European Commission

State of Health in the EU

Bulgaria

Country Health Profile 2019

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European Observatory on Health Systems and Policies
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The Country Health Profile series

The *State of Health in the EU*'s Country Health Profiles provide a concise and policy-relevant overview of health and health systems in the EU/European Economic Area. They emphasise the particular characteristics and challenges in each country against a backdrop of cross-country comparisons. The aim is to support policymakers and influencers with a means for mutual learning and voluntary exchange.

The profiles are the joint work of the OECD and the European Observatory on Health Systems and Policies, in cooperation with the European Commission. The team is grateful for the valuable comments and suggestions provided by the Health Systems and Policy Monitor network, the OECD Health Committee and the EU Expert Group on Health Information.

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Data and information sources

The data and information in the Country Health Profiles are based mainly on national official statistics provided to Eurostat and the OECD, which were validated to ensure the highest standards of data comparability. The sources and methods underlying these data are available in the Eurostat Database and the OECD health database. Some additional data also come from the Institute for Health Metrics and Evaluation (IHME), the European Centre for Disease Prevention and Control (ECDC), the Health Behaviour in School-Aged Children (HBSC) surveys and the World Health Organization (WHO), as well as other national sources.

The calculated EU averages are weighted averages of the 28 Member States unless otherwise noted. These EU averages do not include Iceland and Norway.

This profile was completed in August 2019, based on data available in July 2019.

To download the Excel spreadsheet matching all the tables and graphs in this profile, just type the following URL into your Internet browser: http://www.oecd.org/health/Country-Health-Profiles-2019-Bulgaria.xls

Demographic and socioeconomic context in Bulgaria, 2017

Demographic factors	Bulgaria	EU
Population size (mid-year estimates)	7 076 000	511 876 000
Share of population over age 65 (%)	20.7	19.4
Fertility rate[1]	1.6	1.6
Socioeconomic factors		
GDP per capita (EUR PPP[2])	14 800	30 000
Relative poverty rate[3] (%)	23.4	16.9
Unemployment rate (%)	6.2	7.6

1. Number of children born per woman aged 15-49. 2. Purchasing power parity (PPP) is defined as the rate of currency conversion that equalises the purchasing power of different currencies by eliminating the differences in price levels between countries. 3. Percentage of persons living with less than 60 % of median equivalised disposable income.
Source: Eurostat Database.

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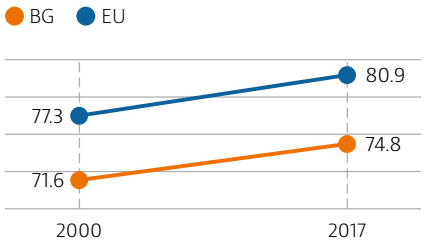
1 Highlights

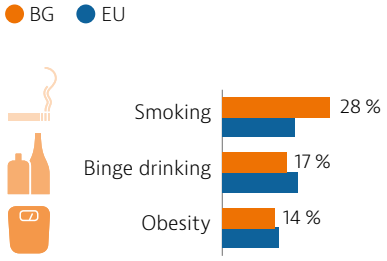
The life expectancy of Bulgarians has improved but is still the lowest in the EU. Underdeveloped preventive actions and outpatient (or ambulatory) care contribute to poor health outcomes. The social health insurance system is compulsory yet in practice there are significant gaps in population coverage and what is offered in the benefit package. Recent reform initiatives have focused on controlling spending and enhancing efficiency, including the introduction of health technology assessment (HTA) for pharmaceutical reimbursement, and trying to shift the health system's focus away from hospital-centred care.



Life expectancy at birth, years

Health status

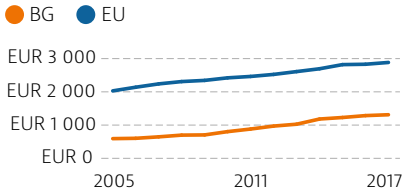
Life expectancy in Bulgaria increased by more than three years between 2000 and 2017 but larger increases in other EU Member States have widened the gap between Bulgaria and the EU average. Circulatory system diseases and cancer are the principal causes of death, and there are significant disparities in health status across gender, regional and educational lines. Morbidity from infectious diseases such as tuberculosis (TB) are also an ongoing concern.



% of adults

Risk factors

Reducing the high prevalence of behavioural risk factors poses a major challenge. Despite a slight reduction in tobacco consumption, the rate of smoking among adults is the highest in the EU and stood at 28 % in 2014 (36.4 % among men). Smoking among teenagers is also common. Heavy alcohol consumption in 2014 was slightly below the EU average for adults, but is increasing among teenage boys. While the obesity rate among adults is just below the EU average, it is a growing problem among children, with one in five being overweight or obese.



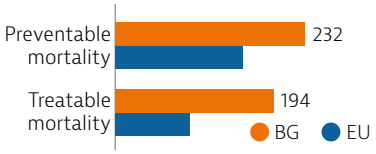
Per capita spending (EUR PPP)

Health system

Despite doubling since 2005, per capita health spending, at EUR 1 311, was the fourth lowest in the EU in 2017. This represents 8.1 % of GDP, below the EU average of 9.8 %, but higher than in neighbouring countries. Out-of-pocket (OOP) spending in 2017 was the highest in the EU (46.6 % compared with 15.8 % on average), and is mainly driven by co-payments on pharmaceuticals and outpatient care. The prevalence of informal payments also adds to household costs for health care.

Effectiveness

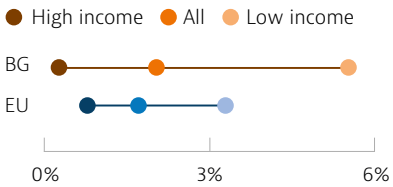
Both preventable and treatable causes of mortality are among the highest in the EU, indicating a large scope for improving disease prevention and the effectiveness of care. A lack of data on key indicators hampers the monitoring of care quality.



Age-standardised mortality rate per 100 000 population, 2016

Accessibility

Although self-reported unmet needs are at the lowest level since 2008, low-income groups are more heavily affected. High levels of OOP spending, and lack of health insurance for a significant proportion of the population, are the main barriers to accessibility.



% reporting unmet medical needs, 2017

Resilience

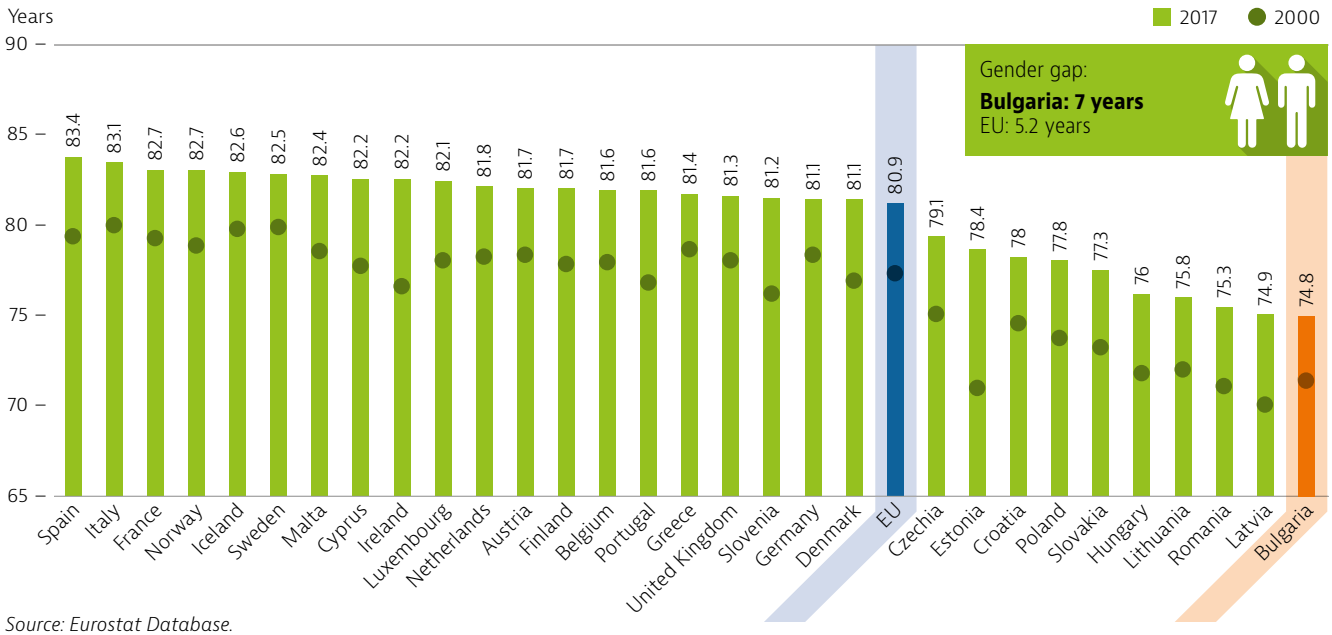
The financial sustainability of the health system is challenged by a heavy reliance on private expenditure as well as the shrinking working-age population that contributes to the revenue base of social health insurance. Efforts to improve efficiency by reorienting service delivery and resources away from hospitals have proven difficult.

2 Health in Bulgaria

Life expectancy at birth has increased in Bulgaria but large differences between men and women persist

While life expectancy in Bulgaria increased from 71.6 years in 2000 to 74.8 years in 2017, it is the lowest in the EU (Figure 1). Although Latvia, Estonia and Romania recorded shorter life expectancy in 2000, gains in these countries have outpaced those in Bulgaria. The gain in life expectancy has been greater among women than men, thus widening the pre-existing gender gap to seven years. Despite this, women in Bulgaria have the shortest life expectancy in the EU (78.4 years), while men have the third lowest (71.4 years).

Figure 1. Bulgaria's population has the shortest life expectancy in the EU



Source: Eurostat Database.

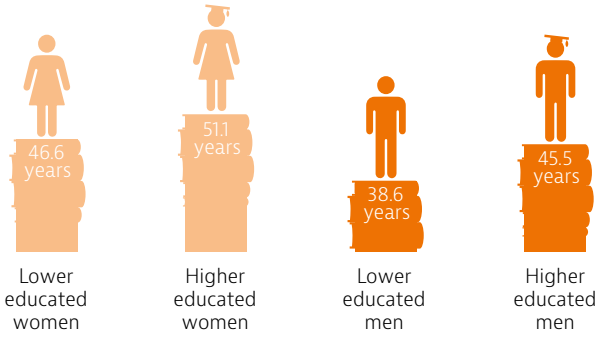
Inequalities in life expectancy by education level are substantial

As shown in Figure 2, men with low levels of educational attainment at age 30 live on average 6.9 years less than those with tertiary education, albeit this is a smaller gap than the EU average of 7.6 years. For women, the gap is less pronounced – 4.5 years – but slightly greater than the EU average of 4.1 years. This gap in longevity can be explained, at least partly, by differences in exposure to various risk factors, such as tobacco consumption and poor nutrition.[1]

Infant mortality has improved but regional disparities persist

Bulgaria achieved significant improvements in infant mortality between 2000 and 2018, more than halving the rate from 13.3 to 5.8 deaths per 1 000 live births, an outcome at least partly attributable to its National Programme on Maternal and Infant Health.

Figure 2. Bulgarians with tertiary education have a life expectancy up to seven years longer than those who have not completed secondary education



Education gap in life expectancy at age 30:

Bulgaria: 4.5 years
EU21: 4.1 years

Bulgaria: 6.9 years
EU21: 7.6 years

Note: Data refer to life expectancy at age 30. High education is defined as people who have completed a tertiary education (ISCED 5-8) whereas low education is defined as people who have not completed their secondary education (ISCED 0-2).
Source: Eurostat database (data refer to 2016).

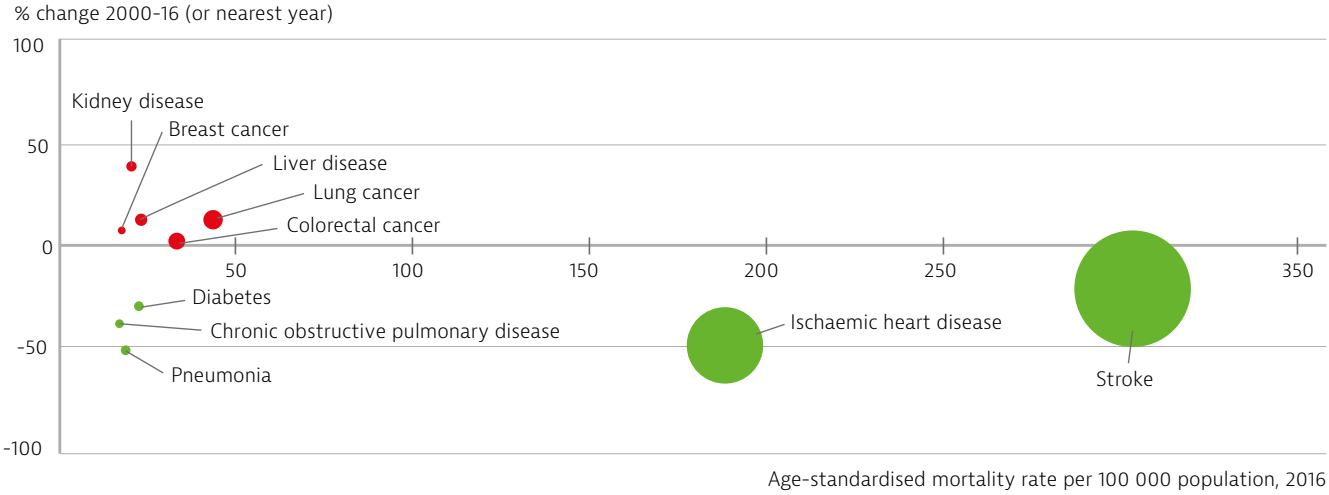
1: As people with higher level of education tend to be of higher socioeconomic status, the education gaps in life expectancy are also related to differences in income and living standards, which may affect both exposure to different risk factors and access to health care.

However, substantial regional disparities persist, with rates as low as 1.5 reported in the Smolyan district and 2.6 in the Sofia (capital) district, but much higher in Pleven (11.3) and Razgrad (10.6) (National Statistical Institute, 2019a).

Cardiovascular diseases are the leading cause of death in Bulgaria

Circulatory system diseases account for the highest numbers of deaths in Bulgaria, with a rate of 1 100 deaths per 100 000 inhabitants in 2016 (around three times the EU average of 360). Of these, 300 were due to stroke (compared with an EU average of 80). In fact, stroke was the cause of around one fifth of all deaths (Figure 3). In contrast, mortality from ischaemic heart disease, the second highest cause of death, has more than halved since 2000. The drop has been more marked in women than men and is partly due to a reduction in some behavioural risk factors as well as improved early detection and treatment (such as free annual check-ups for cardiovascular diseases) and increased use of hypertension medication.

Figure 3. Cardiovascular diseases and cancer account for the majority of deaths in Bulgaria



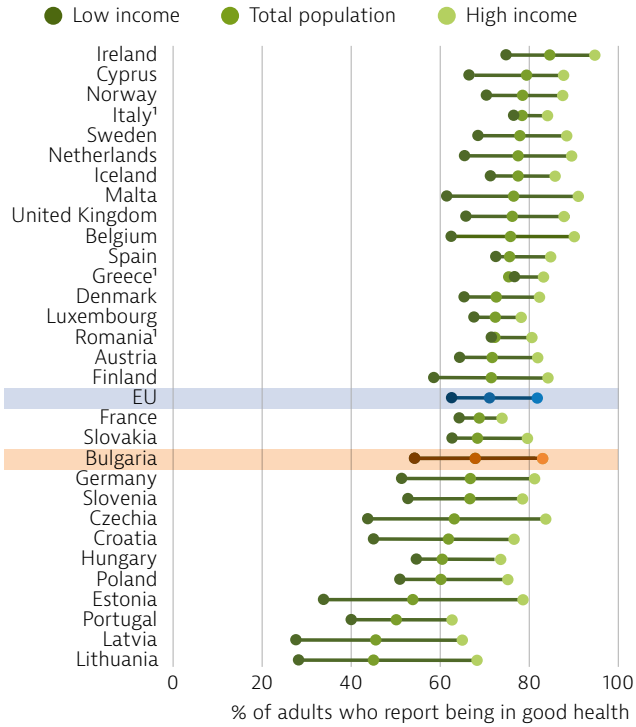
Note: The size of the bubbles is proportional to the mortality rates in 2016.
Source: Eurostat Database.

Lung cancer was the most frequent cause of cancer-related mortality, and the death rate has increased by nearly 12 % since 2000, in part reflecting the legacy of smoking (Section 3). Mortality rates from other cancer have also increased in recent years, in particular colorectal and breast cancer.

The majority of people report being in good health, yet stark disparities exist by income group

In 2017, two thirds of the population reported being in good health, close to the EU average of 69.7 % (Figure 4). However, wider disparities exist across income groups in Bulgaria than in the EU. More than four in five of those in the highest income quintile considered themselves to be in good health, compared with only about half of those in the lowest income quintile.

Figure 4. Two thirds of the Bulgarian population rate their health positively



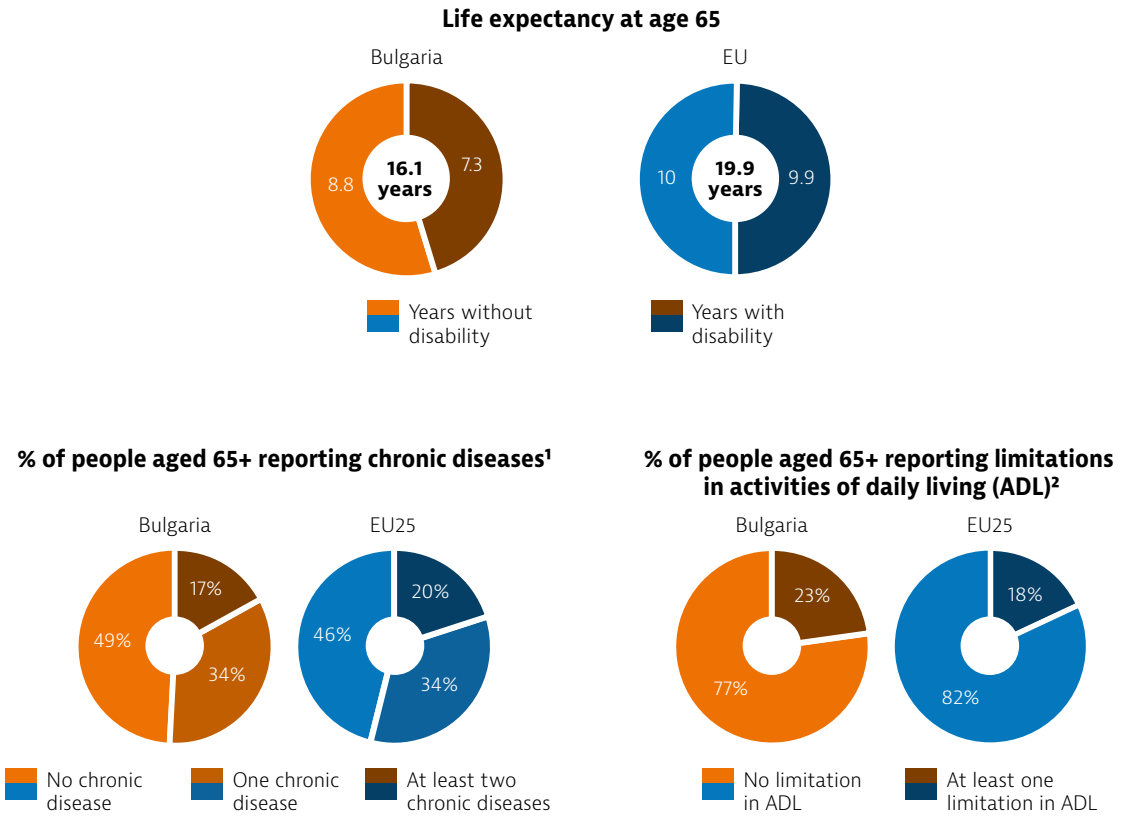
Note: 1. The shares for the total population and the population on low incomes are roughly the same.
Source: Eurostat Database, based on EU-SILC (data refer to 2017).

About two fifths of life after age 65 is lived with some health problems or disabilities

In 2017, Bulgarians aged 65 could expect to live an additional 16.1 years, an increase of two years since 2000. However, as is common in other EU countries, a number of years of life after age 65 are spent with some health problems or disabilities. In Bulgaria, this is only around seven years on average, substantially less than the average across the EU (Figure 5). While the gender gap in life expectancy at age 65 remains substantial, with Bulgarian men living almost 4 years less than women (14.1 years compared to 17.8), the gap in the number of healthy life years[2] is less than 1 year, as women tend to live a greater proportion of their lives with chronic diseases or disabilities.

Just over half the people aged 65 and over reported having at least one chronic disease, a proportion that is slightly below the EU average. However, nearly a quarter of the population aged 65 and over reported severe disabilities that limited their basic activities of daily living (ADL) such as dressing and showering. This is much higher than the average across the EU (18 %).

Figure 5. Half of Bulgarians aged 65 and over have at least one chronic disease



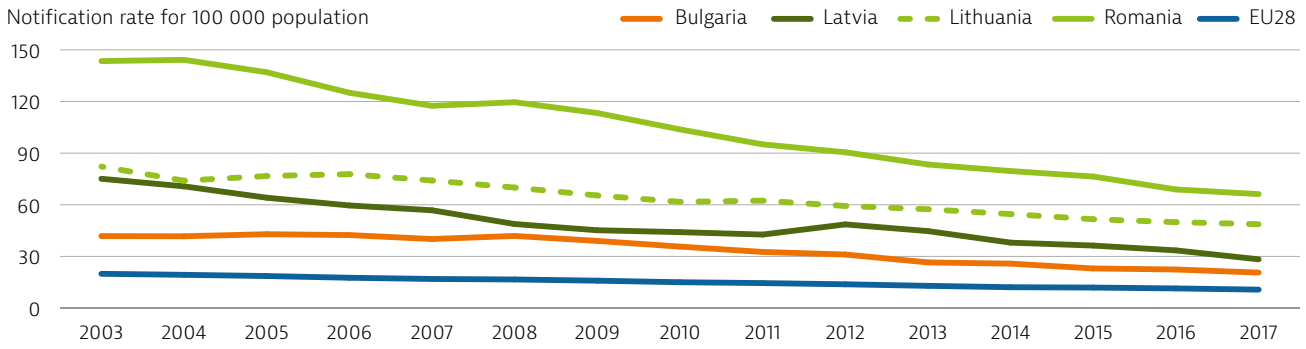
Notes: 1. Chronic diseases include heart attack, stroke, diabetes, Parkinson's disease, Alzheimer's disease and rheumatoid arthritis or osteoarthritis. 2. Basic activities of daily living include dressing, walking across a room, bathing or showering, eating, getting in or out of bed and using the toilet.
Sources: Eurostat Database for life expectancy and healthy life years (data refer to 2017); SHARE survey for other indicators (data refer to 2017).

2: 'Healthy life years' measure the number of years that people can expect to live free of disability at different ages.

Bulgaria still faces important challenges in managing communicable diseases

Although the number of new TB cases has decreased over the last decade, the epidemic is not yet under control. In 2017, the notification rate was almost double the EU/EEA average – 21 per 100 000 population compared with 11 per 100 000 population in the EU/EEA (Figure 6). In addition, the measles notification rate jumped from 0.1 per million population in 2016 to 23.2 in 2017. As neighbouring Romania recorded a notification rate of 462 per million population in 2017, the disease requires ongoing vigilance in monitoring and vaccination (see Section 5.1).

Figure 6. The number of newly reported cases of tuberculosis has declined but continues to exceed the EU average



Source: ECDC Surveillance Data

3 Risk factors

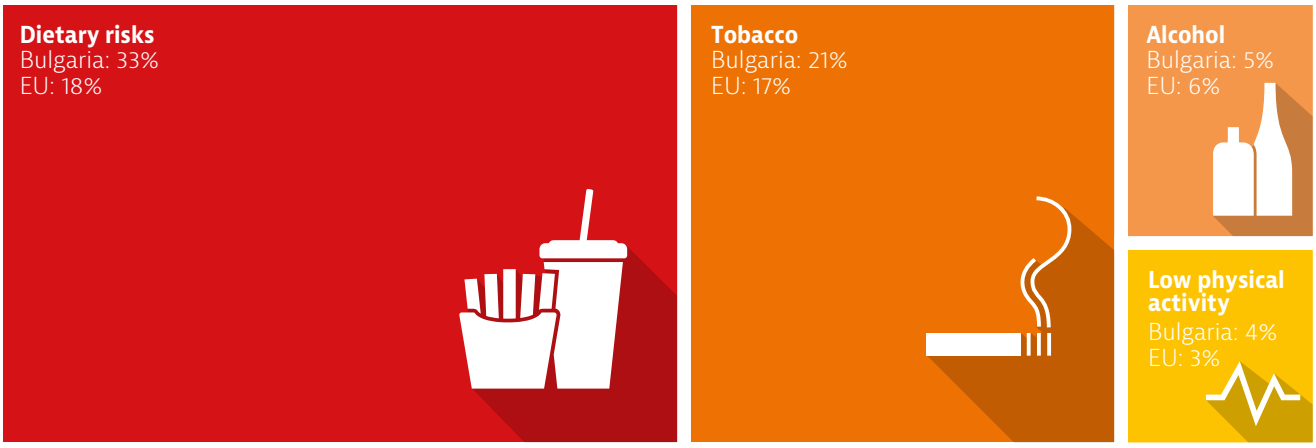
Behavioural risk factors account for more than half of all deaths

It is estimated that 51 % of all deaths in Bulgaria are attributable to behavioral risk factors, compared with 39 % across the EU as a whole (Figure 7). Dietary risks, including low fruit and vegetable intake, and high sugar and salt consumption, were implicated in 33 % of all deaths in 2017, the highest proportion in the EU and almost double that of the EU as a whole (18 %). Tobacco consumption (including direct and second-hand smoking) contributed to an estimated 21 % of all deaths, while around 5 % were attributable to alcohol consumption, and 4 % to low levels of physical activity (Figure 7).

Bulgaria has the highest rate of adult smoking, and the second highest among teenage girls

Bulgaria has achieved some progress in tobacco control in recent years (see Section 5.1), but smoking remains a major public health problem (Figure 8). The rate of adult smoking is the highest in the EU, with more than one in four adults smoking daily in 2014 (and more than one in three men). Regular smoking among teenagers is also extremely concerning, especially among girls. Some 37 % of 15- to 16-year-old girls in Bulgaria reported smoking daily during the preceding month in 2015, the second highest rate in the EU after Italy.

Figure 7. Dietary risk factors are implicated in one third of all deaths



Note: The overall number of deaths related to these risk factors (55 000) is lower than the sum of each taken individually (67 000) because the same death can be attributed to more than one factor. Dietary risks include 14 components, such as low fruit and vegetable consumption and high sugar-sweetened beverage consumption.
Source: IHME (2018), Global Health Data Exchange (estimates refer to 2017).

Overweight and obesity rates in children are a major public health issue

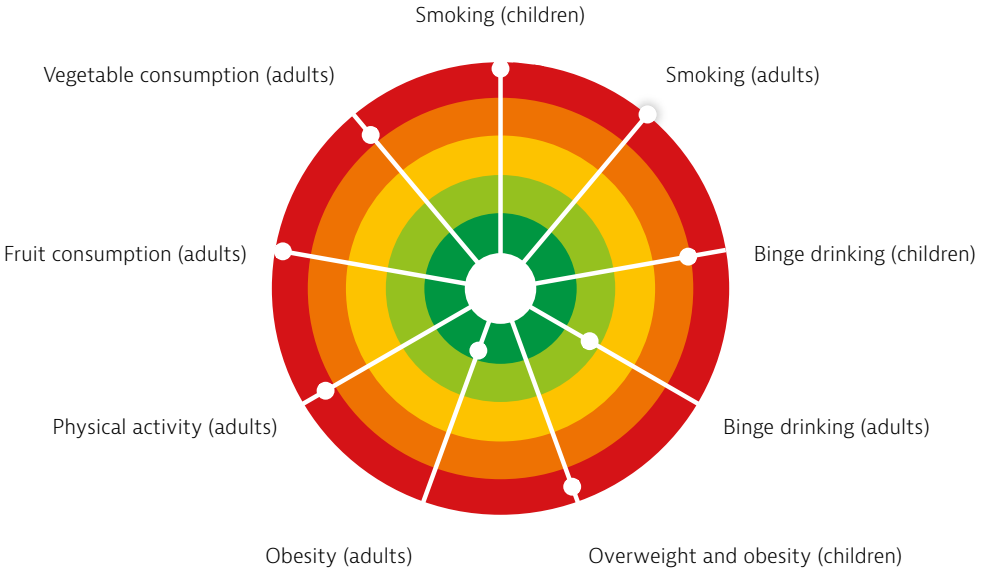
While the obesity rate among adults in Bulgaria (14 %) was just below the EU average (15 %) in 2014, the consumption of fruit and vegetables among adults is very low (the second lowest among all EU countries). Nearly two thirds of the adult population do not consume at least one piece of fruit each day, and more than half do not eat vegetables daily. Physical activity among adults is also low, with only 58 % of adults engaging in at least moderate physical activity every week, less than the EU average of 64 % (Figure 8).

Overweight and obesity levels are becoming a major problem in children, with one in five now falling into these categories. This is the fourth highest rate in the EU, and has increased substantially since 2005-06. In response, programmes targeted towards school-age children promote healthy eating (see Section 5.1). On a positive note, available data indicate that on average children meet recommended levels of physical activity.

More than half of Bulgaria's teenage boys engage in binge drinking

Approximately one in six adults (17.1 %) reported heavy alcohol consumption at least once a month (also known as binge drinking)[3], which is less than the EU average (20 %) yet much more frequent among men (26 %) than women (9.2 %). Moreover, in 2015, more than half of 15- to 16-year-old boys in Bulgaria reported at least one episode of binge drinking during the preceding month, well above the EU average. This is of particular concern given the increased risk of accidents and injuries related to heavy alcohol consumption, and its effects on educational and social outcomes in adolescents.

Figure 8. Smoking and unhealthy diet are major public health problems in Bulgaria



Note: The closer the dot is to the centre, the better the country performs compared to other EU countries. No country is in the white 'target area' as there is room for progress in all countries in all areas. Sources: OECD calculations based on ESPAD survey 2015 and HBSC survey 2013–14 for children indicators; and EU-SILC 2017, EHIS 2014 and OECD Health Statistics 2019 for adults indicators.

Socioeconomic inequality contributes to health risks

Many behavioural risk factors in Bulgaria are more prevalent among people with lower education and/or income – and the higher prevalence of risk factors among socially disadvantaged groups contributes significantly to inequalities in health and life expectancy. For example, almost 14 % of people with lower education levels were obese, compared to 11 % among those with a higher education in 2017. The exception is smoking, where the rate among adults is almost the same regardless of educational attainment (23-24 %).

3: Binge drinking is defined as consuming six or more alcoholic drinks on a single occasion for adults, and five or more alcoholic drinks for children.

4 The health system

A single public insurer and its branches currently purchase services

Bulgaria has a compulsory social health insurance (SHI) scheme, with a small role for Voluntary Health Insurance (VHI). The Ministry of Health is responsible for regulating and coordinating the health system as well as for licensing a dense network of health care providers, including hospitals (Box 1). Within the SHI, the National Health Insurance Fund (NHIF) and its regional branches are the core purchasers of health services. In July 2019, the Minister of Health proposed a reform of SHI to allow private insurers to compete with the NHIF in offering the public benefit package but such a change is still in the early stages of discussion. Notably, the past few years have been marked by challenges to policy implementation and the rising influence of the national courts in this area.

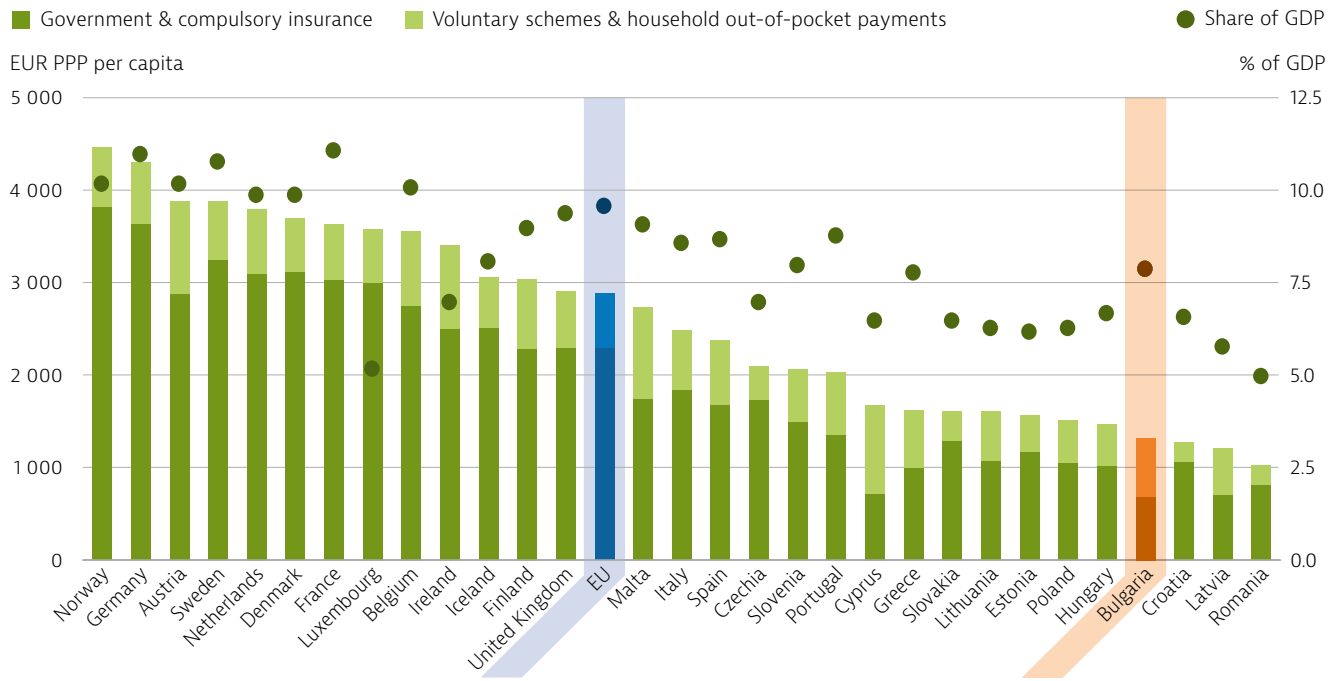
Health spending has increased significantly but is still among the lowest in the EU

In 2017, Bulgaria spent EUR 1 311 per capita (adjusted for differences in purchasing power) on health, which is the fourth lowest in the EU. Health spending per person more than doubled between 2005 and 2017, with an annual average growth rate of 5.3 % since 2009, outpacing the growth rate of every other EU Member State except Romania (see Section 5.3). Health spending continues to grow: the 2019 NHIF budget is 24 % higher than in 2017. As a proportion of GDP, Bulgaria spent 8.1 % on health in 2017, below the EU average of 9.8 % but higher than in neighbouring countries (Figure 9).

Box 1. Reform initiatives have sought to reduce hospital activity

Several reforms have targeted the high density and activity of hospitals with the intention of curbing related spending. Municipalities own the majority of public general and specialist hospitals whose numbers have decreased from 281 to 234 since 2000. Bed capacity in public hospitals has fallen but private sector beds continue to rise (Section 5.3). There was an attempt to introduce the National Health Map as a tool for selective contracting between the NHIF and hospitals; however, implementation of this aspect of the legislation was stopped by the courts in 2016. New plans for selective contacting were introduced in 2018 yet no significant progress has been achieved to date. However, budget and other legislation in 2019 introduced stricter licensing procedures for new hospitals and a ban on the NHIF contracting with them.

Figure 9. Health spending per capita is low but consumes a significant share of GDP



Source: OECD Health Statistics 2019 (data refer to 2017).

Out-of-pocket payments are the highest in the EU

Public financing of the health system accounted for 52.1 % of total health spending in 2017, which is the second lowest in the EU after Cyprus. This is also the lowest level recorded for Bulgaria since the introduction of SHI in 1998. SHI contributions are made by individuals and employers – and the state makes tax-financed contributions for children, pensioners, the poor, and others. Other tax-financed revenues are allocated via annual budgets to the Ministry of Health and municipalities.

Out-of-pocket (OOP) payments represented 46.6 % of health expenditure in 2017, the highest share in the EU. The drivers of OOP expenditure are payments for services not covered by the benefit package (including most dental and long-term care), as well as cost-sharing for a range of services and prescription medicines (see Section 5.2). Informal payments are estimated to make up a considerable share of all OOP spending on health and add to the pressure on private household spending (Zahariev & Georgieva, 2018). In contrast, VHI accounted for only 0.5 % of current health expenditure in 2017.

One in every seven Bulgarians lacks health insurance coverage

Although SHI legislation states that there should be universal health coverage, a significant proportion of the population is uninsured. The most recent estimates from the Ministry of Finance indicate that a total of 719 000 people (10.2 % of the population) lacked health insurance in 2017 (Ministry of Finance, 2018), although according to the NHIF, the proportion of residents not covered by SHI is likely to be around 14 % (after accounting for those who live permanently abroad; EAMA, 2017). Together with high OOP payments, the high number of uninsured people poses serious concerns for accessibility of health care (Council of the European Union 2019; see Section 5.2).

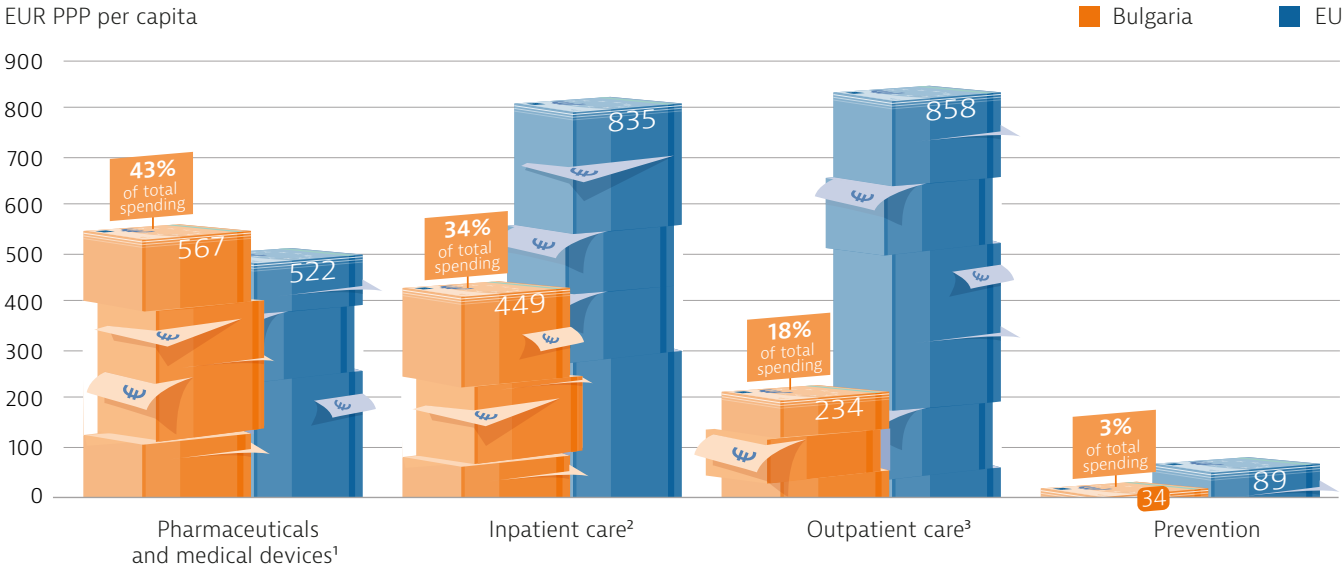
Pharmaceuticals and inpatient care absorb the majority of health spending

In 2017, pharmaceuticals and medical devices, and inpatient care together accounted for three quarters of Bulgaria's current health expenditure. When measured as a proportion of total expenditure, Bulgaria's spending on pharmaceuticals was the highest in the EU (over 40 %), although in absolute terms (EUR 567 per person), it is only slightly higher than the EU average (EUR 522) (Figure 10). Inpatient care accounted for 34 % of health spending, reflecting the significance of the hospital sector in Bulgaria. Spending on ambulatory (or outpatient) care has increased substantially since 2010 but stood at only EUR 234 per capita in 2017. In absolute terms, Bulgaria spends around EUR 34 per person on preventive care, compared to the EU average of EUR 89 – which amounts to 2.6 % of health spending.

Few resources are dedicated to long-term care

Long-term care services are excluded from the benefit package. While many older people are cared for informally by family members, those needing residential care are either placed in the few designated long-term care beds in inpatient care, or in residential care centres that are financed by municipal social assistance. As the Bulgarian population is ageing more rapidly than in

Figure 10. More than 40 % of health expenditure is spent on pharmaceuticals and medical devices



Notes: Administration costs are not included; 1. Includes only the outpatient market; 2. Includes curative-rehabilitative care in hospital and other settings; 3. Includes home care.
Sources: OECD Health Statistics, 2019; Eurostat Database (data refer to 2017).

many other EU Member States (European Commission-EPC, 2018), accessible and affordable long-term care will become a key challenge. The National Strategy for Long-Term Care (2014) and its accompanying action plan for implementation (issued in 2018) have not yet had any substantial impact.

The numbers of nurses and general practitioners are low in Bulgaria

Bulgaria has a relatively high number of doctors, close to the German rate, but the second lowest density of nurses in the EU after Greece (Figure 11). In 2016, only 15.5 % of doctors were general practitioners (GPs), well below the EU average of 27.3 %. This is partly due to the late introduction of specialist training in general medicine and the fact that it is less attractive as a specialty. The rapid ageing of the GP workforce also contributes to low numbers. The numbers of midwives, dentists and pharmacists are high relative to their EU averages. However, there are marked regional disparities in the distribution of all health care personnel, posing ongoing challenges for accessibility (Council of the European Union, 2019; see also Section 5.2).

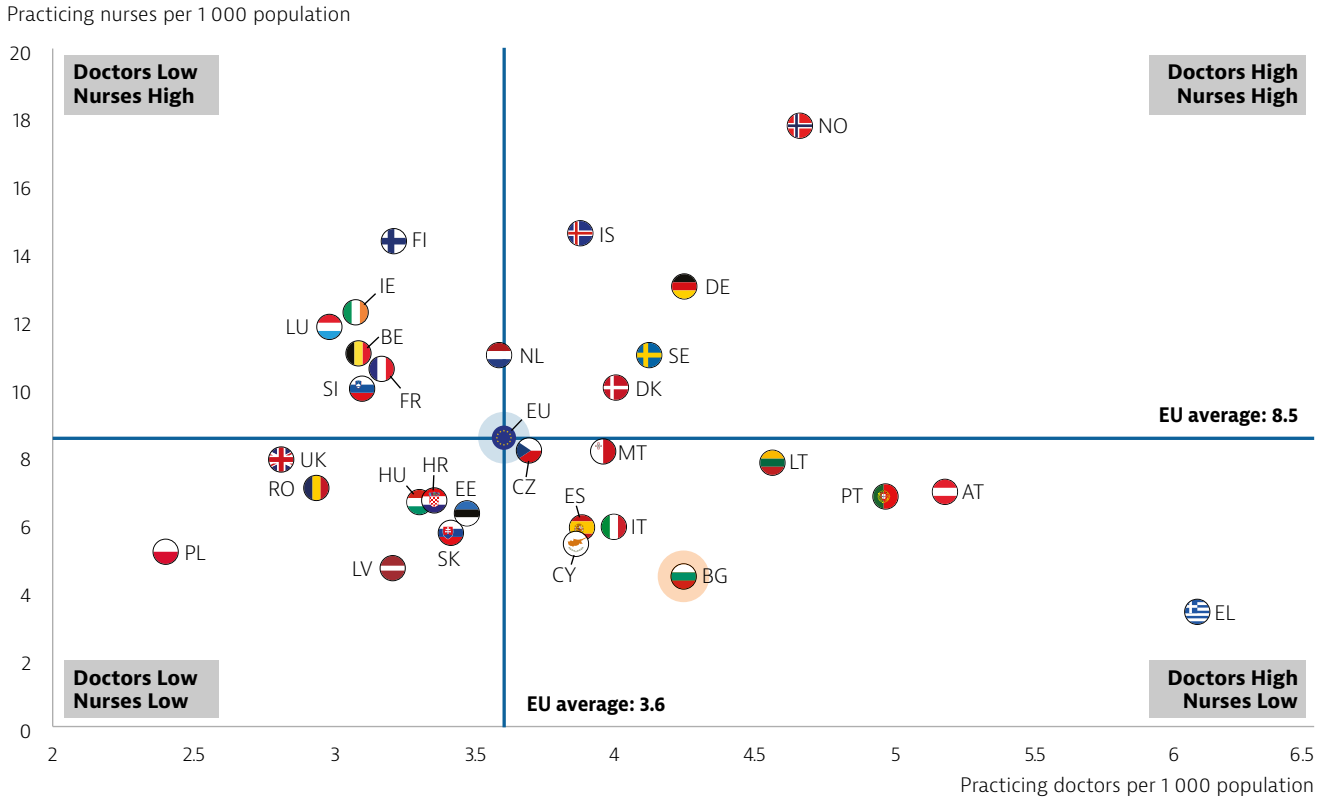
The health system is very hospital-centred

The density of hospital beds in Bulgaria – 7.5 beds per 1 000 population in 2017 – is higher than the EU average and second only to Germany. The average length of stay was halved between 2000 and 2017, and at 5.3 days is below the EU average of 7.9 days. Nevertheless, inpatient care features a high level of activity, with by far the highest rate of hospital discharges (around 31 700 per 100 000 population) in the EU in 2017, and almost double the EU average (17 000; see Section 5.3). Conversely, the number of outpatient contacts in 2017 was relatively low – 6.1 visits per year per person on average compared to 7.2 in the EU.

Primary care is sometimes bypassed by patients

Primary care is provided by GPs, who are independent practitioners contracted by the NHIF, operating in individual or group practices. Specialised outpatient activities are delivered mainly by a network of private specialist practices, centres for diagnostics and treatment, and diagnostic laboratories. GPs act as gatekeepers and a referral is needed for specialist care, diagnostic tests and hospital care. However, monthly quotas for patient referrals are in place and GPs often reach these quotas before the end of the month, meaning that remaining patients either have to wait or visit a specialist directly (without a referral) and pay out of pocket (Zahariev & Georgieva, 2018). This, in part, may explain why up to a third of all patients, including the uninsured, bypass primary care doctors by calling an ambulance or going directly to hospital emergency departments.

Figure 11. The low number of nurses contrasts with that of other health professionals



Note: In Portugal and Greece, data refer to all doctors licensed to practise, resulting in a large overestimation (e.g. of around 30 % in Portugal). In Austria and Greece, the number of nurses is underestimated as it only includes those working in hospitals.
Source: Eurostat Database (data refer to 2017 or nearest year).

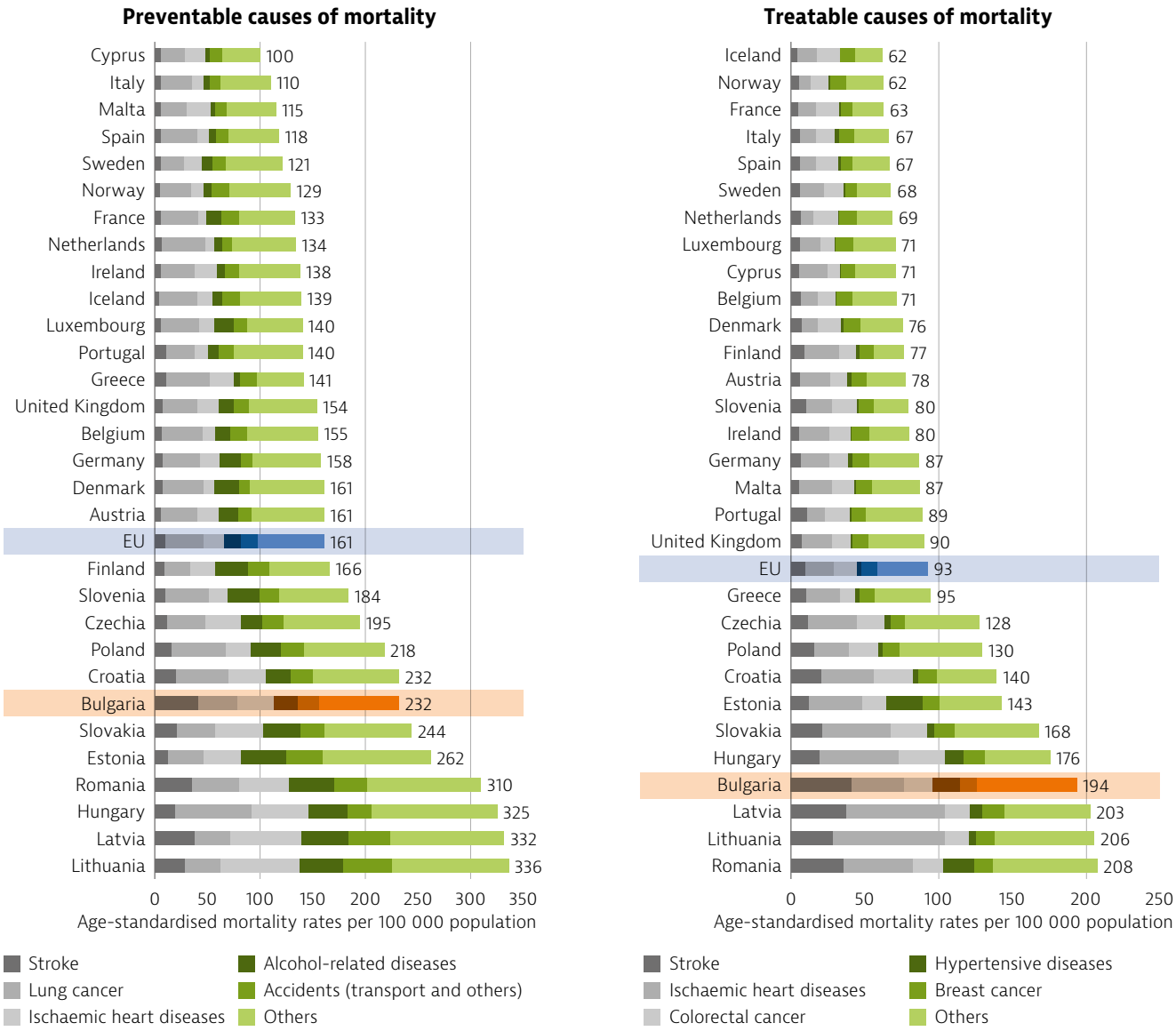
5 Performance of the health system

5.1. Effectiveness

Preventable mortality is slowly declining

In 2016, the preventable mortality rate in Bulgaria stood at 232 per 100 000 population, substantially higher than the EU average of 161 (Figure 12). Apart from lung cancer, which accounted for 16 % of preventable mortality, stroke, ischaemic heart disease and hypertension together contributed to 41 % of all preventable deaths. These conditions are also major drivers of mortality from treatable causes. Although it has fallen significantly since 2000, in 2016, mortality from treatable causes was 194 deaths per 100 000 population, the fourth highest rate in the EU. This indicator highlights the considerable scope for improving diagnosis and treatment of these conditions.

Figure 12. Mortality from both preventable and treatable causes are high in Bulgaria



Note: Preventable mortality is defined as death that can be mainly avoided through public health and primary preventive interventions. Mortality from treatable (or amenable) causes is defined as death that can be mainly avoided through health care interventions, including screening and treatment. Both indicators refer to premature mortality (under age 75). The data are based on the revised OECD/Eurostat lists.
Source: Eurostat Database (data refer to 2016).

Preventive and health promotion policies have had a muted effect

Very high levels of mortality from stroke, cardiovascular diseases and lung cancer are associated with the high prevalence of behavioural risk factors (see Sections 2 and 3). Bulgaria earmarks 1 % of excise duties on tobacco and alcohol products to fund national primary prevention programmes. The National Programme for Prevention of Chronic Non-communicable Diseases (2014-20) also highlights the need to reduce risk factors but the impacts of concrete actions are mixed. Legislation to mitigate smoking includes bans on smoking in public places and on sales to minors, restrictions on tobacco advertising, and warnings and images on cigarette packaging. Nevertheless, little progress has been achieved in reducing smoking rates, partly due to weak enforcement of health legislation and a lack of information campaigns.

Efforts to tackle the increasing numbers of overweight and obese children include the 'Healthy Kids' project, which promotes physical activity and balanced nutrition in primary schools, as well as the National Strategy for Physical Education and Sports Development 2012-22. The government also attempted to introduce a tax on foods and drinks high in salt, trans-fat, sugar or caffeine in 2015 but the legislation failed to win the support of parliament.

Box 2. Despite sanctions, Bulgaria has seen a decline in vaccination coverage

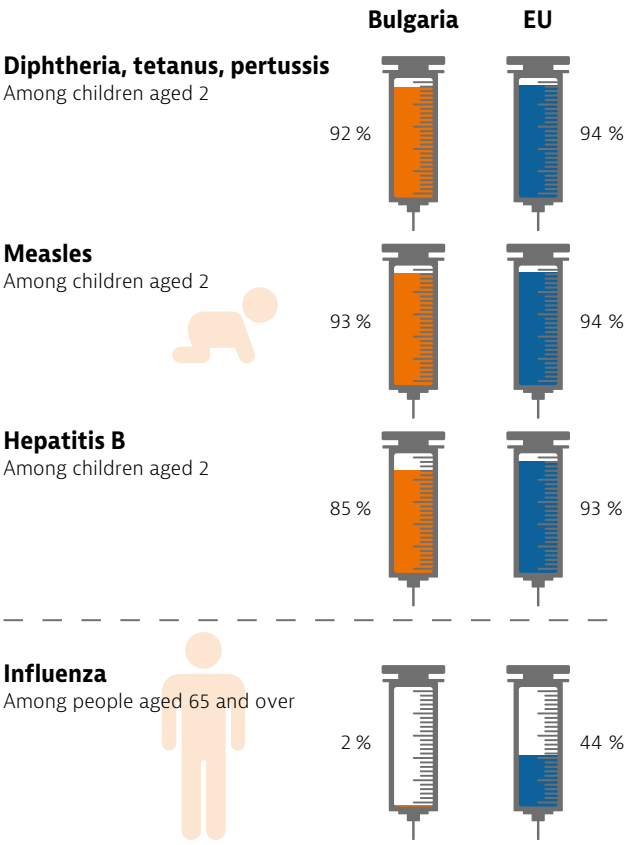
Under the Health Act (2004), vaccinations against TB, hepatitis B, diphtheria, tetanus, pertussis and measles are mandatory for children in defined age groups and dispensed free of charge. Vaccination coverage is monitored at the regional level and provided by GPs or designated offices in Regional Health Inspectorates. Despite sanctions, such as fines for non-compliant parents and barriers to enrolling children in public day care, vaccination coverage rates have been declining (Rechel, Richardson & McKee, 2018). In 2017, 93 % of children were vaccinated against measles, and 92 % against hepatitis B and diphtheria, tetanus and pertussis respectively, both of which are below the WHO recommended levels of 95 % (Figure 13).

The influenza vaccination for adults is recommended and paid out of pocket, resulting in the lowest coverage in the EU, with only 2 % of people aged 65 and over being immunised. This is far below the EU average and the 75 % target set by WHO.

Infectious diseases are still a major challenge

Bulgaria continues to have high notification rates for infectious diseases, with TB being of particular concern (see Section 2). Despite steady decreases and targeted attention through the National Programme for Prevention and Control of TB (2017-20), the notification rate is among the highest in the EU. Bulgaria also has the second highest notification rate, after Romania, for children under 15 (ECDC & WHO Regional Office for Europe, 2019). Compulsory vaccination against TB and other vaccine-preventable diseases is being challenged by declining coverage rates (Box 2).

Figure 13. Vaccination rates for children are lower than recommended levels by WHO



Note: Data refer to the third dose for diphtheria, tetanus, pertussis and hepatitis B, and the first dose for measles.
Source: WHO/UNICEF Global Health Observatory Data Repository for children (data refer to 2018); OECD Health Statistics 2019 and Eurostat Database for people aged 65 and over (data refer to 2018 or nearest year).

Low survival rates from cancer are a cause for concern

Although overall cancer mortality in Bulgaria was below the EU average in 2016, there is room for improvement in early detection and treatment. Biennial breast cancer screening was introduced in 2011 for women over 50, in addition to an annual check-up with a GP. Screening rates are picking up rapidly but remain low compared to other EU Member States. In 2016, half of women in rural areas reported having no breast cancer examination, compared to 24 % in cities (Eurostat, 2019). Five-year survival rates are increasing for breast, prostate and colorectal cancer, but still remain below EU averages (Figure 14).

Progress towards more effective and quality care has been slow

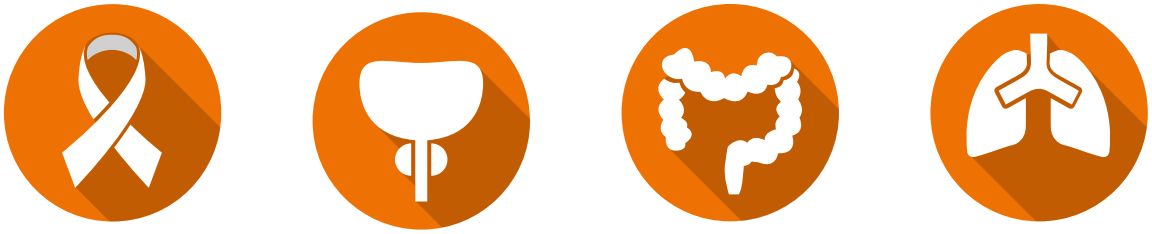
Evidence shows that the effectiveness of health services in Bulgaria is poor and improvements in the quality of care have been slow. In addition, Bulgaria's very high hospitalisation rates (see Section 4) are partly due to the underdevelopment of preventive health services and the primary care sector. Notably, the National Health Plan estimates that about 20 % of hospital procedures could be implemented in outpatient care, while 10 % of hospitalisations could be avoided altogether if better outpatient care were available.

Efforts to replace the hospital-centred model of care delivery have often been subject to delays. For example, the implementation of an integrated care model for children with disabilities and chronic diseases was planned for 2016. It involved the establishment of centres offering a wide range of services from screening, diagnostics, treatments, rehabilitation, long-term care and palliative care. However, as of mid-2019, no centre has yet been established.

Antimicrobial resistance is still a concern

Antimicrobial resistance (AMR) is a major concern to the Bulgarian health system. In 2017, 50 % of Klebsiella pneumoniae bloodstream infections showed combined resistance to several antimicrobials (up from 35 % in 2007 (ECDC, 2018; ECDC & WHO Regional Office for Europe, 2019). The National Programme for the Rational Use of Antibiotics and Surveillance has targeted this issue but there are still a number of gaps and weaknesses in tackling AMR, including limited knowledge among health care professionals and a lack of coordination between the human health and veterinary domains (ECDC & European Commission, 2019).

Figure 14. Five-year cancer survival is lower than in most EU countries



Breast cancer
Bulgaria: 78 %
EU26: 83 %

Prostate cancer
Bulgaria: 68 %
EU26: 87 %

Colon cancer
Bulgaria: 52 %
EU26: 60 %

Lung cancer
Bulgaria: 8 %
EU26: 15 %

Note: Data refer to people diagnosed between 2010 and 2014.
Source: CONCORD Programme, London School of Hygiene & Tropical Medicine.

5.2. Accessibility

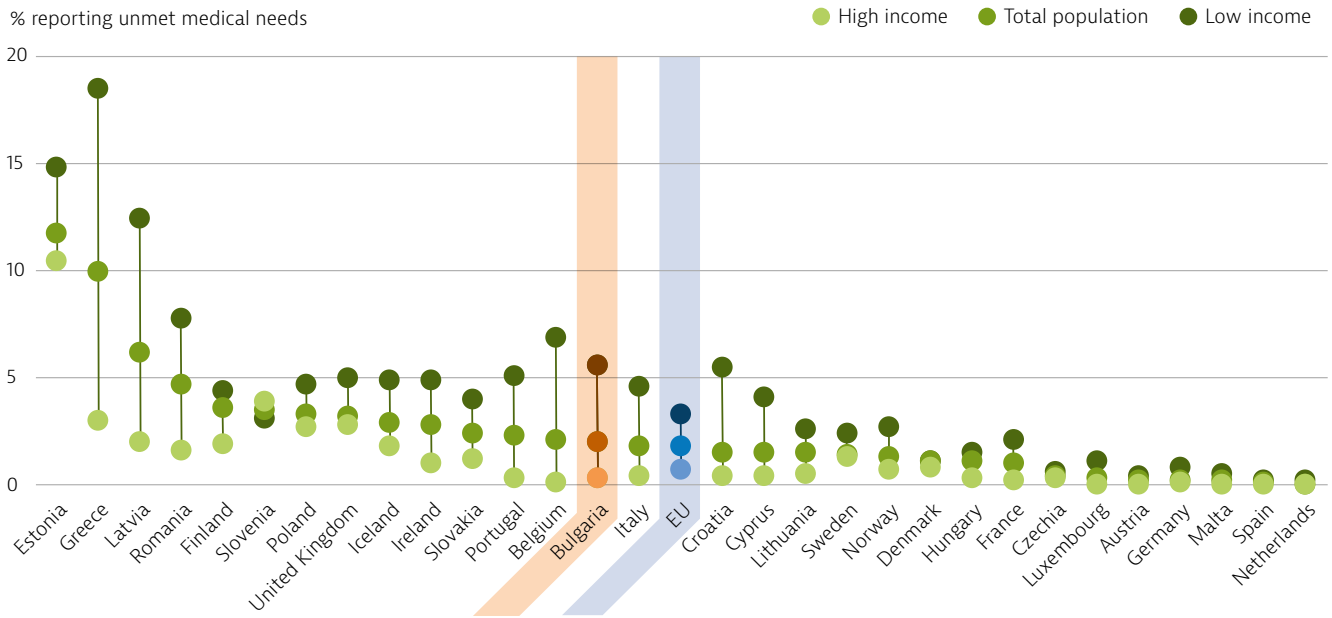
There has been a steep reduction in self-reported unmet needs

Self-reported unmet needs for medical care was 2 % in 2017, the lowest level recorded over the preceding decade, and a decline of 13 percentage points from the level reported in 2008, which was the highest in the EU at the time. On average, Bulgarians now have only a slightly higher level of unmet needs for medical examination due to the combined reasons of cost, distance or waiting times than the EU average (Figure 15). However, the rate is substantially higher among populations on low incomes (5.6 %) than those on high incomes (0.3 %). There also has been a substantial decline in self-reported unmet needs for dental examination, which was six times lower in 2017 (2.7 %) than in 2008 (16.5 %), although again the level was much greater among low-income groups than high-income groups (5.5 % compared to 0.5 %). Cost is the most frequently cited reason for foregoing medical or dental care, followed by distance.

Gaps in social health insurance coverage persist

A lack of SHI coverage creates a major barrier to access for a considerable proportion of the population (10 %–14 %, see Section 4). Uninsured individuals are required to pay directly for medical services unless they visit an emergency department in a life-threatening situation. This disproportionally affects the long-term unemployed, the Roma population and those living in disadvantaged regions (Box 3).

Figure 15. Self-reported unmet needs for medical care is close to the EU average but with a sizeable difference among income groups



Note: Data refer to unmet needs for a medical examination or treatment due to costs, distance to travel or waiting times. Caution is required in comparing the data across countries as there are some variations in the survey instrument used.
Source: Eurostat Database, based on EU-SILC (data refer to 2017).

Box 3. Several vulnerable groups do not have health coverage

The long-term unemployed are thought to account for a quarter of the total uninsured population. SHI coverage is lost if the insured person fails to pay more than three monthly contributions over a period of three years. Another quarter of the total uninsured population comprises people who can afford SHI contributions but choose not to pay. The most frequently stated reason is distrust in SHI. These abstainers tend to renew their SHI coverage only if their health deteriorates (and are then required to settle 60 months' worth of SHI contributions to be reinstated). Citizens without a valid ID card are also not covered. This issue particularly affects Roma people and irregular migrants. According to estimates, as many as one third of the Roma population do not have a valid ID card. Together, these vulnerable groups make up around 16 % of the total population in the regions of Burgas, Varna, and Dobrich (Institute for Market Economics, 2018). Although additional funds are transferred to the NHIF to cover some preventive activities and acute care for the uninsured, evidence on unmet needs suggests that some of these individuals would forgo care more often or only seek care once their health has deteriorated.

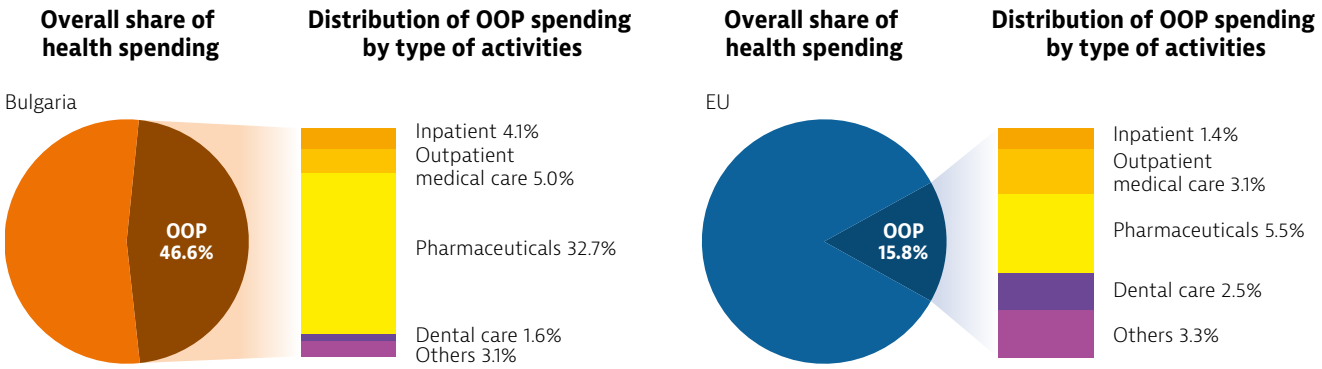
An attempt to split the benefit package was overruled by the Constitutional Court

In 2015, an attempt to reorganise the benefit package into a basic part and a complementary part was overturned by the Constitutional Court on the grounds that it undermined citizens' rights to equal access to health care. The benefit package currently includes primary and specialised outpatient medical and basic dental care; laboratory services; hospital diagnostics and treatment; and highly specialised medical services. Emergency care, mental health care, renal dialysis, in vitro fertilisation, organ transplantation, and treatment abroad for children are covered by the state budget or other dedicated funds. The most important category of excluded services is long-term care and dental care is restricted. In addition, there is a positive list for pharmaceuticals and medical devices that are reimbursed by the NHIF.

Affordability continues to deteriorate, especially for pharmaceuticals

At 46.6 %, Bulgaria reported the highest share of OOP spending in the EU in 2017, which was almost three times the EU average. Pharmaceuticals and medical devices, through direct payments and co-payments, account for the overwhelming bulk of OOP spending, followed by outpatient care and inpatient care (Figure 16). Overall, OOP medical spending, excluding long-term care, accounted for 6.3 % of final household consumption in Bulgaria, the largest share among EU countries in 2017.

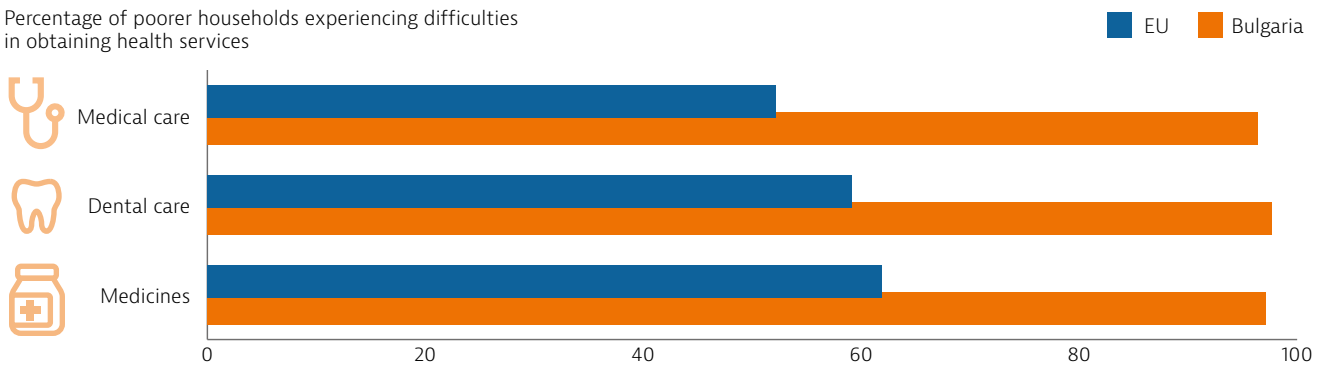
Figure 16. Bulgaria has the highest out-of-pocket spending in the EU



Sources: OECD Health Statistics 2019 (data refer to 2017).

Despite the decreasing level of self-reported unmet needs in recent years, survey data show that 32.6 % of Bulgarians experienced difficulty and 54.8 % reported some difficulty in obtaining medicines in 2017. Among low-income households the proportion of people reporting difficulties was the highest recorded in the EU – 57.9 % reported a high degree of difficulty and 39.2 % some difficulty. This proportion was even higher for dental care (Figure 17).

Figure 17. Low-income households are disproportionately impacted by the costs of ill health



Note: Only households below 60 % of median equivalised income are shown, aggregated by high and moderate burden in obtaining care.
Source: Eurostat Database (data refer to 2017).

Exemption mechanisms are not sufficient to alleviate the burden of co-payments

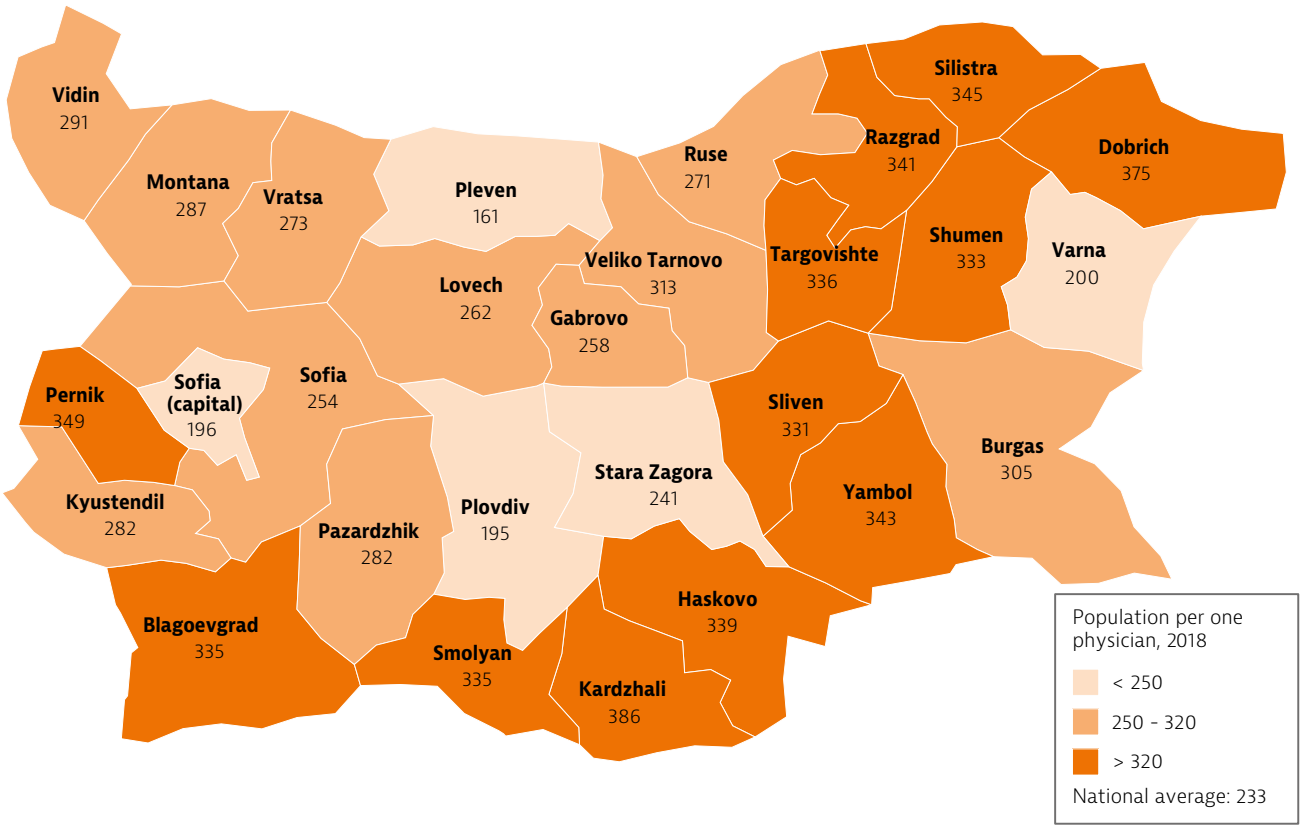
High OOP payments are driven by co-payments for the majority of covered services; direct payments for excluded services, such as most dental care for adults; and informal payments. The monthly quotas which limit GP referrals also provide incentives for patients to seek specialist care without a referral, where they pay the full cost of treatment (see Section 4).

Exemptions from co-payments are in place for children, pregnant women (including those uninsured), patients suffering from chronic diseases, cancer patients, medical professionals, those with incomes below a certain threshold, and some other groups. Pensioners pay reduced co-payments per visit, with the NHIF paying the difference. However, there is no additional protection for pharmaceutical co-payments. While some 10 % of the Bulgarian population are also enrolled in VHI to mitigate OOP spending, VHI plays only a marginal role among vulnerable groups.

A lack of GPs hinders the availability of primary care

Although Bulgaria has a comparatively high density of health professionals (except for nurses), their distribution is uneven. The situation of doctors is a case in point (Figure 18). The small number of GPs are unequally distributed across the country, favouring urban and more affluent districts, which leads to considerable shortages in others. Disadvantaged areas – often remote rural areas or small towns – are perceived as unattractive to settle in, and entail high workloads as patient lists are longer (more than 2 700 patients per GP in regions such as Kardzhali). The ageing of the workforce and retirement of GPs are also ongoing challenges. Strategies such as increasing the numbers of medical and nursing graduates, as well as financial incentives to settle in underserved areas, have been implemented. In 2016, Bulgaria registered the highest number of graduates in both professions since 2002. However, the continuing trend of emigration and urbanisation is likely to decrease the number of available health professionals in areas of need.

Figure 18. The regional distribution of doctors is heavily skewed towards more affluent districts



Note: The national average is calculated by taking into account the total number of doctors including those attached to other offices and includes practitioners working in individual or group practices under a contract with the NHIF in more than one district.
Source: National Statistical Institute, 2019.

5.3. Resilience[4]

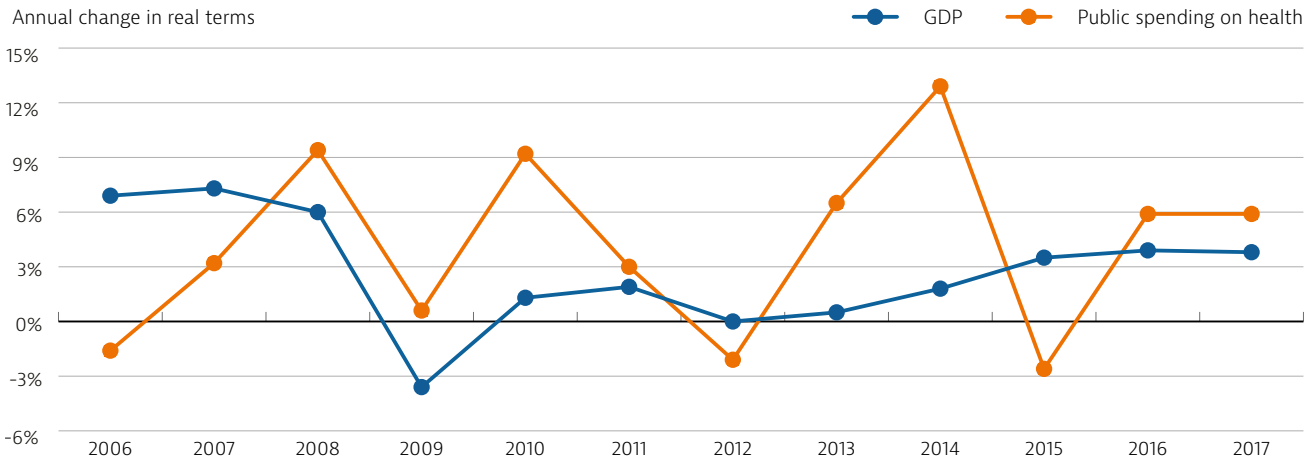
Health expenditure has grown faster than in other EU Member States

Current health expenditure in Bulgaria has increased significantly since 2000, albeit from a low base, outpacing growth in all other EU Member States. Although the trend has not been consistent, health spending grew on average by more than 5.3 % per annum between 2009 and 2017, more than three times the EU average of 1.5 %. With the exception of 2012 and 2015, the annual growth in public spending on health has outpaced GDP growth since 2008 (Figure 19). The NHIF budget is the main planning tool for health expenditure and the current national budget plans suggest that public spending on health will continue to grow.

Over-reliance on private spending and a declining working-age population constrain health system funding

As earmarked contributions to SHI have remained stable at 8 % of wages, the rise in Bulgaria's health expenditure has been largely financed through private spending, which needs to compensate for low public funding (Council of the European Union, 2019). Added to this, Bulgaria's population is both ageing (currently one fifth of inhabitants are 65 years or over) and shrinking due to a natural decline and continued emigration. Unless this trend is reversed, the proportion of people of working age will continue to decline, leading to fewer contributors to the revenue base of the NHIF in the years to come. At the same time, public spending on health is still projected to grow by 0.2 % of GDP between 2016 and 2070 (European Commission-EPC, 2018).

Figure 19. Public spending on health has generally outpaced GDP growth since 2008



Source: OECD Health Statistics, 2019; Eurostat Database.

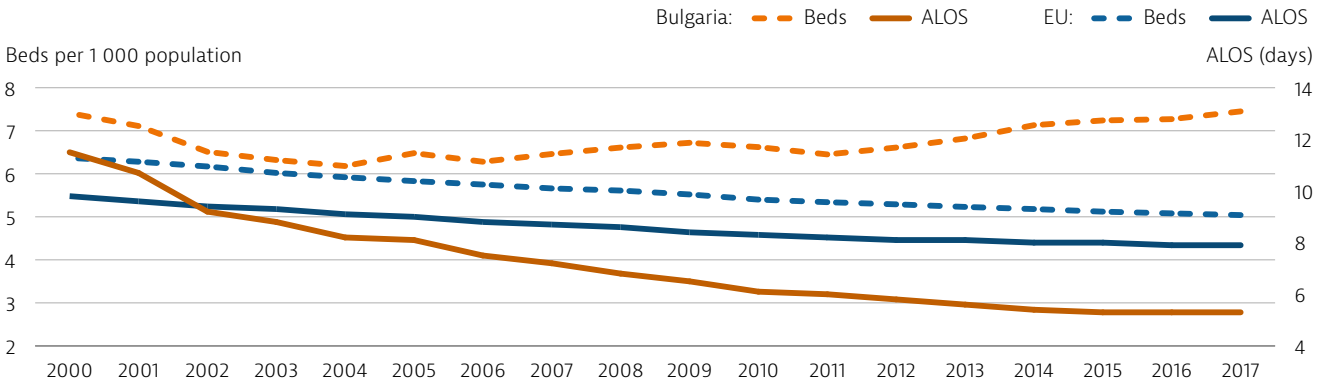
Hospital care continues to grow

Despite policy objectives to strengthen primary and specialist outpatient care, inpatient care continues to grow. Bulgaria has by far the highest hospital admission rate in the EU. This is mainly due to private sector expansion: in contrast with the number of public hospitals and beds, which decreased by 16.7 % and 32.6 % respectively between 2000 and 2016, the number of private hospitals increased six-fold and bed numbers increased by a factor of 36 over the same period. Overall, the rise in the number of hospital beds since 2005 is at odds with the trend in other EU countries (Figure 20). However, over the same time period the number of hospitalisations in public hospitals actually decreased 1.7 times but those in private sector facilities increased by 78 times.

In 2015, Bulgaria had the highest admission rates for heart failure, diabetes, and asthma among all EU countries. These are conditions that can be treated cost-effectively in ambulatory care settings, and clearly show the reliance on hospital care. The over-utilisation of inpatient care is rooted in many factors and has been targeted by several policy initiatives, not all of which managed to be implemented (see Box 1 in Section 4). Recent legislation has also attempted to stimulate greater use of day surgery and reduce inpatient stays. Extensive information about the proportion of all care provided in day surgery settings is not available but the utilisation of day beds has been increasing since 2010. In 2016, 37 % of cataract surgeries were performed in outpatient settings, compared with 84 % across the EU.

4: Resilience refers to health systems' capacity to adapt effectively to changing environments, sudden shocks or crises.

Figure 20. The increase in hospital bed numbers has been driven mainly by private sector expansion



Note: ALOS: average length of stay.
Source: Eurostat Database.

Public hospitals experience chronic deficits

High debt levels in public hospitals are an enduring problem that is often addressed with stopgap measures, such as periodic injections of funds, yet not resolved. Bulgaria funds its hospitals using case payments defined through clinical pathways. The method of calculating these payments is meant to reflect the cost of associated medical activities, auxiliary services and post-discharge consultations for each pathway but in practice they reflect the NHIF's ability to pay rather than the real costs of hospital services. There is an imbalance in the funding of different pathways, with some being overfunded while others are underfunded, creating an adverse incentive for hospitals to overuse some clinical pathways. Overall, the underfunding of clinical pathways is seen as one of the drivers of persistent hospital deficits (Zahariev & Georgieva, 2018).

Bulgaria has introduced health technology assessment for pharmaceutical reimbursement

Given the very high level of spending on pharmaceuticals (see Section 4), the introduction of HTA in 2015 was an important milestone in making cost-effectiveness a key criterion for the reimbursement of medicines. Initially assigned to a special commission at the National Centre of Public Health and Analysis, HTA is applied to medicines not previously included in the Positive Drug List. In 2019, responsibility for HTA was transferred to the National Council for Pricing and Reimbursement of Medicinal Products, which oversees both the process of deciding which medicines are included in the positive list, and their reimbursement level. Only generic medicines and products containing active substances that are well established are exempt from HTA.

A National Health Map could steer health workforce planning

Successfully shifting more hospital services to outpatient care (where clinically appropriate) will be possible if the availability of GPs, specialists and nurses in primary care is ensured. In 2015, a National Health Map was developed that detailed the minimum number of providers needed in ambulatory and hospital care by district. These minimum levels were calculated taking into account regional population health needs and national goals in health (e.g. in maternal and infant health). The needs-based methodology was confirmed in 2018 and the National Health Map could now be used as a tool for workforce planning and distribution. However, it is not an instrument intended to address the quality of delivered care, or how to make GP and nursing positions more attractive as careers (Box 4).

Governance is organised through national strategies but implementation is slow

The National Health Strategy 2020 aims to drive the convergence of Bulgaria's main population health status indicators with EU averages. It also encompasses many disease- and action-specific national programmes (e.g. TB and improving maternal and infant health), and long-term goals such as implementing the National Health Information System. However, it remains to be seen whether the National Strategy can be an effective instrument for steering change.

Frequent turnover of political leadership has been a major obstacle to implementing reforms in recent years and undermines continuity and consistency in policymaking. Almost all reform initiatives aimed at increasing efficiency in the hospital sector, for example, were stopped by the Administrative and Constitutional Courts after being challenged. Coalition building among key stakeholders in the health system could be a key tool for building consensus. For example, in the past the 'Partnership for Health', a consultative body chaired by the Minister of Health, was used to help introduce HTA.[5]

Box 4. There has been some progress in tackling workforce problems

Protests by members of the Bulgarian Nursing Association in March 2019 shed light on the working conditions of the nursing workforce. The average age of nurses and midwives is 55 and the migration of mostly young nurses has overburdened the workload of those nurses who have remained. According to the Bulgarian Association of Professionals for Healthcare (BAPZG), many nurses have two jobs because of low salary levels. The nurses asked the Ministry of Health to improve working conditions, raise salaries, and develop a long-term development strategy. As a first step, standards are to be developed for all medical specialties and will include detailed minimum staffing requirements for outpatient and inpatient care. In the longer term, discussions on how to change the skill mix of health professionals, including doctors and nurses, will be needed.

5: *The current role of this committee is not clear.*

6 Key findings

- Despite significant improvement in life expectancy since 2000, Bulgaria records the lowest life expectancy in the EU. The high prevalence of risk factors such as smoking, alcohol consumption and poor diet contribute to high mortality rates from stroke, ischaemic heart disease and lung cancer.

- The implementation of primary prevention and health promotion activities is relatively weak, as reflected by the high rate of preventable mortality. Similarly, mortality from treatable causes in Bulgaria is the fourth highest in the EU, indicating that the health system is generally failing to treat patients effectively and in a timely manner. About one fifth of hospital procedures could be implemented in outpatient care, while a tenth of hospitalisations and related procedures could be avoided altogether if better outpatient care were available.

- The underdevelopment of primary and preventive care partly explains Bulgaria's high levels of hospital activity and hospitalisation rates, but strong growth in the number of hospital beds in urban areas and in the private sector also reinforces the concentration on inpatient care. Reforms have sought to contain hospital activity and strengthen outpatient care, including initiatives such as the National Health Map, medical guidelines, and a stricter licensing regime. However, some major reforms have been challenged by stakeholders and overturned by the courts.

- Although health spending in Bulgaria is still relatively low compared to other EU Member States, it has increased steadily over the last 15 years. However, the rise in health expenditure has been mainly fuelled through out-of-pocket spending. In fact, the health system now relies almost equally on private spending and public sources as its sources of revenue, with the share of public financing (52 %) having declined in recent years. This trend raises equity concerns over the affordability of health care, particularly for people on lower incomes.

- Out-of-pocket spending is a key barrier to access: making up 47 % of current health expenditure, Bulgaria reports the highest share in the EU. Pharmaceuticals account for the overwhelming proportion of private expenditure on health, followed by spending on outpatient care. Informal payments, in the form of 'gratuities' to doctors, are estimated to make up a considerable share of out-of-pocket payments. While reported unmet needs for both medical and dental care have dropped steeply over the last decade, there are large differences in unmet needs between high- and low-income groups – with cost remaining the most cited reason for foregoing care.

- The biggest challenge for accessibility of health care is the significant proportion of the population (around 14 %) not covered by health insurance. The gap in population coverage disproportionately affects the long-term unemployed, the Roma population and those living in disadvantaged areas. The uneven distribution of health care facilities, health professionals and services across the country also hampers accessibility, with rural areas often underserved while larger cities have an oversupply of services.

- Shortages of health professionals, especially nurses and general practitioners, are hindering the development of primary care and the delivery of services in underserved areas. Strategies to increase the number of medical and nursing graduates and to improve salaries and working conditions have been launched to address these challenges.

Key sources

Dimova A et al. (2018), Bulgaria: Health system review. *Health Systems in Transition*, 20(4):1–256.

OECD, EU (2018), *Health at a Glance: Europe 2018: State of Health in the EU Cycle*. OECD Publishing, Paris, https://www.oecd.org/health/health-at-a-glance-europe-23056088.htm

References

EAMA (2017), *Annual report on condition and overall activity of the health insurance in Republic of Bulgaria for 2016*. Executive Agency Medical Audit, Ministry of Health, Sofia.

ECDC (2018), *Surveillance of antimicrobial resistance in Europe 2017 – Annual report of the European Antimicrobial Resistance Surveillance Network (EARS-Net) 2017*. European Centre for Disease Prevention and Control, Stockholm.

ECDC, European Commission (2019), *Country visit to Bulgaria to discuss policies relating to antimicrobial resistance*. Final joint report. European Centre for Disease Prevention and Control, Stockholm.

ECDC, WHO Regional Office for Europe (2019), *Tuberculosis monitoring and surveillance in Europe 2019 – 2017 data*. WHO Regional Office for Europe, Copenhagen.

Council of the European Union (2019), *Council Recommendation on the 2019 National Reform Programme of Bulgaria*, http://data.consilium.europa.eu/doc/document/ST-10155-2019-INIT/en/pdf

European Commission (DG ECFIN)-EPC (AWG) (2018), *The 2018 Ageing Report – Economic and budgetary projections for the EU Member States (2016-2070)*. Institutional Paper 079. May 2018. European Commission, Brussels.

Institute for Market Economics (2018), *Regional Profiles, Indicators of Development 2017*. Institute for Market Economics, Sofia.

Ministry of Finance of the Republic of Bulgaria (2019), Written answer to parliamentary question No. 01-00-133. Sofia on 27 March 2019. Sofia.

National Statistical Institute (2019a), Crude death and infant mortality rates by place of residence, statistical regions, districts and sex in 2018, Sofia.

National Statistical Institute (2019b), Geographical representation of data on physicians in health establishments by medical speciality, statistical regions and districts as of 31.12.2018, Sofia.

Rechel B, Richardson E, McKee M, eds. (2018), *The organization and delivery of vaccination services in the European Union*. European Observatory on Health Systems and Policies and European Commission, Brussels, http://www.euro.who.int/__data/assets/pdf_file/0008/386684/vaccination-report-eng.pdf?ua=1

Zahariev B, Georgieva L (2018), *ESPN Thematic Report: Inequalities in access to healthcare*. Bulgaria 2018. European Commission, Brussels.

Country abbreviations

Austria	AT	Denmark	DK	Hungary	HU	Luxembourg	LU	Romania	RO
Belgium	BE	Estonia	EE	Iceland	IS	Malta	MT	Slovakia	SK
Bulgaria	BG	Finland	FI	Ireland	IE	Netherlands	NL	Slovenia	SI
Croatia	HR	France	FR	Italy	IT	Norway	NO	Spain	ES
Cyprus	CY	Germany	DE	Latvia	LV	Poland	PL	Sweden	SE
Czechia	CZ	Greece	EL	Lithuania	LT	Portugal	PT	United Kingdom	UK

European Commission

State of Health in the EU
Country Health Profile 2019

The Country Health Profiles are an important step in the European Commission's ongoing *State of Health in the EU* cycle of knowledge brokering, produced with the financial assistance of the European Union. The profiles are the result of joint work between the Organisation for Economic Co-operation and Development (OECD) and the European Observatory on Health Systems and Policies, in cooperation with the European Commission.

The concise, policy-relevant profiles are based on a transparent, consistent methodology, using both quantitative and qualitative data, yet flexibly adapted to the context of each EU/EEA country. The aim is to create a means for mutual learning and voluntary exchange that can be used by policymakers and policy influencers alike.

Each country profile provides a short synthesis of:

- health status in the country
- the determinants of health, focussing on behavioural risk factors
- the organisation of the health system
- the effectiveness, accessibility and resilience of the health system

The Commission is complementing the key findings of these country profiles with a Companion Report.

For more information see: ec.europa.eu/health/state

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