.3.2 *Equity of access to health care*).

■ 2.9.3 Patient rights

Bulgarian legislation guarantees similar patient rights as adopted in the other EU Member States. Patient rights are outlined in the constitution and health legislation. International regulations 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, or the EU directives are also respected.

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. The basic patients' rights are regulated by the Health Act and the Health Insurance Act (Table 2.1) and further elaborated in many other acts and regulations.

TABLE 2.1 Patient rights and obligations

LEGISLATIVE ACT	PATIENT RIGHTS	PATIENT OBLIGATIONS
Health Act	<ul style="list-style-type: none"> ▪ high-quality and accessible health care services regardless of race, gender, age, ethnicity, religion, education, cultural beliefs, political belonging, sexual orientation and social status ▪ more than one physician's opinion regarding diagnosis and treatment ▪ protection of personal data ▪ information about patient rights, health status and treatment options ▪ health promotion and rehabilitation ▪ visits by GP during the hospital stay ▪ admission or refusal of visitors, etc. 	<ul style="list-style-type: none"> ▪ take care of own health ▪ assisting health care providers in carrying out health services (such as adherence to prescription drugs) ▪ observance of the order in the health care establishments, etc.
Health Insurance Act	<ul style="list-style-type: none"> ▪ health services included in the NHIF basic benefit package ▪ choice of health care providers ▪ receive emergency care ▪ receive information from the RHIF about contractual partners ▪ participation in the governance of the NHIF ▪ complaints to the director of the RHIF ▪ cross-border health care services by the provisions of the law, etc. 	<ul style="list-style-type: none"> ▪ payment of health insurance contributions and cost-sharing fees ▪ compliance with the prescriptions of health care providers and requirements for disease prevention, etc

Source: Authors' compilation based on the cited laws.

The rights of patients suffering from mental disorders are subject to special attention. The Health Act regulates the legal procedures for involuntary detention of such patients along with the requirements for appeal

against any court decisions (see Section 5.11 *Mental health care*). The law also determines the rights of pregnant women, mothers, children and patients involved in clinical trials.

According to the Health Act (2009), the Public Council on Patient Rights to the Minister of Health was established, comprising representatives from patient organizations, organizations of people with disabilities, MoH, Ministry of Labour and Social Policy, NHIF and professional associations. Its role is related to consulting on patient rights, discussion on legislative drafts and proposals for legislative amendments concerning these rights. In 2018, there were two representative organizations for patient rights protection that meet the requirements of the Health Act and so may participate in the Council.

■ 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 as cases of corruption. Patients may lodge a complaint with different institutions and organizations at national, district and local levels, such as the EAMA, the RHIs, the NHIF and RHIFs, and with the professional associations' district branches. Despite this, there are no national statistics on patient's complaints that detail the total number, or the concrete circumstances, of each complaint.

Patients may submit complaints to the RHIs in case of violation of their rights guaranteed by the Health Act. If the complaint concerns violations of other legislative provisions, the RHI must notify the regional branches of the professional associations of physicians and dentists or the RHIF. Insured persons have the right to complain to the director of the respective RHIF in cases of unsatisfactory quality of medical care, refused access or informal payments. If a complaint is found reasonable, there are sanctions for the provider and compensation according to tort law. The EAMA is the other option for patients in cases of violation of their rights, unsatisfactory medical care, or corruption and informal payments. 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.

Cases of corruption can be reported on the websites of each institution. Furthermore, citizens may contact the National Council on Anti-Corruption

Policies to the CoM or report corruption through the website of the MoH. Inspections of these signals are carried out by the Inspectorate of the MoH – the department responsible for internal audits.

■ 2.9.5 *Public participation*

Public participation in health system management is regulated by the Health Act and the Health Insurance Act. Insured individuals participate in the NHIF management, but the overall number of members in the NHIF governing body was restricted in 2002 and 2009. Currently, there is only one representative of patient organizations on the supervisory board. At the local level, citizens participate in municipal committees and health councils.

Representative patient organizations are involved in the Public Council on Patient Rights to the Minister of Health and in the Public Council of the Fund for Treatment of Children established to provide financial support to children with rare diseases or in need of treatment abroad. According to the Law on Health Care Establishments, these organizations are part of the commissions elaborating regional and national health maps.

In 2015, a consultative body “*Partnership for Health*” to the CoM was established. The Partnership engages a wide variety of stakeholders, professionals and patient organizations and is initiated by the Bulgarian National Patients’ Organization (see Section 7.6 *Transparency and accountability*).

However, public participation in Bulgaria remains restricted. The citizens themselves consider it as limited to information provision and consultations instead of active involvement in the decision-making process (Atanasova-Pieterse, 2014).

■ 2.9.6 *Patients and cross-border health care*

Insured persons 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 through various scenarios. Fig. 2.2 gives a simplified overview of different scenarios to receive care abroad. First, Bulgarian citizens are entitled to emergency care during a temporary stay in other EU Member States by using the European Health Insurance Card. In this case,

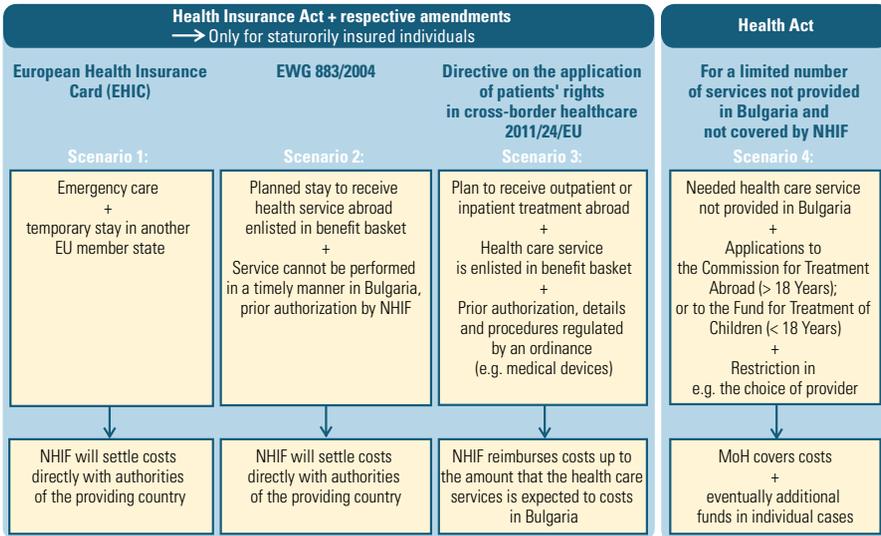
the NHIF will settle costs directly with the authorities of the country that provided health care services (scenario 1). In the second scenario, insured Bulgarians are entitled to health care services abroad under the European Commission regulation (883/2004), and associated costs are also settled by the NHIF directly with the authorities in the country that provided health care services. Third, because of the Directive on the Application of patients' rights in cross-border health care (2011/24/EU), insured citizens may access health care provision in other EU Member States (if the desired service is enlisted in the benefit package). It is further regulated by an ordinance of the Minister of Health on terms and procedure for using health services abroad and defines health care services, pharmaceuticals and medical devices for which previous authorization is required. However, costs are reimbursed to the total amount of medical expenditures paid by the NHIF or the MoH for the respective health services in Bulgaria. That, in fact, poses financial barriers to the access to cross-border health services, as most patients cannot afford to cover the difference in prices, nor the associated costs of travel and accommodation. In fact, only 1% of Bulgarian respondents indicated that they received medical care abroad in 2015, which is the lowest score in the EU. This is despite the fact that 28% of Bulgarian respondents would be willing to receive medical care abroad, mainly because respondents hope for a better-quality treatment abroad (70%), or a medical treatment that is not available in Bulgaria (67%), or a treatment by a renowned specialist (21%). Over half of Bulgarian respondents indicated that they cannot afford treatment abroad (56%, ranked second after Greece), whereas only 15% indicated an overall satisfaction with the national health system (second lowest value after Poland with 12%; European Commission, 2015).

Additionally, there is a fourth option for funding services that are not covered by the NHIF and not provided in Bulgaria. A Commission for Treatment Abroad established at the MoH decides in individual cases on the payment for services. The procedure necessarily requires previous authorization for treatment. Approved treatment is covered by the budget of the MoH. User fees, as well as travel, accommodation and costs for accompanying persons are paid OOP by the patients. The Commission provides information about health care establishments abroad, but the patient may approach other health care facilities abroad. In this case, it is required to submit an official document stating the price of the treatment and expected outcomes. Otherwise, the Commission determines the health

care establishment. Since 2014, the number of applications and permissions for treatment abroad has been decreasing.

The Fund for Treatment of Children subordinate to the MoH provides financial support to children up to 18 years of age who need treatment abroad, treatment of rare diseases, transplantation or medical devices not covered by the NHIF and not provided in Bulgaria. In certain cases, the financial support provided by the Fund may also include travel and accommodation for the child and accompanying adults abroad, costs for interpretation, as well as up to three follow-up check-ups if needed. The Fund operates its own budget with revenues from the state budget through the MoH, and from donations and grants. On average, 90% of submitted applications to the Fund have been approved.

FIG. 2.2 Key regulations for receiving treatment abroad



Source: Authors' own compilation.

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. Following the introduction of SHI in the late 1990s, total health expenditure as a percentage of GDP increased steadily and stood at 8.2% in 2015. Except for Slovenia, Bulgaria spent more on health as a percentage of GDP than all new EU Member States. Although both public and private health expenditure contributed to the increase of total health expenditures, the growth rate of private expenditure outpaced that of public spending. Private expenditure on health – mainly OOP – has grown from 39.1% in 2000 to 48.9% of total expenditure in 2015 and constitutes the largest source of financing in Bulgaria. Comparing only OOP expenditure, Bulgaria records the largest share among all EU countries with 47.7% of total health expenditure in 2015. This poses a financial burden on the population, especially so for pharmaceutical care, which accounts for approximately two thirds of overall OOP expenditures. Corporate payments are ranked second in private health expenditures, whereas VHI only plays a marginal role, contributing less than 1% to Bulgarian health financing.

The role of public financing has decreased steadily since the transition period to an SHI system in the late 1990s and accounted for slightly more than half of total health expenditures in 2015. Public financing mainly stems from SHI contributions managed through the NHIF, which made up 41.9% of total health expenditures. General government expenditure continued to decrease and stood at 9.2% of total health expenditures in 2015. Roughly 60% of SHI revenues are mobilized through income-related SHI

contributions paid by employees and employers. In addition, SHI contributions paid by the state on behalf of 11 population groups such as children and pensioners make up for approximately one third of the total contribution revenue but cover two thirds of the total population. By law, all Bulgarian citizens are compulsorily insured with the NHIF; however, a significant share of up to 12% of the population is de facto uninsured.

The NHIF has acted as the main purchaser of health services since 1998. Relations between the NHIF and health care providers are based on a contract model. The NHIF and professional associations of physicians and dentists sign the NFC, which is intended to regulate the formal and operational procedures of the compulsory health insurance system. The benefit package includes primary and specialized outpatient medical care, outpatient diagnostic services, dental care, and inpatient services that are regulated by clinical pathways and procedures. Providers are mainly remunerated prospectively for the services they provide to the population on a fee-for-service and per capita basis. Public health services, emergency care and state psychiatric hospitals are funded by global budgets of the MoH. Approximately half of current health expenditure is spent for curative and rehabilitation services. Despite reform efforts to contain overall hospital activity through decreasing the number of public hospitals and beds, introduction of ceilings to inpatient procedures, and introduction of clinical and ambulatory procedures, inpatient care accounts for the largest share of curative and rehabilitative care expenditure.

■ 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. Since the introduction of an SHI system in 1998–1999, the total health expenditure in absolute value and per capita has constantly increased even during the financial crisis in 2008–2009. The total health expenditure as a share of GDP equally increased (see Table 3.1).

Bulgaria's total health expenditure as a percentage of GDP is below the EU15 average (Fig. 3.1). Total health expenditure as a percentage of GDP increased from 4.7% in 1998 to 7.2% in 2001 (WHO Regional Office for Europe, 2018). In the following years, it decreased slightly to 6.5% in 2007,

TABLE 3.1 Trends in health expenditure in Bulgaria, selected years

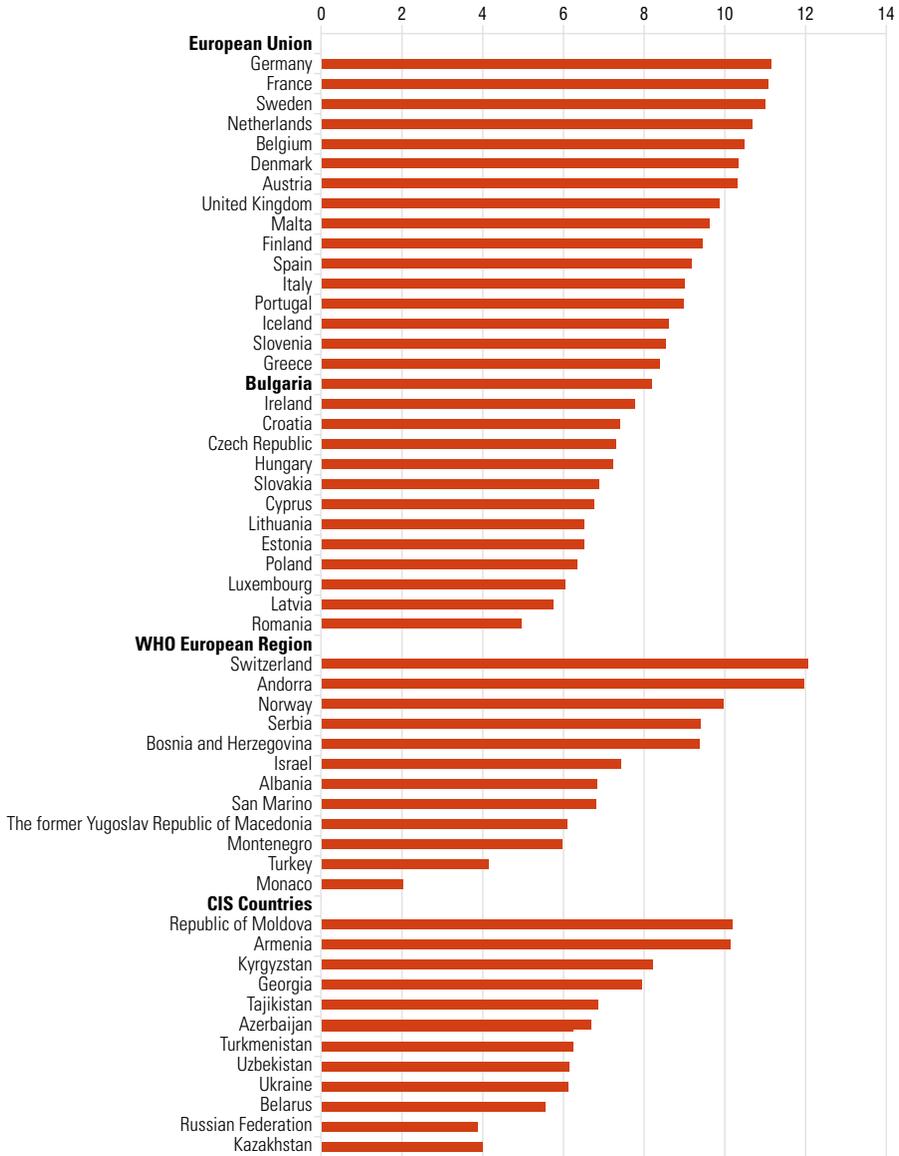
EXPENDITURE	2000	2005	2010	2015	% CHANGE 2000–2015
Total health expenditure in PPP \$ per inhabitant	373	706	1059	1492	300
Total health expenditure as % of GDP	5.9	6.9	7.1	8.2	39
Mean annual real growth rate in total health expenditure ^a	2.1 ^b	1.8	2.7	3.3	n/a
Mean annual real growth rate in GDP ^c	2.0	2.6	2.8	3.6	n/a
Public expenditure on health as % of total current expenditure on health	59.6	59.9	55.4	51.1	-14
Private expenditure on health as % of total current expenditure on health	40.4	40.1	44.6	48.9	21
General government expenditure on health as % of total government expenditure	8.5	11.2	10.9	10.3	n/a
General government expenditure on health as % of GDP	3.5	4.2	3.9	4.2	n/a
OOP payments as % of total expenditure on health	40.4	38.9	43.1	47.7	n/a
OOP payments as % of private expenditure on health	100.0	96.9	96.8	97.5	n/a
VHI as % of total expenditure on health	0.0	0.3	0.5	0.4	n/a
VHI as % of private expenditure on health	0.0	0.7	1.0	0.8	n/a

Sources: WHO Global Health Expenditure Database, 2018.

Notes: n/a: not applicable. PPP: purchasing power parity; ^aCalculated as the mean of the annual growth rates in euros at previous period basis; ^bAt 1995 basis; ^cCalculated as the mean of the annual growth rates in euros at previous period basis.

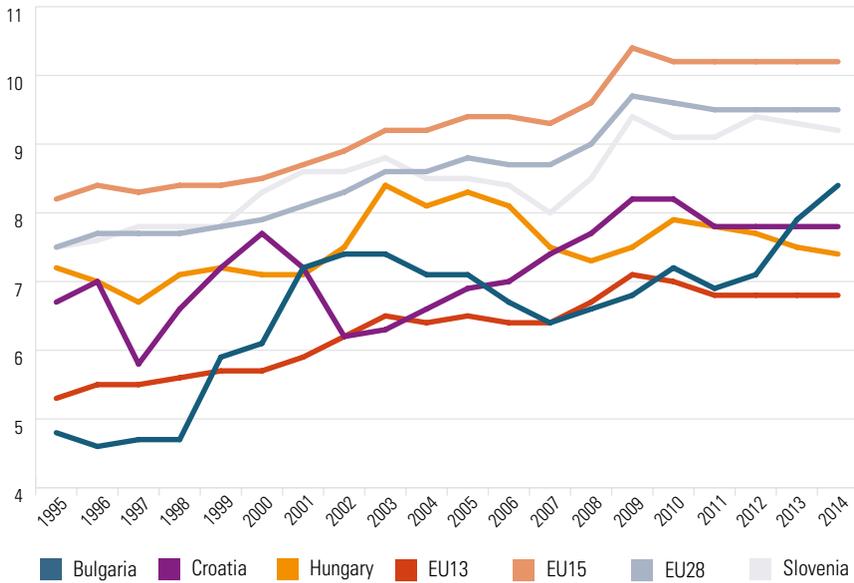
and increased to 8.2% in 2015 (Eurostat, 2018), surpassing all new EU Member States (except Slovenia) and the average for the EU13 average (Fig. 3.2). With a shrinking GDP base in 2009 due to the financial crisis, health expenditure increased compared with the previous 3 years and reached 7.1% in 2009. Thus, total health expenditure increased steadily in absolute value as well (Fig. 3.3). The slight decrease in total health expenditure as a share of GDP between 2010 and 2011 (Fig. 3.2) might be a reflection of the GDP increase surpassing the growth of health expenditure in 2011.

FIG. 3.1 Health expenditure as a share (%) of GDP in the WHO European Region, 2015 or latest available year



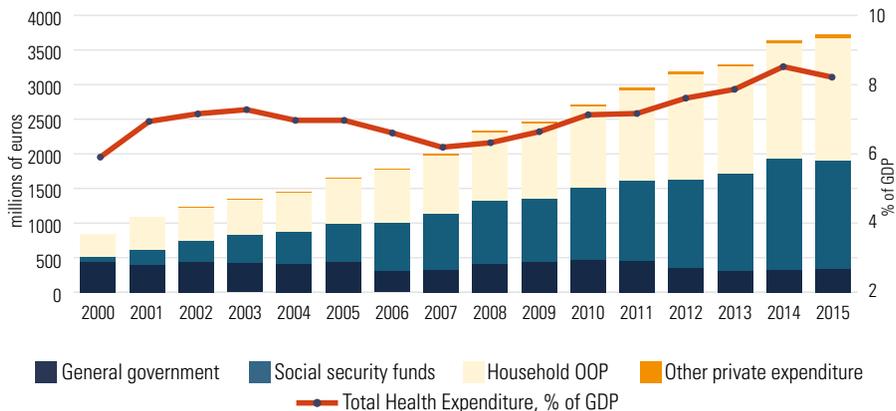
Source: WHO Global Health Expenditure database, 2018.

FIG. 3.2 Trends in health expenditure as a share (%) of GDP in Bulgaria and selected countries and averages, WHO estimates, 1995–2014



Source: WHO Regional Office for Europe, 2018

FIG. 3.3 Trends in health expenditure in Bulgaria by funding source in millions of euros and as a share (%) of GDP



Source: WHO Global Health Expenditure database, 2018

Per capita health expenditure increased threefold from 373 purchasing power parity in US dollars (PPP\$) in 2000 to 1492 PPP\$ in 2015, reflecting both the GDP growth and total health expenditure growth as a percentage of GDP (Tables 1.2 and 3.1). Hence, the gap between the Bulgarian per capita health expenditure and the EU average has decreased in the last 15 years. However, the Bulgarian per capita health expenditure was still below the EU28 average (3310 PPP\$) in 2015 (WHO, 2018). Among EU Member States, only Romania and Latvia have a lower per capita health spending than Bulgaria in 2015 (Fig. 3.4).

While general government health expenditure as % of GDP has remained relatively constant (around 4%) between 2000 and 2015 (Table 3.1), the share of the private, mainly OOP, expenditure grew from 2.2% in 2000 to 3.9% of GDP in 2015 (Eurostat, 2018). Although both public and private health expenditure increased in absolute values, the growth rate of private expenditure outpaced that of public spending. Private expenditure on health as % of total expenditure has grown from 39.1% in 2000 to 48.9% in 2015 (Table 3.1), which is the second highest value in the EU after Cyprus. Comparing only OOP expenditure, Bulgaria has the largest share among all EU Member States (47.7% of total health expenditure in 2015; Eurostat, 2018). Meanwhile, 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 51.1% in 2015 (WHO, 2018). From an international perspective, Bulgaria's public share of health expenditure was below all except two European and nine Commonwealth of Independent States countries in 2015 (Fig. 3.5).

Public expenditure on health as a percentage of the total government spending (10.3% in 2015) was comparable with newest EU Member States (Fig. 3.6) but lower than the EU average (15.3% in 2014). This indicator reached its lowest value after 2000 in 2009 (9.1%) probably reflecting government priorities facing the economic crisis (WHO, 2018).

The trend of private (mainly OOP) expenditure increasing as a share of total health expenditure is stable, with some variations over the years. This might be to the result of a shortage or inefficient use of public resources for health care, considering the fact that the public expenditure per capita tripled from 2000 (223 PPP\$) to 2015 (762 PPP\$) (WHO, 2018).

Public expenditure on health consists of health spending by the NHIF, the government (MoH, ministries operating parallel health systems, and the

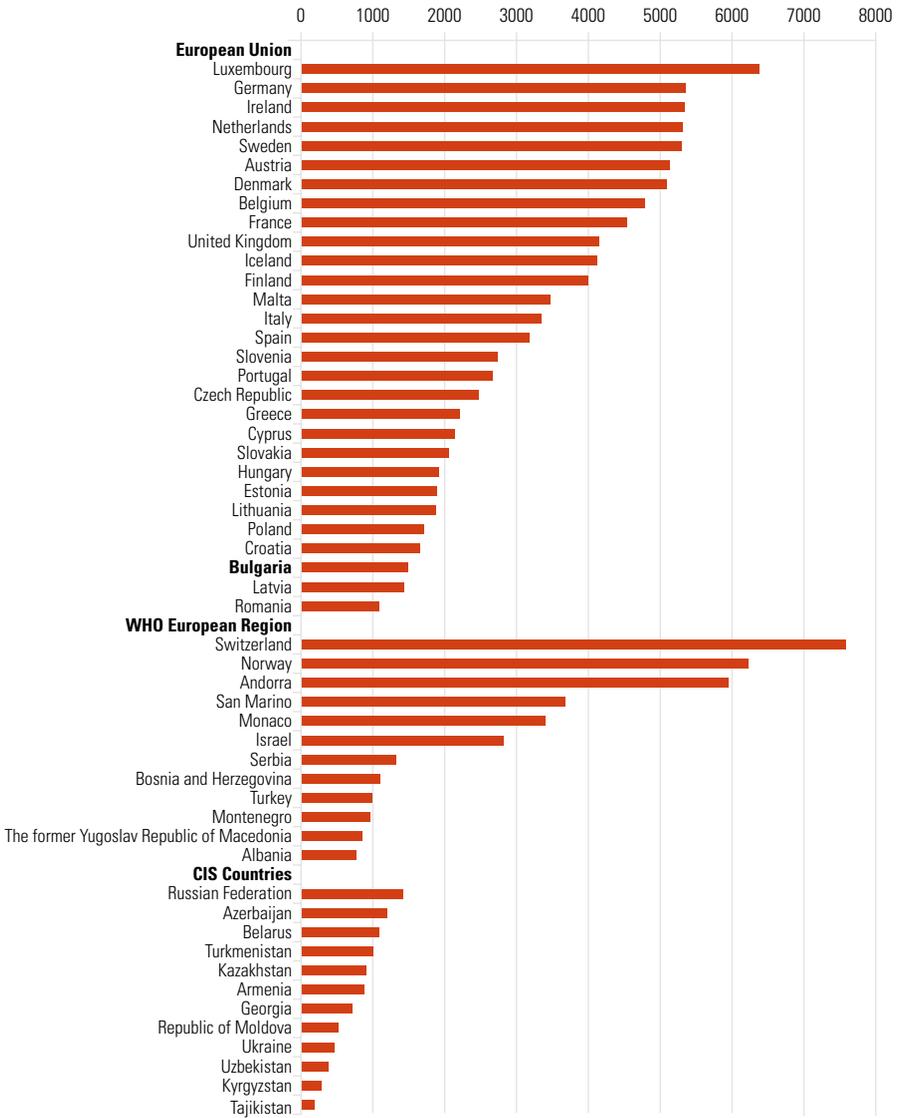
central budget), and municipalities. The share of each public source in total public expenditure on health changed during the transition period. The share of SHI expenditure has increased gradually since 2000 and represents the largest public source of health care funding. In 2015, it stood at 41.9% (up from 31.6% of the total current health expenditure in 2004; WHO, 2018). Simultaneously, general government expenditure as a share of the total health expenditure decreased from 26.3% in 2005 to 10.3% in 2015 (Eurostat, 2018).

Approximately half of current health expenditure is spent on curative and rehabilitation services (Table 3.2), varying between 51% and 54% in the period 2003–2010 and declining to 48–49% in 2011–2015. Whereas the share of inpatient curative and rehabilitative care declined from 41.1% of current health expenditure in 2008 to 29.4% in 2015, the share of outpatient curative and rehabilitation care expenditure remained relatively stable around 14%, the share of curative and rehabilitation day care expenditure increased to 4.7% in 2015.

Expenditure on medical goods (pharmaceuticals and therapeutic appliances) ranks second as a share of total health expenditure (Eurostat, 2018). The share spent on medical goods grew from 38.5% in 2003 to 40.7% of total health expenditure in 2015, more than 95% of which being spent for pharmaceuticals. As a result, pharmaceutical expenditure per capita (€498 purchasing power standard) was the fourth largest in the EU after Germany, France and Belgium in 2015 (Eurostat, 2018). The growth of pharmaceutical expenditure both in absolute value (tripling from 2003 to 2015) and as % of total health expenditure is substantial and has the greatest impact on OOP expenditure increase, considering the fact that pharmaceuticals account for the largest share of OOP expenditure (on average 67% for 2003–2015). Traditionally, nearly 80% of pharmaceutical expenditure is OOP (Eurostat, 2018), which makes the public coverage for pharmaceuticals in Bulgaria the lowest in the EU, except for Cyprus (OECD/EU, 2016).

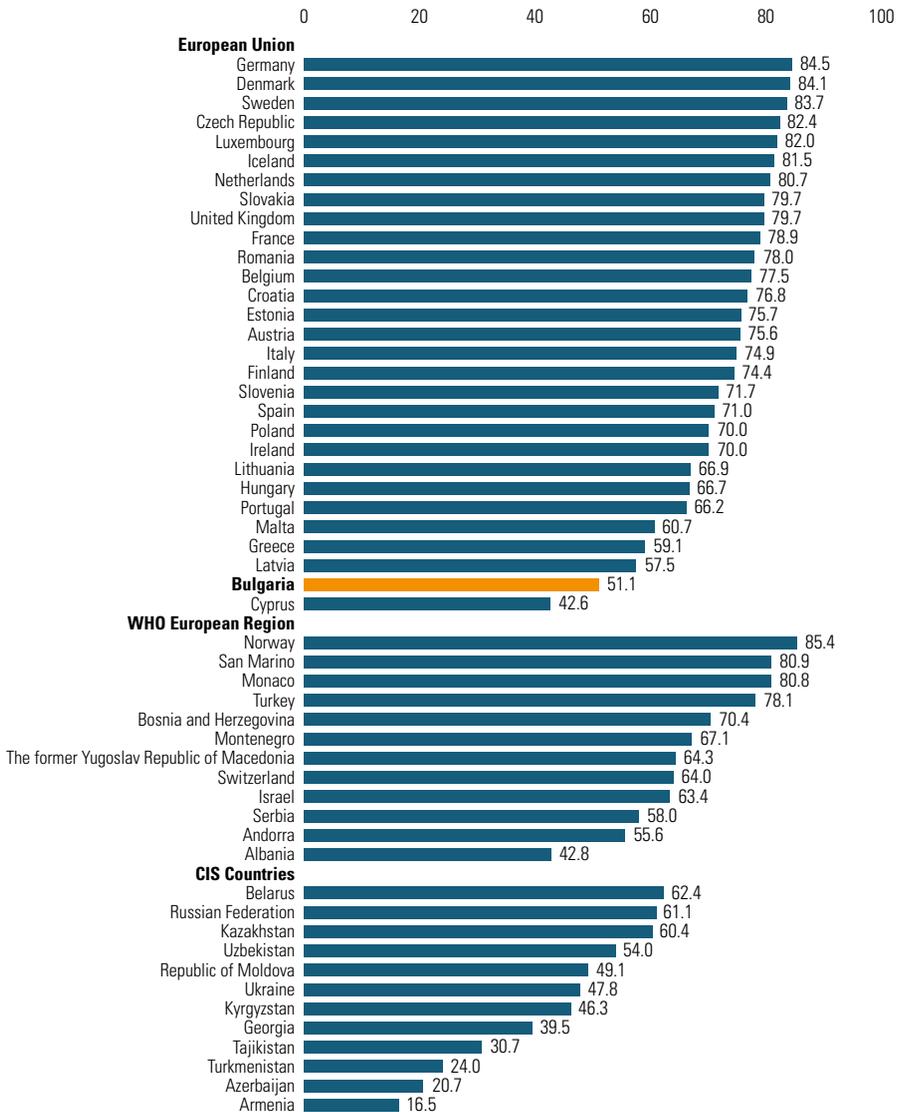
Although public health services, prevention and health promotion are acknowledged as a priority by all health authorities, their corresponding share in current health expenditure is small and declined further to less than 3% in 2013–2015 (Eurostat, 2018). However, in absolute value, expenditure on prevention and public health services increased each year since 2003 (except in 2009 – not shown in the table), reaching its peak in 2010. The expenditure on prevention and public health services in absolute value were nearly two times higher in 2015 than in 2003 (Eurostat, 2018).

FIG. 3.4 Health expenditure in PPP per capita in the WHO European Region, 2015 or latest available year



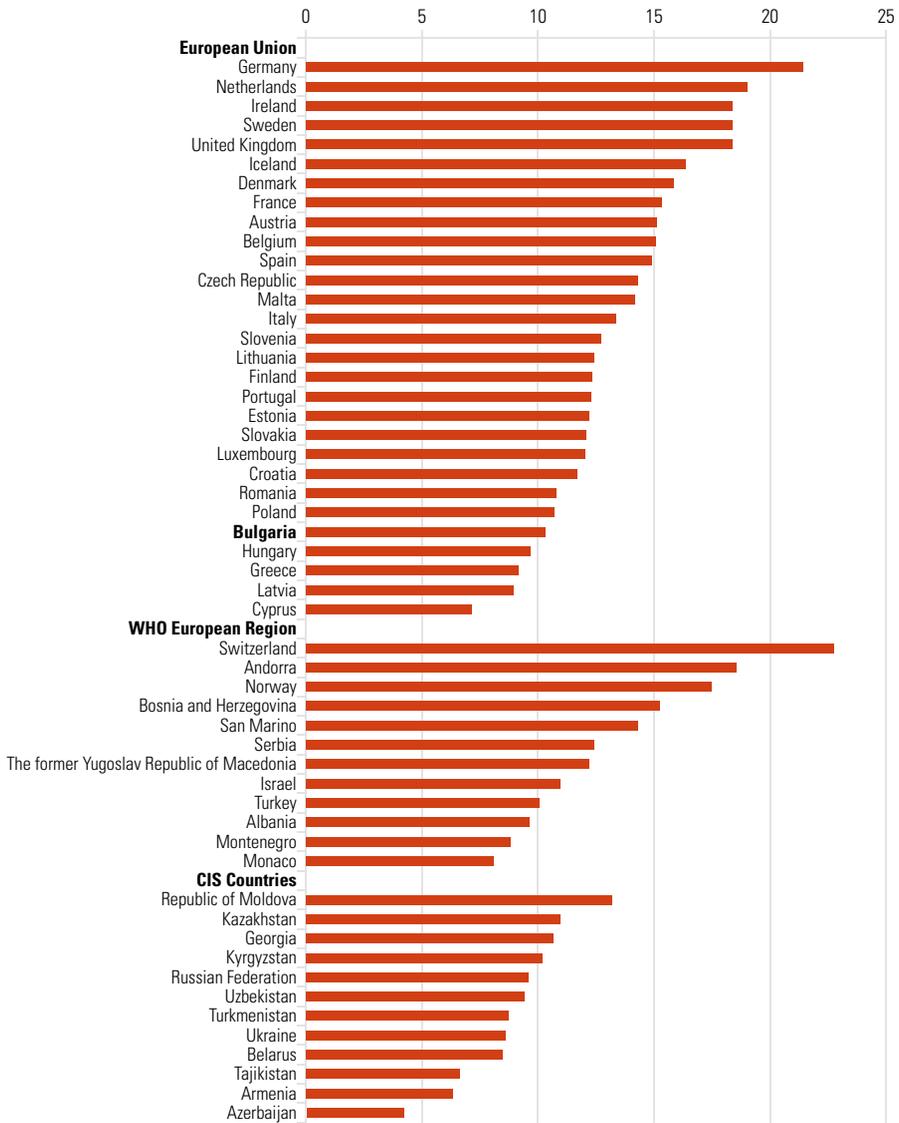
Source: WHO Global Health Expenditure database, 2018

FIG. 3.5 Health expenditure from public sources as a percentage of total health expenditure in the WHO European Region, latest available year



Source: WHO Global Health Expenditure database, 2018

FIG. 3.6 Public-sector expenditure on health as % of total government expenditure, 2015, WHO estimates (HFA_583)



Source: WHO Global Health Expenditure database, 2018

TABLE 3.2 Total expenditure on health by function as % of current health expenditure, selected years

FUNCTION	2003	2005	2010	2015	EU28 (2015) ^a
Curative and rehabilitative care	51.2	54.1	51.9	47.7	n/a
Inpatient curative and rehabilitative care	33.7	40.3	n/a	29.4	29.5
Outpatient curative and rehabilitative care	14.5	13.7	n/a	13.6	29.8
Day care curative and rehabilitative care	n/a	0.05	n/a	4.7	n/a
Pharmaceuticals and medical goods	38.5	35.4	38.2	40.7	18.5
Ancillary services to health care	4.3	4.2	3.7	4.2	7.1 ^a
Prevention and public health services	3.6	3.1	4.2	2.6	n/a
Governance, health system and financing administration	1.4	1.6	1.3	1.3	n/a
Other health care services and categories ^a	1.0	1.6	0.7	3.5	n/a

Sources: Eurostat, 2018.

Notes: n/a: not applicable. ^aOther health care services differ from the Eurostat definition, as it is serving as residual category and subsumes for instance long-term care.

■ 3.2 Sources of revenue and financial flows

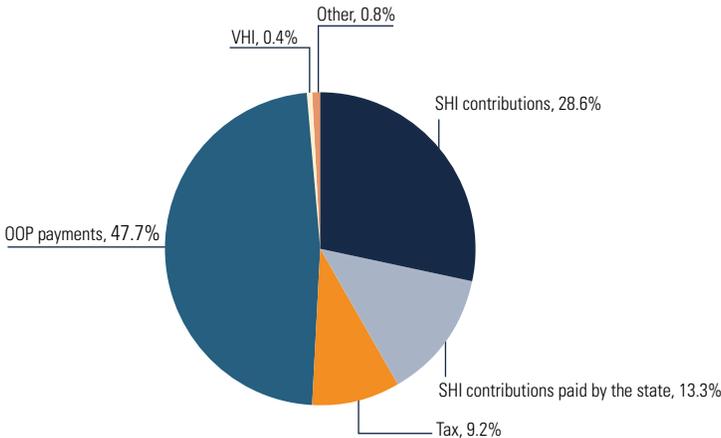
Although an SHI system is in place in Bulgaria, the main source of revenue for the health system is private payments, most of which are direct payments and cost sharing. OOP payments have become the major source of revenue since the introduction of the SHI system, although their overall share has varied over time. In 2000, OOP payments accounted for 40.4% of the current health expenditure, decreased in 2005 and increased significantly to 47.7% in 2015 (Table 3.3 and Fig. 3.7). 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 (accounting for roughly a quarter of current health expenditure). Since 2000, OOP payments include cost-sharing and direct payments for services not covered by the NHIF. In addition, the incapability of the SHI system to assure access to, and quality of, health services means that many make direct payments for services that are actually covered by the NHIF.

TABLE 3.3 Sources of revenue as a percentage of total expenditure on health

SOURCE OF REVENUE	1990 ^a	1995 ^b	2000	2005 ^b	2010 ^c	2015 ^c
Public expenditure on health	100	73.3	59.6	60.7	55.4	51.1
MoH	100	n/a	17.8	17.4	17.6	9.2
Municipalities	n/a	n/a	34.2	11.0	17.6	9.2
NHIF ^d	n/a	n/a	7.6	32.3	38.3	41.9
Private expenditure on health	n/a	26.7	40.4	39.3	44.6	48.9
Out-of-pocket expenditure	n/a	26.7	40.4	38.9	43.1	47.7
Voluntary health insurance (VHI)	n/a	n/a	n/a	0.3	0.5	0.4
Non-profit institutions serving households (for example, NGOs)	n/a	n/a	n/a	0.7	0.5	0.6
Enterprises	n/a	n/a	n/a	0.3	0.5	0.3

Sources: ^aKoulaksazov et al. 2003; ^bDimova et al. 2012; ^cWHO Global Health Expenditure Database, 2018.

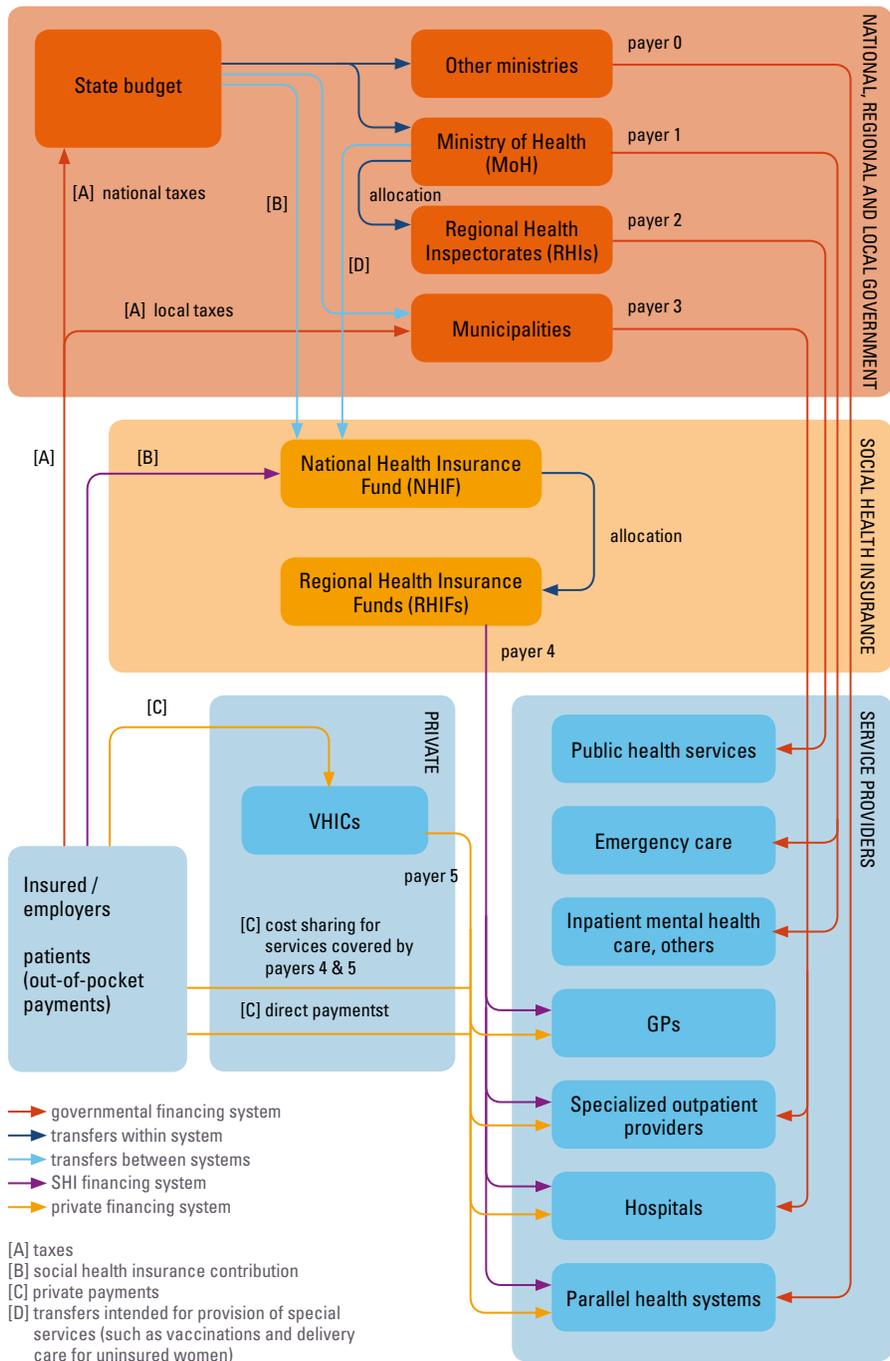
Notes: n/a: not applicable. ^dIncludes transfers from general tax revenue.

FIG. 3.7 Percentage of total expenditure on health according to source of revenue, 2015

Sources: Eurostat, 2018; Bulgarian National Audit Office, 2016.

Out-of-pocket payments traditionally account for nearly 97% of all private health expenditures. Although VHI was introduced along with the SHI, it plays a marginal role in health system financing. Another small part of private expenditure comes from corporate payments, donations and external funds (not included in Fig. 3.8).

FIG. 3.8 Financial flows in the Bulgarian health system, 2018

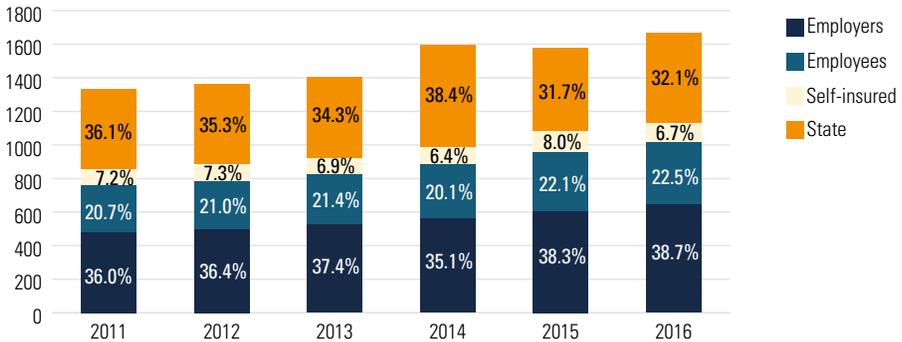


Source: Authors' own compilation.

The SHI contributions are the second largest source of revenue (41.9% of total health expenditure in 2015, Table 3.3 and Fig. 3.7). Nearly 99% of the NHIF's total revenue is formed by SHI contributions. These are income-related and fixed by law at 8% of the insurance income. SHI contributions are paid by employees and employers, individually or by the state (see Subsection 3.3.2 *Collection*). The SHI contributions paid by employers and employees traditionally account for the largest share of the total contribution revenue, which have increased from 56.7% in 2011 to 61.2% in 2016 (Fig. 3.9). SHI contributions paid by the state represent approximately one third of the total contribution revenue. However, they cover the largest share (around 60%) of insured individuals, most of which are pensioners and children (see Subsection 3.3.1 *Coverage*). Although, these funds are defined as SHI contributions by type of revenue, they originate from general non-earmarked taxation.

The SHI revenue has been increasing since the establishment of the NHIF (except for 2014–2015). The forecast SHI revenue is more than five and a half times higher for 2018 compared with the first years after the introduction of the SHI. Several reasons contribute to this: growing GDP; increases of the minimum monthly salary and insurance income; increased SHI contribution rate from 6% to 8% in 2009; decrease of unemployment rate; and increase of the insurance base for the contributions paid by the state in 2016 (see Subsection 3.3.2 *Collection*).

The third main source of revenue, general taxation (Fig. 3.7), is non-earmarked revenue, allocated to the MoH budget from the central budget. A further characteristic is that the MoH transfers funds to the NHIF, which are also general tax revenue, earmarked for services provided to some categories of uninsured individuals (for more details see Subsection 3.3.3 *Pooling of funds*). Part of the MoH's budget is formed by revenue received by RHIs, the national centres and the drug authorities as fee-for-service or fines and penalty charges (for more details see Subsection 3.3.2 *Collection*). Finally, municipalities can use local tax revenues to finance health services in addition to the transfers earmarked for health, which they receive from the central budget.

FIG. 3.9 Total SHI contributions revenue by source in millions of euros and as %

Source: Bulgarian National Audit Office, Annual audit reports on the execution of the NHIF Budget, respective years.

Note: State refers to the SHI contributions paid on behalf of a significant share of the total population (for example, pensioners, children up to 18 years).

■ 3.3 Overview of the statutory financing system

The SHI system was implemented in 2000 by the 1998 Health Insurance Act, which radically transformed the statutory financing system in two ways: first, by shifting responsibility for health system financing from the state to the citizens, and second, by changing breadth, scope and depth of population coverage. Until 2000, there was unconditional universal access to health care, which meant free access to all kinds of health services for the entire population, provided by a tax-funded system. After the introduction of SHI, access was predefined by the scope and depth of the benefit package. In addition, the state continued to cover some health services beyond the benefit package to the entire population (for example, emergency care or transfusion medicine). Hence, the current statutory financing system includes allocations from the NHIF and from the state through the Ministry of Finance and the MoH.

■ 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 significant number of *de facto* uninsured individuals. The problem became evident in 2003 when an electronic system, which allowed health care providers to check the insurance status of patients upon care delivery, was introduced and the NHIF withdrew coverage for uninsured persons. In 2003, people without insurance accounted for more than 2 million individuals. Some attempts have been made to reduce this number, such as changes in regulations on insurance rights restoration. Nevertheless, the problem persists. According to the NRA, 2 037 273 people (27.5%) were uninsured as of end of 2016, 68.4% of which have been registered by GPs (EAMA, 2017). In some districts, uninsured people accounted for more than 25% of the total population (27.5% in Kardzhali, 25.7% in Razgrad, 25.4% in Dobrich), whereas in other districts their share was much lower (13.5% in Sofia city, 14.5% in Sofia district and 14.6% in Smolyan; EAMA, 2017).

Precise data on uninsured individuals is lacking. Some official sources suggest that around 50% of the uninsured are Bulgarian citizens who live abroad; and nearly 25% are permanently unemployed, who experience financial difficulties in paying SHI contributions. The remaining quarter of uninsured could afford to pay SHI contributions but choose not to for a variety of reasons, such as distrust in the SHI system. The latter pay SHI contributions (and so renew their insurance status) only in cases of serious health problems, most often when they need hospital care (Ministry of Finance, 2014).

People lose their SHI coverage if they have failed to pay more than three monthly contributions in the previous 36 months. To restore their health insurance rights, citizens have to settle all contributions for the last 60 months.

There is no official data on the exact number of those insured by the state. However, pensioners and children, who are insured by the state by law, form a significant share of the total population. Pensioners accounted for 30.6% of the population and children up to 19 years of age made up 18.4% in 2016 (National

Insurance Institute, 2017). Combined they present around 60%¹ of the insured population in 2016. It is worth noting that some pensioners continue to work either on a labour contract or as self-employed, therefore they are not insured by the state but by themselves or their employers. In addition, children over 18 years of age who do not study are responsible for paying health insurance contributions.

Scope: what is covered?

The SHI system covers a broad range of health services and goods, which form the basic benefit package of the NHIF. As stipulated by the Health Insurance Act, the NHIF pays for prophylaxis, screening, health promotion, outpatient and inpatient diagnosis and treatment, long-term and rehabilitation services, dental care, medicines for home treatment and medical devices used in hospital treatment, home-based medical services, and transportation on medical reasons.

The basic benefit package is specified by three legislative acts of the MoH:

- Ordinance on the basic benefit package of the NHIF (No. 3/ 20 March 2018)
- Ordinance on prophylactic examinations and dispensation services² (No. 8/ 3 November 2016)
- Ordinance on the criteria for determining the diseases for which the NHIF pays fully or partially for medicinal products, medical devices and dietary foods for special medical purposes (No. 7/ 6 November 2015)

The exact services included in the basic benefit package are specified by type and scope, by medical specialties, by diseases or groups of diseases

1 Own calculation based on the National Statistical Institute data on the total population of 2016, the number of population from 0 to 19 years of age, the National Insurance Institute data on number of pensioners, and the NHIF data on uninsured individuals in 2016.

2 The term “dispensation” describes a complex of medical, diagnostic and prophylactic services that are usually provided for chronically ill patients (diagnoses are specified by an ordinance). Dispensation is performed for patients with certain diagnoses by outpatient and inpatient health care establishments and includes regular check-ups and diagnostic tests, medical surveillance, and long-lasting and acute treatment. It aims at providing integrated care for chronically ill patients and preventing further complications. Dispensation as a system of health care provision originating from the former Soviet Union, initially for patients with infectious diseases.

through another ordinance issued by the MoH. It is important to note, that prophylactic examinations and dispensary services included in the basic benefit package are separately dealt with by a MoH ordinance.

The basic benefit package covers:

- Primary outpatient medical care, which includes health promotion and prophylaxis, health risk assessment, dispensarization services, immunization, diagnostic and treatment services specified by type, home visits and medical expertise;
- Specialized outpatient medical care, including consultations, prophylactic examinations, ambulatory dispensarization services, medical expertise services and 64 predefined highly specialized activities;
- Outpatient diagnostic services, the benefit package includes 184 tests in eight specialties (clinical laboratory, clinical microbiology, medical parasitology, virology, imaging diagnostics, general and clinical pathology, clinical immunology, and immunohaematology);
- Outpatient dental care, embracing 17 services: (primary, specialized and surgical) for children up to 18 years of age, eight services (primary and surgical) for people above 18 years of age, and one additional service for children with mental diseases;
- Inpatient services, which include 267 clinical pathways (hospital stay no less than 48 hours), four clinical procedures (length of stay up to 24 hours), and 42 ambulatory procedures, which do not require hospitalization. In addition to the services provided by hospitals, the NHIF pays for medicines for hospital treatment of oncological diseases.

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.

The NHIF's Supervisory Board issues a list of the specific diseases for which the NHIF pays fully or partially medicinal products, medical devices and dietary foods for special medical purposes based on the MoH's Ordinance on the criteria for determining those diseases. The latest list includes 133 diseases with 377 International Classification of Diseases (ICD) codes (NHIF, 2016). Drugs intended for treatment of those diseases, which

are fully or partially paid by the NHIF, are specified in the PDL, which is maintained by the NCPRMP. The list comprised 1744 drugs in December 2017 (NCPRMP, 2017). The NCPRMP maintains the PDL based on an ordinance issued with a Decree of the CoM and the MoH's ordinance on HTA (CoM, 2011; MoH, 2015a).

In addition, health services and medicinal products beyond the scope of the basic benefit package are funded through transfers from the MoH's budget to the NHIF. These services and products include compulsory vaccines and vaccinations, outpatient treatment of dermato-venereal diseases, intensive care for uninsured individuals, and prophylaxis, diagnostics and maternity services for uninsured women.

Emergency care, inpatient mental health care, transfusion haematology, in vitro fertilization and transplantations are covered by the state budget or specially established funds.

Depth: how much of benefit cost is covered?

The cost of medical services included in the basic benefit package is covered by the NHIF. However, user fees apply for each outpatient visit, laboratory test and hospital stay covered by SHI to all patients with few exceptions (such as children, pregnant women, individuals with income below a certain threshold, patients with chronic illness and some other groups). Pensioners pay reduced fees (see Subsection 3.4.1 *Cost-sharing (user charges)*).

The cost of dental services included in the basic benefit package is only partially covered for patients above 18 years of age. Co-payments apply for 11 of the 17 dental services provided to children up to 18 years of age. Users pay less than 20% of the total price for most of the dental services. The NHIF covers fully dental services for some – rather small – categories of insured individuals such as children and adults living in specialized institutions and children with mental disorders.

There are co-payments for hospital treatment when medical devices are applied. Some medical devices are partially or not covered at all by the NHIF. In such cases, in addition to the cost of treatment services (cost of the clinical pathway) the patients have to pay for the medical devices themselves. Some medical devices and dietary foods for outpatient treatment are covered up to a certain level, which is usually lower than the market price.

The depth of coverage for medicines depends on multiple criteria, such as the purpose of the product (essential, preventive, palliative, symptomatic,

or for maintenance therapy), the social significance of the condition under treatment, expected expenditure and budgetary capacity.

The PDL defines exact patient co-payments and reimbursement levels covered by the NHIF. The NCPRMP defines the reimbursement level of each “International no proprietary name” group based on criteria listed in the Ordinance of the CoM on regulation and registration of pharmaceutical prices, conditions, rules and criteria for inclusion, changes and/or exclusion of PDL drugs:

- 100% reimbursement level contains drugs intended for long-lasting treatment of chronic diseases leading to severe impacts on quality of life or disability;
- 75% reimbursement level applies to drugs intended for the treatment of widespread chronic diseases;
- the rest of the drugs included in the PDL – up to 50%.

The Council can adjust the reimbursement level once a year. Reimbursement rates for drugs for hospital treatment, drugs for HIV, infectious diseases, vaccines for compulsory vaccination and some others are always 100%, based on the Health Case Establishments Act and the Law on Health.

■ 3.3.2 *Collection*

Contributions pooled by the NHIF

SHI contributions are collected by the NRA through its 28 divisions at the district level and transferred to the NHIF on a daily basis. SHI contributions are earmarked for health and can be used only for provision of health services and medical goods to the insured individuals. The contribution rate is 8% (defined by law) of an individual’s income. There are minimum and maximum thresholds to determine the income base for health insurance contribution calculation. The minimum insurance income for employed and self-employed individuals is defined annually by the Law on the State Social Security Budget and depends on the industry and individual position. The minimum insurance income for non-insured individuals was raised from BGN 420 (€215) in 2012–2016 to BGN 460 (€235) in 2017. The maximum insurance income is BGN 2600 (€1329) in 2015–2017.

The SHI contributions are paid by employees (40%) and employers (60%) individually at full rate or by the state (see Table 3.4). For some insured, such as individuals receiving compensation for temporary incapacity to work due to illness, pregnancy, childbirth or maternity leave, the contributions are paid only by the employer. In these cases, contribution is equal to the employer's due part of the contribution, calculated on the minimum insurance base.

The state budget covers health insurance for more than 3.5 million individuals, including pensioners; children up to 18 years of age and school students up to 22 years of age, full-time university students up to 26 years of age and PhD students; 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 asylum; prison inmates; individuals without income who are accommodated in homes for children and youth or social care establishments; individuals receiving unemployment benefits; people with low income entitled to social support; and civil servants. However, the state does not pay the full size of the contribution (see Table 3.4). Until 2016, the contribution rate was 8% up to half of the minimum insurance income. Thus, despite the fact that the state covers SHI for around 60% of insured individuals (see Subsection 3.3.1. *Coverage, Breadth: who is covered?*), it contributes only one third of the SHI revenue (see Section 3.2 *Sources of revenue and financial flows*). Starting from 2016, the contribution base was increased to 55% of the minimum insurance income and by five percentage points each subsequent year until reaching the full amount of the minimum insurance income for self-insured persons.

Single entrepreneurs, individuals who have established limited liability companies, partners in trade companies, freelance practitioners and individuals who work without legal terms of employment or are unemployed are personally responsible for paying the full contribution rate of 8% of their insurance income up to the maximum insurance income. People who have not declared income and who are not insured on another base have to pay SHI contributions on their own at least to the amount of 8% of half of the minimum insurance income (BGN 460, €235 in 2017).

TABLE 3.4 Major 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 2600 (€1329, the maximum insurance threshold for 2017)
Self-employed individuals, registered farmers and tobacco growers	8% paid by the insured person	Declared income between the minimum and maximum insurance thresholds (size depends on industry and position)
Pensioners	8% paid through the state budget	Size of the pension
Children up to 18 years of age, high school students up to 22 years of age, and full-time students up to 26 years of age	8% paid through the state budget	55% of the minimum insurance threshold ^a
Citizens who receive monthly social and targeted benefits	8% paid through the state budget	55% of the minimum insurance threshold ^a
Unemployed individual entitled to compensation for unemployment	8% paid through the state budget	Size of the compensation between the minimum and maximum insurance thresholds
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 minimum insurance threshold

Note: ^aRefers to 2016. The income base will be increased by five percentage points each year until reaching the full size of the minimum insurance income for self-insured persons in 2024.

General government budget

In 2015, €341.71 million generated by general taxation (excluding transfers on behalf of specific groups) was allocated to the health system. This represents 9.2% of the total health expenditure in 2015 (Eurostat, 2018).

General taxation is non-earmarked revenue, flowing to the MoH budget from the central budget (see also Section 3.2 *Sources of revenue and financial flows*). The amount of the tax revenue allocated for health is not fixed and is estimated annually as part of the State Budget Act. The NRA and its 28 divisions on the district level have administrated tax collection since 2006. The NRA 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, value added tax (VAT), patent taxes and corporate taxes, as well as health insurance and pension contributions.

Also in 2017, 2.9% of the state tax revenue was allocated to the MoH and municipalities, and an additional 6.0% was allocated to the NHIF, mainly to cover SHI contributions for people insured by the state. The transfer from the state budget to the municipalities earmarked for health activities was 20.7% of the overall amount of the tax revenue allocated for health in 2017 (in the State Budget Act). 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 insubstantial. Municipal budget tax revenue accumulates from some local taxes such as waste charges, building tax and asset purchase tax, and is collected by municipalities directly.

■ 3.3.3 *Pooling of funds*

The NRA pools the revenue from general state taxation (including general income tax, corporate taxes, VAT, patent tax), health insurance contributions and social security contributions and the National Customs Agency pools excises and customs duties. Both agencies are subordinate to the Ministry of Finance.

Compulsory health insurance contributions are collected by the 28 territorial directorates of the NRA, which transfer them on a daily basis to the NRA's pooling account. Funds received by the NRA are then allocated daily to the accumulation account of the NHIF. Transfers from the NRA to the NHIF usually happen once a month for administrative and technical reasons. Since 2013 all contributions (social, health and others) are pooled to a single account of the NRA, which requires more time to be distributed and allocated to the accounts of the different agents (such as the NHIF) (Ministry of Finance and the NHIF, 2013).

The NHIF distributes the funds to its 28 RHIFs. 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.

To contain costs and control expenditure, the budgets of RHIFs are prospective and disaggregated by line-items with monthly and annual expenditure limits that are approved by the NHIF. As a result, RHIF budgets are spent in accordance with these prospectively approved line-items and, in

practice, RHIFs 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 state budget is allocated to various ministries depending on previously approved annual budgets. Funds for health from the state budget are allocated to the MoH and other ministries running parallel health systems. The municipalities receive earmarked health funds from the state budget, depending on the size of the municipality and according to the State Budget Act.

Other transfers exist between the State Budget and the NHIF and between the MoH and the NHIF. The NHIF receives monthly health insurance contributions for those groups of the population that are insured by the state. The MoH pools funds to the NHIF intended for compulsory vaccines, provision of special services for some uninsured groups of the population (for example, intensive care, delivery care for uninsured women), and co-payment of the reduced consumer fees for pensioners, which the NHIF pays to health care providers for each patient visit (see Subsection 3.4.1 *Cost-sharing (user charges)*).

■ 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 sectors (for purchasing and purchaser–provider relations in the field of VHI, see Section 3.5 *Voluntary health insurance*). In the public sector, the relationship between the purchaser (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 an NFC for medical and dental services, respectively. The NFCs regulate health care providers, the scope of health services, the payment methods, the price of services, the health care quality 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. An attempt to introduce selective contracting

between the RHIFs and health care providers based on the National Health Map was made in 2015–2016 with legislative changes, which were repealed by the Supreme Administrative Court in 2017 (Dimova, 2016a; Dimova & Rohova, 2017b).

Individual contracts between the RHIFs and health care providers cannot include services that are not included or that contain less advantageous provisions than those stipulated in the NFC. Individual contracts provide a limitation on the volume of activities for which the health care provider will be reimbursed by the RHIF.

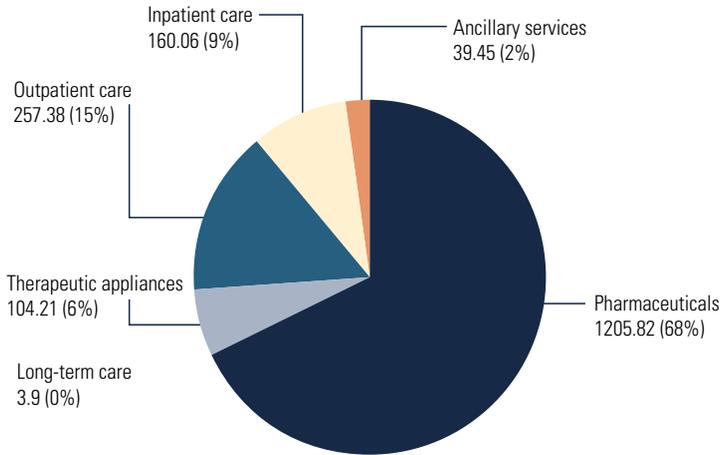
In 2016, 13 434 individual contracts for outpatient medical and dental care and 365 contracts for hospital care were signed between provider organizations and RHIFs (NHIF, 2017a). Contracts for hospital care were signed with 311 hospitals, 42 outpatient care providers and 12 dialysis centres. The number of contracted hospitals has increased by 22 for 2014–2016.

The RHIFs sign individual contracts with pharmacies based on rules and conditions developed by the NHIF and the Bulgarian Pharmaceutical Union. The number of pharmacies that signed contracts with the NHIF/RHIF was 2475 in 2016 (NHIF, 2017a).

■ 3.4 Out-of-pocket payments

Out-of-pocket payments amounted to €1770.82 million in 2015, accounting for 47.7% of total health expenditure, 3.9% of GDP and €583.50 purchasing power standard per capita (Eurostat, 2018). In 2015, only five EU Member States had higher OOP per capita (Cyprus ranks first with 698 purchasing power standard, followed by Austria, Norway, Belgium and Finland). What is more, OOP expenditure per capita in purchasing power standards increased 1.6 times in comparison with 2010 and more than three times compared with 2003 (Eurostat, 2018). Out of total OOP expenditure, pharmaceuticals account for approximately two thirds, followed by outpatient (curative and rehabilitative) care accounting for 15%, and inpatient care accounting for an additional 9% (Fig. 3.10).

FIG. 3.10 Private household OOP expenditure for health care functions in millions of euros and as a share (%) of the total OOP expenditure, 2015



Sources: Eurostat, 2018; Bulgarian National Audit Office, 2016.

Notes: Outpatient and inpatient care refers to curative and rehabilitative care only. OOP payments include cost-sharing and direct payments. There are no official statistics about the size of each form of OOP payment.

■ 3.4.1 Cost-sharing (user charges)

Cost-sharing was established by the 1998 Health Insurance Act in the form of co-payments (referred to as user fees) for visits to physicians, dentists, laboratories and hospitals for the use of services covered by the NHIF (see Table 3.5). User fees apply to all patients with some exceptions: children, pregnant women and women up to 45 days after delivery, patients suffering from chronic diseases listed in the NFC, patients with malignant neoplasms, medical professionals, those with income below a certain threshold and some other groups. The reduced user fees for retired individuals of BGN 1 (€0.51) per outpatient visit, introduced in mid-2008 and abolished in 2011, were restored in 2013. The NHIF pays the difference between the reduced and full user fees for pensioners to the outpatient care providers. Funds for this payment come from the state budget and are transferred to the NHIF by the MoH.

User fees are paid by the patients directly to the provider at the point of delivery.

TABLE 3.5 User charges for health services, 2018

HEALTH SERVICE	TYPE OF USER CHARGE IN PLACE	PROTECTION
GP visit	Fixed user fee of BGN 2.90 (€1.50).	13 patient groups including children, chronic patients, pregnant women and others are exempt from paying user fees.
Outpatient specialist visit	Fixed user fee of BGN 2.90 (€1.50).	Same as above.
Outpatient laboratory services	Fixed user fee of BGN 2.90 (€1.50)	Same as above if user fees apply.
Inpatient stay	Fixed user fee of BGN 5.80 (€2.96) for each day of stay (up to 10 days per year). Extra billing for luxury hospital services (for example, choice of physician or team)	Same as for GPs and specialist visits. No exceptions.
Dental care	Co-payment for services included in the NHIF's benefit package.	Children pay no or smaller co-payments.
Outpatient pharmaceuticals	Co-payment	No exceptions.

Until 2012, user fees were defined as a fixed percentage of the minimum monthly salary (MMS) depending on the type of health care service used (for example, 1% of MMS per outpatient visit and 2% of the MMS per day of hospitalization up to 10 bed-days per year). Hence, user fees have been rising with increases of the MMS. The MMS is the lowest salary that employers can pay by law. It rose from BGN 79 (€40.4) in 2000 to BGN 290 (€148.3) in 2012 and to BGN 510 (€260.7) in 2018. Since 2012, user fees were fixed through a Decree of the CoM at BGN 2.90 (€1.50) per outpatient visit and BGN 5.80 (€2.96) for each day of hospitalization for up to 10 days per year.

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 Subsection 3.7.1 *Paying for health services*).

Despite concerns over their regressive nature, co-payments are seen as a means of restricting avoidable 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.

Another, form of cost-sharing may exist 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. In 2010, it became evident that there are big variations in prices for choosing a physician in the hospital sector (according to some media between €25 and €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 physician 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 because 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.

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

■ 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, long-term rehabilitation and nursing care as well as elective plastic surgery services, some laboratory tests, implants and other medical devices, glasses and various pharmaceuticals.

Second, there are direct payments for services or goods that are included in the NHIF basic package but patients prefer (or are forced) to receive them outside the standard patient pathway in the SHI system. For example, if patients go to a specialist for a regular check-up (a service that is included in the basic benefit package) without a GP's referral, they are expected to

pay for the service. The same is also true if they go directly to a laboratory, hospital or another GP who is not their regular GP. Patients have different motivations for such behaviour. They may want to access the services they need more rapidly or demand services on their own decision. 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, laboratory or hospital because of exhaustion of the monthly limits set by the NHIF). A direct payment also occurs when a physician 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.

Regional inequalities to access, which exist in Bulgaria (Rohova, 2015b), may also contribute to direct payments for services and goods included in the NHIF benefit package.

For some medicines, which are partially covered by the NHIF, reimbursement is lower than the user fee for a visit to a physician. In such cases, the user fee will be higher or equal to the part of the medicine covered by the NHIF. Thus, patients may prefer to buy the medicine directly at full price instead of visiting a physician for prescription.

Third, uninsured individuals also have to pay directly for medical services or goods, unless they call an ambulance or visit an emergency centre.

Health care providers, regardless of their ownership (public or private), have their own fee-for-service price lists and determine how patients are charged in the examples above.

■ 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.

According to the latest Eurobarometer on corruption published in October 2017, 8% of Bulgarian respondents who had contact with the public health care sector in the last 12 months reported informal payments (European Commission, 2017a). This is the sixth highest number (shared with Latvia) after Romania (19%), Hungary (17%), Greece (13%), Lithuania (12%) and Austria (9%).

Tracing results from national representative surveys on informal payments and corruption practices in health care over the years it seems that informal payments have decreased in general, despite the fact that different research tools have been used (Table 3.6).

Patients usually pay informally to secure better conditions of treatment and service quality in hospitals. Another form of informal payment is when relatives of patients in need of blood transfusion pay individuals to donate blood.

From the beginning of 2018, the NHIF will pay the portion of the user fee that is due for pensioners to outpatient care physicians if a receipt is issued to the patient in addition to the other reporting documentation. This measure is expected to have an impact on reducing user fees for which providers do not give a receipt (considered also as informal payments) but limited to only some patients.

TABLE 3.6 Available research on informal payments

BASELINE YEAR	DATA ON INFORMAL PAYMENTS	SOURCE
1994	43% of 1000 respondents reported having paid cash for officially free services in state health facilities.	Delcheva, Balabanova & McKee, 1997
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
2007	3% of the patients reported informal payments Informal payments in the hospitals amounted to 11.7% of all out-of-pocket payments for inpatient care. 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 Sofia, 2008
2010 and 2011	13% of the patients, who had paid out-of-pocket for outpatient physician visits, paid informally in 2010 (10% in 2011).	Atanasova, 2014
2013	8% of respondents (who had contact with the public health care system) reported informal payments.	European Commission, 2014a
October 2017	8% of respondents (who had contact with the public health care system) reported informal payments.	European Commission, 2017a

■ 3.5 Voluntary health insurance

Voluntary health insurance was introduced by the 1998 Health Insurance Act to diversify revenue sources for the health system. However, the VHI market is still limited and covers only a relatively small share of the population.

Until 2013, VHI was provided by for-profit joint-stock companies intended for VHI only and it provided seven benefit packages such as prevention up to complex medical care.

By August 2013, all VHICs had to be relicensed under the terms of the 2003 Insurance Code. In this way, Bulgarian VHI legislation was harmonized with the EU's general insurance legislation (Dimova, 2016b). All insurance companies are commercial joint-stock companies, supervised by the FSC and operating as companies for general or life insurance. VHI is based on contracts in medical insurance, which covers financial risks related to the provision of health services and goods. These contracts are usually subsumed under three different – rather technical – insurance classification groups: “sickness” (general insurance), “sickness” (life insurance) and “permanent health insurance” (life insurance), depending on whether the insurance company is licensed for general or life insurance. In addition, some contracts for medical insurance are reported to the FSC by other classification groups such as “accident” or “travel assistance” (Capital, 2017a). This inaccuracy in grouping VHI into these classification groups leads to incomplete data on the VHI market.

■ 3.5.1 *Market role and size*

Voluntary health insurance covers complementary services and user charges not covered by the NHIF (such as specific laboratory tests, dental services and drugs), supplementary services (for example, better service and free choice of a hospital physician or team), as well as services included in the NHIF benefit package (visits to specialists, hospital treatment, prophylaxis). This means that for some services, individuals with VHI have double coverage.

Expenditure on VHI still amounted to only 0.4% of total health expenditure and 0.8% of private health expenditure in 2015 (see Table 3.1).

When VHICs stopped their activity in 2013, the number of people with VHI coverage decreased by 16.3% to a total of 175 000 insured individuals

(2.4% of the total population) compared with 2012 (FSC, 2013). Until 2016 the number of individuals holding a VHI increased to 700 451 people (9.8% of the total population). Most of the voluntary-health-insured individuals (96%) are between 18 and 65 years of age, and only 3% are children under 18 years. The share of insured people over 65 years of age decreased from 1.5% in 2015 to 0.9% in 2016, mainly due to the fact that most of the policies were corporate in 2016 (EAMA, 2017).

■ 3.5.2 *Market structure*

Customer profile

Although individuals, families and companies may purchase VHI, individual VHI policies play only a marginal role for total health expenditures. Most VHI clients are companies motivated by tax reliefs. However, because these tax reliefs are not substantial, employers are driven primarily by the desire to enhance employee satisfaction and reduce costs incurred by sickness and absenteeism.

Traditionally most of the VHI clients are companies who purchase policies in favour of their employees, although their relative market share is declining (98% in 2009, and 85–90% in 2016; CPC, 2009, Capital, 2017a). Individual policies account for 10–15%, most of which cover family members of individuals insured by their employer (Capital, 2017a). This dominance persists further, as corporate clients made up 96% of all newly signed contracts in 2016. In contrast, in 2015, the majority of the newly signed contracts (71%) were individual. This change in policies structure could explain the 34% increase in the number of individuals with VHI in 2016 compared with a year before.

The main reason for the significantly lower share of individual VHI policies is the affordability of insurance premiums. Premiums for individual clients are much higher than for the group (corporate) clients. In addition, some restrictions in eligibility could also contribute to the lower share of individual VHI. For example, VHICs may refuse to sign individual and even family contracts with people over 65 years of age, while there are no age limitations for the group policies involving more than 50 individuals.

Provider profile

In 2013, ten VHICs were re-licensed, three merged, and six terminated their activity (Neikov, 2013). In 2016, 23 companies (16 general insurance and seven life insurance companies) reported income by the “sickness insurance” category to the FSC (FSC, 2017a, 2017b), out of which 16 companies (14 general insurance and two life insurance companies) have provided VHI packages (EAMA, 2017) and the rest have covered the risk of sickness (which is not technically considered as VHI because these compensate for the loss of income only). In the same year, four of the 16 general insurance companies and two of the seven life insurance companies, which offer “sickness insurance”, had a 57.6% share of the general insurance market and a 72.5% share of the life insurance market respectively (FSC, 2017a, 2017b). One of the companies operating at the VHI market had a 41% share of the individual policies’ market and 34% of the group policies’ market in 2016 (EAMA, 2017).

As a result of the 2013 reform, sickness and incident insurance premium income in the general insurance market increased by 126.1% in 2013 compared with 2012 (FSC, 2013). Group sickness insurance recorded the biggest growth in the general and life insurance market in 2013 and 2014 (FSC, 2013). In 2015 and 2016, sickness insurance total premiums income and payments continued to grow (Table 3.7). Sickness insurance premiums and payments, provided in the life insurance market, even outpaced the increase in the general insurance market (Table 3.8). In the first 10 months of 2017, sickness insurance premiums totalled €42.36 million.

TABLE 3.7 Sickness insurance premiums and payments in millions of euros (non-life insurance market)

	2012	2013	2014	2015	2016	31.10.2017	% CHANGE 2013–2016
Premiums	0.18	18.68	22.40	22.27	22.76	22.27	21.8
Payments	0.03	12.97	12.53	14.09	15.44	13.11	19.0
Combined ratio ^a	0.76	1.97	0.92	0.95	1.05	–	

Source: FSC, 2017a.

Note: ^aClaims (loss) ratio and expenses ratio.

TABLE 3.8 Sickness and health insurance premiums and payments in millions of euros (life insurance market)

		2012	2013	2014	2015	2016	31.10.2017	% CHANGE 2013–2016
Permanent health insurance (3–10 years)	premiums	1.22	0.30	0.21	0.18	0.16	–	–46.7
	payments	0.43	0.14	0.07	0.04	0.03	–	–78.6
Sickness insurance	premiums	0.01	6.20	11.96	14.48	18.66	20.09	201.1
	payments	0.00	1.26	5.25	6.02	6.39	7.01	407.1

Source: FSC, 2017b.

Note: ^aClaims (loss) ratio and expenses ratio.

■ 3.5.3 Market conduct

Voluntary health insurance is contract-based and adapted in accordance with the preferences and risk profile of the customer. More than 90% of the contracts are annual and so require renewal (Capital, 2017b). VHI premiums are risk-adjusted for individual clients (based on individual risk) and community-rated for group clients (the same for all members). Premiums for corporate clients are calculated on actuarial criteria, such as the size of the group, age and gender, as well as the previous experience of the insurance company with the client. Consequently, premiums for corporate clients vary widely.

The VHICs offer different types of insurance packages, which cover outpatient, inpatient, dental care, home treatment, medical transportation, medicines and medical devices. Prophylaxis is also included. Insurance companies provide different coverage for oncological, chronic and mental diseases. Some companies may completely exclude oncological diseases, whereas others may cover only diagnostics and first-stage treatment (Capital, 2017b). Benefit differs between in-kind and a reimbursable lump sum to the predefined limit on a contractual basis.

Since 2013, outpatient curative and rehabilitation care have accounted for the biggest share in the total current VHI expenditure (Table 3.9). Fifty-one percent of the VHI-insured individuals had coverage for outpatient medical services in 2016 – 42.5% for hospital care, 38.4% for preventive care and

17.2% for dental services (EAMA, 2017). The number of insured individuals who claimed VHI services increased by 37% between 2015 and 2016 but as a share of all insured it remained approximately the same (50% in 2015 and 51% in 2016) (EAMA, 2017).

TABLE 3.9 Voluntary health insurance expenditure by health care functions in millions of euros and as a share of the total current health expenditure and total VHI expenditure, 2013–2015

		2013	2014	2015	% CHANGE 2013–2015
Voluntary health insurance	millions of euros	11.48	12.24	14.79	28.8
	% of total CHE	0.35	0.34	0.40	14.3
Out of which:					
Inpatient curative and rehabilitative care	millions of euros	0.75	1.16	1.33	77.3
	% of total CHE	0.02	0.03	0.40	1900.0
	% of VHI	6.50	9.50	9.00	38.5
Outpatient curative and rehabilitative care	millions of euros	5.47	7.56	8.87	62.2
	% of total CHE	0.17	0.21	0.24	41.2
	% of VHI	47.60	61.80	60.00	26.1
Home-based curative and rehabilitative care	millions of euros	1.36	1.57	1.85	36.0
	% of total CHE	0.04	0.05	0.05	25.0
	% of VHI	11.80	12.80	12.50	6.0
Other health care services unknown	millions of euros	3.91	1.95	2.73	–30.2
	% of total CHE	0.12	0.05	0.07	–41.7
	% of VHI	34.10	15.90	18.50	–45.8

Source: Eurostat, 2018.

Note: CHE: current health expenditure.

Insurers selectively contract with private and public health care providers. The level of provider remuneration is determined by the market. The most common payment mechanism is fee-for-service.

■ 3.5.4 Public policy

The VHI market is regulated and supervised by the FSC and the MoH. The FSC licenses all insurance companies who provide VHI if they meet the

requirements such as a capital of BGN 7 million for life insurance companies. Additionally, the FSC approves mergers of VHICs. On the other hand, the MoH's EAMA supervises medical activities provided to individuals covered by VHI in accordance with the insurance contract.

VHI activities are not subject to VAT. Employers have benefitted from tax breaks of up to BGN 60 (€30.7) per month for each insured person since 2008 (according to the 2007 Law on Corporate Income Tax). Individuals can also benefit from tax relief by up to 10% on their annual taxable income for voluntary pension insurance, VHI premiums and life insurance paid over the year altogether (2007 Law on the Taxation of Income of Individuals).

Strengthening VHI is an acknowledged aim but a clear vision of the appropriate changes in both SHI and VHI is lacking. Two main solutions were already discussed, (1) to establish a third pillar of compulsory complementary health insurance, and (2) the introduction of a free choice of funds for compulsory health insurance. In 2016, an envisaged change in the NHIF's benefit package was expected to strengthen VHI; however, it was appealed by the Supreme Constitutional Court as unconstitutional in breach with patient rights securing equal access to health care (see Section 6.1 *Analysis of recent reforms*).

■ 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 and Justice, and by the CoM. These ministries own and manage health care facilities, including five military multiprofile and three rehabilitation care hospitals, two transport multiprofile hospitals and a diagnostic-consultative centre, a Medical Institute with a multiprofile hospital and regional health care facilities, two specialized hospitals, 14 medical centres for prisoners and a specialized hospital for active treatment of prisoners, and one multiprofile governmental hospital. All health care facilities except those run by the Ministry of Justice can sign contracts with the NHIF and private insurers 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 available about the size of financing parallel health systems.

■ 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. The biggest beneficiary is the MoH, but health care providers, mostly hospitals, are also recipients of foreign investment.

Since the accession of Bulgaria to the EU, the major share of foreign aid was received from EU programmes, which were allocated mainly for structural changes in the health system and human resources development. In the ongoing programming period (2014–2020), Bulgaria benefits from a total funding of €9.88 billion through 10 different programmes. Ongoing and important projects in the area of health care are (MoH, 2018e):

- Project “Specialization in Health” implemented with financial support of the Human Resources Development Operational Programme 2014–2020, co-funded by the European Union through the European Social Fund (total budget: BGN 5 496 628.40, €2 810 381.47, with 25% national funding; implementation period 2016–2019). The main project activities include the provision of scholarships and payment of fees for theoretical and practical training.
- Project “Improvement of Conditions for Emergency Treatment”, funded by the European Social Fund through the Human Resources Development Operational Programme 2014–2020 (total budget: BGN 7 million, €3.57 million; implementation period 2017–2019). The project will provide support to medical assistance through the establishment and operation of the National Centre for Education and Training System for emergency medical care.

- The MoH is a beneficiary under the Operational Programme “Regions in Growth” 2014–2020 with the subprogramme of “Regional Health Infrastructure” and a total grant amount of €83 597 313,00 (MoH, 2018a). As of early 2018, however, these funds were not yet contracted.
- Repair of the multiprofile hospital in Silistra through the Solidarity Fund, granted by the European Commission, under application 2015BG16SPO001 for damage caused by a natural disaster in 2015. Budget: BGN 30 983.81 (€15 841.77).

Another project, operationalized by the Ministry of Finance Public Procurement Agency but with an application in the health system as well, is the development, implementation and maintenance of a unified national electronic web-based platform: Centralized Automated Information System “Electronic Public Procurement”. This Public Procurement Portal was developed with the financial support of the PHARE Programme and the Operational Programme Administrative Capacity co-funded by the EU through the European Social Fund. The total budget of the project is BGN 6 999 982 (€3589 million) with BGN 1 049 997.3 (€536 855) national funding and the implementation period is 2016–2020. All public health care providers and institutions are obliged to use the centralized electronic platform for public procurement announcements and contracting.

Since 2008, the MoH has implemented two programmes with the financial support of the Global Fund to Fight AIDS, Tuberculosis and Malaria: Programme “Improving Tuberculosis Control in Bulgaria” (2008–2012) and Programme “Strengthening the National Tuberculosis Programme in Bulgaria” (2010–2015).

In addition, the World Bank is committed to Bulgaria for years and renewed its Country Partnership Framework in 2016. Health projects are subsumed under human resource development and social inclusion, especially targeting access to integrated and long-term care in the ongoing programming period 2017–2022 (World Bank 2015, 2016a,b).

Bulgaria was also a beneficiary of the European Economic Area and Norway Grants programme for 2009–2014. The Public Health Initiatives Programme targeted socioeconomic disparities and territorial imbalances in the field of child health and mental health and access of the Roma

population to qualitative health care (Budget of €13.415 million and a national co-funding of €2.367 million).

Furthermore, there are Swiss contributions to Bulgaria amounting to CHF 76 million (€65.67 million) until 2019 through 15 projects. In the last programming period (2011–2017), home nursing was funded with CHF 2.4 million (€2.1 million) (Swiss Agency for Development and Cooperation SDC, State Secretariat for Economic Affairs SECO, 2015).

■ 3.6.3 Other sources of financing

A relatively small amount of revenue, compared with other sources, comes from voluntary charitable donations by individuals, private companies, foundations and NGOs.

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 to provide their employees with the required health services.

Financing by non-profit institutions serving households and enterprises together present less than 1% of the total current health expenditure (Table 3.10).

TABLE 3.10 Non-profit institutions serving households and enterprise financing in millions of euros and as a percentage of total current health expenditure

		2013	2014	2015
NPISH financing	millions of euros	16.15	16.6	20.66
	% of total CHE	0.49	0.46	0.56
Enterprise financing	millions of euros	12.76	13.45	10.79
	% of total CHE	0.39	0.37	0.29

Source: Eurostat, 2018.

Notes: CHE: current health expenditure; NPISH: non-profit institutions serving households.

■ 3.7 Payment mechanisms

■ 3.7.1 *Paying for health services*

Bulgarian health care providers are paid through mixed payment methods depending both on the type of the payer/purchaser and the provider. In SHI, providers are 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 upon in a contract before the treatment takes place 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 on a fee-for-service basis. The payment methods currently in use are presented in Table 3.11.

TABLE 3.11 Provider payment mechanisms

	MOH	NHIF	PRIVATE INSURERS	COST SHARING	DIRECT PAYMENTS
GPs	–	C, FFS	FFS	UF	FFS
Ambulatory specialists	–	FFS	FFS	UF	FFS
Laboratories	–	FFS	FFS	FFS/UF	FFS
Dentists	–	FFS	FFS	FFS	FFS
Hospital inpatient	PD ^a	CP	FFS	UF	FFS
Hospital outpatient	–	FFS	FFS	UF	FFS
Long-term care (incl. Hospices)	–	–	FFS	UF	PD/FFS
Public health services	GB	–	–	–	FFS

Notes: GB: global budget; C: capitation; FFS: fee-for-service; PD: per diem; CP: case payment (through clinical pathways); UF: User fee (see Subsection 3.4.1 Cost-sharing). ^afor psychiatric hospitals only.

Public health services, provided mainly by the RHIs, are funded by the MoH through global budgets. The RHI budgets are calculated based on 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 MoH 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 MoH, covering all services and expenses per patient per day (nursing, overheads, food) as well as capital investments.

Primary care

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 NFC. 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 2017 NFC for medical care, the GP receives BGN 1.37 (€0.70) monthly for a patient in the age group 0–18 years; BGN 1.05 (€0.54) for a patient in the age group 18–65 years and BGN 1.47 (€0.75) for a patient over 65 years. The NHIF pays an additional BGN 0.11 (€0.06) per patient for assuring access to primary care beyond the announced work schedule of the practice. In return, GPs pay to other health care providers who provide urgent primary care to their patients beyond the GPs' working hours and during the weekends, based on individual contracts.

Additional payments on a fee-for-service basis are made to GPs for:

- prophylactic activities within the Child Health Programme, including immunizations – for prophylactic examinations for children up to 1 year of age GPs receive BGN 10.50 (€5.37) and BGN 9.50 (€4.86) for children between 1 and 18 years of age, and BGN 4.50 (€2.30) for immunizations regardless of age;
- vaccinations against cervical cancer (BGN 4.00, €2.05) and against rotavirus gastroenteritis (BGN 7, €3.58) in execution of the respective national programmes;
- prophylactic activities within the Maternal Health Programme [regular medical check-up of included individuals and associated payments of BGN 7 (€3.58)];
- dispensary examinations (“Dispansery Programme”). Payment rates depend on whether patients suffer from one (BGN 9.50, €4.86), two (BGN 11.40, €5.83) or more (BGN 13.30, €6.80) diseases;

- prophylactic activities for compulsorily health-insured individuals aged over 18 years (BGN 12, €6.14) and vaccinations (BGN 4.50, €2.30);
- working in a remote settlement or a settlement with poor infrastructure and other complicated conditions [in 2017, there were 1074 of such settlements and the payment per month per GP practice in these settlements varied from BGN 139 (€71.1) to BGN 972 (€497)];
- examinations of compulsorily health-insured individuals, coming from other districts (BGN 5.50, €2.81 per visit).

General practitioners also receive a user fee for each patient visit (BGN 2.90 or BGN 1 for pensioners). 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 uninsured patients.

Dental care

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 NFC for dental care and covers only a defined proportion of the total price of dental services. According to the 2017 NFC for dental services, prices vary from BGN 2.50 (€1.30) to BGN 139.7 (€71.40) depending on the type of service and category of the insured individuals (see Subsection 3.3.1 *Coverage* for more details). The NHIF pays an additional 20% of the price for services of dentists who work in unfavourable conditions. Most of the dental services are co-paid by the patients. Dental care is also paid fee-for-service by uninsured patients and by insured patients for services, which are not included in the benefit package.

Specialized outpatient care

Specialized outpatient care and laboratory services are paid on a fee-for-service basis. The 2017 NFC for medical care defines the following fees for specialized outpatient services:

- patient's first visit to a specialist BGN 20 (€10.22), almost double the fee of 2005 (BGN 11.50, €5.88), and
- second visit for the same illness(es) and condition(s) BGN 9.50, (€4.86).

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; fees are slightly higher than those for primary care remuneration (BGN 12.00, €6.14);
- dispensary monitoring (BGN 12.50, €6.39 per visit);
- working ability medical expertise (BGN 7.00, €3.58);
- specialized medical activities, such as biopsy, echocardiography, laser therapy; prices of the different services vary from BGN 5.00 (€2.56) to BGN 40.77 (€20.85);
- physiotherapeutic treatment courses: initial examination (BGN 7.00, €3.58), procedures (BGN 1.80 each, €0.92) and final examination (BGN 9.00, €4.60).

Specialists receive user fees for each patient visit as well as direct payments.

Exact rates of all outpatient diagnostic tests included in the NHIF's benefit package are defined in the NFC for medical services.

Inpatient care

Hospitals receive funding mostly through case-based payments: by so-called "clinical pathways" (since 2001), clinical procedures and ambulatory procedures. In 2017, there were 292 clinical pathways that were based on a single flat rate (up from 158 in 2001). Clinical and ambulatory procedures were introduced as an attempt to optimize hospital activity in 2016. There are four different clinical procedures that require a length of stay up to 24 hours (for example, dialysis treatment in acute conditions and intensive treatment of newborns with assisted breathing) and 42 ambulatory procedures (such as peritoneal dialysis, chemotherapy, cataract surgery) that do not require hospitalization (see Subsection 5.4.1 *Day care*).

The flat rates for clinical pathways, and clinical and ambulatory procedures reimbursed by the NHIF are specified in the NFC and subject to negotiation between the NHIF and the Bulgarian Physicians Union. Rates are calculated based on the cost of medical activities, auxiliary services provided to patients and up to two outpatient medical examinations and consultations, after the patient has been discharged from hospital. However, rates are, in practice, more representative of the NHIF ability to pay than

the real costs of hospital services. In addition to the price of certain clinical pathways, hospitals receive payments for medical products such as medicine for oncological diseases, cochlear implants, cardiac prostheses, etc.

Hospitals also receive user fees (BGN 5.80, €2.97 per day for hospitalization up to a total of 10 days per year) from individuals covered by SHI and admitted to a clinical pathway, fees for elective services or services not covered by the NHIF paid directly by the patients, and payments from VHIC.

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 by the NHIF (see Subsection 3.3.1 *Coverage. Depth: how much of benefit cost is covered*). Certain highly expensive pharmaceuticals (for example, for treatment of cancers) are paid by the NHIF through the MoH's budget (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. Physicians' 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 NHIF payment to GPs is derived from capitation (50.4%), followed by payments from the Dispansery Programme (22.8%), prophylactic examinations for patients over 18 years of age (12.4%), and the Child Health Care Programme (11.8%) in 2016 (NHIF, 2017b). Another sizable part of the GPs' revenue comes from user fees and direct payments. The average monthly payment made by the NHIF to a GP increased by 90% between 2007 and 2016 [from BGN 1897 (€970) in 2007, to BGN 3600 (€1 840) in 2016 (NHIF, 2017a)].

Outpatient specialists, as well as dentists, if they are self-employed, are paid on a fee-for-service basis with different rates depending on the service provided (see Subsection 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 physicians' salary and bonus are subject to negotiation 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 2016, the contractual minimum basic monthly salary of a single specialty physician is BGN 960 (€490.80) and of a dual specialty physician is BGN 990 (€506.20) (MoH, 2016a). The average monthly payment made by the NHIF for a specialist was BGN 1210 (€619) in 2007 and BGN 1929 (€986.30) in 2016 (representing an increase of 60%; NHIF, 2017a). Like GPs, specialists also receive substantial revenue from user charges and private payments in addition to NHIF payments.

For inpatient care, mechanisms for paying physicians 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. Physicians working in 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 2016, the minimum monthly salary (without additional bonuses) for a physician directly participating in diagnostic–therapeutic activities varies between BGN 830 (€424.40) and BGN 1170 (€598.20) depending on the ownership of the hospital, and the physician's qualification and position (MoH, 2016a). As a comparison, the minimum monthly salary for the country for 2016 was BGN 420 (€214.70) and the average monthly salary in the field of health care and social services in December 2016 was BGN 1068 (€546) (NSI, 2018b).

The average monthly salary in the health care sector rose by 40% from BGN 1351.14 (€691) in 2010 to BGN 1897.91 (€970) in 2016 (Salchev & Staneva, 2018). In 2016, employees in specialized hospitals, centres for oncological diseases and the university hospitals had the highest average monthly salary [BGN 2200–2400 (€1125–1227)] and those in the state psychiatric

hospitals and the specialized hospitals for rehabilitation [BGN 1100–1200 (€562–614)] had the lowest (Salchev & Staneva, 2018).

In private hospitals, payment mechanisms are directly negotiated between the employer and the employee under labour contracts for all personnel categories (physicians, 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 MoH's budget, such as national centres and RHIs, are predominantly salaried. The minimum 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. They can also receive performance-related bonuses in addition to their salary. The size of these incomes varies widely. The minimum starting 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 700 (€358) to BGN 890 (€455) per month (MoH, 2016a).

The minimum initial salary, defined at the Collective Labour Agreement in the field of health care, for pharmacists who work in health care establishments is lower than those for the specialists, but comparable with salaries for physicians without a specialty. Pharmacists working in pharmacies and drugstores receive a salary negotiated between employer and employee on a market basis.

Physical and human resources

The structure and distribution of physical and human resources in the Bulgarian health sector are characterized by imbalances and substantial disproportions. The hospital sector in Bulgaria has traditionally been marked by overcapacity and yet it is subject to further growth. In 2016, there were 321 hospitals with a total of just below 50 000 beds. The increase in both the number of hospitals and beds is mainly driven by the private sector, whereas the number of public hospitals (under state and municipality ownership) has been comparatively stable. There are considerable regional variations for inpatient facilities in favour of more urban settlements.

More than 120 000 people, or roughly 5.5% of all full-time employees, are working in the health care sector in Bulgaria. The number of physicians per 1000 population has been steadily growing from 3.17 in 1990 to 4.06 in 2015, which puts Bulgaria above the EU28 average (3.5 per 1000 population). There are far more medical specialists than GPs, with the latter making up only 16.6% of the total physician workforce, which is the second lowest ratio in the EU after Greece. What is more, the number of GPs has been steadily decreasing.

Rapid ageing and an outflow of physicians due to emigration result in large regional discrepancies and insufficient coverage in some fields. Although the number of nurses has stayed comparatively stable at a very low level, Bulgaria still records the lowest nurse per physician ratio of all EU Member States, with 1.1 nurses per physician. This is contrasted by the highest density of practising dentists per 1000 population in the EU in 2016.

■ 4.1 Physical resources

■ 4.1.1 *Capital stock and investment*

The hospital sector in Bulgaria has traditionally been characterized by over-capacity, which has been further increasing in terms of number of hospitals and beds for multiple reasons (see Sections 5.4 *Inpatient care* and 7.5 *Health system efficiency*). In general, hospitals are incentivized to admit patients, or deliver a wide range of avoidable services, which leads to underutilization and inefficiency of ambulatory care in particular. In 2016, the total number of hospitals was 321 with a bed capacity of 49 589 (up from 312 hospitals in 2010; Table 4.1).

Ownership of inpatient facilities is mixed, and although the number of public hospitals (also considering state and municipal ownership) has been comparatively stable at around 112 facilities in total, the share of private hospitals is growing every year. In 2016, the total number of private hospitals was 111 (up from 88 in 2010), representing 33% of all hospitals and 22.6% of total beds. Multiprofile hospitals for acute treatment form the largest group, but their relative share in hospital care is decreasing: 34% of all hospitals and 51% of beds in 2016. Specialized hospitals for active treatment rank second and account for 51% of all specialized hospitals and 43.5% of beds in 2016. The number of health facilities for outpatient care (medical, dental, diagnostic and consulting centres, and laboratories) has also risen from 1170 in 2011 to 2029 in 2016.

In contrast to acute care hospitals, the number of hospitals for long-term treatment remains stable over the years, which is insufficient and a substantial structural deficiency of the system. Likewise, the number of psychiatric hospitals remains constant at 12 facilities in total.

There is considerable regional variation across all examined inpatient establishments and beds. The south-western region still records the highest number of hospitals (103 in 2016 or roughly one third of total hospitals), mostly driven by the capital city Sofia. In 2016, 54% of all beds were concentrated in seven districts: Sofia (city) (19%), Plovdiv (11.9%), Stara Zagora (5.2%), Bourgas (5%), Varna (4.8%), Pazardzhik (4.2%) and Pleven (4%) (NSI, 2017a). This high concentration of hospitals is not necessarily driven by demographic indicators, because some districts with a comparable population register far lower numbers of hospitals. For example, there are eight hospitals in the

TABLE 4.1 Health facilities and hospital beds, 2016

TYPES OF HEALTH ESTABLISHMENTS	NUMBER	BEDS
Health establishments for hospital care – total ^a	321	49 589
Multiprofile hospitals	112	25 353
Multiprofile hospitals for active treatment	110	25 238
Specialized hospitals	65	7121
Specialized hospitals for active treatment	33	3100
Specialized hospitals for long-term treatment and rehabilitation	10	930
Specialized hospitals for rehabilitation	21	2951
Psychiatric hospitals	12	2225
Private establishments for hospital care	111	11 195
Health facilities for outpatient care	2029	1163
Medical centres	702	825
Dental centres	50	13
Medical–dental centres	50	53
Diagnostic and consulting centres	112	272
Medical–diagnostic and medical–laboratory centres	1115	–
Outpatient individual practices for primary medical care	3396	–
Outpatient individual practices for primary dental care	5062	–
Outpatient group practices for primary medical care	214	–
Outpatient group practices for primary dental care	372	–
Outpatient individual practices for specialized medical care	2949	–
Outpatient individual practices for specialized dental care	85	–
Outpatient group practices for specialized medical care	139	–
Outpatient group practices for specialized dental care	1	–
Other health care and health establishments		
Complex oncological centres	7	1145
Dermato-venereological centres	5	50
Mental health centres	12	–
Centres for urgent medical aid	27	–
Centres for transfusional haematology	4	–
Homes for medico-social care for children	17	1114
Hospices	45	1079
National centres without beds	5	–
Regional health inspectorates	28	–

Source: NCPHA, 2018a.

Note: ^aA number of specialized hospitals are included in the total without featuring in the categories listed here.

Smolyan district (109 000 population), whereas the district of Pernik (124 000 population) has four hospitals and the Razgrad district (115 000 population) only has three hospitals (NSI, 2017a). Additionally, there are regional disparities in terms of hospital specialization and technological profile.

Legally, hospitals are autonomous organizations registered as trading companies. Their accounts are public and should be easily accessible. However, there are insufficient data on property and facilities, which would allow appraisal of their condition and need of renovation. Given that the majority of hospitals have existed for decades and run an extensive network of public facilities, there is pressing need for repairs and reconstruction of buildings, and for upgrading and renewal of medical equipment. Unlike most of the private hospitals, which have opened more recently, the public hospitals in Bulgaria are characterized by a chronic poor state of facilities due to underfunding and inefficient use of available resources.

As mentioned previously (see Section 2.8.6 *Regulation of capital investment*), the MoH is partly responsible for the allocation of capital investment to the hospitals owned by the state. Local hospitals depend mostly on investment from municipal budgets, which in general are very limited. Public university multiprofile hospitals for active treatment concentrate capital investment in the inpatient sector. In spite of the fluctuations in the 2010–2016 period, there was a significant rise of capital investment in 2015 and 2016 – by BGN 63 million (€32.2 million) and BGN 125 million (€63.9 million) respectively. The largest part of this, 90% in 2016, was intended for tangible fixed assets and some 8–9% for major repair and renovation works. For the same period the district multi-profile hospitals for active treatment allocated BGN 13 million (€6.6 million) and BGN 41 million (€21 million) capital investment with a similar structure. Municipal hospitals are particularly underfunded: the capital investment in the same period (2015 and 2016) amounted to BGN 8.8 million (€4.5 million) and BGN 4.3 million (€2.2 million), respectively (NCPHA, 2017).

In 2016, the consolidated fiscal programme of the state envisaged capital expenditures in the health system amounting to BGN 80.9 million (€41.4 million), out of which BGN 58.8 million (€30.06 million) were financed from the state budget, BGN 3.7 million (€1.89 million) from the NHIF, BGN 9.5 million (€4.86 million) from the municipalities, BGN 8.5 million (€4.34 million) from other international programmes and BGN 0.2 million (€0.1 million) from European sources. In comparison to 2015,

the total capital expenditure was more than twice as high, amounting to BGN 185.3 million (€94.72 million). The biggest share, BGN 133.9 million (€68.44 million) was financed through the EU-funded Operational Programme “Regional Development”; BGN 34 million (€17.38 million) came from the state budget and BGN 14.2 million (€7.26 million) was provided by the municipalities (Ministry of Finance, 2016, 2017). According to the Global Health Expenditure database of the WHO, capital health expenditure in the country has been decreasing (after some fluctuations and a peak in 2008). Measured in constant (2010) PPP per capita capital health expenditure Bulgaria stays far behind the other EU countries. The PPP per capita in 2015 was 5 compared to 38 in Croatia, 162 in Estonia, 65 in Lithuania and 101 (2014) in Romania (WHO, 2018).

■ 4.1.2 Infrastructure

In 2010 there were 48 934 beds in 346 inpatient care establishments and 938 beds in a total of 1613 outpatient facilities. In 2016, there were 51 816 beds in all 345 inpatient care establishments (including dermato-venereal, oncological and mental health centres) and 1163 beds in 2029 outpatient facilities (NSI, 2018h). This increase has mainly been driven by private hospitals (by a 106% increase in beds between 2010 and 2016). According to OECD data, the number of hospital beds per population has decreased in all EU Member States since 2000, except for Bulgaria (OECD/EU, 2016). While the number of public hospitals and beds decreased between 2000 and 2016 (see Subsection 7.5.2 *Technical efficiency*), following the government strategy for restructuring the hospitals sector, the number of private hospitals and beds increased significantly. This phenomenon is because the NHIF contracts all health care establishments after they meet predefined criteria without possibilities for selective contracting (see Chapter 6 *Principal health reforms*).

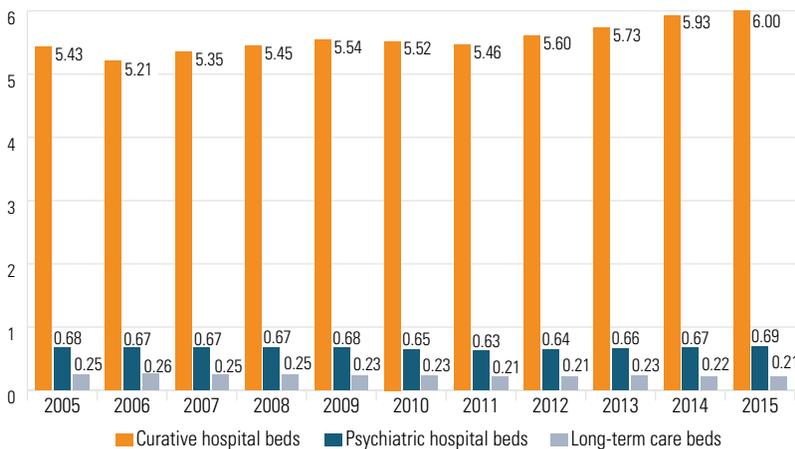
The vast majority of hospital beds are allocated for curative care (Fig. 4.1) and a slight reduction of acute care beds took place in 2006 and 2011, followed by a consequent increase in the number of beds. Only 6% of total beds are devoted to psychiatric care, and only 2% to long-term care. In 2014, the number of acute care hospital beds in Bulgaria stood at 5.95 beds per 1000 population and was still among the highest in the EU. Furthermore, Bulgaria recorded far more beds per 1000 population than the EU13

average (4.61 beds), EU15 average (3.77 beds) and EU28 average (3.94 beds). Few European countries recorded more acute care beds per 1000 population than Bulgaria: Lithuania (6.34 beds) and Germany (6.21 beds) (see Fig. 4.3).

The average length of stay in acute care hospitals decreased by more than 50% from 11.5 days in 2000 to 5.4 days in 2014, which is below the EU average of 8 days, and remained stable till 2016 (NSI, 2018d). In 2014, only Denmark had a shorter average length of stay than Bulgaria (Fig. 4.2). The quick reduction of average length of stay in Bulgaria is partly associated with the change in the regulatory requirements of the clinical pathways contracted with the NHIF and coincides with a substantial reduction in the number of public hospital beds per capita since 2000. Still, hospital admission rates for short stays have increased (OECD/EU, 2016). In 2016, psychiatric care had the longest average length of stay (30.9 days), followed by long-term and continuing treatment (13.7 days), rehabilitation (7.4 days) and acute treatment (4 days) (NSI, 2018d).

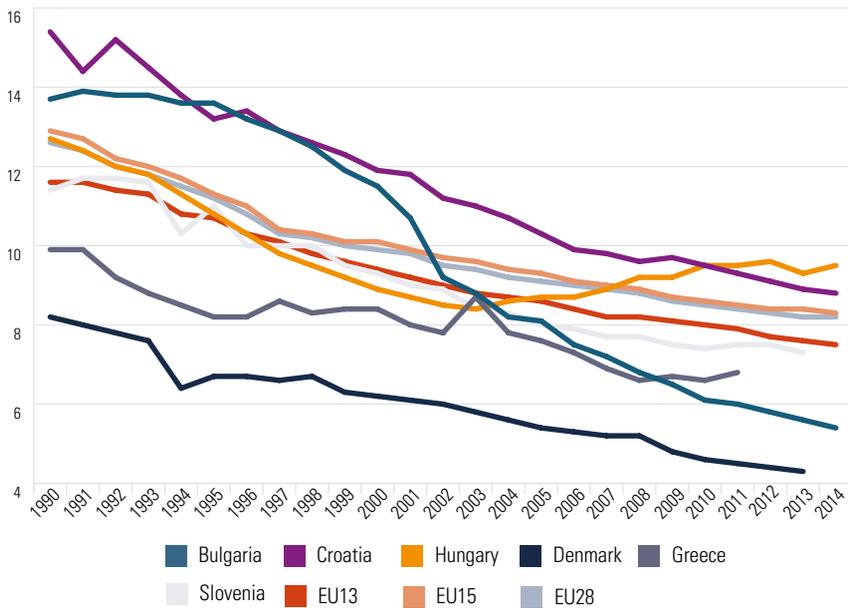
The bed occupancy rate increased from 66% in 2000 to 79% in 2005, which reflects the decline in bed numbers in that period. Then the occupancy rate fell to 67% in 2016, which is the same level as of 2000 and means that 33% of the total bed capacity in the country is not used. The bed occupancy rate marked lowest in private hospitals at 60%, while the occupancy rate in multi-profile hospitals and specialized hospitals for active treatment in 2015 was 70% (NCPHA, 2018a).

FIG. 4.1 Mix of beds in acute-care hospitals, psychiatric hospitals and long-term care institutions per 1000 population, 2005–2015



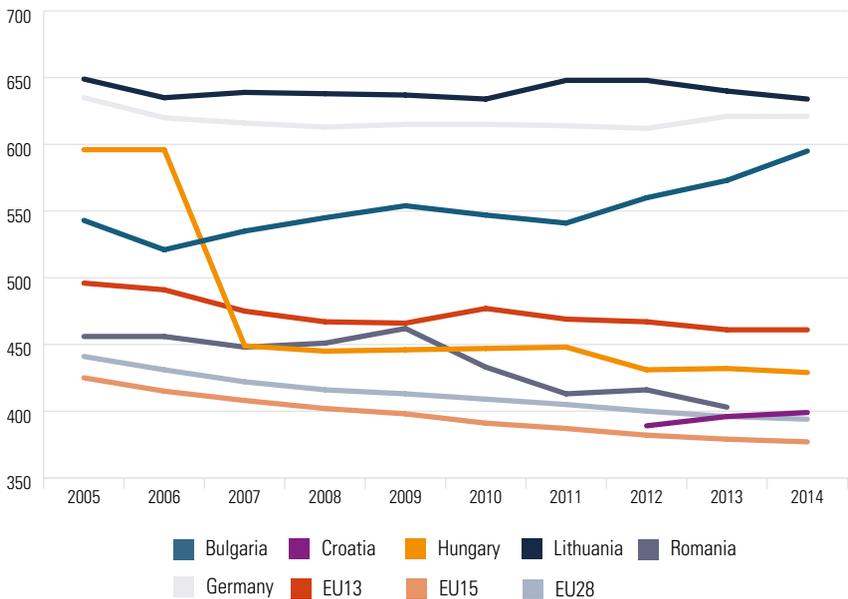
Source: Eurostat, 2018.

FIG. 4.2 Average length of stay, all hospitals, 1990–2014



Source: WHO, Regional Office for Europe, 2018.

FIG. 4.3 Acute-care hospitals beds per 100 000 population in Bulgaria and selected countries, 2005–2014



Source: WHO, Regional Office for Europe, 2018.

Note: Data on Bulgaria were lacking before 2005, so this graph was adapted.

■ 4.1.3 *Medical equipment*

According to the new Public Procurement Act (2016), health care establishments are obliged to conduct a standardized procedure for the delivery and installation of medical machines, devices and other equipment. This is valid for health care establishments registered as commercial companies (according to Articles 36–37 of the Health Care Establishments Act) who receive more than 50% of revenues from the NHIF, state or municipal budget. Furthermore, Article 20 of the Public Procurement Act rules on thresholds above which health care establishments follow up specified procedures. For instance, all purchases of medical equipment above BGN 70 000 (€35 790) are required to operate a public tendering process (Public Procurement Act, 2016). In recent years, the availability of medical equipment in hospitals has significantly improved in Bulgaria, largely due to the funding under the “Regional Development” operational programme between 2007 and 2013.

Based on Eurostat data, the number of magnetic resonance imaging (MRI) units in inpatient care increased from 15 to 30, as well as the number of MRI in ambulatory care, the number of which also increased from 16 to 21 between 2010 and 2015. At the same time, the number of computed tomography (CT) scanners and angiographs for ambulatory care decreased, in contrast to the number of positron emission tomography scanners and mammography devices (Table 4.2).

In 2015, the OECD average was 15.9 MRI units and 25.7 CT scanners per million population. Bulgaria is far below the EU average regarding MRI units (7.1) but it has a higher number of CT scanners (34.2) than the EU average (OECD/EU, 2016). Additionally, Bulgaria had the sixth highest number of CT scanners per capita in 2015 (after Iceland, Denmark, Latvia, Germany and Cyprus). According to Eurostat, in 2015, the least intensive use of CT scanner units was recorded in Bulgaria, Finland and Romania, each with an average of less than 2.2 thousand scans per CT scanner (Eurostat, 2018). In the following year, Eurostat recorded that there were three positron emission tomography scanners operating in health care facilities. There are also four Da Vinci Surgical Systems that operate in four hospitals in Bulgaria – two in Sofia and two in Pleven, used mainly for gynaecological and urological surgery, as well as for the clinical pathway “High-tech Robot Assisted Gynecological Surgery” (newly introduced in 2016 by the NHIF).

TABLE 4.2 Items of functioning diagnostic imaging technologies

ITEM	2010		2013		2014		2015	
	n	Per million population	n	Per million population	n	Per million population	n	Per million population
MRI units								
Inpatient care	15	2.0	27	3.7	24	3.3	30	4.2
Ambulatory care	16	2.1	26	3.6	27 ^b	3.7	21 ^b	2.9
CT scanners								
Inpatient care	149	20.0	169	23.3	180 ^b	24.9	177 ^b	24.7
Ambulatory care	75	10.0	80	11.0	67 ^b	9.3	64 ^b	8.9
Angiography units								
Inpatient care	53 ^a	7.0 ^a	66	9.1	69	9.6	70	9.8
Ambulatory care	17 ^a	2.3 ^a	12	1.7	13	1.8	10 ^b	1.4
Positron emission tomography scanners, inpatient care	2 ^a	0.3 ^a	2	0.3	2	0.3	3	0.4
Mammography devices, inpatient and ambulatory care	151 ^a	20.5	197	27.1	204	28.2	213	29.7
Radiation therapy equipment, inpatient and ambulatory care	43 ^a	5.9	37	5.1	52	7.2	60	8.4

Source: Eurostat, 2018.

Notes: ^a2011; ^bThe indicated decline may be partly due to incomplete information, as health care establishments report on a voluntary basis.

■ 4.1.4 Information technology

Data from the NSI shows that 67.3% of households in Bulgaria had access to the internet in 2017 (NSI, 2017c). Access to the internet varies across regions, from 57.8% in the north-western region to 70.5% in south-western region of the country. The share of households with internet access is lower compared with the EU average of 87% in 2017 (Eurostat, 2018). The age group most active online is between 16 and 24 years of age, of which more than 80% use a computer or the internet every day or at least once a week. High-speed, reliable and uninterrupted internet access is most important for enterprises, and 94.6% of them had a permanent connection with the global network in 2017. The share of employees using the internet for professional purposes has increased from 22.5% in 2012 to 26.7% in 2017 (NSI, 2017c). Additionally, the number of Bulgarians aged between 16 and 74 years who used the internet to seek health-related information has grown and reached 53.1% in 2017.

All GPs in Bulgaria have used computers in their practices since 2004. According to a survey performed in 2012, Bulgarian GPs used their computers mainly to send referrals to specialists, to store test results, for drug prescriptions and to search for medical information (De Rosis & Seghieri, 2015). In general, all health care establishments in Bulgaria use information systems for accounting purposes and electronic reporting to the NHIF. They use software applications to monitor the movement of patients, drugs and medical devices, and maintain their own websites to inform patients. Health and health care data are contained in providers' databases, part of which is aggregated to the databases of the NHIF, the NCPHA and other centres and agencies. The NHIF and the NCPHA consolidate databases at national level. However, there is no unifying system enabling communication between the different information systems and databases. Simultaneously, there is no opportunity to report the activities in real time (Salchev, 2016).

■ 4.2 Human resources

■ 4.2.1 *Health workforce trends*

Even though there is no overall shortage of physicians, the current composition of human resources in the health system is unbalanced. First, there is a lack of GPs, and nurses are in short supply, which further erodes primary care in the country. Second, there are significant regional distortions as well as insufficient coverage and vacancies in some specialties. Furthermore, the health workforce is rapidly ageing, and emigration among young health professionals is persistent.

In 2015, around 120 000 people were employed in the health care sector, which represents roughly 5.5% of all full-time employees. There were 29 038 working physicians, representing an increase of 5.5% compared with the total number in 2000 (Table 4.3). With 15%, or a total of 4433 physicians, working as GPs, Bulgaria is following the general trend of a rising ratio of physicians per population throughout Europe. The number of physicians per 1000 population has been steadily growing from 3.27 in 1990 to 4.16 in 2016 (Table 4.4). Similar to other EU countries, the increase is the result of both a rise in the absolute number of physicians as well as the population decline (see Section 1.1 *Geography and sociodemography*).

TABLE 4.3 Health care personnel by number and changes

	2000	2005	2010	2015	% CHANGE 2000–2015
Physicians	27 526 ²⁰⁰²	28 174	27 963	29 038	5.5
Generalist medical practitioners of which GPs	5760 ²⁰⁰² 5293 ²⁰⁰²	5631 5232	5014 4761	4517 4433	-21.6 -16.2
Specialist medical practitioners	21 928 ²⁰⁰²	22 543	22 949	24 521	11.8
Ratio of specialists to generalists	3.8	4.0	4.6	5.4	42
Dentists	6778	6516	6389	7547	11.3
Nurses and midwives of which were nurses of which were midwives	35 610 31 479 4131	34 690 31 235 3455	35 033 31 786 3247	34 671 31 397 3274	-2.6 -0.3 -20.7
Physicians employed in hospitals Share of all physicians	13 093 ²⁰⁰³ –	13 268 47.1%	14 802 52.9%	16 478 56.7%	25.9 n/a
Nursing professionals and midwives employed in hospitals Share of all nurses and midwives	23 009 64.6%	23 377 67.4%	23 556 67.2%	23 171 66.8%	0.7 n/a

Source: Eurostat, 2018.

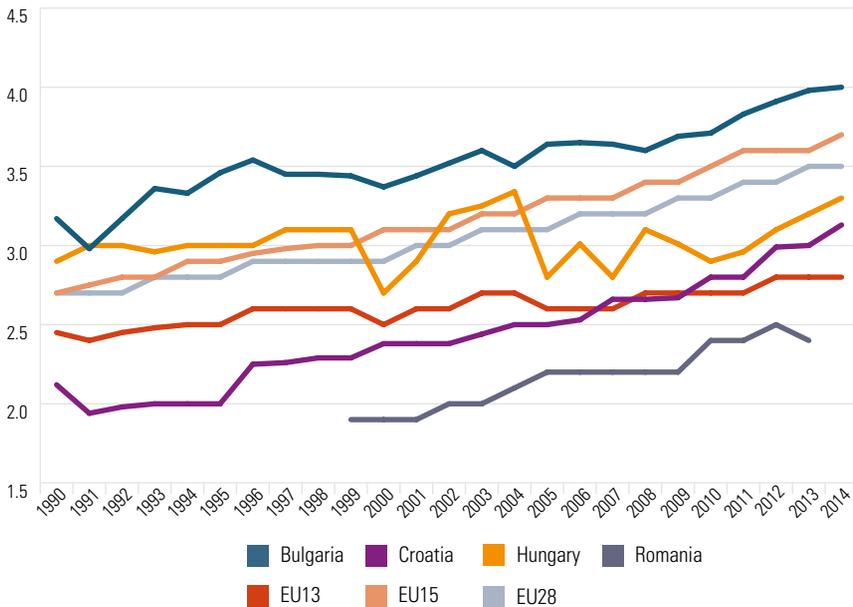
TABLE 4.4 Health care personnel in country per 1000 population, 1990–2016

	1990	1995	2000	2005	2010	2014	2015	2016
Physicians (total)	3.27	3.46	3.37	3.64	3.75	3.99	4.05	4.16 ^a
GPs	n/a	n/a	0.67 ²⁰⁰²	0.68	0.64	0.63	0.62	n/a
Generalist medical practitioners	n/a	n/a	0.73 ²⁰⁰²	0.73	0.67	0.66	0.63	n/a
Specialist medical practitioners	n/a	n/a	2.79	2.91	3.07	3.33	3.42	n/a
Internal medicine	n/a	n/a	n/a	0.26	0.23	0.21	0.19	n/a
Cardiology	n/a	n/a	n/a	0.12	0.14	0.17	0.18	n/a
Oncology	n/a	n/a	n/a	0	0.002	0.017	0.02	n/a
General surgery	n/a	n/a	n/a	0.193	0.208	0.22	0.23	n/a
Nurses	6.17	6.07	3.85	4.04	4.26	4.42	4.37	4.36 ^a
Dentists	0.70	0.65	0.83	0.84	0.86	0.98	1.05	1.13 ^a
Pharmacists	0.50	0.22	0.17 ¹⁹⁹⁹	n/a	0.75	n/a	0.84	n/a
Laboratory technicians (clinical and radiology) ^a	0.88	0.88	0.73	0.77	0.77	0.83	0.83	0.84
Dental technicians ^a	0.33	0.32	0.16	0.18	0.18	0.24	0.23	0.22
Other medical specialists ^a	0.56	0.57	0.39	0.38	0.36	0.40	0.40	0.41

Source: Eurostat, 2018; ^aNSI, 2018d.

Furthermore, among EU Member States, Bulgaria records a relatively high ratio on a par with Austria (5.04), Portugal (4.42), Lithuania (4.30), Sweden (4.12) and Germany (4.11). In terms of the relative number of physicians, Bulgaria stood higher than the EU13 average (2.8), EU28 average (3.5), EU15 average (3.7) and selected countries, like Poland (2.3), Romania (2.4), Croatia (3.13) and Hungary (3.3) (Fig. 4.4).

FIG. 4.4 Number of physicians per 1000 population, selected countries, 1990–2014



Source: WHO, Regional Office for Europe, 2018.

Even though most EU Member States struggle with an unbalanced proportion of medical specialists to general medical practitioners, in Bulgaria this ratio is exceptionally low. What is more, the number of generalist physicians decreased by 21.6% between 2000 and 2015, while the number of specialist physicians increased by 11.8%. The share of generalists to the total physician workforce has consistently been shrinking from 21% in 2000 to 16.6% in 2015, which is the second lowest ratio in the EU after Greece and far below the EU25 weighted average of 30.2%. As part of the widespread tendency toward more specialists, the ratio of specialists to generalist medical practitioners is growing, from 3.8 in 2000 to 5.4 in 2015. Within the group of the generalist physicians, the number of GPs has been steadily going down, recording a negative change of 16.2% for 15 years. Some of the reasons are

the heavy administrative workload; insufficient payment and recognition; low appeal of the specialty among young physicians; and problems with training and acquiring the specialty of general medicine (Valentinova & Nedkova-Milanova, 2018).

Bulgaria has recorded the highest ratio for surgical specialists (on a par with Greece, Lithuania and Austria), above one physician per 1000 population (Eurostat, 2018).

With regards of all physicians, more than half are employed in hospitals. In the last decade this share has been steadily growing – from 47.1% in 2005 to 56.7% in 2015. Women account for 55.1% of all physicians. The generally rapid ageing of medical professionals characterizing Europe is evident in Bulgaria as well. The share of the physicians aged 55–74 years in 2015 was 44.5%; 13.3% of all physicians being between 65 and 74 years and only 10.1% were less than 35 years old (Eurostat, 2018).

There are persistent geographical distortions in health care labour supply throughout the country. The districts with medical universities and university hospitals concentrate the largest numbers of physicians and more health professionals on average per 1000 population than the other districts. For example, in 2016, in Pleven district there were 5.63 physicians per 1000 population, whereas the national average was 4.16 per 1000 population. One fifth of all physicians works in the capital, Sofia, with 5.03 per 1000 population (Table 4.5). At the same time, the distribution of professionals is disproportionately low in the districts of Razgrad (2.63 physicians per 1000 population); Dobrich (2.70 per 1000 population) and Pernik (2.70 per 1000 population), which poses serious challenges to equal access. Particularly alarming are the great regional disparities in the distribution of GPs and the vacant practices in rural and remote areas. Physicians still lack significant incentives to work in underserved areas.

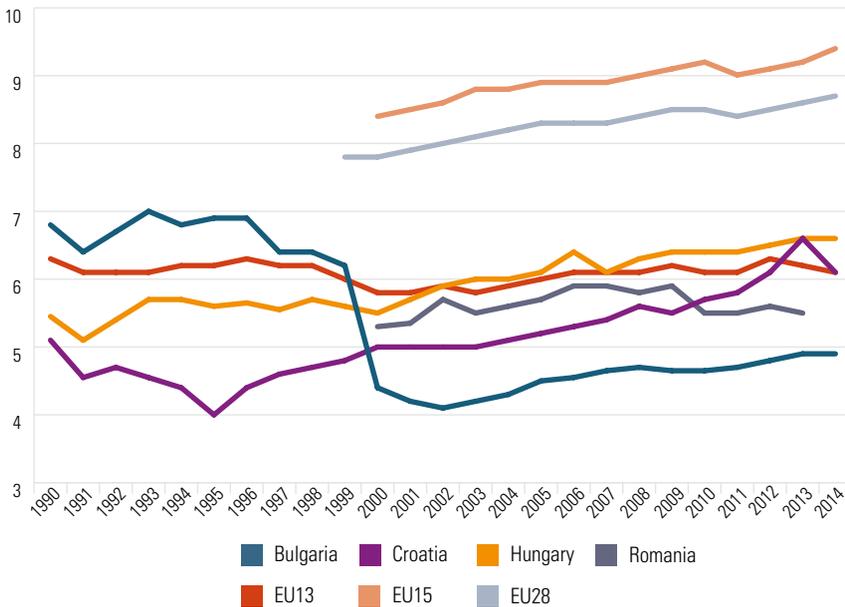
Similar to other EU Member States, nurses are the most numerous health professional group in Bulgaria. Unlike physicians, the number of nurses in Bulgaria has stayed comparatively stable during the last 15 years, around 31 000 nurses in total. However, in terms of the ratio of nurses to population, the country has the second lowest ratio in the EU, with 4.9 per 1000 population, which surpasses only Greece (3.4 per 1000 population; Fig. 4.6). The number of nurses per 1000 population is considerably lower than in Romania (5.5), Hungary (6.6) and Croatia (6.1), and is below the EU28 average of 8.7 per 1000 population. Thus, Bulgaria records the lowest nurse per physician ratio of all EU Member States with 1.1 nurses per doctor,

TABLE 4.5 Geographical differences in the distribution of health professionals, ranked according to physicians’ densities, selected districts, 2016

REGION	2010		2013		2014	
	n	Per million population	n	Per million population	n	Per million population
Sofia city	6663	5.03	2050	1.55	6426	4.85
Plovdiv	3329	4.96	1194	1.78	3137	4.67
Varna	2287	4.84	616	1.30	1854	3.92
Pleven	1396	5.63	192	0.77	1391	5.61
Stara Zagora	1375	4.28	332	1.03	1528	4.75
Razgrad	303	2.63	80	0.69	343	2.97
Dobrich	482	2.70	145	0.81	537	3.01
Pernik	338	2.73	163	1.32	371	3.00
Kardzhali	413	2.74	132	0.88	571	3.79

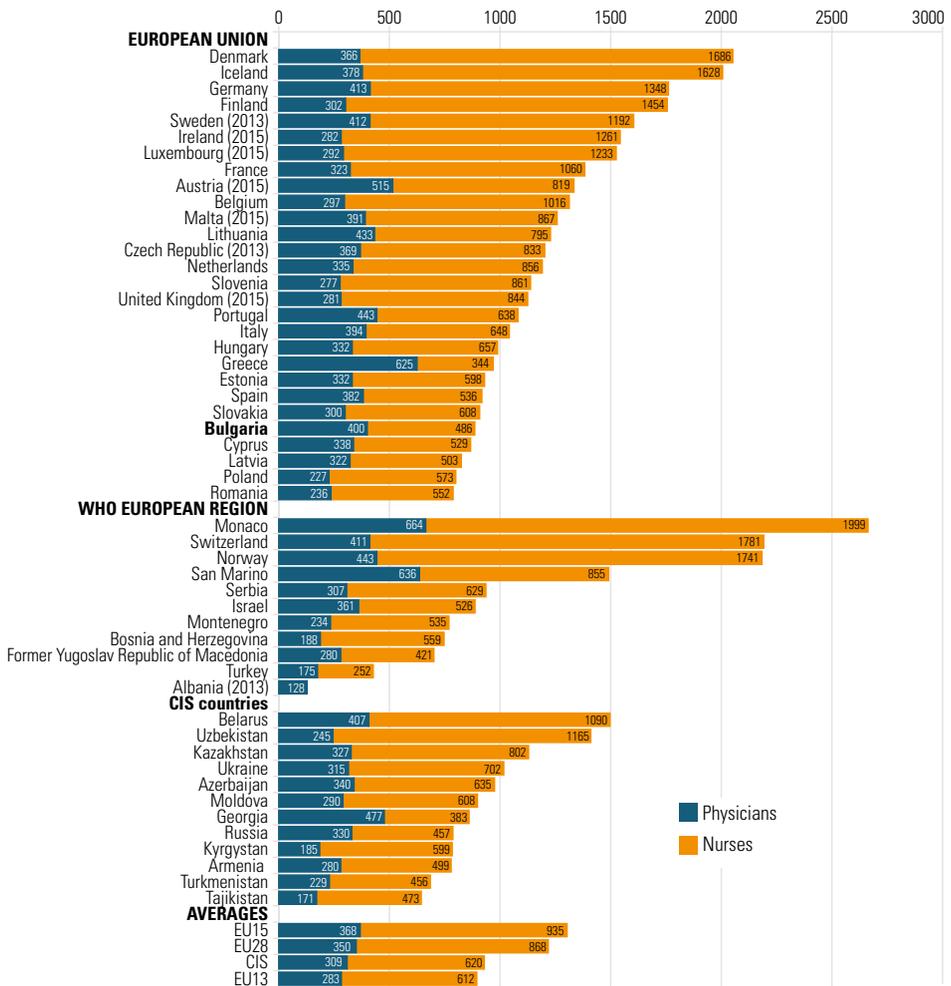
Source: NSI, 2018d.

FIG. 4.5 Number of nurses per 1000 population, Bulgaria and selected countries, 1990–2014



Source: WHO, Regional Office for Europe, 2018.

Note: Accounted for physical persons due to data availability.

FIG. 4.6 Physicians and nurses per 100 000 population, 2016 or latest available year


Source: WHO, Regional Office for Europe, 2018.

less than half the EU Member States ratio of 2.5 nurses per physician. The shortage of nurses is also characterized by regional inequities (although less accentuated than for physicians and dentists).

The number of graduating nurses has fluctuated over the last 15 years: from 828 in 2000 to 295 in 2005 and 379 in 2015. However, Bulgaria still has the lowest number of nursing graduates per capita, almost 10 times less than the average EU number (Eurostat, 2018). More alarmingly, a large number

of trained nurses emigrate because of the lack of adequate job opportunities and better pay for nurses abroad (Veleva et al., 2013).

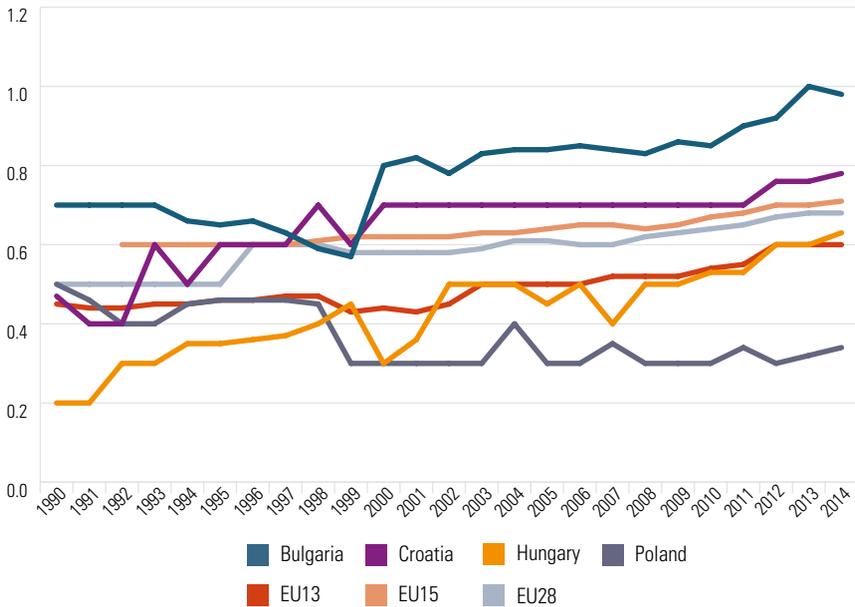
Similar to nurses, the number of midwives has stabilized at some 3200 in the last 5 years. At 0.46 midwives per 1000 population in 2016, the midwives per population ratio remains one of the highest in the EU, surpassed only by Sweden (0.75 in 2014), Poland (0.59) and the United Kingdom (0.48) (Eurostat, 2018).

Contrary to most EU Member States where the number of practising dentists per capita remained relatively stable between 2010 and 2015, in Bulgaria this ratio has been consistently growing, reaching its peak with 1.05 dentists per 1000 population. In 2015, a total of 7547 dentists was recorded, which is 11.3% more than in 2000. In 2016, this figure further increased and stood at 1.16 dentists per 1000 population (NSI, 2018d). Notably, Bulgaria recorded the largest absolute change across all EU Member States in the density of dentists for the 2010–2015 period, with an additional two dentists per 1000 population. Thus, in 2015, Bulgaria was one of two countries (together with Cyprus) with the highest density of practising dentists in the EU (Eurostat, 2018). Nonetheless, there are significant regional disparities in the distribution of dentists. Almost half of all dentists (48% in 2016) work in only three districts – Plovdiv, Varna and Sofia city (NSI, 2018d).

According to Eurostat data, Bulgaria stands in the middle of EU countries in terms of number of pharmacists per population with 0.84 pharmacists per 1000 population in 2016. National data (Bulgarian Pharmaceutical Union) indicated a total number of 6202 pharmacists in 2018. Unfortunately, data limitations preclude a complete analysis of the development and dynamics of this professional group.

A specifically underrepresented part of the health care personnel are medical specialists in public health, with a majority employed at the RHIs. However, there has been a tendency of steady staff decrease from 3341 in 2010 to 2500 in 2015. The low remuneration places this group of professionals at a great disadvantage, resulting in highly qualified specialists with medical degrees leaving their jobs, lack of motivation of the existing staff and shortage of medical and nonmedical young specialists. In 2015, the average age of the professionals with a medical doctor's degree working in the public health system was 54 years (NCPHA, 2017).

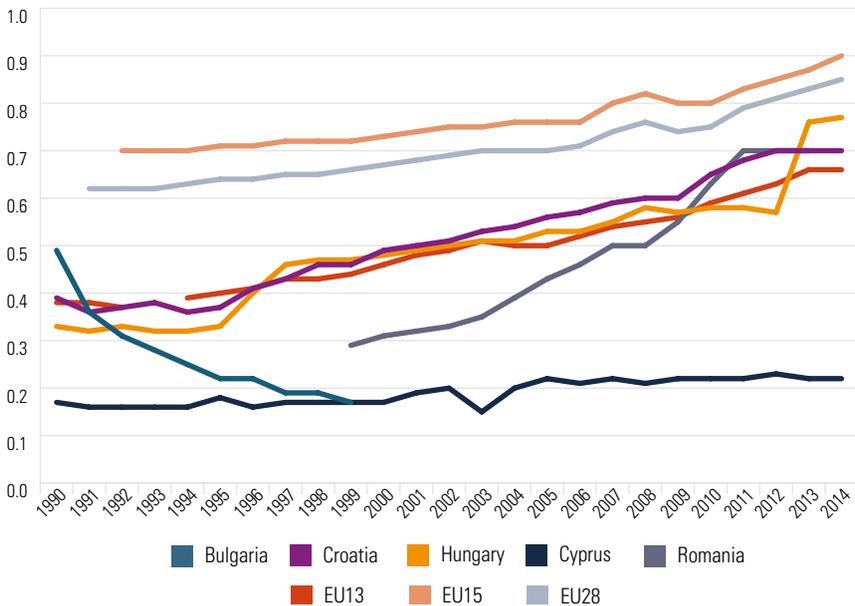
FIG. 4.7 Number of dentists per 1000 population, Bulgaria and selected countries, 1990–2014



Source: WHO, Regional Office for Europe, 2018.

Note: Accounted for physical persons due to data availability.

FIG. 4.8 Number of pharmacists per 1000 population, Bulgaria and selected countries, 1990–2014



Source: WHO, Regional Office for Europe, 2018.

■ 4.2.2 *Professional mobility of health workers*

Migration has been evolving as a result of democratic changes after 1989, the eastward enlargement of the EU, and economic and cultural globalization. Open borders, rapid technological development and the recognition of higher education diplomas are essential prerequisites for the intensifying of the process of emigration.

Despite the aggregated good availability of physicians and health care professionals in the country, there are enormous interregional differences. Thus, part of the migratory flows is directed from smaller towns to large settlements, which has an impact on the actual free choice of health care facility, access and adequate provision of health services. There is also migration from the public to the private sector. Health professionals can split their working time between both sectors, which causes a deterioration in public health care system performance (due to low motivation), creating disorganization (insecurities for patients being sent to private practices) and economic losses.

In 2013, 2636 physicians trained in Bulgaria were employed abroad in OECD countries (Lafortune, 2016). This exodus of medical specialists is developing into a serious problem for the Bulgarian health care system: in 2014, approximately 540 physicians left the country, whereas in the first 6 months of 2015, more than 280 physicians left Bulgaria. According to the Bulgarian Medical Association, certificates allowing physicians to work abroad were issued mostly to physicians who have taken a specialty (Yaneva, 2017). Although, there are no precise statistics about nurses who left the country, migration of nurses is prevalent as well. In 2015, the MoH issued a total of 291 certificates necessary to practice as a nurse abroad. However, issuance of a certificate is only a proxy indicator – certificates are more a measure of potential emigration. According to data from the Bulgarian Association of Health Professionals in Nursing, most Bulgarian nurses work in the United Kingdom, followed by Spain, Italy, Germany, Belgium, France and Switzerland (Vasileva, 2017).

The most common reasons for leaving the country include low levels of satisfaction and lack of recognition, lower salaries compared with the destination countries, imbalances in payment by specialties, lack of modern medical equipment and failed health reforms. Some of the most important retention measures for young physicians and other health professionals in

the country are the opportunities for professional development (see also Section 6.1 *Analysis of recent reforms*).

■ 4.2.3 *Training of health personnel*

As stipulated in the 1995 Higher Education Act, the CoM approves state requirements for obtaining higher education degrees and specialty titles of regulated health professions (physicians, dentists, pharmacists, nurses, midwives and all paramedical professions). Every year until the end of April, the Council also approves the number of admissions for undergraduate and graduate students according to academic capacities, and perspective needs of the professional fields and specialties of the regulated professions. The Council meets this decision based on a proposal by the Minister of Education and Science as well as suggestions by the respective universities.

Currently there are four medical universities and two medical faculties. The medical universities in Sofia, Plovdiv and Varna have four faculties: medicine, dentistry, pharmacy and public health. In 2016, the medical university in Plevan opened a new faculty of pharmacy in addition to the three faculties of 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 part of that university.

Undergraduate medical education lasts 6 years and includes 5 years of theoretical training and 1 year of practice. During the final year, medical graduates have to pass five state examinations. After graduation, physicians continue their study in accordance with a MoH ordinance for specializations. The duration of specialty training is from 4 to 5 years for most specialties but may last longer, whereas specialty training in general medicine takes 3 years. Once physicians have completed their residency and postgraduate qualification, they need to register with the MoH and obtain a certificate for professional qualification.

Dentistry training lasts 5 years followed by 6 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 examination.

Pharmacists train for 5 years and studies are organized in three levels: the first level aims to provide 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, drugstores, pharmaceutical firms and/or pharmaceutical laboratories for drug control, which have been recognized as training centres. The degree is awarded after successfully completing the four state examinations; defending a Master's thesis can be chosen as an alternative to one of these examinations. Medicine, dentistry and pharmacy training is offered only on a full-time basis and students graduate with a Master's degree.

Public Health faculties at medical universities offer training in Bachelor's and Master's degrees in various specialties. In total, respective faculties provide 18 Bachelor and 17 Master programmes, which show a wide selection of specialties.

Presently, nurses and midwives are trained not only at medical universities and their affiliates. In recent years, the increased shortages of this type of professionals has led to the establishment of separate faculties for Public Health and Health Care within the structure of other universities. The education of nurses and midwives lasts 4 years and results in a Bachelor's degree. These professionals can continue their studies in specific Master's programmes.

In 2017, the Medical University of Varna in cooperation with the Naval Academy N.Y. Vaptsarov – Varna and the Military Medical Academy – Sofia, introduced for the first time in Bulgaria a joint training in two new specialties “Military Physician” and “Military Nurse”. After a full 6 years of training the military physicians obtain a Master's degree in “Medicine” from the Medical University – Varna and a Bachelor's degree in “Organization and Management of Military Formations at the Tactical Level” from the Naval Academy – Varna. Students in the Military Nurse programme graduate with a Bachelor's degree.

Six medical colleges, four of which are part of medical universities, provide training for paramedical personnel (for example, assistant pharmacists, rehabilitators, medical and X-ray laboratory technicians, dental

technical assistants, medical cosmetics, physician's assistants). Those colleges offer professional Bachelor's degrees in the field of health care and the length of training is 3 years. Some of the graduates pursue further education in Bachelor's and Master's degree, seeking further professional development and remuneration.

Professional specialties to be acquired by medical and nonmedical personnel in the health system are regulated by an ordinance of the MoH. A new ordinance regulating terms, conditions and financing of medical specializations was issued by the MoH in 2015. It aimed at ensuring better conditions for specialization, removing financial constraints and providing better opportunities for professional development for young physicians in Bulgaria. The new ordinance changed the residents' status from trainees in the health care establishments to employees. Residents are now entitled to work on a full-time labour contract for the duration of their residency with a health care establishment of their choice accredited for specialization training. Thus, instead of paying fees to health care providers, the residents are now remunerated. Admission examinations to specialization training were also abolished. Capacities for training are decentralized and follow proposals of health care establishments and Medical Universities for clinical and nonclinical specializations, respectively, which are consequently approved by the MoH. At the same time, the new specialization ordinance requires the training facilities to announce the vacancies for postgraduate students throughout the year. The vacancies for specializations are announced on the MoH's website as well to increase transparency and awareness for postgraduates. However, the new regimen has encountered some problems. The financial ability of health care providers to launch places for specialization training prompts a problem for the smaller health care establishments and especially for specialization in general medicine. Nevertheless, the new ordinance created additional incentives to complete the training in certain medical specialties, such as anaesthesiology and intensive care, general and clinical pathology, paediatrics, emergency medicine, infectious diseases and neonatology. Nurses and midwives can also specialize in accordance with the ordinance mentioned above for 1 year. All specializations require a final state examination for the State Examination Commission in Sofia.

The Bulgarian Medical Association registers and organizes the continuous medical education in accordance with the Health Act. In addition, it contracts scientific organizations, associations, pharmaceutical companies

and others for individual qualifications. The contracts stipulate the terms and conditions for conducting the form of continuous qualification as well as the financial relations. The forms of training can include courses, seminars, conferences, congresses, presentations, workshops, distance learning and subscription to specialized medical issues. Physicians are qualified by their own wish and prove their qualification with a certificate issued by the Bulgarian Medical Association. A credit system is used to assess the medical specialists' performance based on different categories. Each category (for example lectures, congresses, distance learning) recognizes a certain number of credit points for a period of 3 years.

■ 4.2.4 *Physicians' career paths*

Once medical students have become a Master of Medicine, they usually apply for the acquisition of a specialty. After being awarded a specialty degree, physicians choose to work either in outpatient health care establishments or in hospitals. In ambulatory care, physicians can choose between individual and group practices, as well as between being employed in diagnostic–consultative centres or medical centres. Despite these opportunities, the individual private practice for specialized medical care is still the most dominant form.

A promotion during a physician'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. In university hospitals, physicians may pursue an academic career by combining clinical duties and research activities. Furthermore, a physician or other professional (for example, a person with nonmedical education) may choose to qualify for hospital management in accordance with the 1999 Health Care Establishments Act, by completing a course in health care management.

Another option for physicians is to work as medical representatives of pharmaceutical companies, which offer flexible working hours and higher salaries. However, this option is not as attractive for physicians as it was in the mid-2000s due to the development of the curative sector. In recent years, the trend of pursuing career abroad remains. First, graduates can choose to specialize abroad and second, do practice after receiving a specialty within the EU. In order to work in an EU Member State, the basic requirements for Bulgarian applicants (according to the automatic recognition of professional

qualifications) are a completed medical education, a confirmation for the obtained specialty and working experience in a certain area, and mastery of the host country's 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 with the specialty "management of health care" might participate in competitions for managerial posts (senior nurse/midwife, chief nurse/midwife). The requirements for this career path are regulated by the Health Care Establishment Act. For health professionals, a career in universities can also be an option, depending on ambitions and personal goals.

5

Provision of services

In Bulgaria, health services are provided by a network of various health care providers, in either the private or public sector. Public health services are provided by the state and organized and supervised by the MoH. Various public health programmes are mainly implemented by the Ministry's local branches, the Regional Health Inspectorates, several national centres and by municipalities.

The Health Care Establishment Act (1999) 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 declining and access to primary care in rural and remote areas is still a challenge. 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 NHIF. The majority of the outpatient facilities are privately owned. The distribution of specialists across the country is characterized by great regional imbalances.

Inpatient care is delivered mainly through a network of public and private hospitals, divided into multiprofile and specialized ones. There are also other inpatient health care establishments such as comprehensive cancer centres, centres for dermato-venereal diseases, and the newly established centres for comprehensive service for children with disabilities and chronic diseases. 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. For years, both an oversupply of acute care beds and an increasing undersupply of long-term care services have remained.

The centres for emergency medical care with their subsidiaries and hospitals' emergency wards are the key units in the organization of emergency care. In 2014, the MoH undertook several reforms aiming to improve the infrastructure and material resources; ensure sustainable development of human resources; efficient organization, coordination and management of the emergency medical care system.

Pharmaceutical care in Bulgaria is part of the state health policy and is carried out by the Minister of Health. The Bulgarian pharmaceutical market is one of the smallest in the EU, but it is nevertheless among the fastest growing sectors of the Bulgarian economy.

Dental care is delivered in outpatient and inpatient facilities. The regulations for outpatient dental care facilities are similar to those for primary and specialized medical care. The majority of dental practices are concentrated in the big cities. Only selected dental care services are fully covered by SHI, whereas the majority of procedures are paid for by the patient.

Institutions for residential mental care include specialized psychiatric hospitals, mental health centres, psychiatric wards in multiprofile hospitals, as well as a number of social homes for people with mental disorders. Despite efforts to deinstitutionalize psychiatric patients, Bulgaria still relies on the traditional psychiatric services and outpatient and community-based services are responding insufficiently to the identified needs.

■ 5.1 Public health

Public health in Bulgaria is coordinated by the MoH, as the most competent authority, which is responsible for overall planning, supervision, as well as state sanitary control. Responsibilities are split between the Department of Promotion and Prevention of Diseases and Addictions (mainly dealing with disease control and supervising communicable diseases) and the Department of Health Control (responsible for disease prevention, health promotion and reduction of risk factors for noncommunicable diseases) of the MoH.

The 28 RHIs, which represent the MoH at the district level, are responsible for the coordination and provision of public health services. Their functions include: monitoring health status of the population and health determinants; health promotion and integrated disease prevention; laboratory testing of environmental factors and assessment of their impact on population health; consultation and expertise in the field of public health protection; coordinating the implementation of national public health programmes at the local level; elaboration of public health programmes and projects, control of communicable diseases, sanitary control of public places, products and activities pertinent to human health and environmental factors.

The main bodies of state health control are the Principal State Health Inspector as its supervisor, and the National Centre of Radiobiology and Radiation Protection. The Principal State Health Inspector, appointed by the Prime Minister at the proposal of the Minister of Health, supervises and organizes the state sanitary control, health promotion and disease prevention activities and prophylactic and anti-epidemic activities in case of disasters, accidents and catastrophes. The Inspector is, therefore, the main supervisor of the state health control system. The activities of the Principal State Health Inspector are assisted by the Department of Health Control.

The National Centre of Radiobiology and Radiation Protection 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; risk assessments for the population and for particular groups.

The public health network in Bulgaria also includes several national centres, which are engaged in public health protection and promotion and are owned by the MoH. These national institutes provide expertise and advisory assistance to RHIs or health care establishments if needed.

- **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.
- **National Centre of Drug Addictions** – the centre coordinates and provides methodological guidance on drug abuse and addiction-related issues, including the prevention, treatment and rehabilitation of persons abusing drugs (with and without addiction), specialized

control over their treatment process and the provision of expertise on drug addiction.

- **National Centre of Public Health and Analyses** – 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; supervises HTA and the accreditation processes; and carries out scientific research. The Centre is responsible for providing information on health status in the country, socioeconomic determinants of health, and on the health care system, its structures and resources.

Furthermore, control of safety and quality of food is carried out by the Bulgarian Food Safety Agency to the Ministry of Agriculture, Food and Forestry.

The MoH and its subordinate bodies use an intersectoral and multi-level approach in their work, collaborating with other sectors' institutions at the 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 Food and Forestry, the State Agency for Child Protection, municipal councils and local administrations, and patient organizations (see Section 2.6 *Intersectorality*).

Key public health programmes in Bulgaria are summarized in Table 5.1. They are developed by the MoH and approved by the CoM. The programmes are implemented by different public institutions, municipalities and NGOs. The municipalities also adopt and implement local programmes for health promotion and disease prevention, financed through independent municipality budgets or donor programmes.

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 and prophylactic check-ups).

In 2015, 2.55% of overall health spending in Bulgaria was allocated to preventive care, which was close to the EU average. In the same year, 0.42% of health care expenditures were spent on immunization programmes – among the highest levels in the EU (Eurostat, 2018).

TABLE 5.1 Public health programmes in Bulgaria, 2018

PROGRAMME	PERIOD
National Plan for Influenza Pandemic Preparedness of the Republic of Bulgaria	2006–ongoing
National Programme for the Reduction of Radon’s Impact of Buildings on the Health of the Bulgarian Population	2013–2017
National Programme for Prevention of Suicides in Bulgaria	2013–2018
National Programme for the Prevention and Control of Vector Transmitted Infections in the Republic of Bulgaria	2014–2018
National Anti-Drug Strategy	2014–2018
National Programme for Prevention of Chronic Noncommunicable Diseases	2014–2020
National Programme for the Improvement of Maternal and Child Health	2014–2020
National Programme for the Prevention of Oral Diseases in Children from 0 to 18 years of age in the Republic of Bulgaria	2015–2020
National Programme for Prevention and Control of HIV and Sexually Transmitted Infections	2017–2020
National Programme for Prevention and Control of Tuberculosis	2017–2020
National Programme for Cervical Cancer Prophylaxis	2017–2020
National Programme for Control and Treatment of Rotavirus Gastroenteritis in the Republic of Bulgaria	2017–2021

Source: CoM, 2017c

Communicable diseases and immunization

The RHIs are responsible for the surveillance of communicable diseases in Bulgaria. People with contagious diseases, contact persons and contaminants are subject to registration and mandatory reporting. The Minister of Health determines by ordinance which communicable diseases are subject to notification, registration and reporting based on the 2004 Health Act. Any medical professional who diagnoses a reportable communicable disease must inform the regional inspectorate and the patient’s GP.

Fig. 5.1 provides an overview of the information flow in surveillance for communicable diseases. The NCPHA compiles information by RHIs, operates a central information system for reporting and monitoring incidences of infectious diseases and prepares weekly and monthly epidemiological bulletins by diagnosis and by districts. Furthermore, the MoH has maintained specialized case-based reporting information systems for HIV/AIDS and

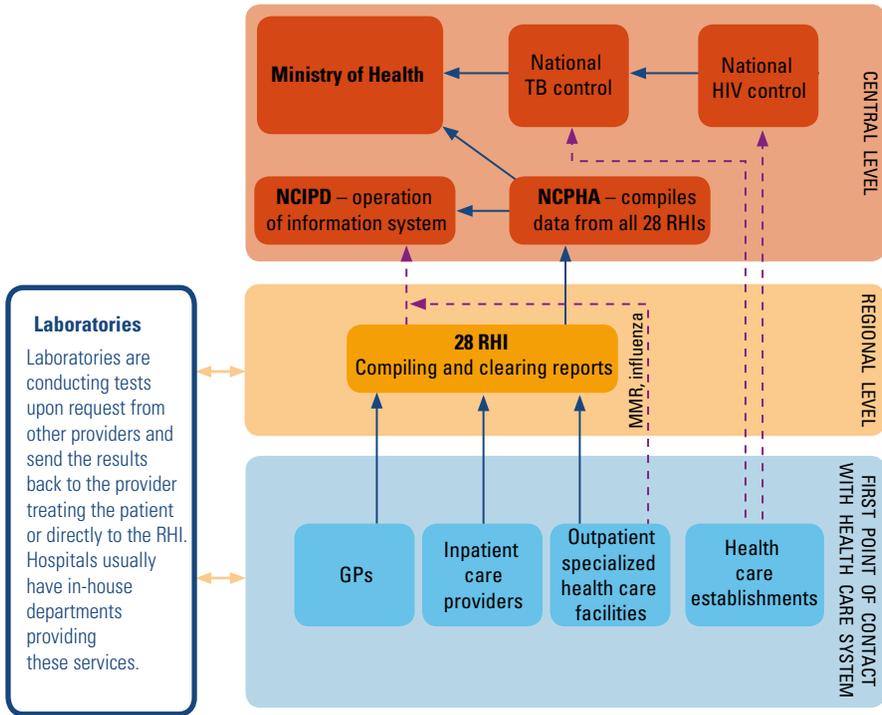
for tuberculosis since 2005. The informational systems for measles, rubella and mumps, and for influenza are supervised by RHIs. Epidemic outbreaks and outbreaks of nosocomial infections have to be reported immediately to the MoH and the National Centre of Infectious and Parasitic Diseases. The latter takes part in organization and control of prophylaxis and anti-epidemic activities in the field of infectious diseases in Bulgaria.

The Minister of Health determines by ordinance who (in terms of age groups) is subject to immunizations, as well as the methods and the terms for carrying out either compulsory, targeted or recommended immunizations. The Bulgarian immunization calendar is approved annually and vaccinations and revaccinations are scheduled by age groups. Compulsory immunization provided by GPs free of charge covers vaccination for tuberculosis, hepatitis B, diphtheria, tetanus, pertussis, poliomyelitis, rubella, measles, mumps, *Haemophilus influenzae B* and pneumococci. Participation in these vaccinations is obligatory for the target population. In the case of noncompliance there are sanctions, for instance parents who refuse to have their children vaccinated cannot use kindergarten and must pay penalties as regulated in the 2004 Health Act. Second, targeted immunization against rabies, Crimean–Congo haemorrhagic fever and abdominal typhus are provided only in certain cases. Vaccines for targeted immunization are paid through the state budget and provided free of charge. Third, recommended immunizations against yellow fever, hepatitis A, rotaviruses, human papillomavirus, influenza, meningococci and pneumococci are possible. Some of the noncompulsory vaccinations recommended by the MoH for certain high-risk populations are free of charge (for example, vaccines against rotavirus and human papillomavirus). Noncompulsory vaccination programmes are delivered through the National Centre of Infectious and Parasitic Diseases, health care establishments and the RHIs. Noncompulsory vaccinations can be requested and paid for by patients.

Since 2012, vaccination rates have been falling (Table 5.2). In 2016, vaccination rates for compulsory immunizations were below the target of 95%, with the exception of primary immunization against tuberculosis (National Centre of Infectious and Parasitic Diseases, 2017). The decreasing rates are the result of both a negative perception of compulsory vaccinations among parents and vulnerable groups of individuals, for example the Roma community.

The last outbreak of measles was recorded in 2009–2010, mainly among Roma children. In 2017, there were 36 cases of measles identified among the

FIG. 5.1 Information flow in the communicable diseases surveillance system



Source: ECDC, 2017.

Notes: Dashed lines indicate information flows for specific diseases only. MMR: measles, mumps, rubella.

TABLE 5.2 Immunization rates in Bulgaria, 2012–2016

IMMUNIZATION	2012	2013	2014	2015	2016
% of infants vaccinated against tuberculosis	97.0	97.2	96.7	95.8	96.2
% of infants vaccinated against hepatitis B	95.4	95.2	95.0	91.6	91.1
% of infants vaccinated against diphtheria, tetanus, pertussis	95.3	94.9	87.6	90.7	92.1
% of infants vaccinated against poliomyelitis	95.3	94.9	87.6	90.7	92.1
% of infants vaccinated against <i>Haemophilus influenzae</i> type B	95.3	94.9	82.7	87.1	92.1
% of infants vaccinated against pneumococci	93.5	93.7	91.7	90.4	90.3
% of infants vaccinated against rubella, measles, mumps (first dose)	93.7	95.1	93.2	91.5	92.1

Source: National Centre of Infectious and Parasitic Diseases, 2017.

Roma community living in Plovdiv. In such cases (as well as in emergency epidemic situations or significant declines in immunization coverage), the Minister of Health can order additional compulsory vaccination and revaccination.

Furthermore, targeted human papillomavirus vaccinations exist and aim at girls of 12 or 13 years. In these groups, vaccine uptakes were 14.3% and 5%, respectively, in 2016 (National Centre for Infectious and Parasitic Diseases, 2017). The low uptake was, inter alia, the result of the death of a 14-year-old girl, which was associated in the media with human papillomavirus vaccination.

Health promotion, disease prevention, prophylaxis and screening

The concept “Objectives for Health 2020” (2015) envisages to strengthen public health capacities, including health promotion and disease prevention for communicable and noncommunicable diseases. Primary health care providers and their further development are seen as key for an efficient delivery of these services. According to the concept, “the significant number of already existing national prevention programmes creates duplication of activities [...], which is an unjustified waste of financial resources” (MoH, 2015b). Thus, priority is given to the National Programme for the Prevention of Chronic Noncommunicable Diseases (2014–2020) as an integrated approach to reducing premature mortality, morbidity and related health consequences.

This approach is further developed in the NHS 2020 (MoH, 2015c). The Strategy envisages interventions to reduce risk factors, expanding the range of hospital services in the field of health promotion and disease prevention, promotion of healthy nutrition, improving the quality of health education and training, coordination and synchronization of sectorial policies and the active involvement of different stakeholders among others (see Section 2.5 *Planning*). The National Programme for Prevention of Chronic Noncommunicable Diseases has implemented a wide range of activities to encourage healthy attitudes and behaviour, such as information:

- education and communication campaigns
- offices for consulting about the ban of tobacco products from health care establishments

- sports initiatives
- training for health professionals
- surveys on the risk factors and the level of health literacy in the population.

The last survey was carried out in 2014 by the NCPHA nationally and among the population aged 10–19 and over 20 years. The programme lasts till 2020 and is financed through the state budget with a total amount of BGN 9.5 million (approximately €4.9 million) (MoH, 2014c).

Reducing risk factors

The Health Act includes some measures aiming at the reduction of risk factors.

Tobacco and alcohol

Amendments to the law prohibiting smoking in public places were enacted in 2009. The only exceptions to this law are airports. Broadened restrictions on smoking in public places came into force in 2010, when the Health Act introduced a complete smoking ban on playgrounds and in the surroundings of kindergarten and schools. However, these restrictions have not been strictly respected. The Health Act also prohibits the direct advertising of alcohol; indirect advertising on radio and television is allowed after 22:00. Other measures are the restriction on tobacco advertising, increasing tobacco prices, the introduction of new packages with information and pictures about smoking consequences. Overall, alcohol and tobacco are not sold to persons below 18 years of age. According to the Health Act (2004), 1% of the revenues contributed to the state budget from excises on tobacco and alcohol products are used to fund national programmes to reduce smoking and alcohol abuse and to prevent drug use.

Unhealthy diet

In October 2015, the MoH announced a draft law on a Public Health Tax. Foods and drinks containing salt, sugar, trans fats, caffeine and taurine should be taxed above a predefined quantity. The main goal of the law was to improve population health by nudging dietary habits, limit the production

of unhealthy food and save health expenditure in the long-term. After a vigorous public debate, the law has not been passed in parliament.

Despite different efforts and programmes in the field of health promotion and education, there are still insufficient results. Risk factors such as smoking, alcohol abuse and unhealthy nutrition are widespread (see Section 1.4 *Health status*). According to the NCPHA, the risks of smoking are underestimated, smoking is generally tolerated, and existing legislation on tobacco control is not respected (NCPHA, 2015a). The national representative survey, conducted in 2014, reveals that knowledge on risk factors and causes of severe diseases is insufficient in Bulgaria (Dimitrova et al., 2015).

Monitoring risk factors in patients and screenings

Prophylactic and dispensarization activities are regulated by ordinance of the MoH (with the latest update in 2016). According to this ordinance, GPs assess risk factors in all patients, guided by updated criteria, and group patients according to their health risk. Additionally, prophylactic examinations and diagnostic tests by type, volume and periodicity for each patient risk group are specified. These are focused on early detection of cardiovascular diseases, type 2 diabetes mellitus, and several malignant neoplasms. Prophylactic activities for children include different diagnostic tests, examinations and immunizations specified by age group. Every insured person over 18 years of age is entitled to one prophylactic check-up per year. The prophylactic examination includes: medical history and complete objective status, laboratory tests of blood and urine, filling in a questionnaire and formation of risk groups. Additionally, since 2011, a prostate-specific antigen prostate cancer test for men over 50 years of age and breast mammography screening for women over 50 years every 2 years has been included. In the case of risk of diabetes, heart attack, stroke, and cardiovascular and malignant diseases, the GP may also refer to a respective specialist. The volume of diagnostic tests and the number of check-ups to dispensary surveillance for chronically ill people depends on their condition and diagnosis. The NHIF pays for the prophylactic and dispensarization activities.

The screening system consists of a National Screening Register and regional coordinators in each RHI. The National Screening Register is run by the NCPHA. Financing of screening can be provided by the different

sources: programmes and projects; the state budget; the budget of the NHIF; and donors.

According to a national representative survey, the frequency of the prophylactic check-ups was very low in 2014 (Dimitrova et al., 2015). Around one quarter of the respondents had never checked their cholesterol; over 70% of men had never been screened for prostate cancer and 33% of women had never attended a mammography. In contrast, self-reported screening rates for cardiovascular diseases and diabetes risks (measurement of blood pressure, blood cholesterol and blood sugar) in the last 5 years ranged between 78% and 89% (Eurostat, 2018). In 2016, the average number of prophylactic examinations per infant up to 1 year was 10.0 and the average number of prophylactic visits per insured persons over 18 years by GP was 0.37 (NHIF, 2017b).

Maternal and child health, reproductive health

Maternal and child health is one of the main priorities of public health policy according to the concept “Objectives for Health 2020” and the NHS 2020 (MoH, 2015b, 2015c). Every pregnant woman is eligible for 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, regular check-ups and prenatal diagnosis and prevention of congenital disorders, provided by primary and specialized ambulatory care facilities, as well as hospital services during the delivery. The National Programme for Improvement of Maternal and Child Health (2014–2020) embraces an integrated approach of involved institutions to maternal and child health. Under this programme, centres for maternal and child health have been established at district hospitals. The programme also envisages health promotion and educational activities for pregnant women and parents. The total budget of the programme is BGN 128.6 million or approximately €65.7 million (MoH, 2014b).

There are a number of programmes and initiatives to improve child health in general and to reduce infant mortality in particular. Children up to 18 years of age are entitled to free access to paediatric care and are incentivized for regular medical check-ups, conducted by GPs and paediatricians. Furthermore, medical offices in schools, kindergartens and social institutions

for children provide first aid services. Medical professionals working in these offices are also responsible for organizing and conducting health education programmes. In 2015, the Health Care Establishments Act introduced a new type of health care establishment, that is, centre for comprehensive service for children with disabilities and chronic diseases. These centres will provide screenings, prophylaxis, diagnostics, treatments, rehabilitation, long-term care and palliative care to children with disabilities and chronic diseases (see Chapter 6 *Principal health reforms*).

Reproductive health is safeguarded by the state by means of promotion and consultation, access to specialized medical care, and prevention and treatment of sterility. 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). Since 2009, the MoH created the Assisted Reproduction Fund, which financed up to three in vitro attempts per person. In May 2017, the CoM approved additional financing of assisted reproduction services to lift the ceiling of three attempts (CoM, 2017a). This decision is in line with the policy targeting the demographic situation in Bulgaria (see Section 1.1 *Geography and sociodemography*). In August 2017, the MoH proposed up to eight in-vitro procedures per couple. In the period of 2014–2015 a total of 7598 procedures were financed and 2171 children were born (Bulgarian National Audit Office, 2017). Some municipalities also offer programmes for additional funding of in vitro procedures.

Occupational health services and other public health activities

The organization of occupational health services is regulated mainly by the 1997 Law on Health and Safety at Work. The MoH and the Ministry of Labour and Social Policy are jointly responsible for occupational health and injury prevention. Occupational diseases are the responsibility of occupational medicine facilities, which are either independent legal entities or legal entities created by a particular enterprise or health care establishment. The services are chiefly preventive: 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.

The NCPHA is responsible for the collection, analysis and publication of health statistics and epidemiological data. 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 noncommunicable diseases, for which data are often unreliable, incomplete or not available. There are not regular surveys of health behaviour in Bulgaria. Such surveys are usually conducted in the framework of different projects and programmes.

Despite the various public health programmes and initiatives, results have not been entirely satisfactory in Bulgaria. Nonetheless, challenges remain in ensuring access to quality public health services for the rural population, and for vulnerable and ethnic groups, such as the Roma minority.

■ 5.2 Patient pathways

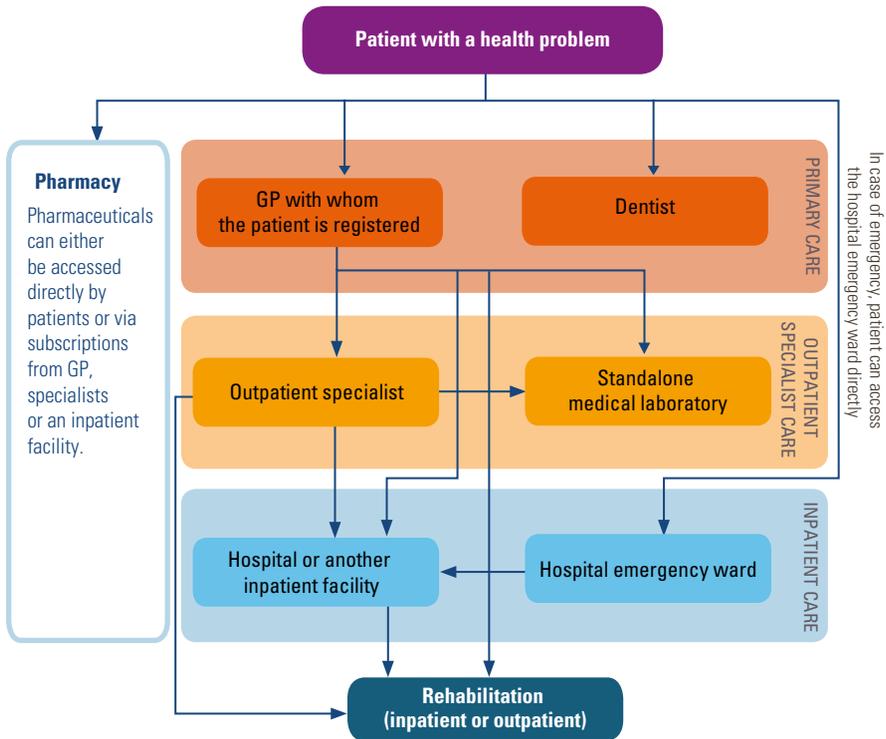
Patient pathways through the health care system depend on the type and severity of the patient's condition. Other influencing factors include the type of insurance (SHI or VHI), as well as patient attitudes and wishes. In general, GPs act as a gatekeeper and are the main point of entry into the health care system. The only other directly accessible primary care professionals are dentists.

Fig. 5.2 shows the possible pathways of a patient with a health problem covered by SHI.

If the patient's condition requires specialized care, the GP refers the patient to a specialist. Specialist care can be accessed at a diagnostic-consultative centre, a medical centre or an individual or group specialized practice, within 30 days of referral. The GP or the specialist may refer the patient also for inpatient treatment. Admission to a hospital usually takes place within a few days after receiving a referral. Waiting times vary based on the patient's diagnosis and condition and depend on hospital waiting lists as well. Once discharged from the hospital, there are two possibilities: (1) if necessary, the patient can be hospitalized for long-term treatment and rehabilitation, or (2) ongoing treatment and rehabilitation care are coordinated by the GP. For prescription-only medicines or laboratory testing, a prescription or referral from a GP or a specialist is required.

If patients wish to access specialized care directly, they must pay for the services provided. Patients using services covered by complementary VHI can visit a medical specialist directly, depending on the type of insurance. In case of an emergency, patients can contact their GP, call an ambulance or visit a hospital emergency ward directly (see Section 5.5 *Emergency care*).

FIG. 5.2 Patient pathways in Bulgaria



Source: Authors' own compilation based on existing legislation.

■ 5.3 Ambulatory care

The Health Care Establishments Act (1999) stipulates the separation of outpatient and inpatient care and determines the nomenclature for different types of health care establishments in Bulgaria. Ambulatory care consists of general and specialized care provided by GPs and specialists respectively and includes a wide variety of providers for both primary and specialized outpatient services, such as GPs, specialist practices, medical centres, laboratories and nursing homes.

Primary care and a large part of the specialized ambulatory care operate mainly in the private sector. There are also ambulatory health care establishments owned by the municipalities and some owned by public hospitals, but they are independent legal entities.

Generally, ambulatory care in Bulgaria is provided by outpatient health care establishments. The only exception being psychiatric hospitals and hospitals owned by the Ministries of Defence, Transport, Informational Technology and Communications, Internal Affairs and Justice, and the CoM can sign contracts with the NHIF for outpatient primary and specialized care.

Primary care

Primary care in Bulgaria is provided by GPs, who are independent practitioners contracted by the NHIF but privately operating their medical practices. There are two types of practices for primary care: individual and group practices. A primary care practice may employ a nurse or other health care professionals. Bulgarian citizens are free to choose their health care provider both for primary and specialized care. Patients are entitled to switch GPs twice per year.

In 2016, approximately 14.9% of all physicians in Bulgaria worked in primary care (NSI, 2017h); consequently, the GP to population ratio is relatively low (0.62 per 1000 population) in comparison with the EU average (see Section 4.2.1 *Health workforce trends*). More worryingly, this ratio is deteriorating and has fallen by almost five percentage points since 2006.

A referral is also needed for diagnostic tests. 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 predefined on a quarterly basis by the RHIF according to the GP's patient list, patient specifics (for example, chronic diseases, age) and the performance of the previous months. Up to a third of all patients (including the uninsured) bypass primary care physicians by calling an ambulance or going directly to hospital emergency departments (see Section 5.5 *Emergency care*).

GPs provide basic examinations, diagnostics and treatment, provide consultations and are responsible for prescribing medications from the PDL. They also provide family planning training, preventive activities (immunization),

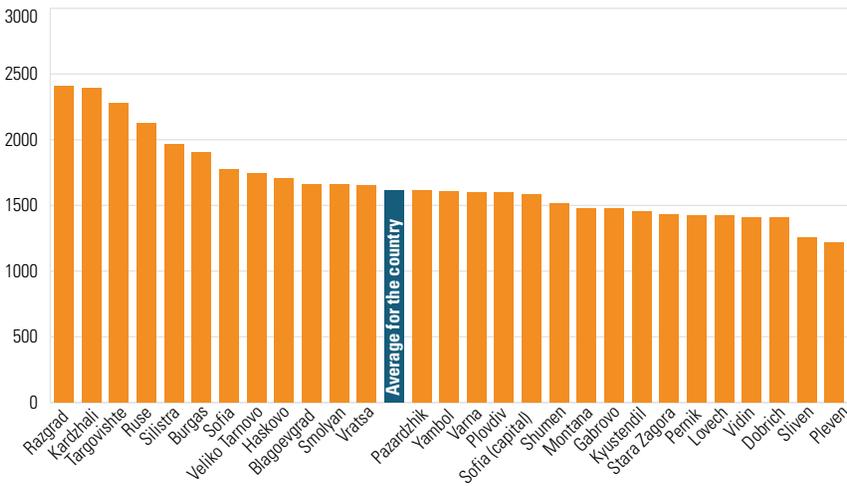
health promotion and health education. Some GP services unrelated to health care provision (for example for a work competency permit, or a document of competency to drive a motor vehicle) are paid for by the patients. The primary care practices are required to display a list of fees and payments in a visible place within the facility.

Since 2010, the number of GPs in Bulgaria has been decreasing (Table 4.3). In 2017, 4287 GPs provided primary care, which averages one GP per 1656 citizens. Individual practices prevailed (3476 or 81.1%), whereas 18.9% of GPs worked in a total of only 811 group practices (NHIF, 2017c).

The number of GPs varies significantly between districts in the country. These variations cause inequitable access to health services, particularly for individuals in rural areas. In 2016, the average number of insured persons per GP differed widely across the country – from 1216 persons per GP in the Pleven district to 2404 in the Razgrad district (Fig. 5.3). In general, access to primary care services varies between urban and rural areas, with residents in remote rural areas facing considerable challenges because of shortage of GPs, a poor infrastructure and geographical distances. Some specific measures have been implemented – financial incentives for primary care physicians who serve rural and remote areas defined as a monthly allowance for the GP practice. These allowances are specified in the NFC by settlements and vary according to the remoteness of the practice from other health care establishments, difficult accessibility due to infrastructure, diffusion of the practice (ambulatory serving two or more settlements), served population and environmental pollution. Shortages due to physician ageing are becoming also a worrying trend, especially in rural areas (see Section 4.2 *Human resources*). As a result, GPs often have to provide services to patients from different villages within a radius of several kilometres.

There are no official data on quality of primary care. The most common infringements of the NFC in primary care, as identified by RHIF inspections, are related to the delivery of preventive services, provision of dispensarization services, violation of working times and of requirements for medical equipment (NHIF, 2016).

In 2015, the analysis in the concept “Objectives for Health 2020” concluded that the development of primary care continues to be a major challenge. This is due to the limited profile of activities and tasks, lack of incentives for teamwork, limited recognition, weak connection with secondary care and inadequate funding (MoH, 2015b).

FIG. 5.3 Persons per GP by district in Bulgaria, 2016

Source: NSI, 2017g, own calculations.

Specialized ambulatory care

Specialized outpatient activities at the secondary care level are 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 mental health centres, comprehensive cancer centres, centres for dermato-venereal diseases, and centres for comprehensive service of children with disabilities and chronic diseases. Specialized outpatient facilities may be registered as:

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

The medical, medico-dental and diagnostic-consultative centres may open units where physician assistants, nurses or midwives perform nursing care independently.

Diagnostic-consultative centres are owned mainly by municipalities and are regulated by the respective municipal council. The remaining specialized ambulatory care providers mostly follow the private-practice model. The specialized outpatient facilities are registered under the Commercial Act. Patients have the right to free choice of a specialist.

Similar to primary care, individual practices for specialized ambulatory care are more common, but their number has been decreasing, by almost 40% since 2010. In contrast, the number of medical centres, medico-dental centres and stand-alone laboratories has increased significantly compared with 2010 (Table 5.3). Many specialists share time between their practice and working at inpatient health care facilities.

TABLE 5.3 Outpatient health care providers, 2010–2016

PROVIDERS BY TYPE	2010	2011	2012	2013	2014	2015	2016	% CHANGE (2010–2016)
General practitioners ^a	4761	4697	4900	4572	4525	4433	4407	-7.5
Individual practices for specialized medical care ^b	6219	2858	3050	2864	2887	2915	2949	-52.6
Group practices for specialized medical care ^b	205	146	149	142	139	139	139	-32.2
Medical centres ^c	520	559	575	604	617	631	702	35.0
Medico-dental centres ^c	29	35	33	39	44	45	50	72.0
Diagnostic-consultative centres ^c	113	121	121	117	117	112	112	-1.0
Stand-alone medico-diagnostic and medico-technical laboratories ^c	902	1006	1026	1078	1103	1096	1115	23.6

Sources: ^aNSI, 2017g; ^bNCPHA (2011, 2012, 2013, 2014, 2015b, 2016, 2017); ^cNSI, 2017a.

Most specialists in ambulatory care have a contract with the NHIF. In 2017, 3224 outpatient facilities concluded contracts on the delivery of specialized ambulatory care covered by the NHIF (NHIF, 2017e). The benefit package of specialized health services includes primary and secondary examinations, preventive check-ups, dispensary observation, rehabilitation

activities, highly specialized medical activities and expert assessment of temporary disability if the patient's condition requires a longer sick leave and is consequently covered by SHI.

In 2016, a person covered by SHI made an estimated 0.77 primary and 0.31 secondary visits to outpatient specialists. The number of secondary consultations has been increasing and, in 2016, there were 40–41 secondary visits for every 100 primary consultations (NHIF, 2016).

Among specialists, surgeons, paediatricians, obstetricians, cardiologists and neurologists are the most plentiful (NSI, 2017g). There is a shortage in some specialties such as clinical toxicology, medical parasitology, communicable diseases and allergology. According to the NCPHA, capacity of outpatient care is insufficiently developed, leading to unequal access for the population to medical care, especially in remote areas (NCPHA, 2015a). The distribution of specialists varies regionally with significant imbalances between districts.

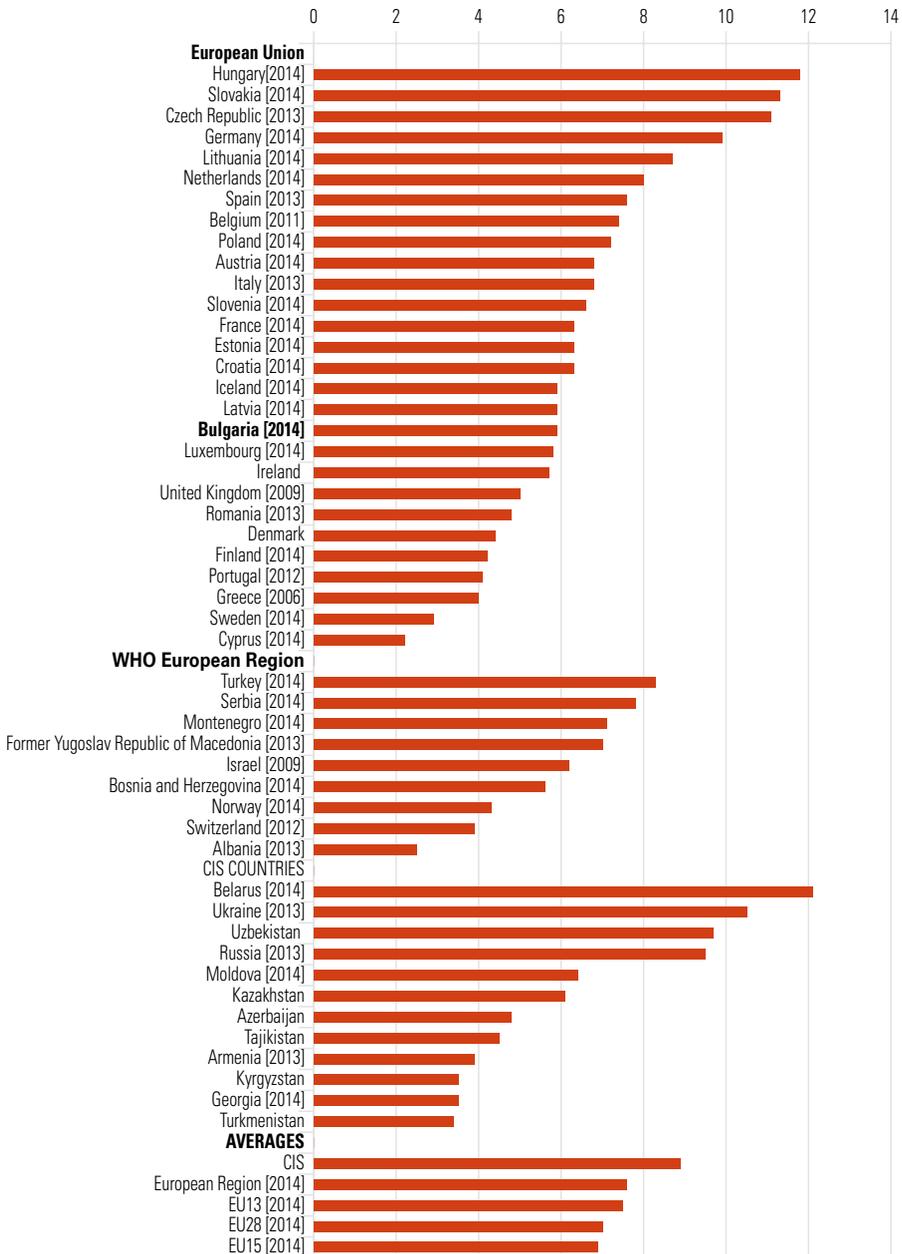
Fig. 5.4 shows average outpatient contacts per person within the WHO European Region in 2014. With 5.9 outpatient contacts per person in 2014, Bulgaria is well below the average of newer Member States (7.54 in 2014), and also below the EU28 annual average of 7.03 per person (WHO, 2018). These data refer exclusively to primary and specialized care outpatient contacts. On the other hand, the estimated number of consultations per physician was only 1480 in 2014, which is among the lowest in the EU (OECD/EU, 2016).

■ 5.4 Inpatient care

According to the 1999 Health Care Establishments Act, hospitals in Bulgaria can be multiprofile (with at least two specialized wards) or specialized (usually gynaecological, surgical, orthopaedic, paediatric or psychiatric). Hospitals can also be classified according to the treatment duration as hospitals for active treatment (for short stays), continuing and long-term treatment, and rehabilitation hospitals. University hospitals are affiliated with the four medical universities and two faculties of medicine in the country. They are multiprofile or specialized, determined by the CoM, and train students as well as health professionals at a postgraduate level. The number of each type of hospitals is presented in Table 5.4. Inpatient care is also provided by centres for dermato-venereal diseases, comprehensive cancer centres and mental health centres (the former

dispensaries), and by centres for comprehensive service of children with disabilities and chronic diseases. The patients have a free choice of hospitals.

FIG. 5.4 Outpatient contacts per person in the WHO European Region, 2014 or latest available year



Source: WHO, 2018.

TABLE 5.4 Number of hospitals in Bulgaria, 2010–2016

HOSPITALS BY TYPE	2010	2011	2012	2013	2014	2015	2016	% CHANGE (2010–2016)
Multi-profile hospitals	121	120	114	111	113	114	112	-7.4
Specialized hospitals for active treatment	39	39	37	37	36	34	33	-15.4
Specialized hospitals for long-term treatment	5	5	5	5	4	3	0	-
Specialized hospitals for long-term treatment and rehabilitation	14	13	12	12	12	11	10	-28.6
Specialized hospitals for rehabilitation	19	19	19	19	19	19	21	10.5
Psychiatric hospitals	12	12	12	12	12	12	12	0.0
Hospitals of other administrations	14	18	21	24	21	21	21	50.0
Hospitals per ownership								
Private hospitals	88	89	92	99	106	108	111	26.1
Former dispensary centres								
Comprehensive cancer centres	9	7	7	7	7	7	7	-22.2
Centres for dermatovenereal diseases	10	10	8	7	7	7	5	-50.0
Mental health centres	12	12	12	12	12	12	12	0.0

Sources: NCPHA (2011, 2012, 2013, 2014, 2015b, 2016, 2017).

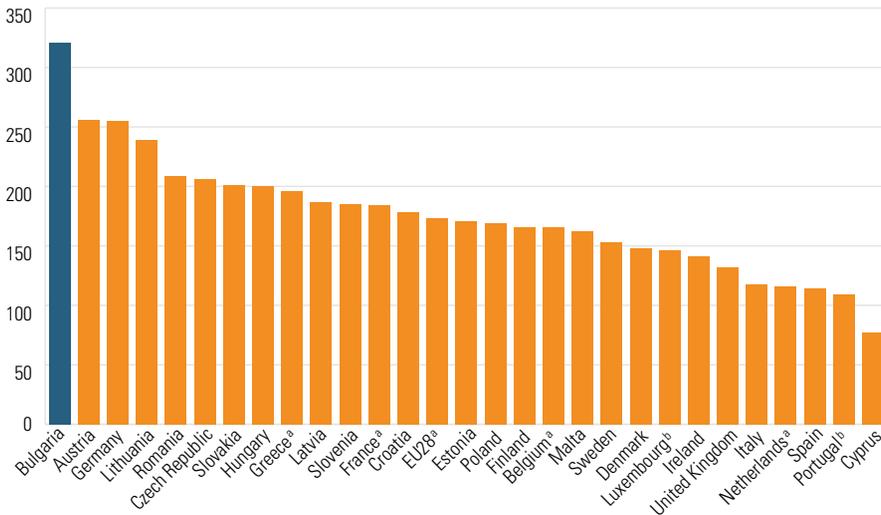
Another way to categorize hospitals is according to their ownership and the type of provided services. First, national hospitals (such as university hospitals) deliver highly specialized care (usually tertiary care) for cases that cannot be treated at the local or district level and are owned entirely by the state. Second, 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. District hospitals have a mixed ownership: 51% of their capital is owned by the state and 49% by municipalities of the respective district. Third, local hospitals are multi-profile or specialized and are located in smaller towns, usually consisting of several wards in the basic specialties (such as paediatrics, obstetrics and gynaecology, internal medicine, neurology,

general surgery and physiotherapy). Local hospitals are owned entirely by municipalities. There are also private, for-profit hospitals.

Thus, hospital care is currently provided by public and private health care establishments. The number of private hospitals has been rising and in 2016, they represented one third of all hospitals in Bulgaria (Table 5.4). The majority are specialized in surgery, ophthalmology, obstetrics and gynaecology, orthopaedics and surgery. Between 2010 and 2016, the number of hospitalized patients in private hospitals increased twofold. In 2016, 111 private hospitals in Bulgaria had a total of 11 195 beds, representing a doubling of the number of beds since 2010 (NCPHA, 2017).

Registration of all health care establishments for inpatient care is in accordance with the requirements of the Commercial Act and therefore depends on the chosen legal form (Ltd., PLC, etc.). Permission for the provision of medical activities is issued by the Minister of Health. For state-owned hospitals, ownership rights are exercised by the Minister of Health and for municipal hospitals by the respective municipal council. The CoM at the proposal of the Minister of Health grants the ownership rights in the management of the university hospitals to the respective medical university. 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. Generally, the management of the hospitals is organized by the owner of the respective facility depending on the chosen legal form of registration. The basic requirements and principles are postulated in the Health Care Establishments Act (1999). 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 MoH, other ministries or the municipal councils). Hospital managers sign a 3-year managerial contract with the hospital owner and are usually physicians or economists with additional qualifications in health care management. According to the Health Care Establishments Act, all hospitals must have a nursing manager (a head nurse/midwife or rehabilitator). Collective organs with advisory functions (Medical Council, Nursing Council and commissions) are typically involved in the management.

Acute hospitals prevail in Bulgaria and are the third highest within the EU, whereas capacity for long-term care is insufficient. In 2015, Bulgaria had the highest hospital discharge rates in the EU, with rates more than 50% above the EU average and an even further increase in recent years (Fig. 5.5).

FIG. 5.5 Inpatient discharges per 1000 population in the EU, 2015

Source: OECD/ European Observatory on Health Systems and Policies, 2017.

Notes: ^aThese values have been estimated by OECD to calculate the EU28 weighted average. ^bEstimated values.

Some of these hospitalizations are considered unnecessary as chronic conditions can be effectively treated in primary care (with the most common conditions of congenital heart failure, asthma and diabetes – see Subsection 7.4.2 *Health services outcomes and quality of care*). Although (strengthening of) primary care has been on the policy agenda of almost all governments since 1990, these remain underused. Some reasons behind the higher number of hospital admissions and hospitalizations are underlined in the World Bank report (2015):

- some services that could technically be provided on an ambulatory basis are provided in hospitals;
- even when a patient can be treated in an ambulatory setting for services such as CT scans or MRI scans, waiting times and procedures required to obtain authorizations to perform these tests are such that a referral to the hospital might become a more effective way to ensure the patient's access to the service;
- admitting a patient to the hospital can make the overall payment for the service far higher in the inpatient setting than in the ambulatory facility;

- specialists who work on an ambulatory basis and in hospitals may have further financial incentives to refer to hospitals, as they divide their work time between outpatient and inpatient care.

Moreover, according to the results of NHIF audits, some patients with several chronic diseases are admitted consecutive times to hospital receiving treatment only of the disease that is mainly reported in the respective clinical pathway (NCPHA, 2015a).

In 2015, in an attempt to reduce unnecessary hospitalizations, ceilings to hospital admissions were introduced for each hospital and clinical pathway. Complying with these new payment schemes, the NHIF should not pay for hospitalizations that exceed beyond the set ceilings. In practice, however, hospitals continued to provide services – even after the allocated budget was spent – and petitioned the NHIF for additional funding as emergency cases, which are not subject to hospital ceilings.

Integrated care attempts

According to the concept “Objectives for health 2020”, the structures and processes in health care are characterized by a lack of proper coordination between care levels and between health and social services, including health promotion, disease prevention, health care management and rehabilitation. The cooperation between hospital network and social establishments is especially prone to this lack, as there are different legal statuses, institutional affiliations and responsibilities.

In the past, integrated health care was applied through the dispensarization system. Bulgaria used to have a well-developed system of dispensaries aimed at comprehensive care for people with oncological, dermato-venereal, mental and pulmological diseases since the 1950s. Dispensaries are health care establishments, which provide diagnostic, therapeutic outpatient and inpatient services and follow-up procedures up to rehabilitation care to people with specific chronic diseases and also maintain patient registers. In 2010, a change in the Health Care Establishments Act transformed these dispensaries into comprehensive cancer centres, centres of mental health, and centres for dermato-venereal diseases, designed to provide integrated care to patients with specific health needs.

In 2015, integrated care first appeared as a term in legislative acts through amendments in the Health Act and the Health Care Establishments Act. The Health Act (2004) defined integrated health and social services as:

“activities through which medical professionals and specialists in the field of social services provide health care and medical supervision and carry out social work, including in-home environment, in support of children, pregnant women, people with disabilities and chronic diseases and the elderly”.

The Health Care Establishments Act now enables a new type of a health care establishment, that is, a centre for comprehensive service of children with disabilities and chronic diseases and a new activity – integrated health and social services, which the health care establishments can perform.

■ 5.4.1 *Day care*

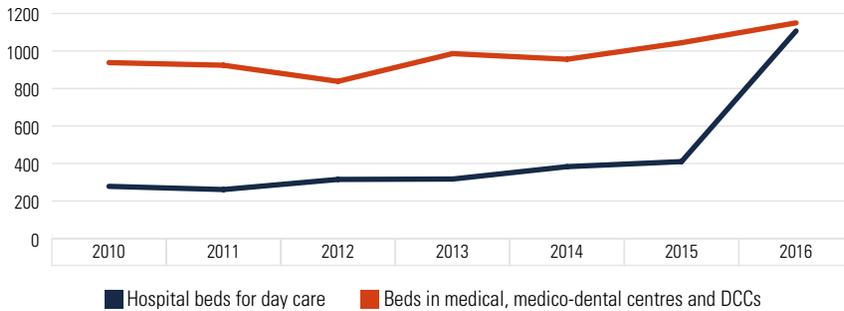
According to the ordinance ruling on the basic package of health services, guaranteed by the budget of the NHIF (2016), health care establishments for inpatient care may conclude contracts also for so-called clinical procedures and ambulatory procedures except for clinical pathways. These clinical procedures are to be performed by inpatient medical specialists and care lasts up to 24 hours (such as intensive treatment of newborns with assisted breathing). In contrast, ambulatory procedures (such as dialysis, chemotherapy, biopsy) may be carried out in inpatient or in outpatient health care establishments with respect to patients whose condition does not require a continuous inpatient stay.

Usually, beds for day care are created in surgical wards (for day surgery), as well as for mental care services, oncology, rehabilitation and palliative care. Medical, dental and medico-dental centres and diagnostic-consultative centres can have up to 10 beds for short-term observation and treatment. The diagnostic-consultative centres can open up to five additional beds for surveillance and treatment for up to 48 hours for the purpose of clinical trials of medicinal products. The number of such beds has been rising slightly since 2010 (Fig. 5.6).

The share of 1-day admissions in hospitals is not substantial. Since 2010, the number of hospital beds for day care has been increasing (Fig. 5.6). In

2016, there were 1.6 beds per 10 000 population (NCPHA, 2017). Information about the proportion of care provided in day-care settings is not available but the utilization of day-care beds has been increasing since 2010.

FIG. 5.6 Beds for day care, 2010–2016



Sources: NCPHA (2011, 2012, 2013, 2014, 2015b, 2016, 2017).

Notes: DCCs: diagnostic-consultative centres.

■ 5.5 Emergency care

Emergency care is organized at several levels in Bulgaria depending on the degree of urgency: patients can call an ambulance or go directly to an emergency ward. Primary care physicians are required to assure provision of urgent care during night and at weekends. This task can be delegated to group practices, health care establishments (with a travelling distance up to 35 km), or provided via 24-hour care by phone or through home visits. Emergency care is mainly provided by centres for emergency medical care (CEMC) and hospital emergency wards.

Outpatient emergency care is provided by 27 CEMC (with the districts Sofia capital and Sofia sharing one CEMC) and their 198 subsidiaries for emergency medical care (SEMC). Besides CEMC, hospital emergency wards are key units of service provision. In 2017, there were emergency wards in 37 multiprofile hospitals across the country. According to the Health Act (2004), every health care establishment is obliged to carry out the possible medical activities for a patient in a state of emergency. If it is impossible (due to a lack of specialists, equipment or free beds) to provide the necessary medical activities and the condition of the patient allows, the patient is transported to the nearest health care establishment, which has the necessary conditions.

The CEMC are public establishments, located in district centres and financed by the MoH. They provide emergency care to ill and injured persons at home, on the spot of the incident, during disasters and during transportation to the hospital. Each centre comprises an administrative department, a regional coordination office and subsidiaries for emergency medical care across the district served. Their activities include emergency care for sick and injured people, specialized transportation of patients, donors, organs and blood, transportation of national medical consultants and training of medical professionals. The centres are headed by directors who are contracted by the Minister of Health.

The SEMCs provide medical triage, diagnostics, short-term observation and treatment of emergency patients for up to 24 hours. In more rural areas where a hospital-based emergency ward is not available, the SEMC fills a gap not otherwise covered. However, many urban areas have an emergency ward and an SEMC. In order to carry out its activities in the SEMC a certain number and type of mobile emergency teams, sanitary transport vehicles and stationary emergency teams are maintained, whose number and composition are determined according to criteria in the medical standard for emergency care.

Despite efforts, emergency care is characterized by an extensive, but inefficient and ineffective network of health care establishments without coordination between them. In 2014, a Concept for the Development of the Emergency Medical Care System in Bulgaria (2014–2020) identified several challenges:

- Inequalities of access to emergency medical care: about 15% of the settlements have an access time for the provision of emergency medical services over 30 minutes.
- Some hospitals' emergency wards are overcrowded with patients (often uninsured) in comparison with other hospitals, which usually perform planned hospitalizations. This leads to unacceptable situations with patients being transported between multiple health care establishments before reaching a hospital where they can receive the necessary medical care.
- There is a great variation in both the number and composition of teams across regions (not related to the number of served persons or to the served area).
- Emergency care is characterized by inadequate staffing levels with a general shortage of physicians and paramedical staff. Low wages,

bad working conditions and limited career opportunities cause increased staff turnover, particularly among physicians. Moreover, a serious problem is a lack of staff qualification in the CEMC. In 2013, physicians with specialty training were only 30% of all physicians working in the emergency care system.

- There is also a lack of sufficient medical equipment, a shortage of ambulances, as well as an underdeveloped road and communication infrastructure, particularly in rural areas.
- Despite budget increases, a serious shortage of financial resources, including financial incentives for the staff and for the timely maintenance and upgrading of infrastructure (for example, mobile teams of CEMC) causes further challenges.

To overcome these challenges, measures are implemented, aimed at provision of adequate and uniform spatial distribution of the emergency medical care structures; improving the infrastructure and physical resources (buildings, equipment, sanitary transport vehicles), as well as communication and information systems; ensuring sustainable development of human resources; efficient organization, coordination and management; and ensuring financial sustainability of the system of emergency medical care.

In 2015, employees in the emergency medical care system benefitted from a 20% increase of remuneration. As a result of this measure, there is currently a significant increase in the number of newly recruited employees in the CEMC (NCPHA, 2015a). The remunerations of emergency care are to be increased twice by 2020. In 2016, the establishment of a system for the selection, ongoing training and evaluation of employees in emergency medical care started, and the National Centre for Education and Qualification in the System of Emergency Care was established. Nearly 7000 physicians and health professionals will be trained under the project “Improving conditions for treatment of emergencies”, financed by the Operational Programme “Human resource development”.

Medical standards, regulating the requirements for emergency medical care structures, were updated at the end of 2015. This standard introduces a triage system and time limits for the execution of emergency calls, and defines requirements to structure and activities of all emergency care units, including quality and access indicators. For the first time new types of personnel in the system of emergency medical care – physician assistants and

paramedics – are regulated. The requirements for the levels of competence of the emergency wards in the hospitals are defined. Furthermore, a National Emergency Care Map was approved by the CoM as a part of the National Health Map in March 2016.

In 2016, a new mechanism for funding hospital emergency wards, based on human resource capacity was introduced. Thus, in addition to the payment per patient and activity, emergency units receive a lump sum of average annual expense for a physician and a nurse.

The number of total emergency care contacts has been increasing in recent years. In 2016, approximately 2.6 million patients visited the emergency systems, with the CEMC providing care for 49.4% of all emergency cases (NCPHA, 2017). In 2016, the number of emergency calls, as well as the number of patients of hospitals' emergency wards increased (MoH, 2016c). Box 5.1 describes the patient pathway to access emergency care.

In many cases, the population uses emergency care to directly access specialized medical care. Between 2011 and 2013, 34.2% of patients going to an emergency ward reported this because primary care was not available, higher than the corresponding EU average (OECD/EU, 2016). For uninsured individuals this is also a “pathway” to obtain medical care free-of-charge.

BOX 5.1 Patient pathway in emergency care

Patients who need urgent medical attention will contact their GP, call an ambulance (emergency number 112) or go directly to an emergency ward in a hospital.

- GP will treat the patient and, if necessary, refer the patient to a hospital.
- A patient calling the emergency number will have a triage assessment and will be referred either to the nearest SEMC, to the hospital's emergency ward or to their own GP. The patient may be treated in the SEMC for up to 24 hours, may be admitted to the hospital or may be treated by the CEMC's mobile team at home.
- People going directly to an emergency ward will also be triaged and treated accordingly. They may be admitted to the hospital or may be discharged after medical procedures for home treatment.

■ 5.6 Pharmaceutical care

Drug policy is carried out by the Minister of Health. The BDA is a specialized body of the MoH, which assesses and supervises the quality, safety and efficacy of medicinal products, authorizes the production of medicinal products, and registers and licenses the wholesalers, the pharmacies and the parallel export (see Section 2.8.4 *Regulation and governance of pharmaceuticals*).

Regulation of pharmaceutical producers

Currently, there are 39 domestic pharmaceutical manufacturers and nine third-country importers (outside the EU) registered by the BDA (BDA, 2017a). The manufacturers have to fulfil the EU requirements of good manufacturing practice for medicinal products. In 2015, domestic production accounted for €121 million or 13% of the pharmaceutical market value at ex-factory prices (European Federation of Pharmaceutical Industries and Associations, 2017). Foreign manufacturers operate through representative offices, which perform only promotion and marketing activities, or through local subsidiaries who distribute medicinal products to wholesalers, pharmacies or health care establishments. 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. They must meet the requirements of Good Distribution Practice. More than 300 wholesalers are currently licensed by the BDA, some of them with divisions in several cities (BDA, 2017b). The law also regulates intermediation in the field of wholesale drug dealing.

Pharmaceutical manufacturers and importers are entitled to distribute their products based on the manufacturing or import license. They can participate directly in procurement tenders organized by the MoH, 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 MoH. In 2015, regulatory provisions for the purchase of medicinal products were created through an electronic auction from the Central Purchasing Authority. The purpose of the assignment through this central body is the supply of medicinal products from the PDL, for which the central body will conclude framework agreements on behalf of the contracting authorities – the public health care establishments. These measures intend to provide greater transparency of this process, time savings and lower prices for medicines.

Sale of medicines

Retail sale of medicinal products is carried out by pharmacies and drugstores. Hospitals and other health care establishments providing inpatient care can operate pharmacies but only for their own needs. According to the BDA register, there are currently 4203 pharmacies in Bulgaria, including pharmacies in health care establishments (BDA, 2017c). Of all pharmacies, 2324 or 55.3% concluded a contract with the NHIF in 2017 (NHIF, 2017d). Each pharmacy has to be managed by a licensed pharmacist (with a Master's degree). Most pharmacies in Bulgaria are owned by independent entrepreneurs. A person or a legal entity may own up to four pharmacies. In 2015, the Commission for Protection of Competition identified 17 pharmacy chains with more than four pharmacies that operated under the same trademark based on a franchise contract, license agreement or shared use of a trademark. Four pharmacy chains had vertical integration with a wholesaler (Commission for Protection of Competition, 2015). Bulgaria is one of the countries with the highest density of pharmacies per capita in Europe. In 2015, the country ranked third after Greece and Cyprus (Pharmaceutical Group of the European Union, 2015).

Retail sale of prescription-only pharmaceuticals is allowed only in pharmacies. They can only be sold by a pharmacist with a Master's degree. Over-the-counter pharmaceuticals for personal use are available both at pharmacies and at drugstores. There are 983 drugstores in Bulgaria, registered by the MoH (MoH, 2017). The manager of a drugstore must be a medical specialist. 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. Direct-to-consumer advertising of prescription medicines is not permitted. Medicines without a prescription can only be sold on the internet by a pharmacy or a drugstore. The sale of medicinal products through automated machines is prohibited except for the medicinal products listed in an ordinance of the MoH. The law allows some exceptions for settlements without a pharmacy. In this case, physicians or dentists may also sell drugs but only with permission from the MoH. The list of pharmaceuticals that can be dispensed by physicians is determined by an ordinance of the Minister of Health.

The pharmaceutical market

Although the Bulgarian pharmaceutical market is one of the smallest in the EU, it has grown substantially over the last few years and the pharmaceutical industry is one of the fastest growing sectors of the Bulgarian economy (Commission for Protection of Competition, 2015). This increase is attributed mainly to two factors: increased NHIF costs for oncological and other expensive medicines and increased consumer demand for over-the-counter drugs. In 2012, the MoH transferred responsibility for payment for a list of specialty medicines to the NHIF. These are 100% reimbursed and include certain oncology drugs, as well as drugs for post-transplant immunosuppression, and various orphan diseases. The MoH is providing medical products for the treatment of AIDS, tuberculosis, and mental and behavioural disorders due to the use of opioids, addiction syndrome and radiopharmaceuticals.

Pricing and reimbursement

The NCPRMP to the Minister of Health compiles the PDL determining which pharmaceuticals are covered by SHI and through the state budget. The PDL comprises four annexes:

- the Reimbursement List, which lists those medicines paid for by the NHIF according to the Health Insurance Act and the level of subsidy they receive;

- medicines funded from the budgets of the public health care establishment for inpatient care;
- medicines for the treatment of HIV/AIDS and certain communicable diseases outside the scope of the Health Insurance Act, as well as vaccines; and
- maximum retail prices for medicines included in the PDL.

The PDL is organized in pharmacological groups with relevant international non-proprietary names and includes the defined daily dose, the reference value for the defined daily dose and the reference price. The PDL is published by the NCPRMP, and for existing drugs is updated twice a month. New products are only added on the 1 January each year, and the Council may only change the level of reimbursement of a medicine in PDL once a year, although price changes can occur more frequently.

Insured persons have access to medicinal products covered totally or partially by SHI. According to the Health Insurance Act (1998), the NHIF pays for only the medicinal products included in the PDL intended for the treatment of diseases covered by the compulsory health insurance, set out in an ordinance of the Minister of Health. 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. Reimbursement may also be provided by the private health insurance. Subsidies vary between 25% and 100%. For products with the same international nonproprietary name in the same pharmaceutical form, the benchmark price is set with reference to the cheapest version of the product as determined by cost per defined daily dose.

In 2014, pharmaceutical expenditures in Bulgaria were PPP €438 per capita, and were among the highest in the EU – Bulgaria took seventh place in this ranking (OECD/EU, 2016). The prices of drugs remain high: patients often cannot afford prescribed medicines. Moreover, co-payments for pharmaceuticals covered partially by SHI are also considerably high. During the economic crisis from 2010 to 2012, about 20% of households stopped buying regular medicine (World Bank, 2012). According to a study conducted in 2014, approximately 20% of the respondents indicated that they did not always buy the prescribed drugs because of insufficient funds (Rohova, 2015a).

HTA

In 2015, HTA for pharmaceuticals was introduced in Bulgaria. It is obligatory for the inclusion of new medicines (with new international non-proprietary name) in the PDL. Pharmaceuticals included in the PDL are selected on the basis of several criteria such as efficacy, therapeutic effectiveness and safety, as well as on the basis of pharmacoeconomic analysis. The HTA is conducted by the NCPHA (see Subsection 2.7.2 *Health technology assessment* and Chapter 6 *Principal health reforms*).

■ 5.7 Rehabilitation/intermediate care

Rehabilitation and physiotherapy are provided by ambulatory health care establishments (individual or group practices, medical centres and diagnostic-consultative centres) and by inpatient facilities such as specialized wards at multiprofile hospitals or in specialized rehabilitation hospitals. Beds designed for long-term treatment or rehabilitation can be established at multiprofile and specialized hospitals for active treatment. The minimum number of beds in such a ward for long-term treatment and/or rehabilitation is five.

SHI covers most outpatient rehabilitation services for patients upon referral from a GP or a specialist. The range of services in ambulatory care includes massages, special physical exercise programmes, thermotherapy and bathing, electromagnetic wave therapy. In 2016, the average number of rehabilitation procedures in outpatient care per insured person was 0.72 (NHIF, 2016).

Regarding inpatient care, the NHIF reimburses hospitals for services provided according to certain “clinical pathways” (such as physical therapy and rehabilitation in child cerebral paralysis, physical therapy and rehabilitation for diseases of the musculoskeletal system). The Ministry of Labour and Social Policy subsidises part of the services provided in specialized hospitals through the Pension Fund. The National Social Security Institute covers the rehabilitation of workers with chronic diseases or disabilities once per year. According to the Law on Social Integration of People with Disabilities, persons with permanent disabilities and permanently reduced working capacity; children up to 16 years of age with permanently reduced opportunity for social adaptation; and military invalids are entitled to physiotherapy and rehabilitation services once a year.

In 2016, there were a total of 6365 beds for physiotherapy and rehabilitation in Bulgaria or 9.0 beds per 10 000 population (NCPHA, 2017). In recent years, the number of beds has been continuously rising. In 2016, there were 10 hospitals providing long-term and rehabilitation care with 930 beds and 21 specialized hospitals for rehabilitation with a total number of 2951 beds. The bed occupancy rate for physiotherapy and rehabilitation was 238 days in 2016 and an average length of stay of 7.4 days (NCPHA, 2017).

If patients with SHI need physiotherapy their GP may refer them to an outpatient rehabilitation facility. After a certain number of rehabilitation procedures in outpatient care, the specialist may refer the patient to a hospital. Inpatient rehabilitation services are also accessible upon a referral from hospital facility for active treatment but this referral can be used only 30 days after discharge from active treatment.

Besides outpatient and inpatient care, rehabilitation and spa treatments supervised by specialists are also carried out in a number of hotel-like establishments at seaside, mountain and spa resorts throughout the country. In 2016, the Ministry of Tourism and the MoH approved an ordinance that determined four types of such establishments – balneological spa centre (medical spa), spa centre, wellness centre or thalassotherapy centre. The ordinance regulates the requirements for building, equipment, staffing and services offered by these centres. However, services provided in these establishments are paid directly by the patients.

■ 5.8 Long-term care

Long-term care is provided both in institutions (residential care) and in communities (different centres for day care or home care). Some services are state funded, financed by the MoH or the Ministry of Labour and Social Policy, others are subsidised by municipalities. In some cases, the services are paid for by the patient's family (Ministry of Labour and Social Policy, 2014).

Institutions for residential care include long-term treatment hospitals, medico-social care centres and different types of residential homes. In 2016, there were 2461 hospital beds for long-term care or 3.5 per 10 000 population, out of which 930 beds were located in 10 continuing long-term treatment and rehabilitation hospitals (NCPHA, 2017). Multiprofile hospitals can

open wards for long-term care with a minimum of five beds, specialized for children or for adults.

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 chronic patients of all ages. They also provide specialized home care for persons with chronic diseases and medico-social problems. The various residential homes provide accommodation to those requiring constant nursing care (for example, people with dementia) or people who need less intensive care (the elderly). They are owned by the state or municipalities or are private homes (licensed according to the Social Support Act). In 2016/17, there were 17 homes for medico-social care for children (NSI, 2017d) and 181 different specialized institutions for residential care (Table 5.5). In recent years, their number has been decreasing and there is a priority shift towards community-based services.

TABLE 5.5 Institutions for residential care and medico-social care centres, 2016–2017

INSTITUTIONS BY TYPE	NUMBER	CAPACITY (PLACES)
Homes for cognitively affected adults ^a	27	2083
Homes for adults with mental disorders ^a	13	1028
Homes for physically disabled adults ^a	21	1287
Homes for people with sensory disabilities ^a	4	133
Homes for adults with dementia ^a	14	825
Homes for elderly ^a	82	5 605
Homes for children deprived of parental care ^a	20	499
Medico-social centres for children ^b	17	1114

Sources: ^aSocial Assistance Agency, 2017; ^bNSI, 2017d.

Services for children

There is a recognized and widely discussed need for reforms to child protection and a need for more family-type institutions and services. The State

Agency for Child Protection adopted the National Strategy “Vision for Deinstitutionalization of Children in the Republic of Bulgaria” (2010–2025). The new complex social and health care providers for children under this Strategy were first established in 2015 as a result of a project “Direction: Family” run by the MoH. The main goal of the project was the closure of eight homes for medico-social care for children and the development of integrated health and social services at a community and family level to replace institutionalized care. The former homes for medico-social care for children have been transformed to complexes for social services run by the respective municipalities, including day centres for children with disabilities, centres for early intervention, family type centres for children and adolescents with permanent medical services’ needs, centres for mental health, etc. Many of these new structures provide integrated social and health services for their patients.

Community services include centres for social rehabilitation and integration, for children and adolescents and for persons with cognitive impairment, as well as social educational-professional establishments, and houses for temporary accommodation. They are provided by the municipality or NGOs and financed by the state and municipality budgets or different national and international programmes. The number of providers of community-based services and their capacity has been increasing in recent years (European Commission, 2016).

Services for older people

Care of the elderly 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 elderly 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.

Many initiatives for the development of long-term care in Bulgaria used to originate from the social sphere based on the Social Support Act and the strategies of the Ministry of Labour and Social Policy. In 2014, the National Strategy for Long-term Care was approved, which envisages the

development of integrated social and health services for elderly people and people with disabilities. Despite these efforts, the capacity to provide services related to long-term care for people with disabilities, chronic diseases, and elderly people is still insufficient (NCPHA, 2015a). The interrelation between health care establishments and social institutions is often characterized by ineffectiveness, lack of cooperation and disintegration of services. In the context of the rapidly aging population, one of the main challenges facing Bulgarian health and social systems will be the delivery of high-performing long-term care services for the growing number of dependants (European Commission, 2016).

■ 5.9 Services for informal carers

Due to the insufficient capacities for providing long-term care services, the burden of care for these patients falls largely on family members and relatives. Women predominantly carry the highest burden of providing informal care. Family members, as caregivers, are entitled to a paid leave of absence if they are employed but only for a short period of time. Most informal carers provide care for long periods and that limits their options for employment in the formal sector. In recent years, NGOs have had an increasingly important role. For example, the Bulgarian Red Cross and Caritas provide comprehensive social and health services to elderly people (over 65 years) with chronic diseases and disabilities at home.

Since 2003, the Ministry of Labour and Social Policy has implemented the “Assistants of People with Disabilities” programme. The programme’s components included the creation of positions for “personal assistants” and “social assistants” and later for “home assistants” and “assistant tutors”:

- the “personal assistant” provides permanent home attendance to a seriously ill or disabled child or adult, to facilitate daily needs;
- the “social assistant” provides services aimed at meeting daily needs, organizing the leisure time of people with permanent disabilities or seriously ill lonely people, implementing activities for their social inclusion and preventing social marginalization;
- the “home assistant” helps with personal hygiene, household maintenance, food preparation, etc.; and

- the “assistant tutor” supports the physical, social, emotional and intellectual development of a disabled child.

The programme aims to reduce the number of persons 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.

In 2017, there were approximately 6400 personal assistants, 1000 social assistants and 2500 home assistants. In the same year, the assistants provided care to 15 000 people with disabilities or elderly people with the inability to self-service in 178 municipalities across the country (Ministry of Labour and Social Policy, 2017). The assessment of people in need of such care is made by the territorial divisions of the Social Assistance Agency. The funds for the appointment of personal assistants, social assistants and home assistants are provided to the municipalities through the Social Assistance Agency.

■ 5.10 Palliative care

The basic principles of palliative care are regulated by the Health Act (2004). They aim to ensure the best possible quality of life for patients and their families. According to the law, palliative care provision involves GPs, outpatient and inpatient health care establishments and hospices.

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 long-term treatment, multi-profile hospitals for active treatment with palliative care units and comprehensive cancer centres with inpatient beds and has a duration of 20 days. The hospitals without palliative care units can conclude a contract with a hospice for carrying out this clinical pathway.

Hospitals can open wards for palliative care with no less than five beds. Palliative care is also provided by hospices and medico-social care centres. In 2016, there were 45 functioning hospices in the country with 1079 beds; their number has been decreasing since 2010 (NCPHA, 2017). Most 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 municipally financed 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 at home by family, mainly for financial reasons (Foreva & Assenova, 2014). The other option for patients in a terminal condition is informal carers (usually retired nurses).

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

■ 5.11 Mental health care

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 and protection of mental health in risk groups (children, students, elderly people, persons living in social institutions, soldiers, detainees and prisoners). 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;
- reducing the institutional dependence on long-term hospital treatment of people with mental disorders;
- integrity and equity of psychiatric care with the other medical specialties;
- specialized and professional training and re-qualification of persons with mental disorders for their social adaptation;

- 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 Health Act 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 decides about compulsory treatment. The conditions and procedures related to the treatment of people with mental disorders are regulated by an ordinance of the MoH. The Medical Standard of Psychiatry, adopted with an ordinance of the MoH in 2004, sets the quality requirements of mental care services. The MoH have to establish and maintain a National Register of Persons with Mental Disorders.

Mental health care is provided both by outpatient and inpatient facilities. Ambulatory services are provided by GPs, by individual or group psychiatric practices, and by psychiatrist's offices in diagnostic-consultative centres and medical centres. In 2017, the NHIF contracted 341 outpatient facilities to deliver such services; their number has diminished since 2010 (NHIF, 2017e). These are unevenly distributed across the country, concentrated predominantly in the district centres.

Inpatient care is provided by specialized psychiatric hospitals and psychiatric wards in multiprofile hospitals, as well as by the mental health centres (former dispensaries for psychiatric diseases). Psychiatric hospitals are state-owned. In 2016, there were 12 psychiatric hospitals with 2225 beds, 12 mental health centres with 1032 psychiatric beds and 750 beds in multiprofile hospitals (NCPHA, 2017). In 2016, the psychiatric network had a total of 4007 beds. Therefore, Bulgaria lags behind both the EU15 average and EU12 average (WHO, 2017). Between 2010 and 2016, hospitalizations and utilization of psychiatric beds decreased. Some hospitals and mental care centres also have day-care units.

Mental health centres provide outpatient and inpatient care, as well as preventive 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 and programmes on psychosocial rehabilitation and social

adaptation. They also have inpatient departments for active treatment of acute mental patients. Funding of psychiatric care, including ambulatory follow up and inpatient psychiatric treatment of patients with mental disorders, is ensured entirely by the MoH.

Emergency mental care is provided by mental health centres, specialized psychiatric hospitals, psychiatric wards at multi-profile hospitals, and the CEMC. 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-run or municipally run social establishments (see Section 5.8 *Long-term care*). Specialized social institutions have multidisciplinary teams, including physicians, paramedics or nurses and social workers. Since the late 1990s, some NGOs have been establishing communities for treatment of people with addiction to drugs. Funding has been coming from charities, relatives of the affected and through various projects.

In recent years, the number of psychiatrists has been falling and in 2016 there were 518 psychiatrists in Bulgaria or 0.7 per 10 000 population (NCPHA, 2017). The number of psychotherapists and other health professionals working in the field of mental health is not known.

Overall psychiatric morbidity in Bulgaria was 1780.5 per 100 000 in 2016 and has been decreasing since 2010 (NCPHA, 2017). Regarding severe mental disorders, the most prevalent diagnoses were cognitive impairment (397.3 per 100 000 population in 2016), schizophrenia (363.2 per 100 000 population in 2016) and affective disorders (301.5 per 100 000 population in 2016). Severe mental disorders affected a relatively low percentage of the total population compared with common mental disorders such as anxiety disorders and clinical depression, which are widespread.

According to the NHS 2020, there are several key challenges regarding mental health in Bulgaria (MoH, 2015c):

- increasing incidences of depression and suicide;
- increasing temporary and permanent incapacity due to mental disorders;
- institutionalization of care for mentally ill and lack of community services.

The concept “Objectives for Health 2020” underlines that Bulgaria still relies on the traditional psychiatric services and 90% of the budget for mental health is spent on inpatient treatment. Psychiatric treatment is carried out in institutions that are often separated by a considerable distance from the patient’s home. The ability of the system for psychiatric help to provide psychosocial rehabilitation is far from what is necessary to meet the identified needs. Moreover, there is a lack of continuity of care and coordination between the different professionals involved with patients suffering from severe mental disorders (MoH, 2015b). Several measures are envisaged to overcome these challenges such as development of community mental health services; ensuring interconnection and coordination of structures for mental health services; improving coordination with other health and social programmes; prevention of mental disorders through programmes for reducing stress in daily life and in the workplace; development of campaigns and actions against stigmatization in society to promote the integration of persons suffering from mental disorders.

■ 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;
- stand-alone dental-diagnostic and orthodontist laboratories.

The 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 physicians and/or dentists with different specialties and dental centres must have 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 2016, there were 50 medico-dental centres and 50 dental centres (Table 5.6). As in ambulatory medical care, individual practices prevailed although their number is decreasing. Outpatient facilities are predominantly privately owned.

TABLE 5.6 Outpatient dental care providers, 2010–2016

PROVIDERS BY TYPE	2010	2011	2012	2013	2014	2015	2016	% CHANGE 2010–2016
Individual practices for primary dental care	7768	4850	5046	4876	4864	4956	5062	-34.8
Group practices for primary dental care	367	264	300	335	367	366	372	1.4
Individual practices for specialized dental care	134	62	76	77	83	85	85	-36.6
Group practices for specialized dental care	1	1	1	1	1	1	1	0.0
Dental centres	49	49	49	48	50	47	50	2.0
Medico-dental centres	29	35	33	39	44	45	50	72.4

Sources: NCPHA (2011, 2012, 2013, 2014, 2015b, 2016, 2017); NSI, 2017a.

Bulgaria has a high national dentist to population ratio (see Subsection 4.2.1 *Health workforce trends*) and during recent years, the number of dentists has significantly risen due to the development of private sector and the prevailing proportion of patient payments. The distribution of dentists is much more variable and diverse than it is for physicians, in favour of urban settlements (Rohova, 2017b).

Access to dental care services varies between urban and rural areas. As for the primary medical care, financial incentives for primary dental care physicians who serve rural and remote areas are defined in the NFC, specified by settlements.

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 health insurance companies. In 2017, 5815 health care establishments for primary and specialized dental care had a contract with the NHIF (NHIF, 2017b). Patients can directly access primary dental care but SHI covers only a few dental services. In 2016, the average number of dental services in primary dental care per insured person was 0.55 (NHIF, 2016).

For some special categories of insured persons (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 pay out-of-pocket. In 2017, the number of dental services covered by the NHIF increased. Hospital dental care is reimbursed by the NHIF based on clinical pathways.

In 2015, the MoH adopted a National Programme for the Prevention of Oral Diseases in Children from 0 to 18 years of age in the Republic of Bulgaria, which envisages different prophylactic activities including fluoridation and school education programmes (MoH, 2015d).

■ 5.13 Complementary and alternative medicine

Range and provision of complementary and alternative care are defined by the 2004 Health Act:

- use of nonmedicinal products of organic or of mineral origin (such as plant extracts, animal organs and tissues, and chemical substances);
- nontraditional physiotherapeutic methods;
- homeopathy;
- acupuncture and acupressure;
- iris, pulse and auricular methods of medical testing;
- nutrition and dietetics.

Homeopathy can be practised only by physicians and dentists (but with no predefined specialization). All 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 persons 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. The RHIs establish and maintain registers of those who practice complementary and alternative care. Patients have to be registered in a visitor's book with necessary patient data (including health problems and

treatment performed or prescribed). Complementary and alternative care is not covered by the NHIF and is paid out-of-pocket by patients. Advertising of non-conventional methods, including their association with prophylactic, diagnostic, treatment and rehabilitation activities, is prohibited.

■ 5.14 Health services for specific populations

The last national census of 2011 confirmed Roma as the third largest ethnic group (with 325 343 persons, that is 4.9% of Bulgarian citizens). Among minority communities, risk factors such as impoverishment, high unemployment, unfavourable environmental and living conditions, unhealthy lifestyles and genetic diseases are more prevalent, as are some chronic diseases (CoM, 2012b). The most frequently reported symptoms and chronic diseases of adult Roma citizens are high blood pressure, migraine and headache, arthritis and rheumatism, asthma and chronic bronchitis, chronic obstructive pulmonary disease and cardiovascular diseases. The health status of children is equally compromised. A survey shows that 12.6% of the entire Roma population in the country, including children, suffer from severe chronic diseases or disabilities (CoM, 2012b). A poor infrastructure in their settlements and neighbourhoods contributes to the fact that the members of the minority communities suffer disproportionately from hepatitis, gastrointestinal diseases, and other diseases caused by parasites. These problems are identified most frequently within the Roma population. Infectious diseases also represent an acute problem in the Roma communities. A serious challenge is the lack of health insurance among the Roma population (Kuehlbrandt et al., 2014).

The CoM has adopted some important measures aimed at overcoming access barriers for the Roma population and promoting Roma health. The National Strategy of the Republic of Bulgaria for Roma Integration was approved in 2012. National and regional initiatives 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 serve as a link to health care establishments, facilitate specific health status tests and coordinate local programmes. In partnership with municipal authorities, conditions are 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. Different screening programmes are also developed. However, there remains a comparatively large group of the population (individuals and families with low income, the undereducated and the unemployed, including Roma) who continue to face substantial barriers to health care access.

The provision of medical services for prisoners is regulated by an ordinance of the MoH 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 and police personnel, as well as railway workers, 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.

According to the Health Insurance Act, health insurance is mandatory for persons granted refugee status, humanitarian status or asylum. The payment of health insurance for persons in refugee status is guaranteed by the State Agency for Refugees with funds from the Republican budget. Their entitlement to health care services arises from the date of initiation of a refugee or asylum procedure. After a procedure for granting status has been opened, a medical examination and treatment (if needed) are carried out. These activities are free of charge for individuals who have sought protection and are carried out at the refugee reception centres of the State Agency for Refugees. Following disclosure of the procedure for granting status and obtaining a registration card under the Asylum and Refugees Act, people who have applied for protection have the right to make a choice of GP. They are health insured and have the right to access a basic package of medical activities paid for by the NHIF.

Principal health reforms

Despite ambitious intentions to reform the health system, no significant changes to the design and functions of the system have been realized since the mid-2000s. The improvement in strategic planning after 2015, as reflected in the new NHS 2020, coincided with an explicitly fragile political situation. Reform initiatives were resisted by stakeholders in the health system and promising legislative ideas and changes, which were expected to address the most pressing problems of the health system such as system effectiveness and efficiency, financial stability, population coverage and equity, were struck down in courts before some of them could enter into force. Instead, most of the recent changes aimed at strengthening control over public spending and cost containment and include pharmaceutical prices regulation, introduction of ceilings to hospital admissions per hospital and clinical pathways, as well as the introduction of standards for financial management of the state hospitals.

Only a few changes aimed at increasing efficiency were successfully implemented, such as the introduction of HTA in 2015. The other changes aiming to raise efficiency, for example, the reorganization of the benefit package into basic and complementary parts and the transformation of some inpatient services to ambulatory settings, and the introduction of selective contracting through National and Regional Health Maps, were repealed in the courts. In early 2018, the MoH presented new plans to introduce selective contracting and make changes in the benefit package, but it is too early to judge on its future implementation.

The 2017 government declaration and the 2018 EU presidency programme laid down reforms that aim to improve prevention of diseases,

and increase the accessibility of pharmaceuticals. Discussions on possible approaches to secure financial stability and to increase efficiency continue.

■ 6.1 Analysis of recent reforms

Despite the explicitly stated and ambitious intentions of the policy-makers to reform, expressed in numerous national strategies, plans and programmes, no significant changes to the design and function of the system have been fully realized in the last decade. The improvement in strategic planning and outlining overall reform goals for the health system, as reflected in the new NHS 2020, as well as the political will for change, which has been lacking previously, were the main drivers of health legislation changes since 2015. Some 2015 changes in the laws on health insurance and health care establishments presented a consistent (although not entirely comprehensive) approach to health system improvements. However, there was a gap between the legislative changes and their practical implementation due to the courts' repeals of the delegated legislation such as ordinances and orders (see Box 6.1). The reform initiatives were resisted by stakeholders in the health system (see Table 6.1), with the courts (Supreme Administrative Court and Supreme Constitutional Court) playing a prominent role. Indeed, legislative ideas and changes, which were expected to increase the system effectiveness, were abolished in court before some of them could enter into force. Consequently, only a few reforms were implemented, mostly concentrating on securing a stable revenue base and increasing efficiency (for example, in the pharmaceutical sector).

In addition, the overall political situation in Bulgaria has been fragile. Since 2009, the country has had eight governments and 13 ministers of health. Given the central role of the MoH in the health sector, the frequent turnover of its leadership is not conducive to uninterrupted policy implementation.

■ 6.1.1 *Measures aimed at health financing stability*

The lack of financial stability is a characteristic of the health system since 1990. The introduction of SHI in 1998–1999 did not overcome this, as out-of-pocket expenditure has remained the main source of revenue for the

BOX 6.1 Major reforms and policy initiatives 2013–2018 (up to March)

- 2018 Introduction of a unified standard for the financial management of state hospitals
- 2018 New draft on criteria for selective contracting between the NHIF and hospitals and a new draft of the National Health Map
- 2018 A ban on NHIF contracting with new hospitals and for new hospital activities
- 2017 Discussion on moratorium on inclusion of new drugs in the PDL, contracting with new hospitals, and contracting of new activities in 2018
- 2017 Liberalization of the final reimbursement decisions after HTA
- 2016 Introduction of criteria for selective contracting between the NHIF and hospitals (*repealed by the Supreme Administrative Court in 2017*)
- 2016 Introduction of a new National Health Map to serve as a tool for selective contracting (*repealed by the Supreme Administrative Court in 2017*)
- 2016 Introduction of a fingerprint identification system for hospital admission (*repealed by the Supreme Administrative Court later in 2016*)
- 2016 Measures against informal payments (changes and amendments to the ordinance on access to medical care)
- 2015 Introduction of centres for comprehensive service of children with disabilities and chronic diseases and regulation of integrated health and social services
- 2015 Establishment of the “Partnership for health”
- 2015 Introduction of Health Technology Assessment
- 2015 Introduction of ceilings to hospital sector by the NHIF (*repealed by the Supreme Administrative Court in 2018*)
- 2015 Reform of the NHIF benefit package (*repealed by the Supreme Constitutional Court in 2016*)
- 2015 Ordinance on patient satisfaction measurement in regard to health services paid by the NHIF (*appealed by the Supreme Administrative Court in 2016*)
- 2015 Reforms to medical specialization system
- 2013 Reform to the organization and provision of VHI (need of re-licencing of all VHICs)
- 2013 Change of the benefit package
- 2013 Establishment of the National Council on Prices and Reimbursement of Medicinal Products

TABLE 6.1 An overview of supporters and opponents of 2015–2016 reforms according to their initiatives in front of courts

YEAR	CONTENT OF THE REFORM	REFORM SUPPORTERS (PRESENTED IN COURT)	COURT TRIAL INITIATORS
2016	Introduction of criteria for selective contracting between the NHIF and hospitals (<i>repealed by the SAC in 2017</i>)	CoM, NHIF, MoH	National Association of Private Hospitals, Centre for Protection of Rights in Health care, Association of Bulgarian Hospital Association, and Association of Municipal Hospitals in Bulgaria
2016	Introduction of a new National Health Map to serve as a tool for selective contracting (<i>repealed by the SAC in 2017</i>)	CoM, MoH, NHIF	Centre for Protection of Rights in Health care and the National Association of Private Hospitals
2016	Introduction of a fingerprints' identification system for hospital admission (<i>repealed by the SAC later in 2016</i>)	CoM, MoH, NHIF	Federation Bulgarian Patient Forum, Centre for Patient Rights Protection, and the National Association of Private Hospitals
2015	Reform on the NHIF benefit package (<i>repealed by the SCC in 2016</i>)	CoM, MoH, Ministry of Finance, NHIF, Commission for Protection against Discrimination, and the National Patient Organization.	62 deputies of the 43rd National Assembly, supported by the Union of Bulgarian Physicians, the Supreme Lawyers Council, and the Association of the Health Insurers
2015	Ordinance on patient satisfaction measurement in regard to health services paid by the NHIF (<i>appealed by the SAC in 2016</i>)	MoH, NHIF	Centre for Protection of Rights in Health care, the National Association of General Practitioners, and the National Association of Private Hospitals
2015	Introduction of ceilings to hospital sector by the NHIF (<i>repealed by the SAC in 2018</i>)	NHIF	Federation "Bulgarian Patient Forum", Centre for Protection of Rights in Health care, and the National Association of Private Hospitals

Source: Authors' own compilation.

Notes: SAC: Supreme Administrative Court. SCC: Supreme Constitutional Court.

health system. However, despite substantial growth in health expenditure after the introduction of SHI (see Section 3.1 *Health expenditure*), the system continued to suffer from lack of financial resources and poor efficiency. Hospitals have continued to accumulate debts, which are usually settled by the MoH on a yearly basis. Municipal hospitals continued to experience financial difficulties

to an even greater extent. A fundamental reason for this underfunding is health services prices. Prices are not established on the basis of real service costs, considering quality standards, but on the funding available at the NHIF.

The inefficient use of financial resources is a well-recognized problem (see Section 7.5 *Health system efficiency*). However, most of the changes in recent years were aimed at strengthening control over public spending and cost containment rather than at increasing efficiency.

Cost containment measures

Changes aiming to strengthen control over public spending and cost containment focused on large and inefficient areas of spending, for instance pharmaceuticals and hospital care.

Pharmaceutical spending

Important changes and amendments to the 2007 Law on Medicinal Products in Human Medicine concerning government regulation of the pharmaceutical sector were passed in 2012. They aimed at a stricter control of the pharmaceutical market by shifting licensing and registration of pharmacies from the MoH to the BDA. At the same time, the NCPRMP was established as a government commission under the MoH, assuming the responsibilities of two previous MoH commissions – the Commission on the PDL and the Commission on Prices and Reimbursement. Currently, the NCPRMP sets price limits for prescription medicines, registers the maximum retail selling prices of over-the-counter products and makes decisions on inclusion, changes or exclusion of pharmaceuticals from the PDL (Rohova, 2013). In addition, the CoM approved a new ordinance on prices of pharmaceuticals in 2013 intended mainly to reduce the prices of pharmaceuticals. Since 2014, the prices of medicinal products included in the PDL were calculated based on 10 basic reference countries (Romania, France, Latvia, Greece, Slovakia, Lithuania, Portugal, Italy, Slovenia and Spain) and seven additional countries (Belgium, Czech Republic, Poland, Hungary, Denmark, Finland and Estonia). The mark-up of wholesalers and retailers was decreased in 2013 both as a percentage and as a maximum value depending on the drugs' price.

Prices of nearly 1400 medicines were reduced in the first year after the establishment of the NCPRMP, which led to savings in public expenditure

of nearly BGN 15 million in 2013 (€7.7 million, compared with 190 medicines in the period of 2007–2011) (Forum Medicus, 2014; Parliamentarian Committee on Health, 2014). In 2014–2017, more than BGN 54 million (€27.7 million) public expenditure on medicines has been saved (NCPRMP, 2015, 2016, 2017, 2018).

The NHIF started centralized bargaining for discounts on medicinal products included in the PLD after a change in the 2009 ordinance on the terms and rules for payment of medicinal products in 2011. Requirements for bargaining of discounts were extended in 2014 (for medicinal products intended for national, regional and municipal health programmes) and in 2015 (for medicinal products for hospital treatment of oncological diseases). In 2017, specific discount rates were introduced for medicinal products with a new “International no proprietary name”, which apply for inclusion in the PDL.

Hospital spending

In order to regulate rapidly increasing hospital spending, the NHIF introduced ceilings to hospital admissions per hospital and for each clinical pathway in 2015 (based on a CoM decree). Complying with these new payment schemes, the NHIF stopped payments for hospitalization that exceeded the set ceilings. Based on experiences in specialized ambulatory care, hospital ceilings aimed to disincentivize hospitalization and further rationalize hospital-based services. This policy was met with harsh criticism from the medical community including the Bulgarian Medical Union and hospitals’ representatives. Many hospitals, especially on the municipal level, felt threatened by the hospital ceilings because they were already indebted. In 2018, the Supreme Administrative Court repealed the 2015 hospital ceilings (Table 6.1).

At the beginning of 2016, the CoM introduced a fingerprint identification system for hospital admissions with changes in the ordinance on access to health care. This was motivated by stricter control over hospital service utilization and hoped to reduce fraud. However, the system was finally repealed by the Supreme Administrative Court later in 2016 (Table 6.1).

A new set of cost-containment measures were suggested with the draft law on the NHIF’s budget for 2018. These measures concerned both pharmaceutical and hospital spending of the NHIF introducing a ban on inclusion of new “International no proprietary name” medicines on the PDL in 2018, a

ban on concluding contracts with new hospitals and on new clinical pathways. These measures aimed at limiting the financial risks to the NHIF budget and ensuring financial sustainability in the compulsory health insurance system. On the other hand, the draft envisaged an increase in total spending of the NHIF amounting to BGN 406.7 million (€208 million) compared with 2017. These additional funds were intended to cover new prophylactic examinations (such as screening for cervical cancer) and to raise the level of payment for outpatient and inpatient health services.

The draft law on the 2018 NHIF budget has caused severe protests by patients supported by NGOs and different political parties mainly with regard to the ban on the inclusion of new medicines in the PDL for 2018. The moratorium on drugs concerned 32 drugs for oncological and other chronic diseases, for which applications for inclusion in the PDL have been prepared or already submitted to the NCPRMP. These new medicines would cost about BGN 50 million (approximately €25.6 million), added to a total expected expenditure of BGN 1.1 billion (€562.4 million) provided for medicines in 2018. After several protests, the law was enacted by the parliament without the disputed moratorium on the new drugs' inclusion in the PDL but keeping the ban on the NHIF contracting with new hospitals and for new hospital activities in 2018 (Rohova, 2017a).

In 2018, the MoH introduced a standard on financial management of state hospitals. This standard defines requirements for the management of hospitals related to signing of new contracts, prevention of increase in overdue liabilities compared to the previous year, and public procurement above a certain threshold. The introduction of the standard was motivated by the fact that state hospitals had overdue liabilities amounting to BGN 155 million (€79.3 million) in 2017, which was more than in previous years (MoH, 2018a).

■ 6.1.2 *Measures to increase efficiency of public spending*

The most significant change to public spending effectiveness and efficiency increase was made in the pharmaceutical sector by the introduction of HTA.

The introduction of HTA in 2016 aimed at increasing efficiency and transparency of the reimbursement process (for more details see Subsection 2.7.2 *Health technology assessment*). As of 30 November 2017,

the responsible Commission has assessed 45 new medicines, out of which eight have not been suggested for inclusion in the PDL, so decreasing the total 5-year negative budget impact by 34% (Salchev, 2018).

A similarly big step to the introduction of HTA were the intended reorganization of health care delivery, namely the benefit package and the elaboration of a new national health map (and regional health maps) and its introduction as a tool for selective contracting between the NHIF and hospitals. In contrast to changes in the pharmaceutical sector, almost all reform initiatives in 2015 and 2016, which were expected to have meaningful impact on efficiency increase in the curative sector, were repealed by the Supreme Constitutional Court and Supreme Administrative Court for a variety of reasons.

Changes to the benefit package

In April 2016, a reform of the benefit package covered by the NHIF was introduced by a MoH ordinance, which included:

- A split of the benefit package into a basic part and a complementary part. The basic part covered prophylaxis, diagnosis and treatment of major diseases and conditions that cause death and disability, maternal and child health in accordance with the NHS 2020. The complementary part included treatment services paid by the NHIF, which could be postponed without a risk of deterioration of patient's condition for up to 2 months. Patients in need of such services could use their VHI to receive care immediately.
- The transformation of some inpatient services to ambulatory settings in hospitals or outpatient care providers. This change introduced the clinical and ambulatory procedures discussed in Subsection 5.4.1 *Day care*, aiming at optimizing hospitalizations.

The split of the benefit package into a basic and complementary part was repealed by the Supreme Constitutional Court as non-constitutional with regard to patient rights of equal access to health care in 2016 (Table 6.1).

National health maps and its usage as a tool for selective contracting

Following intentions to allow selective contracting based on the national health map date back to 2011, further steps in this direction were made in 2015 and 2016. The 2011 national health map was replaced with an updated one in late 2015 and the CoM defined the rules and criteria for selective contracting in March 2016. A specific feature of the 2015 national health map elaboration was that it was based on the regional health maps, established by local health authorities, municipalities', physicians' and patients' representatives. In 2017, the Supreme Administrative Court repealed the other two acts – the MoH's ordinance on criteria and order for selective contracting between the NHIF and hospitals and the CoM decree for the national health map, motivating its decisions with violation of the Law on Administrative Acts (Table 6.1).

Following the repeals, at the of beginning of 2018, the CoM and the MoH prepared and published new draft acts on selective contracting and the benefit package (for more details see Section 6.2 *Future developments*).

Regulations on OOP (user fees and informal payments)

User charges were fixed for each outpatient visit and a day of hospitalization in 2012 and user fees for pensioners were further reduced in 2014 (see Subsection 3.4.1 *Cost-sharing (user charges)*). In 2016 (but initially suggested in 2013), informal payments were targeted by changes and amendments to the ordinance on access to medical care. The ordinance stipulates that health care establishments cannot ask for nor receive payments or co-payments from patients for services covered by the NHIF. In addition, all services, provided by hospitals, which could be paid directly by the patient, are regulated. It also determines the circumstances under which patients can choose a physician or a team for a specific service and pay for that choice.

Voluntary health insurance

Although the reform in the VHI sector in 2013 was motivated solely by the necessity to harmonize Bulgarian regulations with the EU's insurance

legislation (see Section 3.5 *Voluntary health insurance*) it also had other consequences on the market. The number of VHI policyholders increased from less than 3% of the total population in 2010–2013 to 9.8% in 2016. VHI expenditure grew by 28.8% in value in 2015 compared with 2013. Given the overall small share of the VHI market (VHI expenditure amounted to only 0.4% of total health expenditure and 0.8% of private health expenditure in 2015), these changes do not have a significant impact on health system financing.

■ 6.1.3 *Other reforms*

Quality, human resource development, and health system structure and management were also addressed by legislative changes. Most significant changes were made to assure quality of pharmaceuticals and improve the medical specialization system.

Assuring quality of pharmaceuticals and health care services

In 2012, Bulgarian pharmaceutical law was harmonized with relevant European Law by regulating two fields: (1) manufacture, import and wholesale of active substances and (2) pharmaceutical trade. According to amendments to the 2007 Law on Medicinal Products in Human Medicine, the production, export and trade of active substances must be in compliance with the EU directive on Good manufacturing and distribution practices. The BDA is the responsible regulatory body that licenses the manufacture and trade of such substances and oversees the implementation of those legal requirements. This change was motivated to combat widespread malpractices with counterfeit pharmaceuticals and to increase control of the production of drugs and their quality. Companies that trade pharmaceuticals, specifically those that do so without physical storage of pharmaceuticals (which would be considered as wholesale), must be licensed by the BDA and fulfil requirements set out in the Good Distribution Practice Directive.

Along the same lines, drug safety was increased. Amendments concerned the reporting and registration of side-effects (not only during clinical trials); implementing of post-trial marketing studies regarding pharmaceutical safety;

dissemination of reliable information for patients; and more transparency with regard to risk effects of pharmaceuticals. The BDA became responsible for all measures concerning pharmaceutical safety and gained shared responsibility with the European Medicines Agency throughout the EU.

In the field of health services quality, attempts to introduce quality and patient safety indicators and a system for patient satisfaction measurement failed in 2015. The draft ordinance on quality and patient safety indicators applicable to primary outpatient care, specialized outpatient care, and hospital care received strong opposition from the Bulgarian Medical Association, the union of GPs, the union of private hospitals and others and at the time of writing the quality indicators are still not introduced. In 2015, the MoH issued an ordinance on patient satisfaction measurement for health services paid by the NHIF. According to this ordinance, the NHIF had to carry out surveys on patients' expectations, needs and received medical care. In 2016, however, the Supreme Administrative Court repealed this legislation before it had entered into force (Table 6.1).

Reform of the medical specialization system in Bulgaria

The new ordinance regulating terms, conditions and financing of medical specializations, issued by the MoH in 2015, aimed at increasing residents' satisfaction regarding conditions of specialization and offering medical graduates opportunities for professional development in Bulgaria without financial constraints. The new ordinance changed the residents' status to employees of the responsible health care establishment. Residents are now entitled to work on a full-time labour contract for the duration of their residency with a health care establishment of their choice accredited for specialization training (instead of paying fees). Under the new legislation, a few problems arise. Some are related to the financial ability of health care providers to launch places for specialization training; this is in particular valid for the specialization in general medicine. However, the new system for medical specialization has a positive impact on the number of specializing physicians, which increased in 2015. In addition, the MoH registered a decrease in the number of certificates issued for work abroad, which according to the MoH is a result of the new specialization system (MoH, 2016b).

Health system structure and organization

Integrated care as a term first appeared in the 2005 Law on Health and the 1999 Law on Health Care Establishments in 2015. The Law on Health defined integrated health and social services now as

“activities through which medical professionals and specialists in the field of social services provide health care and medical supervision and carry out social work, including in-home environment, in support of children, pregnant women, people with disabilities and chronic diseases and the elderly”.

Although this can be seen as a first necessary step to implement integrated care, there are still outstanding changes to secure financing.

In 2015, a new type of health care establishment, namely, a centre for comprehensive service of children with disabilities and chronic diseases, was introduced (by changes to the Law on Health Care Establishments). The centres are state-owned establishments directly financed by the MoH, which are meant to provide screenings, prophylaxis, diagnostics, treatments, rehabilitation, long-term care and palliative care to children with disabilities and suffering from chronic diseases. To provide these comprehensive services for children the centres can sign contracts with other health care establishments for outpatient or inpatient care. At the end of 2016, the MoH provided details for the structure, activity and internal order of these centres, however, no such centres have yet been established.

■ 6.2 Future developments

Future reforms are outlined in the current national health strategy (NHS 2020), and other concepts and national programmes (see Sections 5.1 *Public health* and 7.1 *Stated objectives of the health system*). More recently (as the NHS was agreed upon in 2015), priorities in health care were launched after the election in 2017 (GERB, 2017). These include:

- strengthening prevention efforts to improve health and quality of life through expanding the scope of prevention and prophylaxis;

- stabilization of the health insurance system and demonopolization of the NHIF;
- building an integrated information system;
- overcoming regional imbalances and ensuring the functional interaction between the various levels of medical care, improvement in terms of access and quality, and assuring availability of health services in small settlements.

In the short-term, policy-makers have to react to the repeal of reforms by the Supreme Constitutional and Supreme Administrative Courts. Although a new draft was published for public discussion on criteria for selective contracting between the NHIF and hospitals in early 2018, other regulations, such as the patient satisfaction measurement, also have to be reworked. However, this adds to the uncertainty about what specific changes will be made in the health system and whether these changes are going to be implemented.

In March 2018, the Minister of Health and the WHO Director-General Dr Tedros Ghebreyesus signed the Biennial Collaborative Agreement for 2018–2019. The biennial collaborative agreement underlines priorities in the field of infectious and noncommunicable diseases, improving maternal and child health, national health policy and state preparedness in emergency health situations (MoH, 2018d).

During its first EU presidency (January–July 2018), Bulgaria chose three topics to be set on the European agenda, which are

- regulation of medicinal products,
- healthy diet for children,
- parallel export and other economic reasons leading to shortages of medicinal products.

To this end, there have been events and conferences organized during the Bulgarian Presidency and some key messages formulated. It seems likely that these documents also serve as a baseline for future national health policy.

7

Assessment of the health system

The current national health strategy, NHS 2020, focuses on a convergence of Bulgarian health indicators with the EU average. Although, there has been notable progress in several indicators such as infant mortality rate, life expectancy and an uptake of prevention efforts, there is still considerable room for improvement. The underperformance in the field of cardiovascular mortality and lack of substantial results in reducing cancer mortality could be partly attributed to deficiencies in the health system (especially so for screening, early detection and diagnosis). What is more, the growing percentage of OOP payments in Bulgaria, which is already far above the EU average, highlights the inadequate financial protection provided by the SHI system to citizens. Overall, OOP spending on health increased more than threefold between 2003 and 2015 and accounted for 47.7% of total health spending in 2015. Inevitably, this has adverse implications for the accessibility of health care and puts many disadvantaged groups (those on low income, residents in rural areas, ethnic minorities, those suffering from chronic diseases, and older people) at a high risk of impoverishment and forgone care. Citizens as well as medical professionals are dissatisfied with the performance of the health system and the quality of care, for which a national monitoring system or standardized data are lacking.

The Bulgarian health system is further challenged by regional imbalances of medical professionals, which are concentrated in urban areas. Access to physicians is further deteriorating, especially in primary care. Inpatient care remains the dominant sector and records the highest hospital admission rates

for heart failure (1334.9 per 100 000 population), diabetes mellitus (721.2 per 100 000 population), and asthma (183.0 per 100 000 population) among all EU countries in 2015. In contrast, the outpatient care sector remains small, and its share in total health expenditures is the lowest in the EU. There has been some progress in terms of accountability and transparency in the health system, which is an encouraging sign.

■ 7.1 Stated objectives of the health system

After a broad public discussion in 2013–2015, the NHS 2020 was officially approved by the Parliament. In contrast with preceding strategies, it clearly stated five strategic goals to be achieved by 2020 regarding, for example, infant mortality. The goals were based on 2011 analyses but not updated during the almost three years of discussions. Hence, when the strategy was officially approved by the Parliament in 2015, three out of five strategic national targets (infant mortality, mortality in the 1–9 age group, and life expectancy over 65 years) were already achieved (Table 7.1). In general, these were not very ambitious goals in the first place when compared with the corresponding EU28 average. The goals to decrease the SDR among adolescents (10–19 years) and adults (between 20 and 65 years), were yet to be reached in 2016.

Furthermore, the national health goals are targeted by specific policies in three priority areas such as improving health conditions throughout life; developing and managing a fair, sustainable and effective health care system, and strengthening public health, and specifying policies, for example, implementing an e-health system.

The NHS 2020 represents an advancement of health policy compared with previous strategies. Areas of improvements are:

- underlining the need for long-term health policy strategies, continuity and coherence in governance on the basis of broad social and political consensus;
- ensuring sustainability of the implementation process through action plans and stakeholder consultation;
- stressing health system integration (between different levels of health care provision) as well as service integration (focusing on both health and social needs);

- pressing problems such as the lack and migration of health professionals, health prophylaxis and prevention, regional inequalities, anti-corruption practices, health of elderly and people with disabilities, development of civil society and the participation of citizens in the management of the system;
- the allocation of responsibilities between the institutions and cross-sectoral cooperation;
- emphasis on regional health policies.

It remains to be seen, whether the NHS 2020 can result in actual improvements and solutions to the health system. The biggest challenge remains the financial sustainability of the health system, which has also been addressed by the Council of the European Union recommendation since 2014 (Council of the EU, 2014). In line with these recommendations, the Government outlined priorities for the health system development in 2017–2021 (CoM, 2017b).

TABLE 7.1 Comparison between NHS 2020 goals and EU28 and Bulgarian performance, selected years

INDICATORS	NHS 2020 GOALS	PERFORMANCE	
		REACHED IN EU28 AVERAGE (YEAR)	BULGARIA
Infant mortality, 0–1 years	6.8 per 1000 live births	6.5 in 1998	6.6 in 2015 6.5 in 2016
SDR, 1–9 years	0.24 per 1000	0.26 in 2002	0.25 in 2015 0.21 in 2016
SDR, 10–19 years	0.28 per 1000	0.26 in 2002	0.31 in 2016
SDR, 20–65 years	4.19 per 1000	4.1 in 1997 ^a	5.1 in 2016
Life expectancy above the age of 65 years	16.4 years	16.4 in 2000	16.3 in 2013 16.1 in 2014

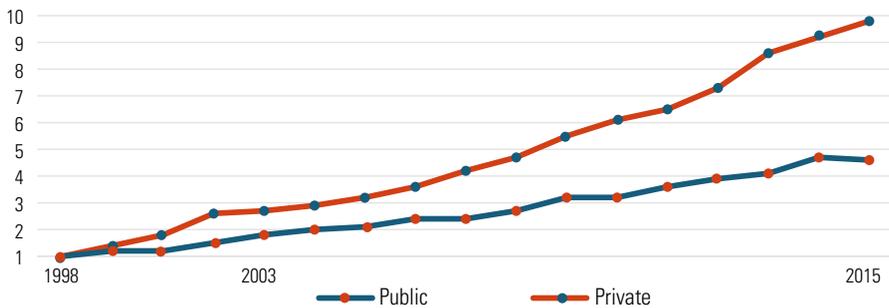
Sources: WHO Regional Office for Europe, 2018; NSI 2018a.
Notes: SDR: standardized death rate; ^a25- to 65-year age group.

■ 7.2 Financial protection and equity in financing

■ 7.2.1 Financial protection

The far higher (compared with all EU countries) and growing percentage of OOP payments shows the inadequate financial protection that the SHI system provides to citizens. Since 1998, private spending growth has substantially outpaced the public expenditure growth rate on health and the gap has deepened after 2003 (Fig. 7.1).

FIG. 7.1 Growth index in public and private health expenditures

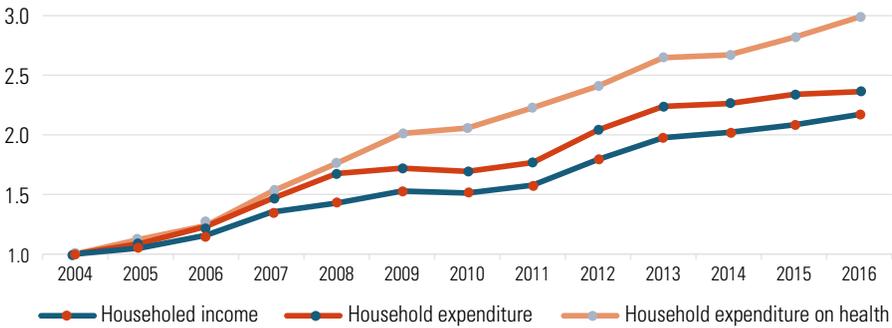


Source: Eurostat, 2018.

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

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 expenditure, spending on health increased from 2.9% in 1999 to 6.7% in 2016. During the same period, the growth in household expenditure on health substantially outpaced the growth in both household income and total consumer expenditure (Fig. 7.2). Unsurprisingly, household expenditure on health moved from penultimate ninth largest consumer spending category in 1999 to the fourth largest in 2008 and kept this place till 2016 (Dimova et al., 2012; NSI, 2018a).

Overall OOP spending on health increased more than threefold between 2003 and 2015 (Table 7.2). In the same period, the mean annual inflation was 4.1% while the mean annual inflation in health care only was 2.4% (NSI, 2018f). Looking at the OOP spending by type of service, the largest growth was observed in inpatient services, which grew by more than four times in the same period with annual inflation rate for hospital services being an average of 8.2% for 2003–2015.

FIG. 7.2 Growth index in household income, household expenditure and household expenditure on health per person

Source: NSI, 2018a.

Note: The index calculation base is the value for 2004.

TABLE 7.2 Out-of-pocket household spending on health by type of service in million units and as % of total OOP expenditure

TYPES OF SERVICES		2003		2005		2010		2015	
		million	%	million	%	million	%	million	%
Pharmaceuticals and other goods	BGN	746.9		902.8		1662.1		2540.6	
	€	381.9	74.4	461.6	71.5	849.8	72.3	1299.0	75.7
Growth index ^a		1		1.2		2.2		3.4	
Outpatient care	BGN	181.6		199.5		301.3		503.4	
	€	92.9	18.1	102.0	15.8	154.1	13.1	257.4	
Growth index		1		1.1		1.7		2.8	
Inpatient care	BGN	75.3		161.0		335.8		313.1	
	€	38.5	7.5	82.3	12.7	171.7	14.6	160.1	9.3
Growth index		1		2.1		4.5		4.2	
Total	BGN	1003.8		1263.4		2299.2		3357.0	
	€	513.2		646.0		1175.6		1716.4	
Growth index		1		1.3		2.3		3.3	

Source: NSI, 2018g.

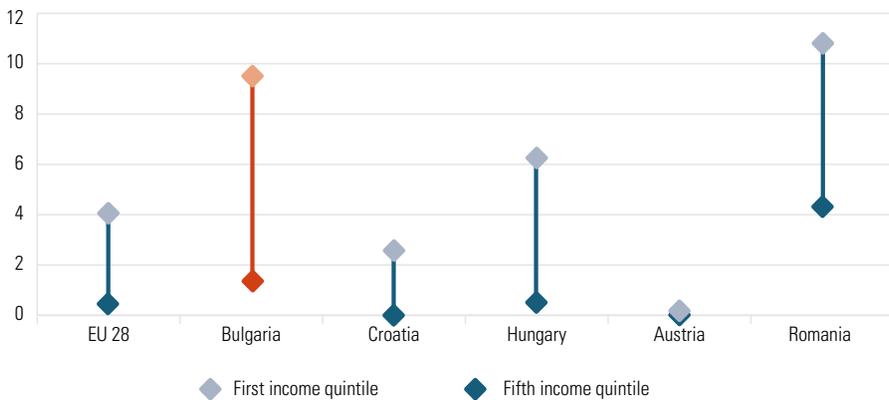
Note: ^aThe index calculation base is the value for 2003.

Near 4.7% of the Bulgarian population reported unmet health care needs in 2015, which was the seventh largest share among EU Member States (EU28 average: 3.2%; Eurostat, 2018).

Unmet needs remain high in the lowest income group, with 11.7% indicating unmet need for medical care in 2015. Financial reasons are by far

the leading cause (9.5%, Fig. 7.3), followed by waiting lists and the distances to the next health care provider (each 1.1%, respectively). For dental care, a total of 11.6% reported an unmet need, out of which 10.4% reported financial reasons for the unmet need. In dental care, there is a clear difference in prevailing usage among higher income groups. Dental services are mostly paid by patients (with very few exceptions), which creates financial barriers to their use by people with lower incomes. In 2015, 2.3% of respondents of the highest income quintile reported an unmet need for dental examination for financial reasons (and only 1.4% for the same reason for medical examinations). Waiting times are also among the reasons for unmet needs in the fifth income quintile for both medical and dental examination.

FIG. 7.3 Unmet needs due to costs according to income quintile, 2015, selected countries



Source: Eurostat 2018.

Note: First quintile presents the poorest group, fifth quintile presents the richest group.

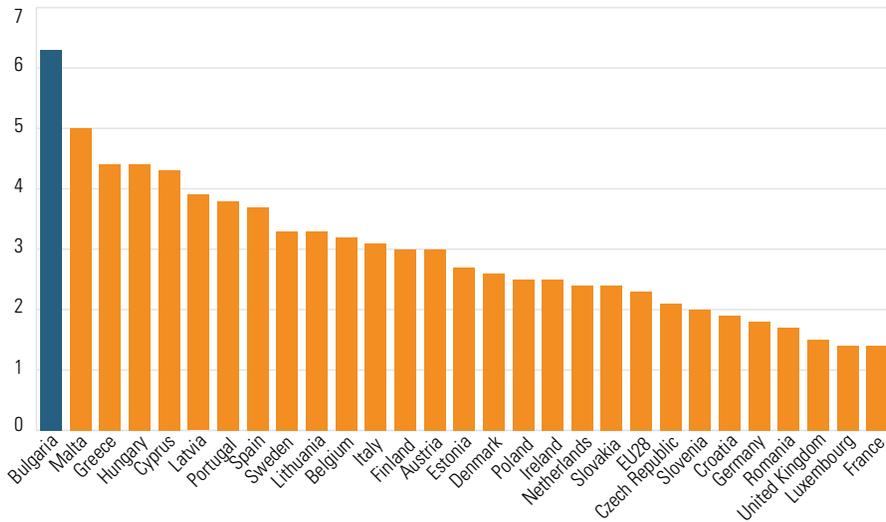
According to the International Bank for Reconstruction and Development, more than 20% of the lowest quintile reported unmet need, and only Latvia reported an even higher share. Financial protection has deteriorated between 2010 and 2013 since excessively high household expenditures on health pushed some households into poverty to a greater extent, including households in the richest quintile (International Bank for Reconstruction and Development, 2015).

A significant proportion of the people in need of health care reported forgone outpatient specialist visits (40.4%) and hospital care (29.1%) due to financial reasons in 2010 (Tambor et al., 2014). A majority of patients have

paid directly for outpatient specialist visits (72.4%) and hospital care (61%), some of which have borrowed money or sold assets to pay for health services (5.6% for outpatient visits and 18.5% for hospital care) (Tambor et al., 2014).

These data, although referring to the general population and so probably reflecting also the substantial number of uninsured individuals in Bulgaria, together with the high OOP expenditure on health, provide strong evidence for a weak financial protection of the SHI system to the population. Bulgaria had the highest health expenditure share of the final household consumption among all EU Member States in 2016 (Fig. 7.4).

FIG. 7.4 Out-of-pocket as a share of final household consumption, 2016, EU Member States



Source: OECD/ European Observatory on Health Systems and Policies, 2017.

■ 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 has not been achieved. While in the SHI system the financial burden is distributed among insured people, their employers and the state (see Section 3.2 *Sources of revenue and financial flows*) there is an upper assessment base for the contribution rate (BGN 2600, €1329 since 2015), 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 (2.9% of the state tax revenue was allocated to health in 2017; tax revenue decreased to 9.2% of total expenditure on health in 2015, see Section 3.2 *Sources of revenue and financial flows* and Subsection 3.3.2 *Collection*). 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 be likely to have a progressive effect on financing. This poses also a significant problem, as there is a disproportion in SHI contributions for those individuals insured by the state and for the other categories of insured individuals. As mentioned in Subsection 3.3.2 *Collection*, the state does not pay the full size of SHI contribution, which exaggerates inequity in financing (see Subsection 3.3.2 *Collection, Contributions pooled by the NHIF*).

Moreover, the substantial number of uninsured people (some of them high-income, self-employed people who do not trust the insurance system) (see Subsection 3.3.1 *Coverage*) exacerbates financing inequity.

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

■ 7.3 User experience and equity of access to health care

■ 7.3.1 User experience

Several studies indicate that consumers' perception of the overall system and the health services they receive remains mostly negative.

There is no routinely conducted national survey on public perception of the health system as of 2017. In 2013, 45.5% of participants in a survey conducted (with more than 1300 respondents) indicated dissatisfaction with the national health care system. Reasons for this dissatisfaction varied from low quality of health services, high OOP expenditures, difficult access, corruption and lack of communication to the low level of responsiveness of physicians. Furthermore, the low degree of overall satisfaction with the health care system is also associated with the lack of choice of health insurance funds (Petrova, 2013).

A 2014 Eurobarometer survey assessed individual perceptions of patient safety and quality of care (European Commission, 2014b). Most Bulgarians rated the quality of health care provision in the country as poor (68%), whereas only 29% judged it as good (and 3% indicated “don’t know”). There are only a few other EU Member States that had a similar low ranking (for example, Romania with 25%; the EU average was 71%). Seven out of ten respondents in Bulgaria (72%) indicated that health care quality in the country is worse than that of other Member States, and 10% believe the quality of health care is the same as that of other Member States. Bulgarian citizens rely mostly on informal sources for information on the quality of health care – 58% are most likely to say that the opinion of other patients would be the most useful information when assessing hospital quality (which is the highest value in the EU and far above the EU28 average of 31%). In more general terms, seven out of ten Bulgarians cite friends or family as their primary source for information when assessing health quality overall, which is again the highest value within the EU, whereas other sources, such as statistics (6%), NGOs (3%), internet sources (19%), play only a marginal role (European Commission, 2014b).

The Institute of Market Economics conducts regular surveys on the quality of health services at the regional level. In its most recent survey (2015), more than 60% of respondents were satisfied with the quality of hospital services in the districts of Targovishte, Ruse and Varna (Institute of Market Economics, 2015). In the districts of Kyustendil, Sliven, Stara Zagora and Smolyan, more than half of survey participants indicated their dissatisfaction with hospital services. Nearly 70% of respondents indicated their dissatisfaction in the districts of Sofia, Plovdiv and Burgas, as well as in smaller districts of Silistra and Vidin. This is contrasted by an overwhelming share of about 90% indicating dissatisfaction with hospital services in Pernik (Institute of Market Economics, 2015).

In 2015, the MoH issued an ordinance on the obligatory investigation of patient satisfaction with medical activities by the NHIF by annual surveys, which was appealed by the Supreme Administrative Court in 2016 (see Section 6.1 *Analysis of recent reforms*).

■ 7.3.2 *Equity of access to health care*

The constitution guarantees equal rights to health care for all insured citizens; nevertheless, specific population groups (people at social disadvantage, unemployed or disabled individuals, rural residents and ethnic minorities) experience problems accessing services, a fact that negatively affects their health status.

Equity concerns among districts

Population services vary substantially in terms of quality and accessibility in different districts. The distribution of resources is uneven across regions and districts, which particularly refers to health care professionals and health care establishments.

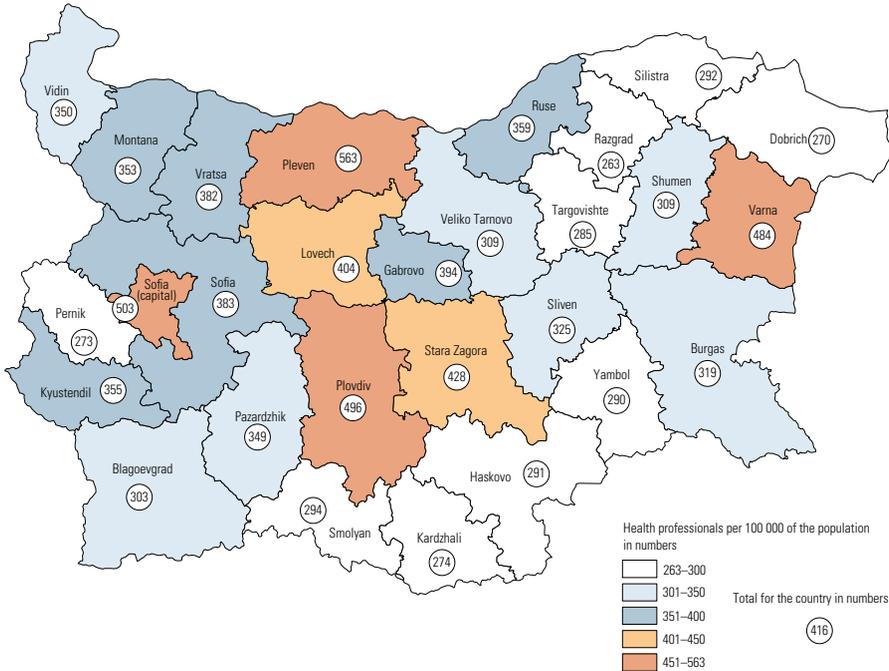
The number of physicians per 1000 population in the west part of the country (north-west and south-west regions) exceeds the average value for Bulgaria (NSI, 2017g). In the north-west region, this proportion increases due to population ageing and diminution, whereas in the south-west region the number of physicians rises due to the higher concentration of health care establishments in the capital Sofia. The availability of health professionals in the south-east and north central regions lags behind.

Regional imbalances in the distribution of health workers become even greater among the 28 districts in the country (Fig. 7.5; see Section 4.2 *Human resources*). There is an upward trend in territorial imbalances of availability of physicians across districts, expressed in absolute or relative differences.

Similar imbalances are observed in the distribution of GPs by districts (see Section 5.3 *Ambulatory care*). According to the 2016 National Health Map, the most considerable shortage of GPs is observed in the eastern part of the country (with the largest shortages in the south-east and north-east regions). In 2015, the district of Burgas lacked more than 130 GPs, followed by the

district of Varna. However, all other districts also cannot provide adequate access to primary medical care due to an insufficient number of GPs, which is causing severe difficulties in the overall organization of medical care (Atanasova, Valkanova & Rohova, 2017).

FIG. 7.5 Medical personnel per 100 000 population by Bulgarian districts, 2017



Source: NSI, 2017g.

Note: The number of health professionals relates to the number of physicians and nursing professionals.

Imbalances are also observed in the distribution of specialists – with a high concentration in university centres and considerable shortage in the small cities and rural areas. Otorhinolaryngology, orthopaedics and traumatology, dermato-venereology and ophthalmology are especially affected by territorial imbalances. These imbalances can be considered as barriers to accessing specialized medical care in some districts. Additionally, this correlates with the population's health outcomes. Districts recording a high infant mortality also have a low specialist per population ratio. For example, in Lovetch and Sliven – districts with the highest infant mortality in the country – the number of specialists in paediatrics, and obstetrics and gynaecology are far below the average values for Bulgaria (Rohova, 2017b).

There are significant territorial imbalances up to a factor of three in the distribution of dentists by districts (Rohova, 2017b). Dentists are heavily concentrated in the capital Sofia and several big towns and sparse in smaller cities and rural areas.

In addition, territorial imbalances of physicians and dentists are also associated with an uneven distribution of health care establishments. Most hospitals are concentrated in the capital, university centres and big cities. In 2016, there was almost a threefold difference between the district with the highest and the district with the lowest hospital beds per population ratio (NSI, 2017a).

Finally, there are general territorial imbalances between urban and rural areas in Bulgaria. The rural population more often reported unmet health care needs due to costs (21.7%) compared with those living in small towns (15.8%) and cities (14.4%) in 2014. Payments for a check-up pose a barrier to access when patients have no referral from a GP, or they are uninsured. Rural residents went without a medical examination or hospitalization more often due to expenses (payment for a check-up, transportation cost). The problems in access to health care services mainly in small towns and villages are associated with the insufficient number of health care professionals and facilities in these settlements. Hence, long distances to health service providers rank second as a reason for unmet need for health services. In 2014, 6.9% of respondents in rural areas indicated unmet need, 3.2% in towns and suburbs, and only 1.8% of those living in cities. According to a 2014 study, the respondents reported that most often they postponed visits to GPs – approximately 62% of small-town residents and 59% of individuals living in rural areas did not use outpatient services when needed (Atanasova, Rohova & Dimova, 2016). Although the reasons for forgone care or delayed visits differ, the most important are those indicating waiting time in front of the physician's office and costs.

Equity concerns regarding income

The financial burden of OOP health expenditure is a serious barrier in access to health care services primarily for the more impoverished part of the population, uninsured people and other vulnerable groups. A 2014 study found robust differences between the lowest and highest income groups in seeking the care of a general practitioner, a dentist, and when admitted to a hospital (Rohova, Atanasova & Dimova, 2017). According to the survey,

poorer people more often use primary and hospital health services, because of heightened demand due to their health status.

Consequently, there are serious barriers to access medical care along various lines, with territorial imbalances, inequity in the availability and inequity in health care utilization being a persistent concern. Among the groups experiencing problems in accessing health care services are also ethnic minorities, especially the Roma minority. A serious barrier is the lack of health insurance among the Roma population (see Section 5.14 *Health services for specific populations*).

The government has developed and adopted a number of strategic documents to address the problems experienced by disadvantaged populations, such as the National Strategy for Reducing Poverty and Promoting Social Inclusion 2020, the Nation Strategy for Persons with Disabilities 2020, and the National Strategy of the Republic of Bulgaria for Roma Integration 2020.

■ 7.4 Health outcomes, health service outcomes and quality of care

■ 7.4.1 Population health

In the last two decades and especially so after the accession to the EU in 2007 Bulgaria has achieved some improvements in population's health status indicators (Postolovska, 2015). However, it is falling behind compared with the EU28 average, with the newer EU Member States, and especially compared with the better performers. Due to a slow pace of improvement, the Bulgarian 2015 life expectancy was already 4 years below that of the Czech Republic (74.7 versus 78.7 years), and 0.3 years lower than life expectancy in Romania (75 years). The gap with the EU28 average (80.6 years) has been widening in the last decade and stood at 5.9 years of difference in life expectancy in 2015 (Eurostat, 2018).

A summary of main health outcomes, analysed in a greater detail in Section 1.4 *Health status*, shows the following.

- Bulgaria registered the highest negative rate of natural population change (-6‰) in the EU in 2016, driven by the highest overall

mortality rate in the EU (15.1 deaths per 1000 population) and a very low birth rate (9.1 live births per 1000 population).

- Although cardiovascular mortality has decreased in the last decade, it is still the highest in the EU and several times higher than the EU average.
- With respect to cancer mortality, Bulgaria has a relatively moderate position in the EU. Contrary to the EU-wide tendency for reductions of deaths due to malignant neoplasms, this type of mortality has been fluctuating without showing any significant signs of decrease in Bulgaria.
- Child mortality (both infant and under-5) has been decreasing: between 2005 and 2015 infant mortality rate fell by more than one third, from 10.4 to 6.6 deaths per 1000 live births. Still, all related indicators (also neonatal, post-neonatal and perinatal mortality rates) remain above the EU average.
- There is a high rate of premature mortality in the country. For some causes (years of life lost due to hypertensive heart disease) the premature death rate numbers are the highest in comparative country groups (IHME, 2016).
- Avoidable mortality is twice as high as the EU average. A similar high level is also recorded for preventable mortality. What is more, the indicators show no steady improvement pattern as in other EU Member States, but tend to go up or fluctuate.

Population health status is not only a result of received medical services, but depends on the socioeconomic, cultural, political and environmental conditions in which people live. Significant 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, healthy lifestyle) overall socioeconomic and political dynamics as well as better organization and performance of the health care system.

Comprehensive studies are lacking to assess the influence of this factor. Also such an analysis is further complicated by the complex political and economic situation that the country has experienced in the last years (characterized by political volatility, economic distress, a natural demographic decline

and a general lack of consistency of reforms). Still, fairly valid conclusions about the effect of the system on health outcomes can be inferred.

The underperformance in the field of cardiovascular mortality and lack of substantial results in reducing cancer mortality could be partly attributed to problems and deficiencies of the health system (especially so for screenings, early detection and diagnosis). For example, in 2014, only half (52.2%) of women aged 20–69 years reported having had a Pap smear test in the previous 3 years, whereas this proportion in the EU28 was 78%. Similarly, in the same year, the proportion of people aged 50–74 years who had had a colorectal cancer screening in the previous 2 years in Bulgaria was 5.7% compared with 31.3% in EU28 countries on average (European Commission, 2017c). The uneven reduction of child amenable mortality can also be attributed to deficiencies in the health care system and reflects an inefficient and poorly performing health system distressed by unfinished health reforms and the inconsistent, uncoordinated, even controversial, governance moves discussed in previous chapters. Similarly, the health system is further challenged by a quickly increasing burden of chronic diseases.

■ 7.4.2 *Health service outcomes and quality of care*

The quality of medical care was and remains one of the most substantial problems, although it is less discussed in the political arena than the financial stability of the system. The unsatisfactory health status of the Bulgarian population combined with the overall dissatisfaction with the health system underlines the problem of health service quality (see Subsection 7.3.1 *User experience*).

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 at both national and organizational levels. Hence, the analysis of health care quality is based only on vaccination rate and preventable mortality (preventive care indicators) and amenable mortality and hospital admission rate for some diseases (curative care indicators).

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 7.3). However, the vaccination rates declined after 1992–1993 with some variations over the years. In 2015, all vaccination rates were below the EU averages. Fortunately, incidence of some vaccine-preventable diseases has declined in the last few years as well.

TABLE 7.3 Preventive care indicators

% OF CHILDREN VACCINATED AGAINST:		1990	2000	2005	2010	2015
Measles	BUL	99	89	96	97	92
	EU	78	92	94	97	94 ^a
Diphtheria	BUL	99	93	96	94	91
	EU	88	92	96	97	97 ^a
Tetanus	BUL	99	93	96	94	91
	EU	88	92	96	97	97 ^a
Pertussis	BUL	99	93	96	94	91
	EU	88	92	96	97	97 ^a

Source: WHO Regional Office for Europe, 2018.

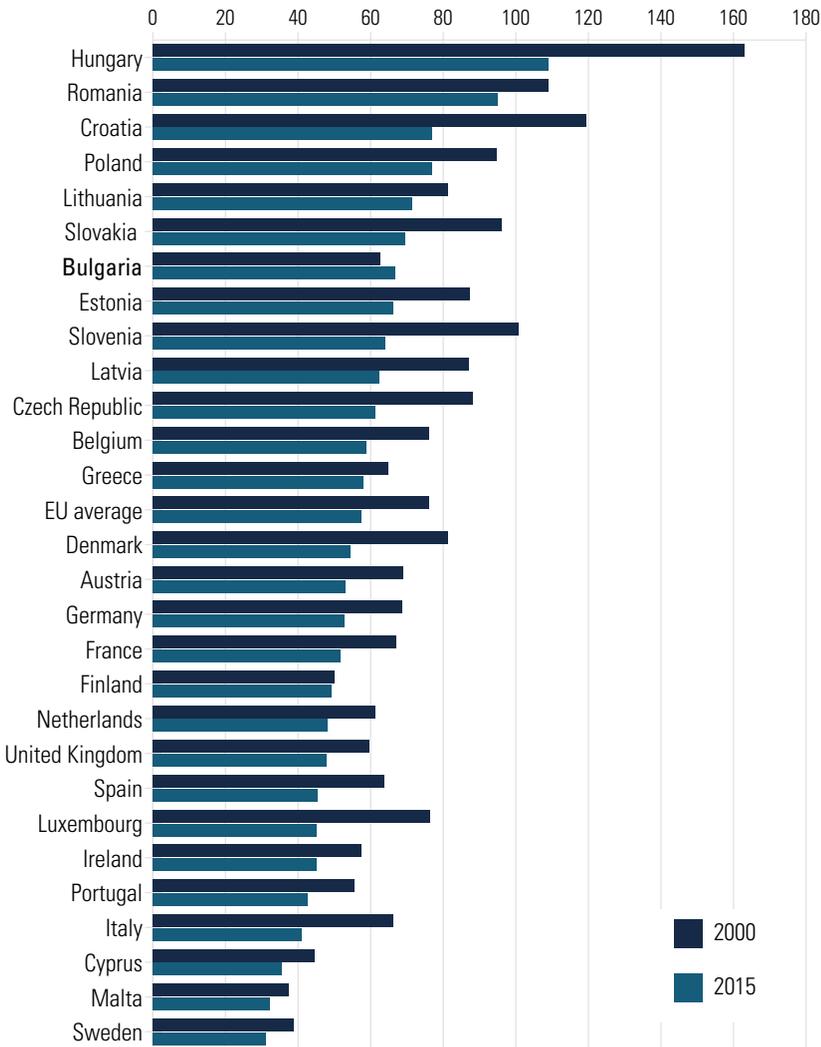
Note: ^a2014.

With regard to the quality of public health interventions, data on preventable mortality suggests room for improvement. In contrast to the EU-wide decrease between 2000 and 2015, preventable mortality increased for Bulgaria (Fig. 7.6).

Amenable mortality in Bulgaria is the second highest after Romania in 2015 (Fig. 7.7). Although it decreased in comparison with 2000, the improvement was slower than in other countries, such as Estonia and Latvia. As a result, Bulgaria moved from fourth to second place in this negative ranking.

Bulgaria had the highest hospital admission rates for heart failure (1334.9 per 100 000 population), diabetes mellitus (721.2 per 100 000 population), and asthma (183.0 per 100 000 population) among all EU countries in 2015 (Figs 7.8 and 7.9). The hospital admission rates for diabetes mellitus and especially for heart failure increased between 2006 and 2015, whereas hospital admissions for asthma varied during this period. Although these data are in line with the general increase in hospital admissions, they could be attributed to some financial incentives to hospitals. Moreover, it suggests that the problem with low quality of both outpatient and inpatient services is deepening.

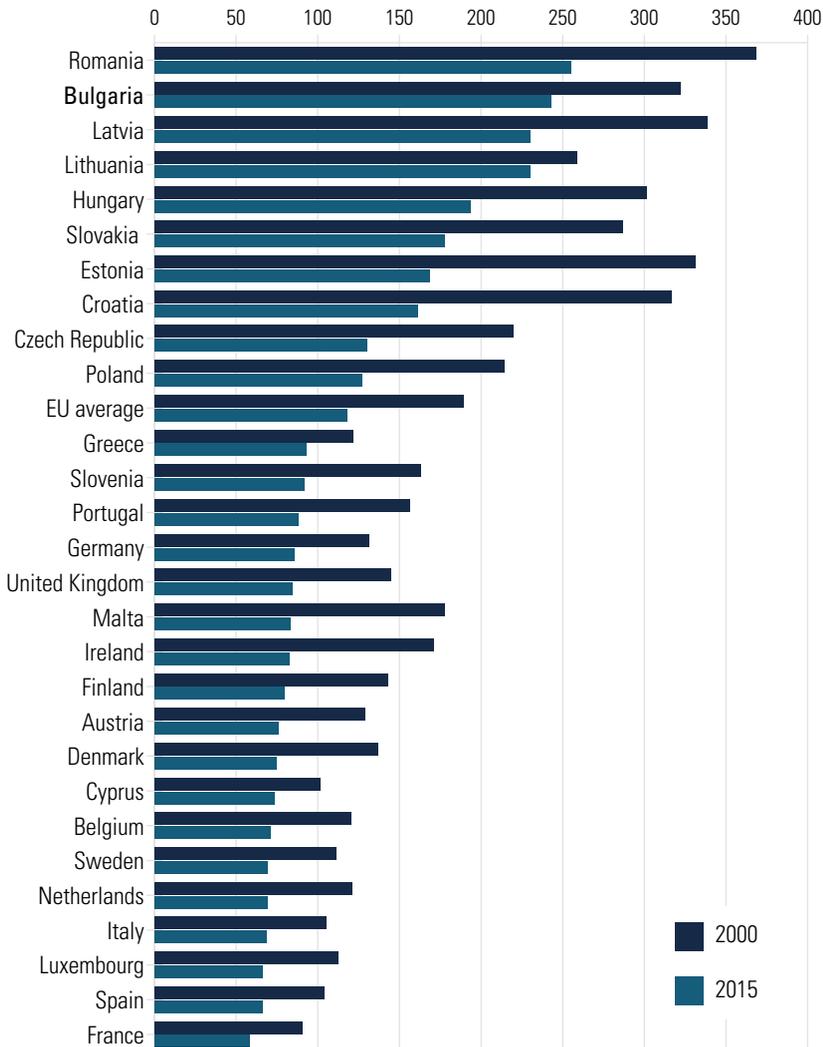
FIG. 7.6 Preventable mortality, standardized death rate per 100 000 population, 2000 and 2015 (or latest)



Source: WHO global mortality database, released October 2017

Notes: Amenable and preventable mortality is based on list by Nolte & McKee latest year for Belgium, Bulgaria, Finland, France, Greece, Italy, Malta, Portugal, Slovakia; 2013 latest year for Ireland; 2001 baseline year for the United Kingdom; 2004 baseline year for Cyprus.

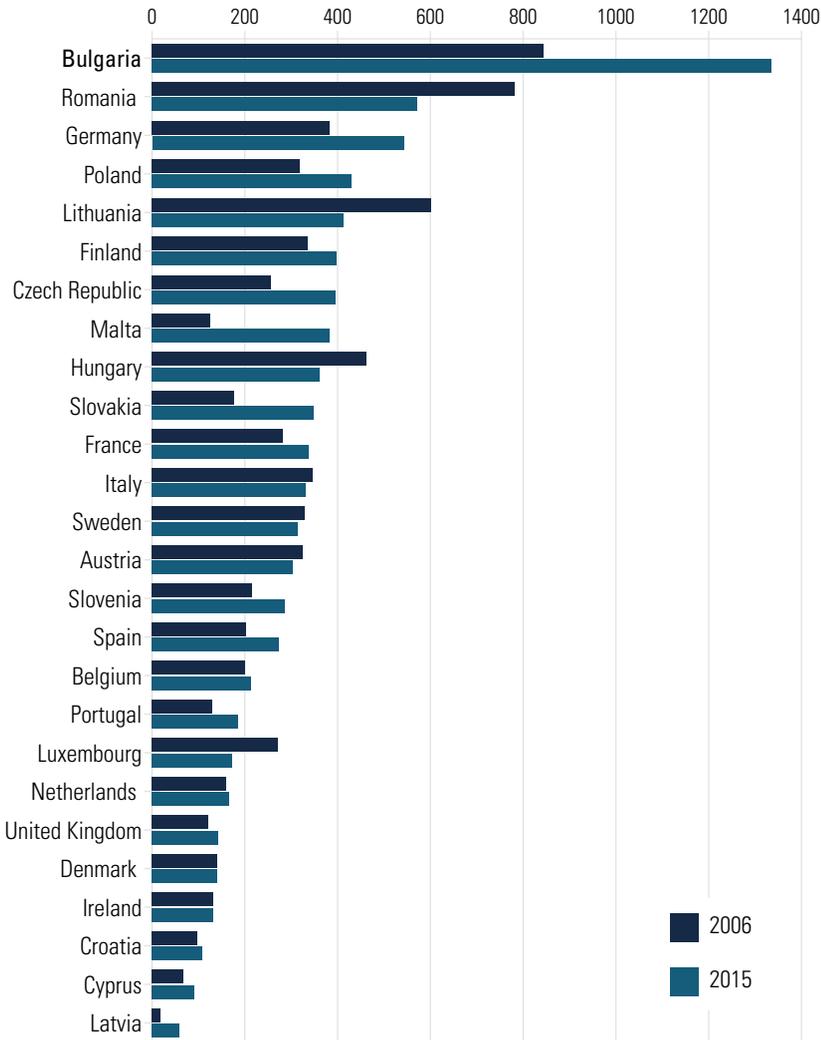
FIG. 7.7 Amenable mortality, standardized death rate per 100 000 population, 2000 and 2015 (or latest)



Source: WHO global mortality database, released October 2017.

Notes: Amenable and preventable mortality is based on list by Nolte & McKee. latest year for Belgium, Bulgaria, Finland, France, Greece, Italy, Malta, Portugal, Slovakia; 2013 latest year for Ireland; 2001 baseline year for the United Kingdom; 2004 baseline year for Cyprus.

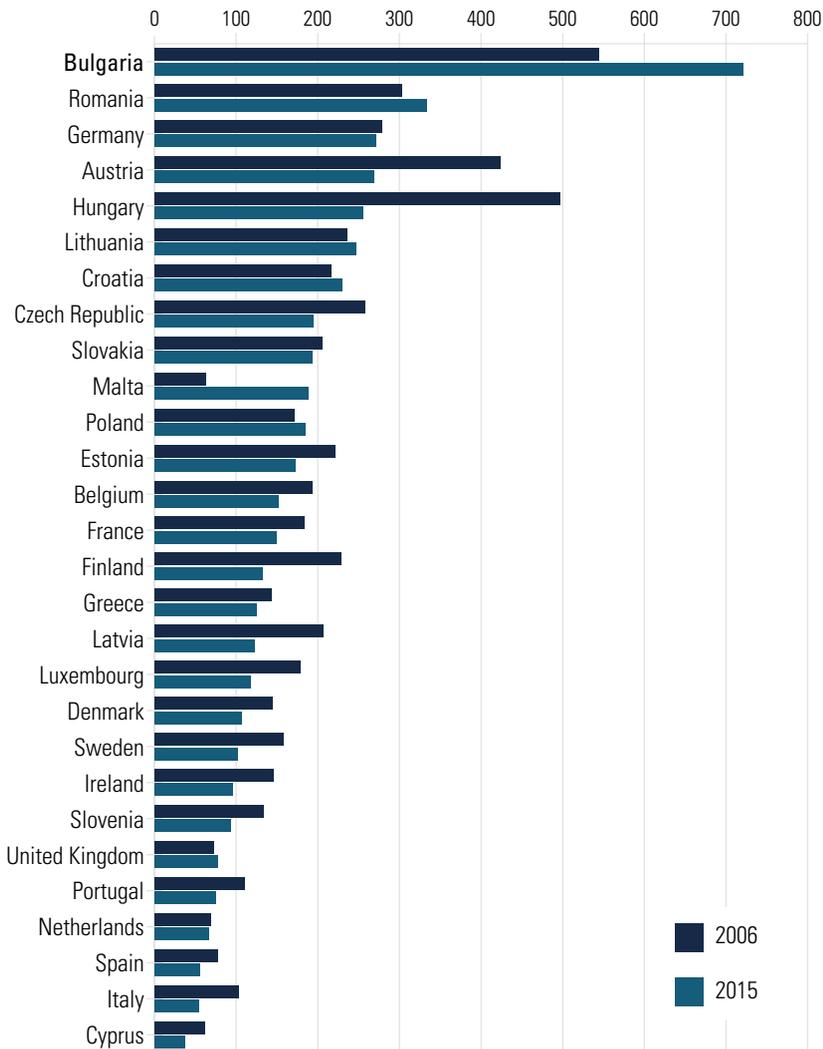
FIG. 7.8 Hospital discharges by heart failure, inpatients, per 100 000 population, 2006 and 2015 (or latest)



Source: Eurostat, 2018.

Notes: 2014 latest year for Belgium, Denmark; 2012 latest year for Netherlands; 2007 baseline year for Romania.

FIG. 7.9 Hospital discharges by diabetes mellitus, inpatients, per 100 000 population, 2006 and 2015 (or latest)



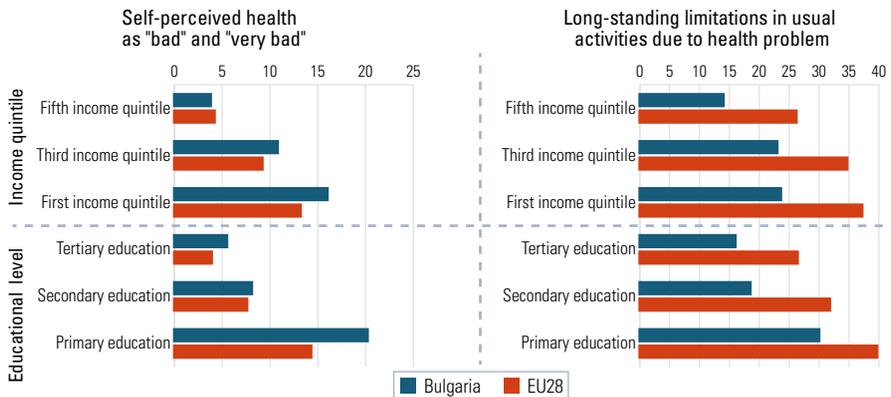
Source: Eurostat, 2018.

Notes: 2014 latest year for Belgium, Denmark, Estonia; 2012 latest year for Greece, Netherlands; 2007 baseline year for Greece.

With regard to quality, Bulgaria possesses well-trained medical personnel with world-class medical achievements (for example, Petrov et. al., 2017), technology (for example Da Vinci surgical systems) and health care provision; however, as data suggest, overall and nationwide quality assurance is problematic. There are wide regional differences in the quality of health care and numerous factors that hamper patient safety, such as the absence of a medical error reporting system and risk management system, lack of medical personnel, and insufficient competence in the field of patient safety (EAMA, 2016). According to the EAMA's report for 2016, the majority of signals and complaints by patients and institutions (62.4%) have been related to unsafe care, followed by patient rights violation (11.9%), ethical problems (5.1%) and informal payments (3.5%). According to the latest European Commission's Special Eurobarometer on patient safety and quality of care, 11% of Bulgarians have experienced an adverse event, most of which have not reported it (European Commission, 2014b).

■ 7.4.3 *Equity of outcomes*

Equity of outcomes is a challenge, not only because of variations in health needs but also because of socioeconomic disparities and territorial imbalances. There are significant disparities in self-perceived health status across different socioeconomic groups, as measured by income and educational attainment level (see Fig. 7.10). In 2015, 79.3% of people in the highest income quintile reported being in very good or good health, compared with 51.9% of people in the lowest income quintile (Eurostat, 2018). In the same year, more people with low income (20.3%) experienced long-standing limitations in usual activities due to a health problem in comparison with people with high income (8.8%) (Eurostat, 2018). Similar differences are observed in self-perceived health between people differentiated by their level of education – those with higher (tertiary) education are more likely to report being in good health (Eurostat, 2018). The education level has a significant impact on life expectancy, as well. According to Eurostat, people with tertiary education are expected to live 7.3 years longer than people with primary and lower secondary education in 2015 (Eurostat, 2018). For men, this gap is even broader (7.9 years).

FIG. 7.10 Health outcome according to income quintile and education, 2015

Source: Eurostat, 2018.

Concerning territorial inequalities, the health status in villages is substantially lower than in cities. Maternal and infant mortality rates reflect among other issues the poor access to health services of rural residents. In 2016, the infant mortality in towns amounted to 5.8 per 1000 newborns in comparison with 8.5 per 1000 newborns in villages (NSI, 2018c). However, this was reduced compared with 2010. Infant mortality varies widely across districts – the difference between the district with the highest infant mortality and the district with the lowest was more than sixfold in 2016 (NSI, 2018c).

There is also further evidence to substantial regional differences. For instance, all-cause mortality presented by the crude death rate varies between regions. Although these differences are not substantial (after age-standardization), there is a clear, stable north–south gradient with higher mortality rates in the northern parts of the country (Atanasova, Mircheva & Dokova, 2016). Moreover, a significant positive correlation between mortality from all causes and share of the population living below poverty line by districts is observed (Dokova et al., 2013). Regional differences are also identified in morbidity, socioeconomic factors and health risks for the population (Salchev & Dikova, 2015).

Health status among vulnerable population groups is characterized by lower life expectancy, shorter healthy life expectancy, higher morbidity and increased mortality.

Reducing health inequalities is one of the priorities set in the NHS 2020 (MoH, 2015c). In 2017, the newly elected government also re-assured on their intention to overcome regional imbalances, improve access and quality

and assure the availability of health services in small settlements. However, by the end of 2017 specific measures had not been undertaken.

■ 7.5 Health system efficiency

■ 7.5.1 *Allocative efficiency*

Although the inefficient use of financial resources for health is a well-recognized problem by both policy-makers and health professionals, it receives less attention than the lack of resources. There is a constant pressure from health professionals and some patient groups to raise health expenditure; however, the constant and significant increase does not result in improved health status for the population, nor in the system's financial stability. Hence, it proves that inefficient use is a larger problem than the lack of financial resources.

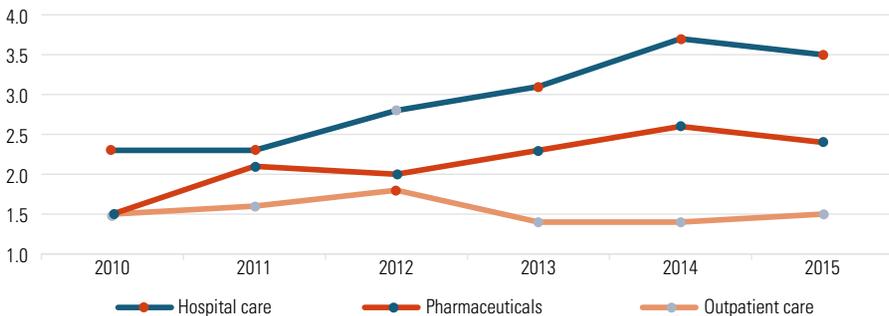
The inefficient use of financial resources results from payment mechanisms that do not promote efficiency and from the failure to allocate financial resources efficiently. Priority setting is mainly based on available resources and political pressure rather than on evidence about measures with proven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

- Health expenditure increased more than four times since the introduction of the SHI system; however, the results have remained unsatisfactory. The system continues to be financially unstable, experiencing a lack of financial resources and worsening ability to assure financial protection to the population. Continuous increase in OOP, despite the increase in public expenditure, reflects ineffective public resource allocation. The nation's health status has not improved substantially with some indicators suggesting even poorer quality. Large inequities and inequities continue to exist.
- The increase in public health spending for hospital care and pharmaceuticals is much higher than for outpatient care and it was only in 2015 that the expenditure growth for outpatient services outstripped the growth of hospital and pharmaceutical spending (Fig. 7.11); however, the share of outpatient care remains the smallest in the

EU. Public expenditure on preventive care was only 2.3% of the total current health expenditure in 2013–2015 (Eurostat, 2018).

- In addition, there are huge regional differences in the average payments for hospital care per insured individual. The NHIF's hospital expenditure varied among districts from BGN 84 (€42.9) to BGN 4320 (€2208.80) per insured individual in 2015 (NHIF, 2016), which underlines the overall hospital care inefficiency.

FIG. 7.11 Growth index in public expenditure by type of service



Source: NSI, 2018g.

Note: The index calculation base is the value for 2005.

In 2015 and 2016, some attempts to improve allocative efficiency were made, but with only partial success. A milestone for cost-effectiveness considerations is the introduction of HTA since 2016 (see Section 6.1 *Analysis of recent reforms*). Other reform initiatives aiming at increased efficiency, such as reorganization of the benefit package (2015), introduction of a fingerprint identification system for hospital admission (2015) and the National Health Map as a tool for selective contracting between the NHIF and hospitals, were stopped by the Supreme Administrative and Supreme Constitutional Courts (Dimova & Rohova, 2017b).

■ 7.5.2 Technical efficiency

Technical efficiency poses a problem as well. In contrast to the stated objective to strengthen primary and specialized outpatient care (and consequently optimize inpatient care), there is an extensive development of hospital care. The inpatient admission rate increased substantially from 145 per

1000 population in 2000 to 322 per 1000 population in 2014. Despite slight decreases in 2015 and 2016, Bulgaria has by far the highest hospital admission rate in the EU (Table 7.4). This is mainly due to the private sector expansion. In contrast with public hospitals and beds, which decreased by 16.7% and 32.6%, respectively in 2016 compared with 2000, the number of private hospitals increased six times and the beds increased 36 times. In 2016 alone, public hospitals decreased by 6% and beds were reduced by 2.3% compared with 2015, while the private sector grew by three hospitals and 799 beds (or an increase of 7.7%). Although the number of hospitalizations in public hospitals increased 1.7 times in 2016 compared with 2000, hospitalizations in the private hospitals increased 78 times for the same period. Hence, the private hospitals' admissions as a share of total hospitalizations increased from 0.6% in 2000 to 15.6% in 2010 and 28.3% in 2016 (NCPHA, 2017). The relatively short average length of stay in Bulgaria (Table 7.4) compared with the EU average (8.2 days in 2014, WHO Regional Office for Europe, 2018) is due to the significant prevalence of acute hospital beds (18% in 2016) and clinical pathways, which predefine the length of stay.

TABLE 7.4 Key hospital indicators

	2000	2005	2010	2014	2015	2016
Inpatient admission rate per 1000 population	145	209	254	322	321	318
Occupancy of hospital beds (days)	242	286	248	258	248	241
Turnover of beds	21	36	42	49	48	47
Average length of stay (days)	11.5	7.9	5.9	5.3	5.2	5.1

Source: NCPHA, 2017.

The substantial growth of hospital care after the introduction of the SHI reflects the inefficiency and underutilization of outpatient services.

Outpatient contacts per person in Bulgaria are well below the EU averages (see Section 5.3 *Ambulatory care*, *Specialized ambulatory care* and Section 5.4 *Inpatient care*). Prophylactic check-ups in primary care are traditionally below the targets, most significantly for people above 18 years of age, and tangible regional variation exists (Table 7.5). The number of primary visits to outpatient specialists per insured individual varied among districts, as well, from 0.56 to 0.93 in 2016 (EAMA, 2017).

TABLE 7.5 Number of medical check-ups by GPs per person

		TARGET	2011	2013	2014	2015	2016
Prophylactic check-ups for children between birth and 1 year of age per person	lowest value	12	9.94	10.08	9.97	10.01	9.94
	highest value		6.86	n/a	6.61	6.47	6.18
Prophylactic check-ups for children between 1 and 2 years of age per person	lowest value	4	3.16	3.16	3.08	3.08	3.04
	highest value		2.23	n/a	2.21	2.10	1.99
Prophylactic check-ups for children between two and seven years of age per person	lowest value	2	1.57	1.58	1.55	1.55	1.51
	highest value		1.22	n/a	1.17	1.14	1.07
Prophylactic check-ups for children between 7 and 18 years per person	lowest value	1	0.86	0.86	0.86	0.85	0.83
	highest value		0.78	n/a	0.74	0.75	0.73
Prophylactic check-ups for adults above 18 years of age per person	lowest value	1	0.44	0.48	0.48	0.50	0.48
	highest value		0.17	0.00	0.22	0.25	0.25
			0.61	0.00	0.67	0.68	0.68

Sources: NHIF, 2011, 2013, 2014, 2015a, 2016, 2017a; EAMA, 2017

Notes: No data available for 2012. n/a: not available.

Combined with an increase of emergency care calls (see Section 5.5 *Emergency care*), the share of ambulatory examinations performed by the CEMC' medical teams, most of which are not urgent, remains constantly high. Ambulatory examinations made up for 82% of all emergency calls in the 2010–2014 average (Bulgarian National Audit Office, 2015). The average expense for an emergency call increased by 34% in 2014 compared with 2010. The average workload of an emergency care team increased also. Similarly to outpatient and inpatient care, all emergency care indicators vary substantially among districts.

Important gains in efficiency increases can also be made in the pharmaceutical sector (OECD/European Observatory on Health Systems and Policies, 2017). Although the Bulgarian pharmaceutical market is one of the smallest in the EU it recorded stable and strong growth over the last few years (Ministry of Foreign Affairs of Denmark, 2014; International Bank for Reconstruction and Development, 2015). There are no studies particularly focused on the causes of the high share of drugs spending in Bulgaria; however, there is significant syllogistic evidence that a complex of causes

leads to this phenomenon, such as high drug prices compared with other EU countries, prescribing practices and overutilization, promotion of more expensive medicines, 20% VAT for drugs, and parallel trade (International Bank for Reconstruction and Development 2015).

Following the Council of the European Union recommendations since 2014 (Council of the EU, 2014), several changes in the health legislation were made in 2015–2016, the impact of which on health system efficiency is to be evaluated in the future (see Section 6.1 *Analysis of recent reforms*).

■ 7.6 Transparency and accountability

Bulgaria has made a significant step towards improving transparency and accountability in recent years. Improvements refer to the health policy development process, availability of data and strengthening of public control over the health system. However, much more needs to be done with regard to citizen and patient empowerment.

Health policy process and transparency on legislative development

The establishment of the Partnership for Health in 2015, a new consultative body to the CoM for coordination and partnership in development and implementation of policies in the field of public health, was an important step towards an improved health policy process in Bulgaria (Dimova et al., 2017). Due to the two changes in the MoH's team in 2017 (Dimova, 2017), the Partnership's activity has slowed down.

Policy development process and transparency of the legislative acts development is supported by the CoM web portal for public consultations, where strategic documents and legislative acts are available for discussion (CoM, 2017c). For example, 17 health-related documents have been published on the portal for the first 2 months of 2018, which received 81 comments and suggestions from citizens and organizations – more than in each other year since 2008 when the portal started to operate. The opportunity for public consultations links with the Partnership for Open Government Initiative, which Bulgaria joined in 2011.

In addition, the MoH publishes all projects of normative acts for a 1-month public discussion together with the respective motives and stakeholders' statements. Discussions in the Parliamentary Health Commissions

and Plenary Hall, as well as the related documents, are available at the web page of the Bulgarian Parliament.

The NHS 2020, approved by the Parliament after a broad public discussion in 2015 (see Section 7.1 *Stated objectives of the health system*), includes an accountability mechanism setting out indicators for implementation monitoring and assessment, deadlines and responsible institutions. A permanent working group for monitoring, control and accounting of the results was established by the MoH. Consultative functions for monitoring and evaluation of the strategy implementation have been granted to the Supreme Medical Council and the Council “Partnership for Health”.

Data availability and public control

Data availability, which is an important prerequisite for strengthening public control over the health system, has also improved in recent years. Although the right of citizens to information from a public authority or an institution, which represents a legitimate interest for them, was defined back in 1991 in the constitution, the application of this right was enforced only recently.

Apart from international sources of data and information, national sources of information increased, as well as the publicly available data by type. A change in the 2000 Law on Access to Public Information obliged institutions to publish a variety of new information including strategies, plans, programmes, reports and analyses on their activity, budget plans and reports on budget execution, information on public tendering, projects on legislative acts together with the motives and results from public discussions of the draft legislation since 2016. Thus, the data, which can be found in reports and analyses by institutions such as the MoH, the NHIF, the Bulgarian National Audit Office, and the EAMA, became richer and more consistent.

In addition, all institutions provide the opportunity to access public information by request in execution of the 2000 Law on Access to Public Information. Based on a change in the law since 2016, all public institutions are obliged to report publicly (usually through their websites) all cases of requested information. The number of requests for access to public information by individuals and organizations to the NHIF and the MoH increased in 2015–2017 (Table 7.6). According to the MoH reports, most of the requests for information are in regard to exercise of rights or legitimate interests, accountability of the institution, control activity of the administration, and spending of public sources (MoH, 2018c).

TABLE 7.6 Number of requests of information under the Law on Access to Public Information

REQUESTS TO:	REQUESTS FROM:	2014	2015	2016	2017
National Health Insurance Fund	Companies	n/a	89	154	235
	Citizens	n/a	50	57	32
	NGOs	n/a	35	27	33
	Journalists	n/a	9	6	21
	Total	n/a	183	244	321
MoH	Companies	7	20	13	25
	Citizens	26	54	49	57
	NGOs	22	23	25	20
	Journalists	20	13	22	23
	Total	84^a	111^a	109	125

Sources: NHIF, 2018; MoH, 2018c.

Note: ^aInclude nonclassified by sender requests to the MoH, which have been redirected to other institutions.

In order to strengthen public control over health services provision and respective public payments, the NHIF introduced an electronic system that allows citizens to access their health records and to inform the NHIF or the RHIF in case of discrepancy between the recorded and received health services since 2013. However, according to media information, only 38 000 citizens have requested personal codes to log into the system up to 2017 (Bedrov, 2017).

The Electronic Public Procurement Portal Electronic system for public tendering implemented under a project (see Subsection 3.6.2 *External sources of funds*) supports health system transparency and accountability since all health institutions and public providers are obliged to use it. The portal maintains statistics on public tenders by organizations and subject of contracts since 2014.

The Commercial register and register of non-profit legal entities, provides information on activities and budgets of health care organizations; however, this information is difficult to interpret.

Despite the overall improvement of the health system's transparency and accountability, some challenges remain. Although e-health has been a permanent priority in all government programmes and national health strategies over the last decades, Bulgaria still lacks an integrated health information system. Data on key indicators are still missing, especially in

the field of health services' quality, which would allow an informed choice of providers. Many sources of information need to become more user friendly for the citizens. With regard to health services provision, patients lack information on their rights, which may contribute to corruption practices and high OOP payments.

8

Conclusion

The Bulgarian health system is characterized by a stronger degree of centralization than many other European countries. Although, new principles, such as autonomy, contractual relations, and market regulation were introduced in the late 1990s, in practice, decision-making processes are highly centralized. At the same time, the unstable political situation and the frequent turnover of leadership have contributed to a lack of continuous and consistent policy implementation.

Hence, the health system continuously suffers from substantial weaknesses, which contributes to unsatisfactory population health. Health inequalities between urban and rural populations as well as inequalities in access to the health system continue to grow. The improvement of the population's health status, as reflected in some health indicators, has been unsatisfactory, with some indicators even deteriorating.

Financial instability is a consistent characteristic of the health system. The system experiences a constant lack of financial resources, resulting in an incapability to assure health care in volume, scope and quality, that meets population needs. Despite the substantial growth in health expenditure after the introduction of the SHI, the system continues to experience a continuous lack of financial resources – suggesting their inefficient use. Payment mechanisms do not promote efficiency. 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. The lack of policies and instruments for effective allocation of public funds is reflected negatively in the providers' market behaviour. It is, in turn, determined by the funding methods that stimulate the quantity of services and goods provided, that is consumption

and absorption of financial resources. In contrast to the stated objective to strengthen primary and specialized outpatient care, there is an extensive development of hospital care due to private sector expansion and increase in hospital admissions. The quality of medical care remains one of the most substantial problems, but this is less targeted.

Some attempts to improve allocative efficiency have been made, but with partial success. A milestone for cost-effectiveness considerations is the introduction of HTA since 2015. However almost all reform initiatives aiming at increasing efficiency in the curative sector were stopped by the Supreme Administrative and Supreme Constitutional Courts.

The solidarity principle is compromised due to the constant and high share of the uninsured population. Today, a large number of individuals are not covered by SHI, while the VHI market continues to be underdeveloped. In addition, the high and growing percentage of OOP payments in Bulgaria shows the inadequate financial protection by the SHI system.

Some meaningful improvements in health system transparency and accountability have been reached. However, bigger challenges remain. Although e-health has been a priority, Bulgaria still lacks an integrated health information system. Data on key indicators are still missing, especially in the field of health service quality.

The NHS 2020 represents an advancement of health policy compared with the previous strategies, more notably in the field of public health and cross-sectoral cooperation. It remains to be seen whether the NHS 2020 can result in actual improvements and solutions to the health system. The biggest challenge remains the financial sustainability of the system and quality of care.

The absence of a clear long-term vision and political consensus on health system development has resulted in inconsistent reforms. Some of the fundamental principles on which the health insurance systems were built were gradually abolished or never realized, such as independence of the NHIF; equal participation of state, employers and insured individuals in the fund's management and control; and using evidence-based health policy. The abandonment of these elements has also given rise to instability, insecurity, distrust in the system and resistance to reforms.

Given this, the need to improve communications with citizens and professionals seems of crucial importance for the further reforms. The health system requires some radical changes that can happen only with both political will and public support. The ground to reach this requirement is to set

decisions on common principles and shared values. The national significance of health reform requires that these decisions be agreed upon and widely supported by a large constituency, including civil organizations, trade unions, municipalities and the scientific community.

Appendices

9.1 References

- Atanasova E (2014). Formal and informal patient payments for public health services in Bulgaria [dissertation]. Maastricht University, Steno Publishing House-Varna, ISBN: 978-90-821059-2-6.
- Atanasova V, Mircheva I, Dokova K (2016). Regional disparities in all-cause mortality in Bulgaria for the period 2000–2012. *Scripta Scientifica Salutis Publicae*, 2(1):7–11.
- Atanasova E, Rohova M, Dimova A (2016). Unmet needs for health care services in Bulgaria. *Journal of IMAB*, 22(3):1324–1327.
- Atanasova-Pieterse D (2014). Citizens' involvement in decision-making in health care at local level [PhD thesis]. Medical University-Varna (in Bulgarian).
- Atanasova E, Valkanova M, Rohova M (2017). The National Health Map—legal regulation and reality. Proceedings from the First National Conference of Bulgarian Scientific Society of Public Health, Varna, June 2017 (in Bulgarian).
- Balabanova D (2001). Financing the health care system in Bulgaria: options and strategies [PhD thesis]. London School of Hygiene & Tropical Medicine. DOI: <https://doi.org/10.17037/PUBS.00682297>
- Bedrov I (2017). And did you take the code for your electronic health record? NHIF encourages everyone to take advantage of the free service. *Bulgaria On Air*, 28.08.2017 (<https://www.bgonair.bg/bulgaria/2017-08-28/a-vie-vzeh-te-li-koda-za-elektronnoto-si-zdravno-dosiee>, accessed 7 March 2018).
- Berlemann M, Nenovski N, Hristov K (2002). Lending of Last Resort, Moral Hazard and Twin Crises: Lessons from the Bulgarian Financial Crisis 1996/1997. William Davidson Institute Working Paper No. 464, May.
- Bulgarian Drug Agency/BDA (2017a). Register of pharmaceutical manufacturers and importers. (<http://www.bda.bg/bg/>) (last updated 1 August 2017; accessed 22 August 2017) (in Bulgarian).
- Bulgarian Drug Agency/BDA (2017b). Register of pharmaceutical wholesalers. (<http://www.bda.bg/bg/>, last updated 1 August 2017; accessed 22 August 2017) (in Bulgarian).
- Bulgarian Drug Agency/BDA (2017c). Register of pharmacies. (<http://www.bda.bg/bg/>, last updated 1 August 2017; accessed 22 August 2017) (in Bulgarian).

- Bulgarian National Audit Office (2015a). Audit Report on the execution of the NHIF Budget for 2014 (<http://www.bulnao.government.bg/bg/articles/dokladi-128>, accessed 19 November 2017).
- Bulgarian National Audit Office (2016). Audit Report on the execution of the NHIF Budget for 2015 (<http://www.bulnao.government.bg/bg/articles/dokladi-128>, accessed 19 November 2017).
- Bulgarian National Audit Office (2017). Audit Report on the execution of the NHIF Budget for 2016 (<http://www.bulnao.government.bg/bg/articles/dokladi-128>, accessed 19 November 2017).
- Capital (2017a). Newspaper. Health insurance increases, January 2, 2017 (https://www.capital.bg/specialni_izdaniia/zdrave/2017/01/02/2884790_zdravnite_zastrahovki_narastvat/, accessed 12 January 2018).
- Capital (2017b). Newspaper. Double health insured. January 13, 2017 (https://www.capital.bg/pazari/lichni_finansi/2017/01/13/2898489_dvoino_zdravno_podsiguren/, accessed 12 January 2018).
- Coleman MP, et al. (2011). Cancer Survival in Australia, Canada, Denmark, Norway, Sweden, and the UK, 1995–2007 (The International Cancer Benchmarking Partnership): An Analysis of Population-based Cancer Registry Data. *The Lancet*, 377(9760):127–38.
- Commission for Protection of Competition/CPC (2009). Analysis of the voluntary health insurance competitive environment (in Bulgarian). Sofia, Commission on Protection of Competition (<http://reg.cpc.bg/DepartmentDecisions.aspx?vp=4>, accessed 12 January 2018).
- Commission for Protection of Competition/CPC (2015). Decision No. 1132, Sofia 22 December 2016. (<http://reg.cpc.bg/Decision.aspx?DecID=300047511>, accessed 10 February 2018) (in Bulgarian).
- Council of Ministers/CoM (2011), Decree No 340 of 14.12.2011 on adoption of the Ordinance for regulation and registration of prices of medicinal products, conditions, rules and criteria for inclusion, changes and/or exclusion of medicinal products from the positive drug list and the terms and rules for the activity of the National Council on Prices and Reimbursement of Medicinal Products (http://www.mh.government.bg/media/filer_public/2015/04/17/naredba-regulirane-registrirane-tsenite-na-lekarstvata.pdf, accessed 20 August 2018) (in Bulgarian).
- Council of Ministers/CoM (2012a). National Development Program: Bulgaria 2020 (<http://www.strategy.bg/StrategicDocuments/View.aspx?Id=765>; accessed 21 March 2018).
- Council of Ministers/CoM (2012b). National strategy of the Republic of Bulgaria for Roma integration. (<http://www.nccedi.government.bg/page.php?category=125&cid=1740>, accessed 10 November 2017).
- Council of Ministers/CoM (2017a). Decisions in brief. Ensuring the provision of additional funds of assisted reproduction, 17 May 2017. (<http://www.government.bg/cgi-bin/e-cms/vis/vis.pl?s=001&cp=0228&cn=9235&g>, accessed 10 November 2017) (in Bulgarian).
- Council of Ministers/CoM (2017b). Government priorities (2017–2021). Healthcare. (<http://www.gov.bg/bg/pravitelstvo/programa-na-pravitelstvoto/zdraveopazvane>; accessed 8 March 2018).
- Council of Ministers/CoM (2017c). Portal for Public Consultations. Strategic documents. Healthcare. (<http://www.strategy.bg/StrategicDocuments/List.aspx?lang=bg-BG&categoryId=14&typeConsultation=1&typeCategory=0&docType=1>, accessed 12 August 2017) (in Bulgarian).
- Council of the European Union (2014). Council Recommendation of 8 July 2014 on the National Reform Programme 2014 of Bulgaria and delivering a Council opinion on the Convergence Programme of Bulgaria, 2014. Official Journal of the European Union 2014/C 247/02
- De Backer G et al (2016). Lifestyle and risk factor management in people at high cardiovascular risk from Bulgaria, Croatia, Poland, Romania and the United Kingdom who participated in both the EUROASPIRE III and IV primary care surveys. *European Journal of Preventive Cardiology*, 23(15):1618–1627.

- De Rosi S, Seghieri C (2015). Basic ICT adoption and use by general practitioners: an analysis of primary care systems in 31 European countries. *BMC Medical Informatics and Decision Making*, 15:70. Delcheva E, Balabanova D, McKee M (1997). Under-the-counter payments for health care: evidence from Bulgaria. *Health Policy*, 42: 89–100.
- Dimitrova A, et al. (2015). A National survey on health risk factors. Health data. National Centre of Public Health and Analyses. (<http://ncphp.government.bg/files/news/flash/slide5.swf>, accessed 10 October 2017) (in Bulgarian).
- Dimova A (2016a). Enabling for selective contracting between the Regional Health Insurance Funds and healthcare providers. 31/05/2016 Reform Log, HSPM. (<http://www.hspm.org/countries/bulgaria22042013/countrypage.aspx>, accessed 23 January 2018).
- Dimova A (2016b), Bulgaria. In: Sagan A, Thomson S, eds. Voluntary health insurance in Europe. Country experience. Copenhagen, WHO Regional Office for Europe, European Observatory on Health Systems and Policies.
- Dimova A (2017). Ministry of Health headed by new team. 15/11/2017 Reform Log, HSPM. (<http://www.hspm.org/countries/bulgaria22042013/countrypage.aspx>, accessed 8 March 2018).
- Dimova A, Rohova M (2017). Recent reform initiatives stopped by the Supreme Constitutional and Administrative courts in 2015 and 2016. 18/04/2017 Policy Update, HSPM. (<http://www.hspm.org/countries/bulgaria22042013/countrypage.aspx>, accessed 23 January 2018).
- Dimova A, Popov M, Rohova M (2007). The Health Reform in Bulgaria: Necessity, Development, Results, Perspectives. Sofia, Open Society Institute.
- Dimova A, et al. (2012). Bulgaria: Health system review. *Health Systems in Transition*, 14(3):1–186.
- Dimova A, et al. (2017). An innovative approach to participatory health policy development in Bulgaria: The conception and first achievements of the Partnership for Health. *Health Policy* (2017). (<https://doi.org/10.1016/j.healthpol>, accessed 2 November 2017).
- Dobrinsky R (1997), Transition Failures: Anatomy of the Bulgarian Crisis, The Vienna Institute for Comparative Economic Studies Research Reports No. 236, April.
- Dobrinsky R (2000). The Transition Crisis in Bulgaria. *Cambridge Journal of Economics*, 24(5):581–602.
- Dokova K, Dimova A (2015). The discussion of a new public health tax in Bulgaria. 14/12/2015 Policy Update, HSMP. (<http://www.hspm.org/countries/bulgaria22042013/countrypage.aspx>, accessed 20 March 2018).
- Dokova K, et al. (2013). Regional mortality inequities in Bulgaria in relation to socio-economic deprivation. *European Journal of Public Health*, 23 Suppl. 1:190–191.
- European Centre for Disease Prevention and Control. Technical missions: HIV, STI and viral hepatitis in Bulgaria. Stockholm: ECDC; 2017.
- European Commission (2014a). Special Eurobarometer 397 – February 2014 “Corruption”. Report. (<http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/yearFrom/1974/yearTo/2018/search/corruption/surveyKy/1076>, accessed 11 January 2018).
- European Commission (2014b). Special Eurobarometer 411. Patient safety and quality of care. European Union. (http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_411_en.pdf, accessed 20 March 2018).
- European Commission (2015). Special Eurobarometer 425. Patients’ rights in cross-border healthcare in the European Union. (http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_425_en.pdf).
- European Commission (2016). Joint report on health care and long-term care systems and financial sustainability. Volume 2 Country documents. Institutional paper 037. (https://ec.europa.eu/info/sites/info/files/ip037_vol2_en.pdf, accessed 10 January 2018).
- European Commission (2017a), Special Eurobarometer 470 – October 2017 “Corruption”. Report. (<http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/2176>, accessed 11 January 2018).

- European Commission (2017b). Country Report Bulgaria 2017, Brussels. (https://ec.europa.eu/info/files/2017-european-semester-country-report-bulgaria_en, accessed 21 July 2017).
- European Commission (2017c). ECHI – European Core Health Indicators. Brussels, European Commission (http://ec.europa.eu/health/indicators/echi/list/index_en.htm, accessed 4 August 2017).
- European Federation of Pharmaceutical Industries and Associations (2017). The pharmaceutical industry in figures. Key data 2017. (https://www.efpia.eu/media/219735/efpia-pharmafigures2017_statisticbroch_v04-final.pdf, accessed 10 December 2017).
- Eurostat (2018). Eurostat database. Luxembourg, European Commission. (<http://ec.europa.eu/eurostat/data/database>, accessed 19 February 2018).
- Executive Agency Medical Audit/EAMA (2016). Report on activity of the EAMA 2016. Ministry of Health, Sofia. (<http://www.eama.bg/images/Dokladi/Doklad%202016%D0%B3.pdf>, accessed 7 February 2018).
- Executive Agency Medical Audit/EAMA (2017). Annual Report on Condition and Overall Activity of the Health Insurance in Republic of Bulgaria for 2016. Ministry of Health, Sofia. (<http://eama.bg/images/Dokladi/Zdravno%20osigurjavane%202016.pdf>, accessed 10 February 2018).
- Financial Supervision Commission/FSC (2013). An overview of non-bank financial sector in Bulgaria (in Bulgarian). Sofia, Financial Supervision Commission. (<http://www.fsc.bg/bg/za-komisiyata/analizi-na-kfn/>, accessed 13 January 2018).
- Financial Supervision Commission/FSC (2017a), Statistics on market of general insurance. (<http://www.fsc.bg/bg/pazari/zastrahovatelyn-pazar/statistika/obshto-zastrahovane/>, accessed 12 January 2018).
- Financial Supervision Commission/FSC (2017b), Statistics on life insurance market. (<http://www.fsc.bg/bg/pazari/zastrahovatelyn-pazar/statistika/zhivotozastrahovane/>, accessed 12 January 2018).
- Foreva G, Assenova R (2014). Hidden patients: The relatives of patients in need of palliative care. *Journal of Palliative Medicine*, 17(1):56–61.
- Forum Medicus (2014). Interview with Prof. Tatiana Benisheva, chair of the National Council National Council on Prices and Reimbursement of Medicinal Products; 22 July 2014. (<http://forummedicus.com/archives/all-publications/3996>; accessed 23 April 2018).
- Freedom House (2017). Nations in transit: country report on Bulgaria. (<https://freedomhouse.org/report/nations-transit/2017/bulgaria>, accessed 18 October 2017).
- GERB (2017), Priorities for governance 2017–2020. (<http://www.gerb.bg/bg/pages/prioriteti-125.html>; accessed 23 April 2018).
- Health Act. State Gazette No. 70, 10 August 2004; last amended 18 July 2017.
- Health Care Establishments Act. State Gazette No. 62, 9 July 1999; last amended 9 December 2016.
- Health Insurance Act. State Gazette No. 70, 19 June 1998; last amended 9 December 2016.
- Institute for Health Metrics and Evaluation/IHME (2016). The Global Burden of Disease Study 2015 (GBD 2015). Seattle, US, Institute for Health Metrics and Evaluation (<http://ghdx.healthdata.org/gbd-results-tool>, accessed 30 July 2017).
- Health System Performance Comparison (2013). An agenda for policy, information and research. Ed. by Irene Papanicolas and Peter C. Smith European Observatory on Health Systems and Policies, Open University Press.
- Institute of Market Economics (2015). Regional profiles: characteristics of health care by districts in Bulgaria. Sofia. (http://www.regionalprofiles.bg/var/docs/HC_Regional_Profiles.pdf, accessed 10 October 2017).
- International Bank for Reconstruction and Development (2015). Final Report on Health Financing Diagnostic and Review of Envisaged Reforms. Washington, DC, The World Bank. (<https://www.openknowledge.worldbank.org/bitstream/handle/10986/22964/Final0Output.pdf?sequence=1&isAllowed=y>, accessed 25 January 2018).
- Konstantinov N (2017). Guidelines in the health policy of Bulgaria, Sofia, 2017. (in Bulgarian, accessed 20 September 2017).

- Kuehlbrandt Ch, et al. (2014). An examination of Roma health insurance status in Central and Eastern Europe. *European Journal of Public Health*, 24(5):707–712.
- Lafortune G. (2016). Monitoring health workforce migration through international data collection: progress with OECD/Eurostat/WHO-Europe joint questionnaire. Joint Action Health Workforce Planning and Forecasting 18–19 February 2016, Varna (presentation).
- Law on Corporate Income Tax, 2007, last amended 28 December 2017 (available at: <https://www.lex.bg/laws/ldoc/2135540562>, accessed 12 January 2018).
- Law on Health and Safety at Work. State Gazette No. 124, 23 December 1997; last amended 13 October 2015.
- Law on Integration of Persons with Disabilities. State Gazette No. 81, 17 September 2004; last amended 14 November 2017.
- Law on Medical Devices. State Gazette No. 46, 12 June 2007; last amended 19 February 2016.
- Law on Medicinal Products in Human Medicine. State Gazette No. 31, 13 April 2007; last amended 7 June 2016.
- Law on Social Integration of People with Disabilities. State Gazette No. 81, 17 September 2004; last amended 9 December 2016.
- Law on the Taxation of Income of Individuals, 2007, last amended 5 December 2017 (available at: <https://www.lex.bg/laws/ldoc/2135538631>, accessed 12 January 2018).
- Ministry of Finance and NHIF (2013). Statement to the Parliament on spending of the health insurance contributions' fund in response to a question from MPs from the 42nd National Assembly, no. 354.06.210 from 11 September 2013. (http://parliament.bg/bg/topical_nature/20250, accessed 23 January 2018).
- Ministry of Finance (2014). Written answer to a question on the number of uninsured persons as of 31.12.2013. Parliamentary control session, 07/02/2014 (kzg.parliament.bg/pub/PK/144583отговор%20%20454-06-35.docx, accessed 1 December 2017).
- Ministry of Finance (2016). Report on the implementation of the state budget of the Republic of Bulgaria for 2015, (<http://www.minfin.bg/bg/940>, accessed 20 November 2017).
- Ministry of Finance (2017) Report on the implementation of the state budget of the Republic of Bulgaria for 2016, (www.minfin.bg/bg/1095, accessed 20 November 2018).
- Ministry of Foreign Affairs of Denmark (2014). The Trade Council. Pharmaceutical and Healthcare Sector Bulgaria. September 2014.
- Ministry of Health/MoH (2014a). Concept for the development of the emergency medical care system in the Republic of Bulgaria 2014–2020. Sofia, Ministry of Health. (<https://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/koncepcii/koncepciya-za-razvitie-speshnata-medicinska-pomosht/>, accessed 2 March 2018) (in Bulgarian).
- Ministry of Health/MoH (2014b). National program for improvement of maternal and child health. Sofia, Ministry of Health. (<http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=907>, accessed 5 March 2018) (in Bulgarian).
- Ministry of Health/MoH (2014c). National program for prevention of chronic non-communicable diseases. Sofia, Ministry of Health. (<http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=861>, accessed 10 March 2018) (in Bulgarian).
- Ministry of Health/MoH (2015a). Ordinance No 9 of 1.12.2015 on terms and procedures for health technology assessment. (https://www.mh.government.bg/media/filer_public/2015/12/11/naredba9-1-12-2015.pdf, accessed 20 August 2018) (in Bulgarian).
- Ministry of Health/MoH (2015b). Concept “Objectives for Health 2020”. Sofia, Ministry of Health. (<https://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/koncepcii/koncepciya-celi-za-zdrave-2020/>).
- Ministry of Health/MoH (2015c). National Health Strategy 2020 and Action Plan. (<https://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/strategii/nacionalna-zdravna-strategiya-2020/>; accessed 20 March 2018).
- Ministry of Health/MoH (2015d). National program for the prevention of oral diseases in children from 0 to 18 years of age in the Republic of Bulgaria. Sofia, Ministry of Health. (<http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=931>) (in Bulgarian).

- Ministry of Health/MoH (2016a), Collective Labour Agreement in the field of health care. (https://www.mh.government.bg/media/filer_public/2016/10/10/ktd-10-10-2016.pdf, accessed 10 January 2018).
- Ministry of Health/MoH (2016b). News. The number of physicians going abroad is decreasing, 13.01.2016. (<http://www.mh.government.bg/bg/novini/aktualno/namalyava-broyat-na-lekari-zaminavashi-za-chuzhbin/>; accessed 23 April 2018).
- Ministry of Health/MoH (2016c). Report about the performance of the policies and programs of the Ministry of Health 2016. (http://www.mh.government.bg/media/filer_public/2017/03/22/otchet_mz_programen_31122016-end.pdf) (in Bulgarian).
- Ministry of Health/MoH (2017). Register of drugstores. (<http://isr.mh.government.bg/pls/mhrb/f?p=100:1:4212696246940465>, accessed 23 August 2017) (in Bulgarian).
- Ministry of Health/MoH (2018a) News. Deputy Minister of Health Jeni Nacheva: The Financial Management Standard aims to prevent the increase in overdue liabilities. (<https://www.mh.government.bg/bg/novini/aktualno/zam-ministr-zheni-nacheva-standartt-za-finansovo-u/>; accessed 23 April 2018).
- Ministry of Health/MoH (2018b) Operational Programme Regions in Growth 2014–2020. (<https://www.mh.government.bg/bg/evropeyski-programi/tekushti-programi-i-proekti/operativna-programa-regioni-v-rastezh-2014-2020g/>)
- Ministry of Health/MoH (2018c). Annual Reports for the received by the MoH requests for access of public information for 2014, 2015, 2016, and 2017. (<https://www.mh.government.bg/bg/administrativni-uslugi/dostap-do-obshtestvena-informatsiya/>, accessed 7 March 2018).
- Ministry of Health/MoH (2018d). National program for the prevention and control of HIV and sexually transmitted infections in the Republic of Bulgaria. 2017. Sofia, Ministry of Health. (https://www.mh.government.bg/media/filer_public/2017/04/28/natsionalna_programa_za_preventsia_i_kontrol_na_khiv_i_seksualno_predavani_infektsii_v_republika_blgaria_za_perioda_2017-2020_g.pdf, accessed 2 July 2018) (in Bulgarian).
- Ministry of Health/MoH (2018e). News. The World Health Organization will support Bulgaria in reforming the health system, 2 March 2018. (<https://www.mh.government.bg/bg/novini/aktualno/svetovnata-zdravna-organizaciya-she-podkrepi-blgar/>; accessed 23 April 2018).
- Ministry of Labour and Social Policy (2014). National strategy for long-term care. (<http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=882>, accessed 23 September 2017) (in Bulgarian).
- Ministry of Labour and Social Policy (2017). Press Release. (<https://www.mlsp.government.bg/index.php?section=FA2&fcats=18>, accessed 23 September 2017) (in Bulgarian).
- National Centre of Infectious and Parasitic Diseases (2017). Analysis of immunisation activities in Bulgaria in 2016. (https://www.ncipd.org/index.php?option=com_docman&view=download&alias=122-analysis-immuno-activities&category_slug=epidemiologiya-i-nadzor&Itemid=1127&lang=bg, accessed 13 February 2018) (in Bulgarian).
- National Centre of Public Health and Analyses/NCPHA (2011). Health care 2011. Sofia, NCPHA. (http://ncphp.government.bg/files/nczi/izdania_2010/healthcare_11.pdf, accessed 10 January 2017) (in Bulgarian).
- National Centre of Public Health and Analyses/NCPHA (2012). Health care 2012. Sofia, NCPHA. (http://ncphp.government.bg/files/nczi/izdania_2010/healthcare_12.pdf, accessed 10 January 2017) (in Bulgarian).
- National Centre of Public Health and Analyses/NCPHA (2013). Health care 2013. Sofia, NCPHA. (http://ncphp.government.bg/files/nczi/izdania_2010/healthcare_13.pdf, accessed 10 January 2017) (in Bulgarian).
- National Centre of Public Health and Analyses/NCPHA (2014). Health care 2014. Sofia, NCPHA. (http://ncphp.government.bg/files/nczi/izdania_2010/healthcare_14.pdf, accessed 10 January 2017) (in Bulgarian).
- National Centre of Public Health and Analyses/NCPHA (2015a). Annual report on health of the citizens in Republic of Bulgaria and the implementation of the National Health Strategy 2015. Sofia, NCPHA. (http://ncpha.government.bg/files/doklad_zdrave_-17-10.pdf) (in Bulgarian).

- National Centre of Public Health and Analyses/NCPHA (2015b). Health care 2015. Sofia, NCPHA. (http://ncphp.government.bg/files/nczi/izdania_2010/healthcare_15.pdf) (in Bulgarian)
- National Centre of Public Health and Analyses/NCPHA (2016). Health care 2016. Sofia, NCPHA. (http://ncphp.government.bg/files/nczi/izdania_2010/healthcare_16.pdf) (in Bulgarian).
- National Centre of Public Health and Analyses/NCPHA (2017). Health care 2017. Sofia, NCPHA. (http://ncphp.government.bg/files/nczi/izdania_2010/healthcare_17.pdf) (in Bulgarian).
- National Centre of Public Health and Analyses/NCPHA (2018a). Annual Report on the Health Status of the Bulgarian Citizens and the Implementation of the National Health Strategy, 2015. Sofia, NCPHA. (http://ncphp.government.bg/files/doklad_zdrave_-17-10.pdf, accessed 23 February 2018).
- National Centre of Public Health and Analyses/NCPHA (2018b). HTA Commission Reports. (http://ncphp.government.bg/index.php?option=com_content&view=article&id=1430:hta-dokladi&catid=358&Itemid=638&lang=bg, accessed 4 May 2018).
- National Council on Prices and Reimbursement of Medicinal Products/N CPRMP (2015). Annual Report on Activity of the N CPRMP for 2014. (<http://www.ncpr.bg/bg/за-съвета/годишни-доклади.html>; accessed 23 April 2018).
- National Council on Prices and Reimbursement of Medicinal Products/N CPRMP (2016). Annual Report on Activity of the N CPRMP for 2015 (<http://www.ncpr.bg/bg/за-съвета/годишни-доклади.html>; accessed 23 April 2018).
- National Council on Prices and Reimbursement of Medicinal Products/N CPRMP (2017). Annual Report on Activity of the N CPRMP for 2016. (<http://www.ncpr.bg/bg/за-съвета/годишни-доклади.html>; accessed 23 April 2018).
- National Council on Prices and Reimbursement of Medicinal Products/N CPRMP (2018). Annual Report on Activity of the N CPRMP for 2017. (<http://www.ncpr.bg/bg/за-съвета/годишни-доклади.html>; accessed 23 April 2018).
- National Health Insurance Fund/NHIF (2011). Annual report of the NHIF's activity for 2011. (ftp://http://www.parliament.bg/pub/cW/20120717100537OTCHET_ZA_DEJNOSTTA_NZOK-2011.pdf) (in Bulgarian).
- National Health Insurance Fund/NHIF (2013). Annual report of the NHIF's activity for 2013. (<https://www.nhif.bg/page/222>; accessed 20 August 2018) (in Bulgarian).
- National Health Insurance Fund/NHIF (2014). Report of budget execution for 2013. (https://www.nhif.bg/page/74?section57_page=3§ion58_page=1; accessed 8 March 2018).
- National Health Insurance Fund/NHIF (2015a). Annual report of the NHIF's activity for 2015. (<https://www.nhif.bg/page/699>, accessed 8 March 2018) (in Bulgarian).
- National Health Insurance Fund/NHIF (2016). Report of budget execution for 2015. (<http://www.parliament.bg/bg/parliamentarycommittees/members/2340/documents>; accessed 8 March 2018).
- National Health Insurance Fund/NHIF (2017a). Annual report of the NHIF's activity for 2016. (<http://www.parliament.bg/bg/parliamentarycommittees/members/2588/documents>, accessed 8 March 2018) (in Bulgarian).
- National Health Insurance Fund/NHIF (2017b). Report of budget execution for 2016. (<http://www.parliament.bg/bg/parliamentarycommittees/members/2588/documents>; accessed 8 March 2018).
- National Health Insurance Fund (2017c). NHIF's contractual partners. General practitioners 2017. (<https://services.nhif.bg/references/lists/opl.xhtml/>; accessed 8 August 2017) (in Bulgarian).
- National Health Insurance Fund (2017d). NHIF's contractual partners. Pharmacies 2017. (<https://services.nhif.bg/references/lists/pharmacies.xhtml>; accessed 23 August 2017) (in Bulgarian).
- National Health Insurance Fund (2017e). NHIF's contractual partners. Specialists 2017. (https://services.nhif.bg/references/lists/specialists.xhtml?jsessionid=WYgPTQJ0VYq9y18K8G51NO9BtEN5J-rqrMlxMB3peaO_1-GQydp0!-242228155; accessed 12 August 2017) (in Bulgarian).

- National Health Insurance Fund/NHIF (2018). Annual Reports for the received by the NHIF requests for access of public information for 2015, 2016, and 2017. (<https://www.nhif.bg/page/1066>, accessed 3 March 2018).
- National Insurance Institute (2017). Statistical Book Demography, Economy and Social Insurance 2016. (http://www.nssi.bg/images/bg/about/statisticsandanalysis/statistics/pokazатели/pokazатели_Demography_2016.pdf, accessed 1 December 2017).
- National Statistical Institute/NSI (2011) Population and Housing Status in the Republic of Bulgaria, 2011. (<http://www.nsi.bg/census2011/indexen.php>, accessed 21 July 2017).
- National Statistical Institute/NSI (2017a). Health care establishments by statistical regions and districts. (<http://www.nsi.bg/en/content/5578/health-establishments-3112-statistical-regions-and-districts>, last updated 16 June 2017; accessed 12 August 2017).
- National Statistical Institute/NSI (2017b). International Migration by Age and Citizenship of Migrants. (<http://www.nsi.bg/en/content/13040/international-migration-age-and-citizenship-migrants>, accessed 12 August 2017).
- National Statistical Institute/NSI (2017c). Main results from information society survey in households in 2017. Sofia, National Statistical Institute (http://www.nsi.bg/sites/default/files/files/pressreleases/ICT_hh2017_ZW9AP4W.pdf, accessed 23 February 2018).
- National Statistical Institute/NSI (2017d). Homes for medico-social care for children. (<http://www.nsi.bg/en/content/5606/homes-medico-social-care-children>, last updated 3 April 2017; accessed 24 August 2017).
- National Statistical Institute/NSI (2017e). Main results from information society survey in enterprises in 2017. Sofia, National Statistical Institute (http://www.nsi.bg/sites/default/files/files/pressreleases/ICT_ent2017_ZW9AP4W.pdf, accessed 23 February 2018).
- National Statistical Institute/NSI (2017f). Statistical Yearbook 2016. Sofia, National Statistical Institute. (<http://www.nsi.bg/sites/default/files/files/publications/God2016.pdf>, accessed 23 January 2017).
- National Statistical Institute/NSI (2017g). Physicians in health establishments by medical specialty, statistical regions and districts. (<http://www.nsi.bg/en/content/5590/physicians-health-establishment-medical-specialty-statistical-regions-and-districts>, last updated 16 June 2017; accessed 8 August 2017).
- National Statistical Institute/NSI (2017h). Statistical Reference Book 2017. Sofia, National Statistical Institute (http://www.nsi.bg/sites/default/files/files/publications/StatBook2017_en.pdf, accessed 15 July 2017).
- National Statistical Institute/NSI (2017i). Population data [online database] 2017, Sofia, National Statistical Institute. (<http://www.nsi.bg/en/content/6718/natural-increase-1-000-persons-population-statistical-regions-districts-and-place>, accessed 16 July 2017).
- National Statistical Institute/NSI (2017j). Poverty and Social Inclusion Indicators in 2016. (http://www.nsi.bg/sites/default/files/files/pressreleases/SILC2016_en_VTLG9JX.pdf, accessed 17 July 2017).
- National Statistical Institute/NSI (2017k). Employment and Unemployment. Annual Data 2016. (http://www.nsi.bg/sites/default/files/files/publications/ZB_2016.pdf, accessed 21 July 2017).
- National Statistical Institute/NSI (2017l). Health Services 2017. Sofia, National Statistical office, National Centre for Public Health and Analyses. (<http://www.nsi.bg/sites/default/files/files/publications/Zdrave2017.pdf>, accessed 28 July 2017).
- National Statistical Institute/NSI (2017m). Mortality by causes, sex, statistical regions and districts. Sofia, National Statistical office. (<http://www.nsi.bg/en/content/5623/mortality-causes-sex-statistical-regions-and-district>, accessed 29 July 2017).
- National Statistical Institute/NSI (2018a). Households Income, Expenditure and Consumption. Sofia, National Statistical Institute (<http://www.nsi.bg/en/content/5640/households-income-expenditure-and-consumption>, accessed 25 January 2018).
- National Statistical Institute/NSI (2018b). Average monthly wages and salaries of the employees under labour contract. (<http://www.nsi.bg/en/content/6410/total>, accessed 19 January 2018).

- National Statistical Institute/NSI (2018c). Crude death and infant mortality rates by place of residence, statistical regions, districts and sex. (<http://www.nsi.bg/en/content/6639/crude-death-and-infant-mortality-rates-place-residence-statistical-regions-districts>, accessed 12 February 2018).
- National Statistical Institute/NSI (2018d). Healthcare 2017. Sofia, National Statistical office, National Centre for Public Health and Analyses. (http://www.nsi.bg/sites/default/files/files/publications/Zdraveopazvane_2017.pdf, accessed 22 February 2018).
- National Statistical Institute/NSI (2018e). Demographic and social statistics. Infostat – National Statistical Institute, Sofia (https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=3&lang=en, accessed 24 January 2018).
- National Statistical Institute/NSI (2018f). Macroeconomics statistics. Consumer price indexes. Infostat – National Statistical Institute, Sofia (https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=69, accessed 25 January 2018).
- National Statistical Institute/NSI (2018g). System of Health Accounts (SHA 2011). Sofia, National Statistical Institute (<http://www.nsi.bg/en/content/14523/system-health-accounts-sha-2011>, accessed 25 January 2018).
- National Statistical Institute/NSI (2018h). Statistical Yearbook 2017. Sofia, National Statistical Institute. (<http://www.nsi.bg/sites/default/files/files/publications/God2017.pdf>, accessed 10 June 2018).
- National Statistical Institute/NSI (2018i). Statistical data. Demographic and social statistics. Health. Homes for medico-social care for children Database. (<http://www.nsi.bg/en/content/5606/homes-medico-social-care-children>, accessed 16 April 2018).
- Neikov P (2013). FSC re-licensed the health insurance companies. Ivestitor.BG, 7 August 2013. (<https://www.investor.bg/ikonomika-i-politika/332/a/kfn-prelicenzira-zdravnite-drujestva-v-zastrahovateli-155651/>, accessed 12 January 2018).
- Nikolov B, et al. (2004). Understanding reform: a country study for Bulgaria. Global Development Network Southeast Europe (GSN-SEE).
- OECD (2017). International Migration Outlook 2017. Paris, OECD Publishing. (http://dx.doi.org/10.1787/migr_outlook-2017-en, accessed 14 July 2017).
- OECD/EU (2016). Health at a Glance: Europe 2016 – State of Health in the EU Cycle. OECD Publishing, Paris. (<http://dx.doi.org/10.1787/9789264265592-en>, accessed 1 August 2017).
- OECD/European Observatory on Health Systems and Policies (2017). Bulgaria: Country Health Profile 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. (<http://dx.doi.org/10.1787/9789264283305-en>, accessed 29 January 2018).
- Open Society Institute Sofia (2008). Informal Payments in the Healthcare. Report. (http://www.osf.bg/cyeds/downloads/Neform_plaschtania_Report.pdf, accessed 12 January 2018).
- Ordinance No. 10 of 2015 on the investigation of patient satisfaction with medical activities purchased by the National Health Insurance Fund. Ministry of Health. State Gazette No. 97, 11 December 2015.
- Ordinance No. 12 of 2015 on the medical standard Emergency Medicine. Ministry of Health. State Gazette No. 4, 15 January 2016.
- Ordinance No. 15 of 2005 on the immunisations in Republic of Bulgaria. Ministry of Health. State Gazette No. 45, 31 May 2005.
- Ordinance No. 2 of 2016 on the basic package of health services, guaranteed by the budget of the National Health Insurance Fund. Ministry of Health. State Gazette No. 24, 29 March 2016.
- Ordinance No. 2 of 2016 on the conditions and rules for certification of the balneological spa centre (medical spa), spa centre, wellness centre or thalassotherapy centre. Ministry of Tourism, Ministry of Health. State Gazette No. 11, 9 February 2016.
- Ordinance No. 21 of 2005 on the order of registration, communication and reporting of communicable diseases. Ministry of Health. State Gazette No. 62, 29 July 2005.
- Ordinance No. 49 of 2010 on the basic requirements by the structure, activities and the internal order of the health care establishments for inpatient care and the homes of medical-social care. Ministry of Health. State Gazette No. 83, 22 October 2010.

- Ordinance No. 8 of 2016 on the prophylactic examinations and dispensation. Ministry of Health. State Gazette No. 92, 22 November 2016.
- Ordinance on the criteria and the procedure for the selection of hospitals with which the National Health Insurance Fund concludes contracts. Regulation No. 45 of 2016. Council of Ministers. State Gazette No. 19, 11 March 2016.
- Ordinance on the terms, rules and procedure for regulation and registration of prices for medicinal products. Regulation No. 97 of 2013. Council of Ministers. State Gazette No. 40, 30 April 2013.
- Parliamentarian Committee on Health (2014). Statement by the NCPRMP 4.06.2014. (<http://www.parliament.bg/pub/cW/20140604050510dopolnitelno%20Stanovishte%20na%20Nac.%20suvev%20po%20ceni%20i%20reimb.%20po%20ZID%20na%20ZZ.pdf>; accessed 23 April 2018).
- Petrov I, et al. (2017). Endovascular treatment of acute aortic dissection Stanford Type A. *JACC: Cardiovascular Interventions* 3538; DOI: 10.1016/j.jcin.2017.10.048
- Petrova D (2013). A comparative analysis of social satisfaction with health care systems in Bulgaria, England, Germany and the Czech Republic. *Medical Review*, 49(1):65–69.
- Pharmaceutical Group of the European Union (2015). Pharmacy with you throughout life. Annual Report 2015. (<http://www.pgeu.eu/en/library/530:annual-report-2015.html>, accessed 10 March 2018).
- Popov M (2009). National Health Service in the Third Bulgarian State – History of Medicine, Sofia, (in Bulgarian).
- Postolovska, I. (2015). International comparisons of Bulgaria's health system performance: background paper. Washington, D.C.: World Bank Group (<http://documents.worldbank.org/curated/en/774801468197986416/International-comparisons-of-Bulgaria-s-health-system-performance-background-paper>, accessed 4 August 2017).
- Public Procurement Act 2016. State Gazette No.13 from 16 February 2016.
- Rohova M (2013). Establishment of National Council on Prices and Reimbursement of Medicinal Products. 19/09/2013 reform Log, HSPM (<http://www.hspm.org/countries/bulgaria22042013/countrypage.aspx>; accessed 30 March 2018).
- Rohova M (2015a). Introduction of ceilings to hospital sector. 15/06/2015 Policy Update, HSPM. (<http://www.hspm.org/countries/bulgaria22042013/countrypage.aspx>, accessed 24 March 2018).
- Rohova M (2015b). Reducing the inequalities in access to health care services [PhD thesis]. University of Economics, Varna (in Bulgarian).
- Rohova M (2017a). Disputed budget of the NHIF for 2018. 20/12/2017 Policy Update, HSPM (<http://www.hspm.org/countries/bulgaria22042013/countrypage.aspx>, accessed 24 March 2018).
- Rohova M (2017b). Regional imbalances in distribution of Bulgarian health professionals. *Journal of IMAB*, 23(1):1427–1431.
- Rohova M, Atanasova E, Dimova A (2017). Socioeconomic health inequalities in use of health care services in Bulgaria. *Varna Medical Forum*, 6(1):184–190 (in Bulgarian).
- Salchev P (2016). E-Health – Myth or Reality (presentation). Third Annual Conference “Can the Health Sector Be the Next Engine of Economic Growth” Econmedia, Sofia. (https://www.researchgate.net/publication/308886687_Elektronnoto_zdraveopazvane_-_mit_ili_realnost, accessed 2 March 2018).
- Salchev P (2018). Activity of the HTA Commission 2017. Technical Report, February 2018. (https://www.researchgate.net/profile/Petko_Salchev/contributions; accessed 16 March 2018).
- Salchev P, Dikova K (2015). Regional differences and health risks. *Social Pharmacy and Healthcare Management*, 1(1):25–40 (in Bulgarian).
- Salchev P, Staneva E. (2018). A brief economic analysis for the period 2012–2016. Technical Report January 2018. (https://www.researchgate.net/publication/322764568_A_brief_economic_analysis_for_the_period_2012-2016, accessed 11 February 2018).

- Social Support Act. State Gazette No. 56, 19 May 1998; last amended 29 January 2016.
- Struckmann V, et al. (2017). Integrated Diabetes Care Delivered by Patients – A Case Study from Bulgaria. *International Journal of Integrated Care*, 17(1):1–6.
- Supreme Administrative Court. Decision No. 2730 of 2017. State Gazette No. 64, 8 August 2017.
- Swiss Agency for Development and Cooperation SDC, State Secretariat for Economic Affairs SECO (2015). Home nursing service for elderly people in Bulgaria: Maintaining Independence Improves the Quality of Life for Elderly People (<https://www.eda.admin.ch/dam/erweiterungsbeitrag/en/documents/Projekte/Home-Care-Bulgarien-EN.pdf>; accessed 14 February 2018).
- Tambor M, et al. (2014). The inability to pay for health services in Central and Eastern Europe: evidence from six countries. *European Journal of Public Health*, 24(3):378–385.
- United Nations, Department of Economic and Social Affairs, Population Division. 2017. World Population Prospects: The 2017 Revision. New York (<http://esa.un.org/unpd/wpp/index.htm>; accessed 15 July 2017).
- Valentinova T, Nedkova-Milanova V (2018). Factors Influencing the Motivation of General Practitioners to Work. *General Medicine*, No 1. (http://www.medun.acad.bg/cmb_htm/Obsta_Medicina/1-2018.html, accessed 20 March 2018).
- Vasileva E. (2017). Alarmingly and not exaggerated: Bulgaria can remain without physicians. (<https://www.dnes.bg/obshtestvo/2017/03/01/trevojno-i-ne-e-presileno-bylgariia-moje-da-ostane-bez-medici.333533>).
- Vassilev, R. (2005). Bulgaria's demographic crisis: underlying causes and some short-term implications. *Southeast European Politics*, Vol. VI, No. 1.
- Veleva, N, et al. (2013). Bulgarian nursing workforce forecast (2013–2015). *European Journal of Public Health*, 23 suppl. 1, Oct. 2013.
- WHO (2017). Global Health Observatory Database. Geneva, World Health Organization. (<http://www.who.int/gho/en/>, accessed 25 July 2017).
- WHO (2018) Global Health Expenditure Database. (<http://apps.who.int/nha/database/Select/Indicators/en>, accessed 23 February 2018).
- WHO Regional Office for Europe (2018). European Health for All database (HFA-DB). WHO Regional Office for Europe, Copenhagen, (<http://www.euro.who.int/hfdb>, accessed 6 February 2018).
- World Bank (2012). Bulgaria: Household welfare during the 2010 recession and recovery. Washington: World Bank. (<https://openknowledge.worldbank.org/handle/10986/12789>).
- World Bank (2015), Systematic Country Diagnostic: Bulgaria's Potential for Sustainable Growth and Shared Prosperity. (<http://documents.worldbank.org/curated/en/521881467994600656/pdf/99721-CAS-P151391-SecM2015-0217-2-IFC-SecM2015-0085-2-Box393212B-PUBLIC-mark-VERSION-REVISED.pdf>; accessed 14 February 2018).
- World Bank (2016a). [Press release] Bulgaria and World Bank Group Renew Partnership for Strengthening Institutions and Investing in People (<http://www.worldbank.org/en/news/press-release/2016/05/19/bulgaria-and-world-bank-group-renew-partnership-for-strengthening-institutions-and-investing-in-people>, accessed 14 February 2018).
- World Bank (2016b). Country Partnership Framework for Bulgaria for the Period FY17–FY22, International Bank for Reconstruction and Development, International Finance Corporation, Multilateral Investment Guarantee Agency (<http://documents.worldbank.org/curated/en/583161467119287449/pdf/104987-REVISED-CASD-P149302-PUBLIC-BulgariaCPFenglishfinal.pdf>, accessed 14 February 2018).
- World Bank (2017). World Development Indicators [online database]. Washington, DC, World Bank (<http://databank.worldbank.org>, accessed 13 July 2017).
- Yaneva I. (2017). Why do not young physicians remain in Bulgaria? *Bulgarian Journal of Public Health*, 9(4).

9.2 HiT methodology and production process

HiTs 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. This HiT has used a revised version of the template that is being piloted during 2016–2017 and will be available on the Observatory website once it has been finalized. The previous (2010) version of the 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 HiTs, ranging from national statistics, national and regional policy documents to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 1 200 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 upon official figures provided by governments, as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments.

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 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 and health workers 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 and dental care.
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 of systems for monitoring health system performance, the impact of the health system on population health, access to health services, financial protection, health system efficiency, health care quality and safety, and transparency and accountability.
8. Conclusions: identifies key findings, highlights the lessons learnt from health system changes; and summarizes remaining challenges and future prospects.
9. Appendices: includes references and useful websites.

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

One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely 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.

9.3 The review process

This consists of three stages. Initially the text of the HiT is checked, reviewed and approved by the series editors of the European Observatory. 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.

9.4 About the authors

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(1999, 2004, 2007, 2011, 2017)

Republic of Korea

(2009^{*})

Republic of Moldova

(2002^a, 2008^a, 2012)

Romania

(2000^f, 2008, 2016)

Russian Federation

(2003^a, 2011^a)

Slovakia

(2000, 2004, 2011, 2016)

Slovenia

(2002, 2009, 2016)

Spain

(2000^h, 2006, 2010, 2018)

Sweden

(2001, 2005, 2012)

Switzerland

(2000, 2015)

Tajikistan

(2000, 2010^a, 2016)

**The former Yugoslav
Republic of Macedonia**

(2000, 2006, 2017)

Turkey

(2002^{ai}, 2011ⁱ)

Turkmenistan

(2000)

Ukraine

(2004^a, 2010^a, 2015)

United Kingdom of**Great Britain and****Northern Ireland**

(1999^a, 2015)

United Kingdom (England)

(2011)

United Kingdom (Northern**Ireland)**

(2012)

United Kingdom**(Scotland)**

(2012)

United Kingdom (Wales)

(2012)

United States of America

(2013)

Uzbekistan

(2001^a, 2007^a, 2014^a)

Veneto Region, Italy

(2012)

All HiTs are
available in English.

When noted,
they are also
available in other
languages:

- ^a Albanian
- ^b Bulgarian
- ⁱ Estonian
- ^c French
- ^d Georgian
- ^e German
- ^k Polish
- ^f Romanian
- ^g Russian
- ^h Spanish
- ⁱ Turkish



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