



State of Health in the EU

Slovakia

Country Health Profile 2019

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-Slovakia.xls>

Demographic and socioeconomic context in Slovakia, 2017

Demographic factors

	Slovakia	EU
Population size (mid-year estimates)	5 439 000	511 876 000
Share of population over age 65 (%)	15.0	19.4
Fertility rate ¹	1.5	1.6

Socioeconomic factors

	Slovakia	EU
GDP per capita (EUR PPP ²)	22 900	30 000
Relative poverty rate ³ (%)	12.4	16.9
Unemployment rate (%)	8.1	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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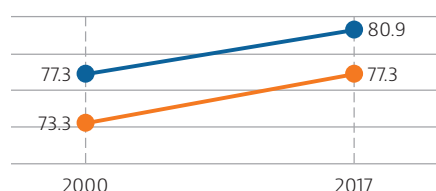
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1 Highlights

The general health of the Slovak population has increased substantially over the last 15 years and the health care sector has undergone major reforms. Most indicators of population health status remain below the EU average, however, and substantial disparities in population health outcomes persist across ethnic and socioeconomic groups. In addition, despite current low levels of health expenditure, the health care sector faces long-term fiscal sustainability challenges, which will require continuing improvements to the efficiency of the health system.

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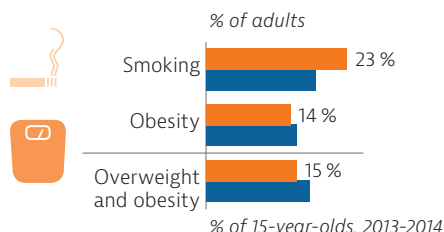


Life expectancy at birth, years

Health status

Life expectancy at birth was 77.3 years in 2017, four years more than in 2000, but still nearly four years below the EU average (80.9 years). Slovak women live about seven years longer than men. The gap by socioeconomic status is even greater: the most educated men live 14 years longer than the least educated. Life expectancy of men and women at age 65 has increased substantially since 2000, but many years of life after that age are spent with chronic diseases and disabilities.

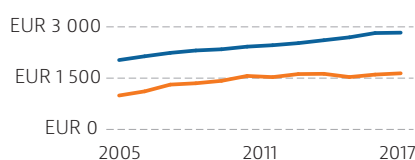
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Risk factors

Tobacco consumption is a major public health concern. In 2014, almost one-quarter of the adult Slovak population smoked daily, and this proportion has not decreased during the last decade, in contrast to nearly all other EU countries. One in seven adults was obese in 2017, a rate close to the EU average. Overweight and obesity among adolescents is on the rise, although it remains slightly below the EU average.

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Per capita spending (EUR PPP)

Health system

Slovakia spends much less on health than the EU average, both in absolute terms (EUR 1 600 per person in 2017, adjusted for differences in purchasing power) and as a share of GDP (6.7 %). Around 80 % of health expenditure is publicly funded, which is similar to the EU average of 79 %. Overall, the health system remains very hospital-centric, with a limited role for primary care.

Effectiveness

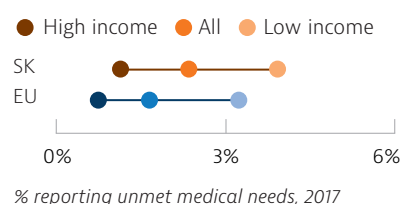
Preventable and treatable causes of mortality in Slovakia are among the highest in the EU. Avoidable hospital admissions are also far above the EU average. More focus on prevention and primary care would contribute to reducing avoidable deaths.



Age-standardised mortality rate per 100 000 population, 2016

Accessibility

Access to health care is generally good, with only slightly more than 2 % of the population reporting unmet needs for medical care. The level of out-of-pocket payments is comparable to the EU average. However, some population groups – such as the Roma minority – face major barriers in accessing health services.



% reporting unmet medical needs, 2017

Resilience

Population ageing will put pressures on public spending on health and long-term care in the coming decades. Substantial efficiency gains in health spending could be made by better controlling pharmaceutical expenditure and rebalancing the health system towards primary care.



2 Health in Slovakia

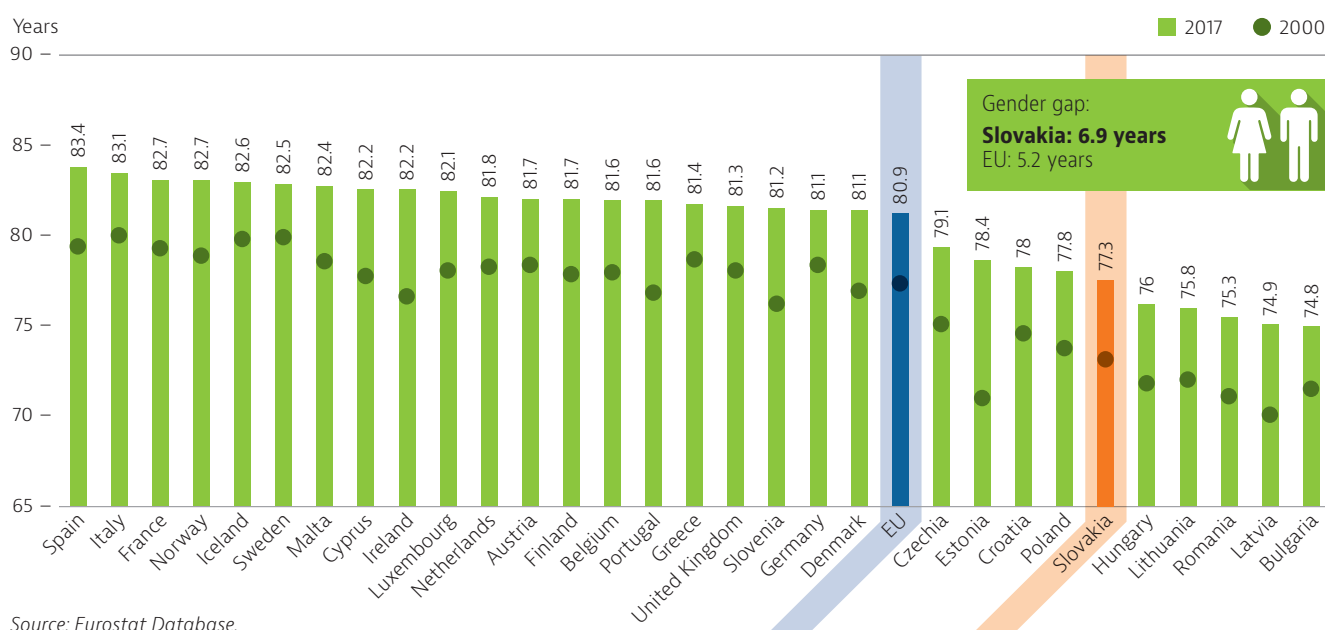
Life expectancy at birth has increased substantially but remains among the lowest in the EU

Life expectancy at birth in Slovakia increased by 4.0 years between 2000 and 2017, from 73.3 to 77.3 years. This progression is slightly above the EU increase of 3.6 years over the same period. Nevertheless, in 2017 life expectancy remained almost

four years below the EU average and nearly two years lower than in Czechia (Figure 1).

On average, women live almost seven years longer than men: 80.7 years compared to 73.8 years. This gender gap is greater than in the EU as a whole (5.2 years) and is largely due to greater exposure to risk factors among men (see Section 3).

Figure 1. Life expectancy at birth is almost four years shorter than the EU average



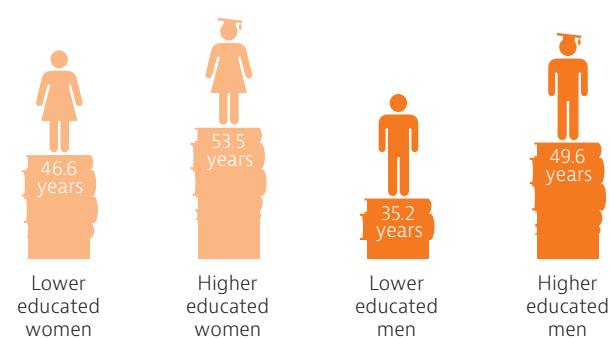
Source: Eurostat Database.

Inequalities in life expectancy by education level are substantial

Inequalities in life expectancy in Slovakia exist not only by gender but also by socioeconomic status. As shown in Figure 2, at age 30 Slovak men with the highest level of education live on average 14 years longer than the least educated – one of the largest gaps in the EU. The education gap among women is half as large (about seven years) but remains much greater than in most EU countries reporting this information.

These differences in longevity can be explained at least partly by differences in exposure to various risk factors and lifestyles, including higher smoking rates among men and women with low levels of education (see Section 3). It is also related to differences in income level.

Figure 2. The education gap in life expectancy at age 30 is 14 years for men and 7 years for women



Education gap in life expectancy at age 30:

Slovakia: 6.9 years

EU21: 4.1 years

Slovakia: 14.4 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).

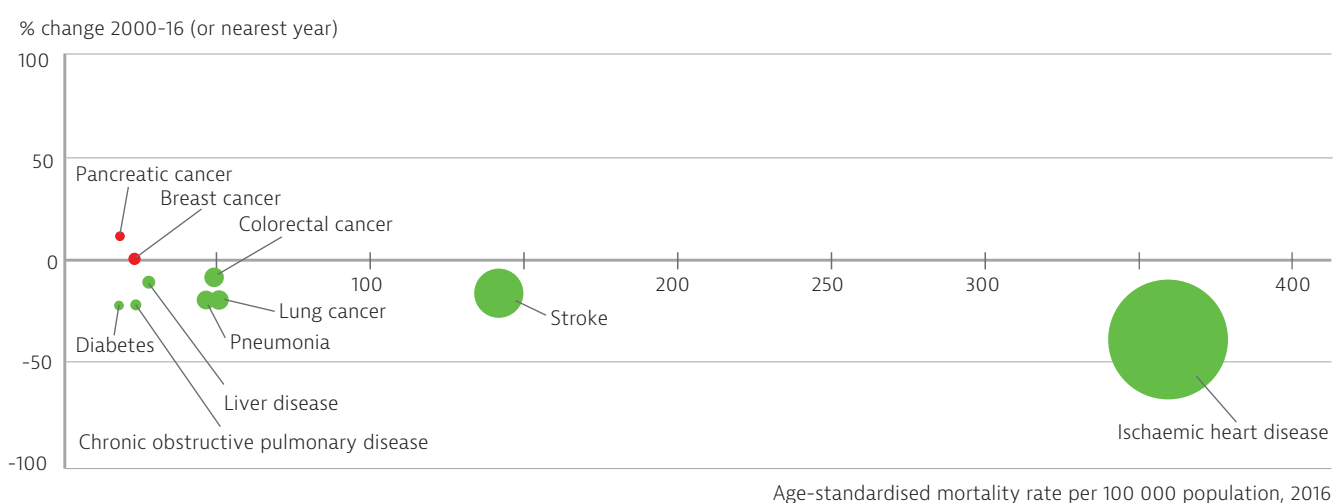
Source: Eurostat Database (data refer to 2016).

Cardiovascular diseases are the leading cause of death in Slovakia

The increase in life expectancy since 2000 has mainly been driven by reductions in mortality from cardiovascular diseases – most notably ischaemic heart disease (Figure 3). Nonetheless, ischaemic heart disease remained the leading cause of death in 2016, accounting for one in four deaths (13 000): the fourth highest mortality rate from this condition in the EU. The mortality rate from strokes has also fallen since 2000, but this remains the second main cause of death in the country.

Mortality from cancer is also very high. In 2016, Slovakia had the third highest mortality rate from cancer in the EU, after Hungary and Croatia – more than 20 % higher than the EU average. Lung and colorectal cancer are the most frequent causes of death by cancer among Slovaks, although there has been a slight reduction in the mortality rate from these two cancers over the past 15 years. On the other hand, the mortality rate from breast and pancreatic cancer has increased slightly in recent years. This excess cancer mortality can partly be explained by the absence of a comprehensive national cancer programme in Slovakia until recent times (see Section 5.1).

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



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

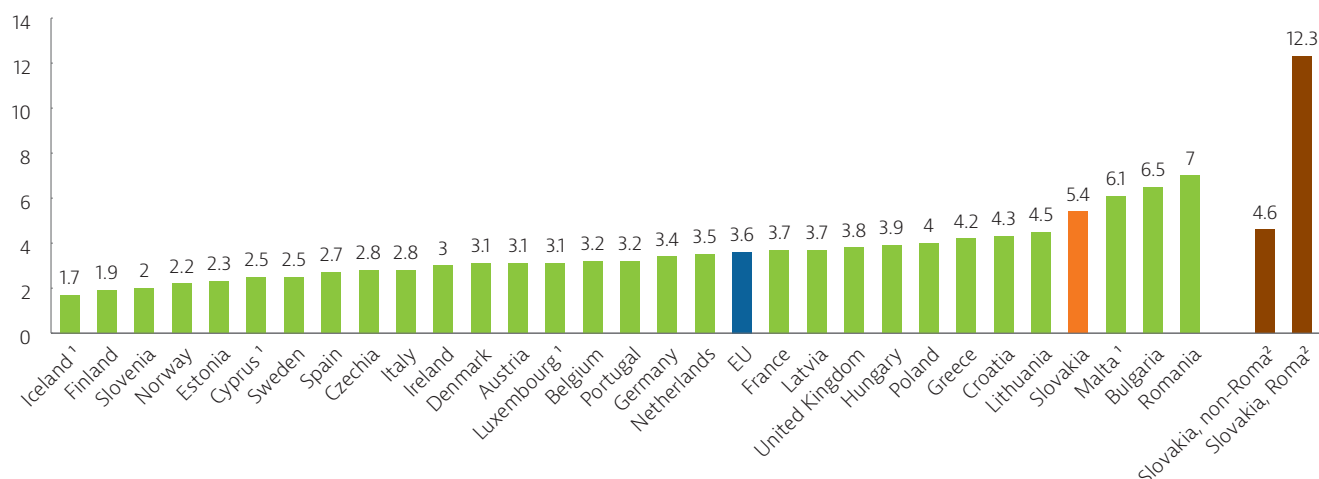
Marginalised communities face major health inequalities

Slovakia has one of the biggest Roma communities in Europe (see Section 5.2). This population faces major social exclusion in most aspects of everyday life, and its health status is much poorer than that of the general population (Babinská et al., 2014; European Commission, 2014). On average, Roma populations in Slovakia have shorter life expectancies at birth compared to the general population: by ten years for men and seven years for women (Decade of Roma Inclusion Secretariat Foundation, 2015).

The high infant mortality rate in Slovakia is related to excess mortality in the Roma minority population, where this indicator is more than twice the national average and almost four times the EU average (Figure 4).

Figure 4. The infant mortality rate in the Roma population is nearly four times the EU average

Deaths per 1 000 live births in 2016



Note: 1. Figures represent a three-year average (2014-16); 2. Research based on field work in three areas, with each Roma community representing 10-25 % of the total population.

Source: Eurostat Database (2016).

Most of the Slovak population rate their health positively

Two-thirds of the adult population reported being in good health in 2017, which is close to the EU average: 67 % compared to 70 %. However, as in other countries, people with higher incomes are more likely to report being in good health than those with lower incomes: 78 % of Slovak people in the highest income quintile reported being in good health in 2017 compared to 61 % in the lowest quintile. This income gap in self-reported health remains lower than that reported in the EU as whole, however.

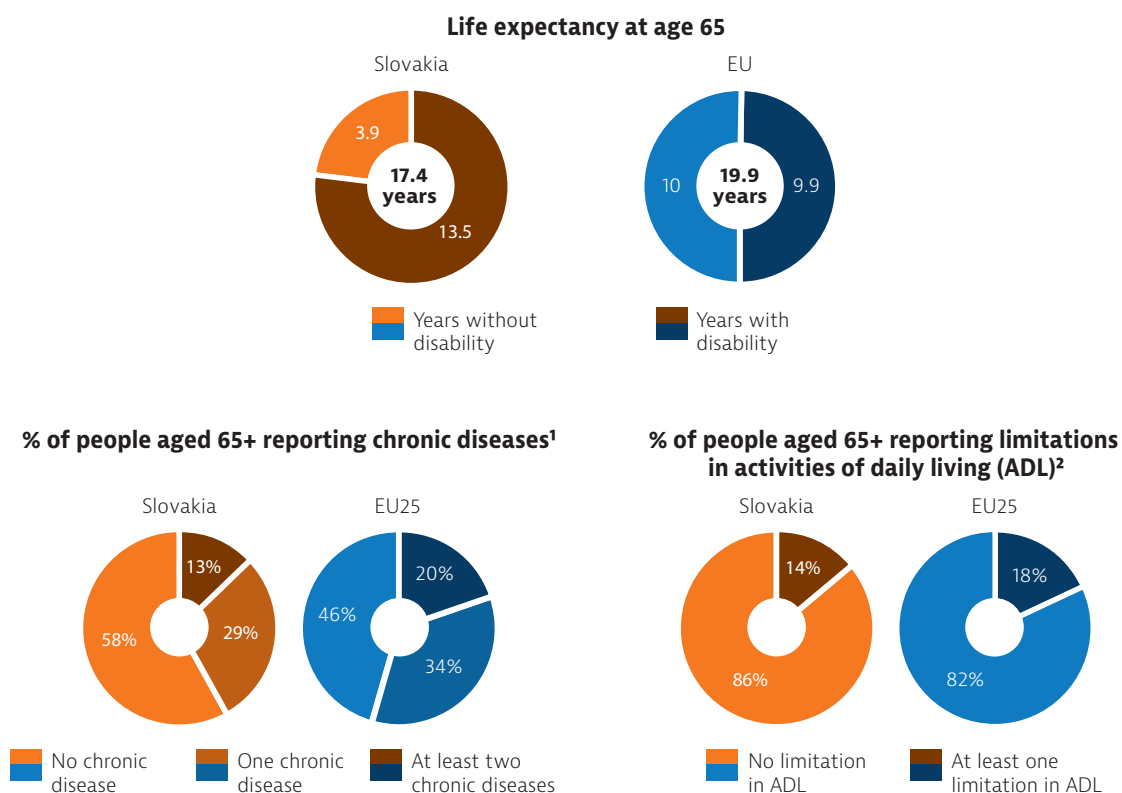
As in other countries, the proportion of people reporting being in good health generally declines with age. Only 21 % of Slovaks aged 65 years and older reported being in good health in 2017, compared with 77 % of adults aged 16-64. This reduction in self-perceived health by age is much more marked in Slovakia than in the EU as a whole.

Several years of life after 65 are lived with chronic diseases and disabilities

The general increase in life expectancy is partly linked to gains in longevity among older people. In 2017, Slovaks aged 65 could expect to live an additional 17.4 years, 2.4 years more than in 2000. However, more than three-quarters of the years of life after 65 are spent with chronic diseases and disability (Figure 5). This is particularly the case among women. While there is a gender gap in life expectancy at 65 of almost four years in favour of women, the number of healthy life years is almost the same, because women tend to live a greater proportion of their lives after 65 with chronic diseases and disabilities.

While four in ten Slovak people aged 65 and over reported having at least one chronic condition, this does not keep them from living a normal life and carrying on their usual activities. Most Slovaks aged 65 and over are able to lead independent lives in old age, but one in seven reported some limitations in basic activities of daily living such as dressing and eating.

Figure 5. Slovaks live longer than before, but not all additional years of life are spent in good health



Note: 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.

Source: Eurostat Database for life expectancy and healthy life years (data refer to 2017); SHARE survey for other indicators (data refer to 2017).



3 Risk factors

Behavioural risk factors account for half of all deaths in Slovakia

It is estimated that around half of all deaths in Slovakia can be attributed to behavioural risk factors, including dietary risks, tobacco smoking, alcohol consumption and low physical activity (IHME, 2018). This proportion is much above the 39 % EU average.

Some 30 % (16 000) of all deaths in 2017 could be attributed to dietary risks, including low fruit and vegetable intake and high sugar and salt consumption – one of the highest levels in the EU. Tobacco consumption, including direct and second-hand smoking, was responsible for an estimated 17 % of deaths (over 9 000). About 6 % of deaths (3 000) could be attributed to alcohol consumption and 4 % (2 000) to low physical activity (Figure 6).

Figure 6. Poor diet, smoking and high alcohol consumption are driving mortality rates in Slovakia



Note: The overall number of deaths related to these risk factors (26 000) is lower than the sum of each taken individually (30 000) 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 and salt consumption.

Source: IHME (2018), Global Health Data Exchange (estimates refer to 2017).

Tobacco consumption is high in Slovakia

The high prevalence of smoking among both adults and adolescents remains a major public health concern in Slovakia. In 2015, nearly one-third of 15- to 16-year-olds reported that they had smoked cigarettes in the past month. This is the fourth highest rate in EU countries (Figure 7). In 2014, more than one in five adults declared that they smoked daily, a higher share than in the EU as a whole. While in most countries tobacco consumption in adults decreased in the last decade, it remained stable in Slovakia. Further, smoking rates show an important gender difference: almost one-third of Slovak men reported that they smoked daily in 2014, in contrast to one in six women.

Excessive alcohol consumption among adolescents presents a growing challenge

Heavy episodic alcohol consumption among adolescents is a troubling phenomenon. Nearly half of 15- to 16-year-olds in Slovakia reported at least one episode of binge drinking¹ during the past month in

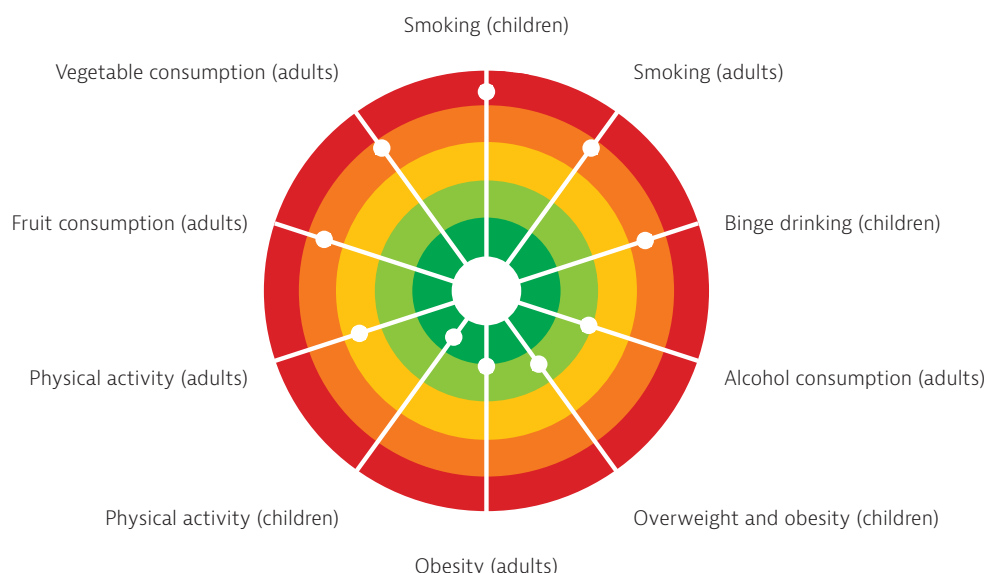
2015. This proportion is much greater than in most other EU countries. Binge drinking is a significant problem considering the increased risk of accidents and injuries related to heavy alcohol consumption, as well as the negative influence on education and social outcomes. Alcohol consumption among adults is close to the EU average. It has decreased by about 10 % over the past decade.

Obesity rates are lower than most other EU countries despite poor nutritional habits

Nutrition in Slovakia could be improved, for instance by reducing consumption of salt and fat – and in particular trans-fatty acids – and increasing fruit and vegetable intake. Almost half the adult population (47 %) reported an intake of less than one fruit every day, and about the same proportion (48 %) reported that they do not consume vegetables daily. These proportions are higher than in most EU countries. Also, only three in five adults report engaging in moderate physical activity every week, a proportion similar to the EU average.

¹: Binge drinking is defined as consuming six or more alcoholic drinks on a single occasion for adults, and five or more alcoholic drinks for adolescents.

Figure 7. Slovaks have higher rates of risky health behaviours than most EU countries



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.

Source: 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.

The adult obesity rate in Slovakia is among the lowest in the EU. One in seven adults was obese in 2017, which is below the EU average, and the rate has remained roughly stable over the past 15 years. However, overweight and obesity are growing issues in children. One in six 15-year-olds was overweight or obese in 2013-14, a rate that has nearly doubled since 2001-02. Some policy measures – such as controlling the marketing of unhealthy food and drinks to children – were introduced in 2016 and 2018 to curb the growth in obesity among children, but the impact of these measures has not yet been evaluated.

Socioeconomic inequality contributes to health risks

As observed across several EU countries, behavioural risk factors are more common among people with lower education or income in Slovakia. In 2014, 22 % of adults who had not completed secondary education smoked daily, compared with only 14 % among those with tertiary education – a gap slightly above the EU average. In the same vein, almost 18 % of people without secondary education were obese in 2017, compared to only 9 % among the most educated. The difference in obesity rate by income is larger in Slovakia than in the rest of the EU: eight percentage points compared with five. The prevalence of unhealthy lifestyle risk factors is also much higher in the Roma population than in the general population (Babinská et al., 2014).

4 The health system

A compulsory health insurance scheme covers nearly the entire population

Three health insurance companies (one public and two private) operate the compulsory health system in Slovakia, setting up contracts with health providers and negotiating quality, prices and volumes individually. These companies compete to sign people up mostly on the basis of shorter waiting times and additional services. The Health Care Surveillance Authority serves as an independent monitoring body for the health provision, insurance and purchasing markets. The Ministry of Health functions as the main regulatory body within the health system. It is also the single shareholder of the biggest health insurance company (VšZP), covering a little over 60 % of the population. Risk equalisation has been implemented to redistribute health insurance company revenues in order to compensate for socioeconomic, demographic and general health status differences among those insured.

Service provision is decentralised and delivered by a mix of public and private providers. Public and private health care providers sign contracts with the health insurance companies to be eligible for reimbursement. General practitioners (GPs) and outpatient specialists can be independent private or public providers. Ownership and management of

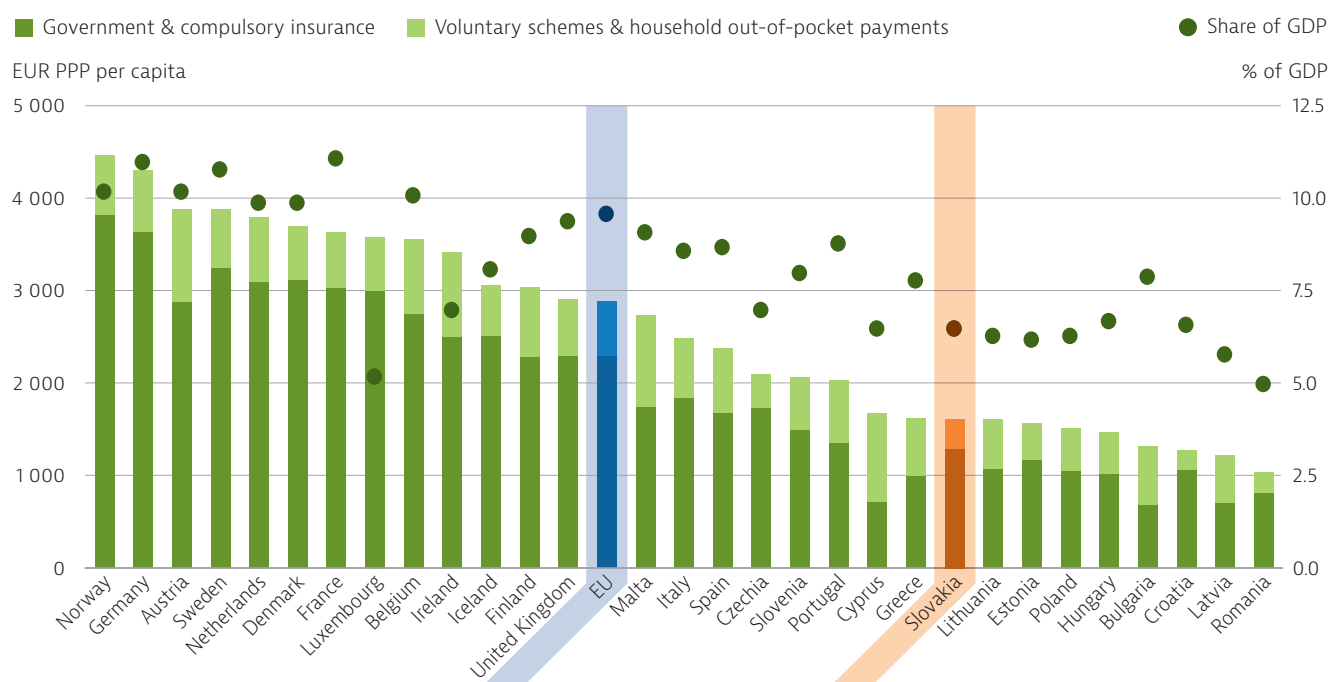
most public hospitals are decentralised at the regional level, even though the central government maintains responsibility for the management of one-third of public hospitals. Health insurance companies have contracts with hospitals, and sometimes even directly with wards, for different types and volumes of health services.

In theory, all residents must be covered by one of the three health insurance companies. In practice, a small share of the population (5 % in 2017) does not pay health insurance contributions, and is therefore not covered. Most of these people have their legal residence in Slovakia but are living and working abroad, and thus may be covered by the health system of their host country. As a result, the proportion of the population not covered in practice is significantly below 5 %.

Spending on health has increased but remains below the EU average

In 2017, Slovakia spent EUR 1 600 per person on health (adjusted for differences in purchasing power), which is more than 40 % lower than the EU average (Figure 8). Despite a substantial increase in absolute terms over the past decade, health expenditure as a share of GDP has remained stable, accounting for 6.7 % of GDP in 2017 – a much lower share than the EU average of 9.8 %.

Figure 8. Slovakia spends substantially less on health than most EU countries



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

More than 80 % of current health expenditure is funded publicly

Most health spending is publicly financed (80 % in 2017; Figure 8). The sources of revenue are mainly wage-related contributions paid by employers and employees, accounting for a little more than two-thirds of the total public spending on health. The remaining third of the total comes from general tax revenues to pay contributions for some subsidised categories of the population, such as dependent family members, students and pensioners.

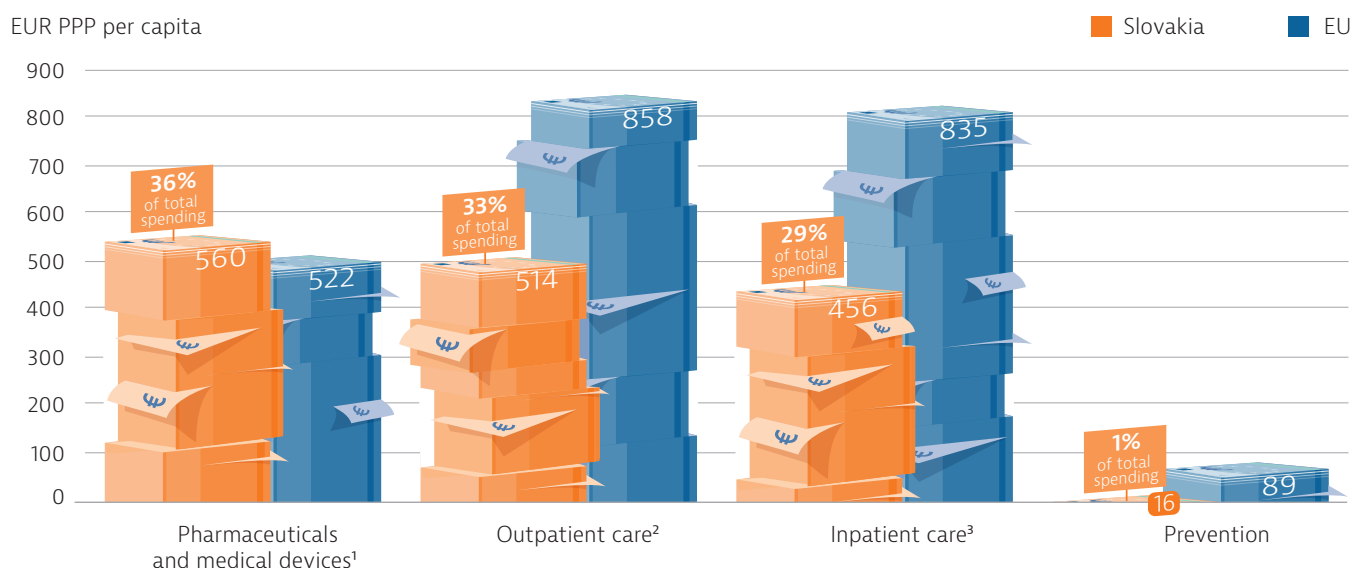
Out-of-pocket (OOP) payments² in Slovakia correspond mainly to formal co-payments for prescribed outpatient pharmaceuticals and user fees for health services or goods not covered by health insurance companies. In 2015, the government passed a law to regulate these user fees; for instance, banning payments for appointments at a scheduled time. However, the insurance companies managed to bypass this legislation and develop new co-payment mechanisms. Expenditure estimates also suggest the existence of a persistent issue relating to informal payments in Slovakia (European Commission, 2016).

Pharmaceuticals represent the largest cost item in the Slovak health system

Just over one-third of current health expenditure (EUR 560 per person, adjusted for differences in purchasing power) was allocated to pharmaceuticals and medical devices in 2017 (Figure 9). Only one country (Bulgaria) dedicated a higher share of its health expenditure to this spending category. Even if the high share can be attributed to the small size of the health budget in Slovakia (considering that demand for medicines is rather price inelastic), spending on pharmaceuticals is above the EU average of EUR 519. This is a sign that the sector could be better regulated, and that controlling the high level of spending on pharmaceuticals has been a longstanding challenge in Slovakia (see Section 5.3).

Outpatient (or ambulatory) care absorbed another third of current health expenditure, and inpatient care over a quarter. The share of spending on preventive care is the lowest in the EU, accounting for only 1 % of all health spending in 2017, compared with an EU average of 3 %. Significant health gains could be achieved in Slovakia if more funds and political attention were dedicated to preventive care (see Section 5.1).

Figure 9. Over one-third of health expenditure is spent on pharmaceuticals and medical devices



Note: Administration costs are not included. 1. Includes only the outpatient market; 2. Includes home care; 3. Includes curative-rehabilitative care in hospital and other settings.

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

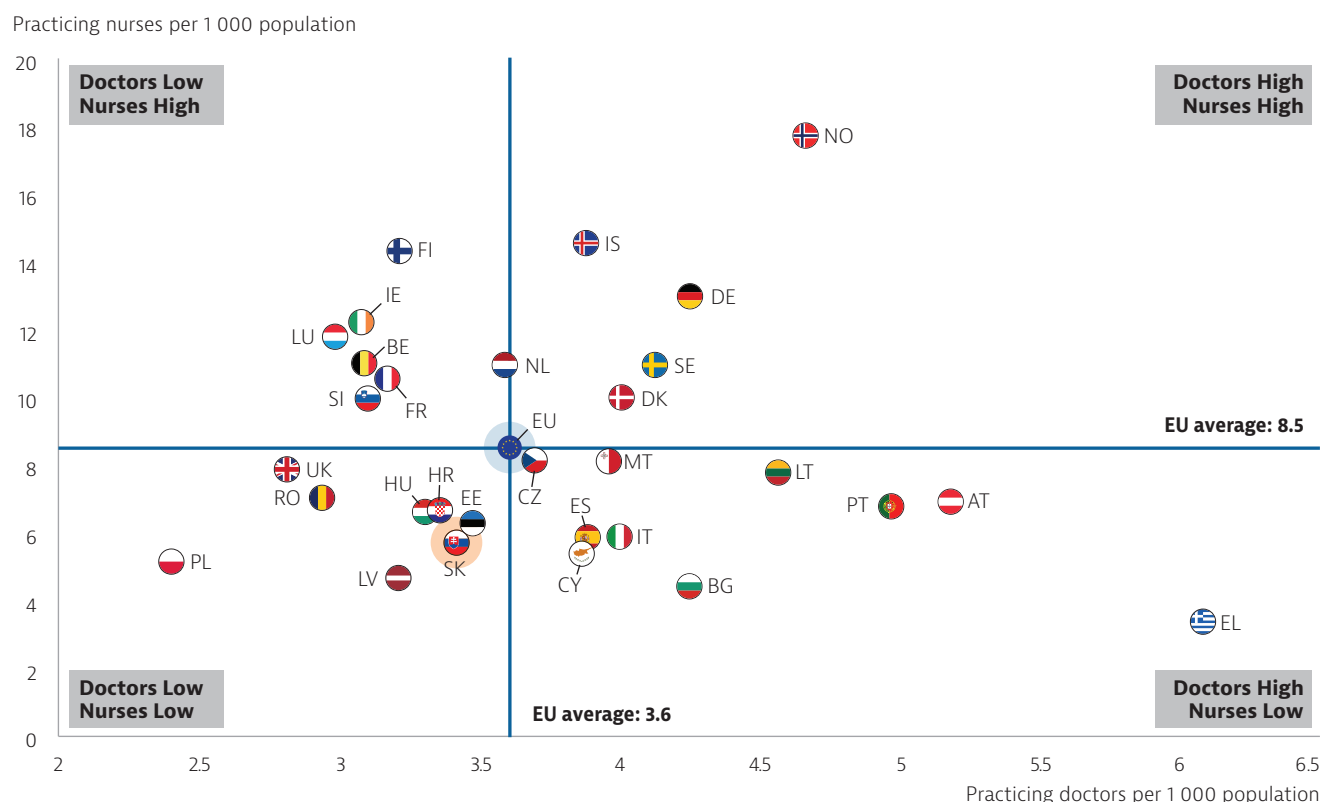
2: OOP payments include direct payments, cost-sharing for services outside the benefit package and informal payments.

The number of doctors in Slovakia is close to the EU average, but there are relatively few nurses

In 2017, Slovakia had a physician density close to the EU average (3.4 physicians per 1 000 population vs. 3.6), but the number of nurses was below the EU average (Figure 10). The country is one of the few reporting a reduction in the number of nurses between 2000 and 2017 both in absolute numbers and on a per capita basis (OECD/EU, 2018).

In principle, GPs act as gatekeepers of the health system but this role is not well enforced, and patients often see specialists directly without, in practice, enduring any form of penalty. Even though the eight self-governing regions are required to ensure minimum GP-to-population ratios, primary care accessibility varies and is reported to be problematic in several regions. The European Structural Funds have played a role in addressing this challenge by providing funding during the period 2014-20 to establish or refurbish 'integrated care centres' throughout the country (see Section 5.1).

Figure 10. Slovakia has a low number of nurses, while the number of doctors is close to the EU average



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

Health care delivery remains excessively hospital-centric

In 2017, the Slovak health system reported a higher number of acute care beds than the EU average: 5.8 vs. 5.0 beds per 1 000 population. The inpatient care discharge rate per 1 000 population is also more than 15 % above the EU average. Although a series of measures implemented over the past decade to increase the efficiency of the health care system led to reductions in the number of beds and average length of stay in hospital, the Slovak health care system remains very hospital-centric. In addition, the occupancy rate of acute care beds is one of the lowest

in the EU, at less than 70 % in 2016, pointing to a degree of hospital overcapacity.

All health institutions are responsible for their own capital investment, but their financial positions have not allowed them to invest substantially in recent times. The hospitals managed by the central government have accumulated substantial debts in recent years (EUR 728 million in 2017). This has required several rounds of bailouts from the central government. As a result, EU funds have been the main driver of capital investment in the health care sector, and the Structural Funds for the 2014-20 period provided support to 28 hospitals since 2016.

5 Performance of the health system

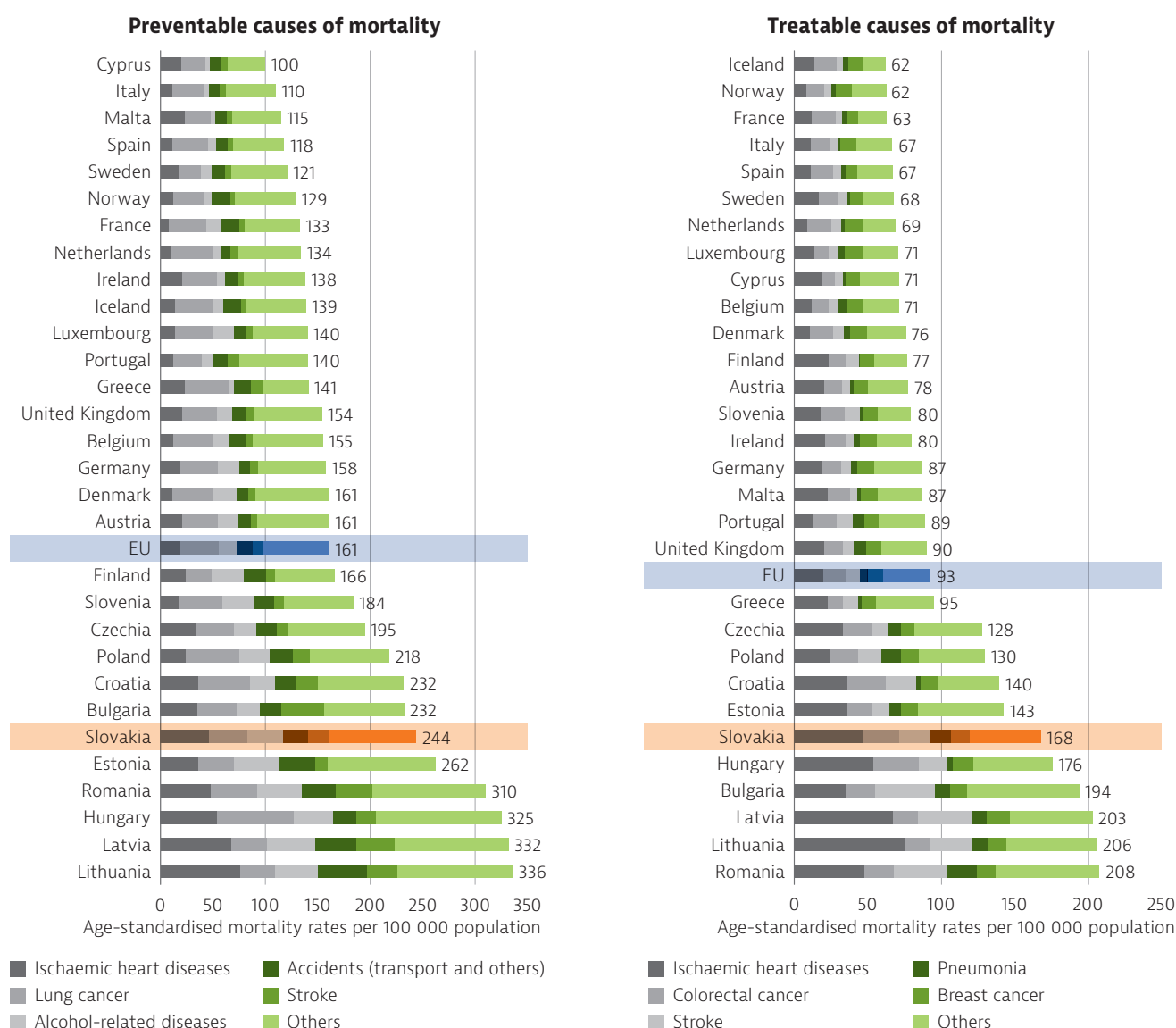
5.1. Effectiveness

Slovakia has relatively high mortality rates from preventable and treatable causes

As shown in Figure 11, Slovakia has among the highest mortality rates from preventable and

treatable causes in the EU in 2016 – higher than neighbouring countries such as Czechia and Poland. This indicates that there is substantial room for public health and health care to contribute to reducing premature deaths. Over 11 000 deaths could have been avoided in 2016 through effective public health and prevention interventions, and a further 8 000 through more adequate and timely health care.

Figure 11. A substantial proportion of deaths in Slovakia could be avoided



Note: Preventable mortality is defined as death that can be mainly avoided through public health and primary prevention 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).

Little priority has been given to prevention

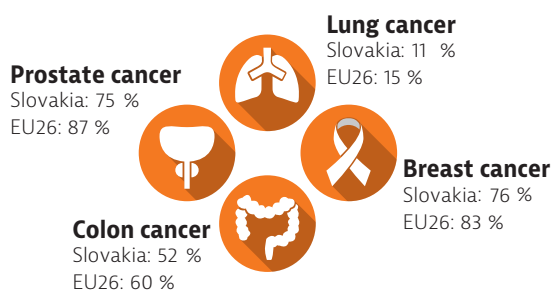
Historically, Slovakia has lagged behind many other EU Member States in investing in health promotion and disease prevention. In 2017, only 1 % of current health expenditure was allocated to prevention, a share much lower than the EU average (3 %). Despite the adoption of a national health promotion programme in 2014, implementation of concrete actions to reduce risk factors like tobacco and alcohol consumption and to prevent obesity remains limited. In 2018, the government initiated a discussion on the possibility of introducing new taxes on sodas and e-cigarettes, but this project was abandoned in 2019.

A national cancer plan was adopted in 2018

Cancer screening rates in Slovakia are among the lowest in the EU. In 2017, less than one-third of women aged 50-69 had undergone screening for breast cancer within the past two years – half the EU average – and less than half (46 %) of women aged 20-69 had been screened for cervical cancer, compared with two-thirds in the EU. Five-year survival after a diagnosis for cancer is generally much lower than the EU average (Figure 12), as the low take-up of screening contributes to not curb the incidence of late-stage, more difficult to treat, cancers in the Slovak population.

In 2018, Slovakia finally established a national cancer strategy, with the adoption of the National Oncology Programme. The programme aims to reduce cancer incidence and improve the survival and quality of life of cancer patients. The first measures introduced in 2019 included a pilot project for colorectal cancer screening; a broad communication campaign to raise awareness for colorectal cancer; and the definition of quality standards and certification of mammography centres.

Figure 12. Five-year cancer survival is lower than in most EU countries



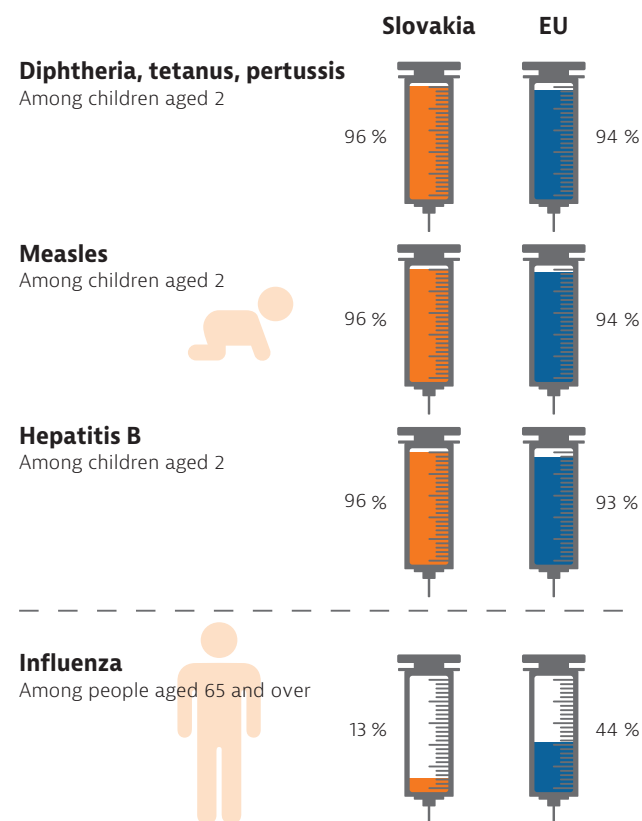
*Note: Data refer to people diagnosed between 2010 and 2014.
Source: CONCORD programme, London School of Hygiene and Tropical Medicine.*

Vaccination coverage is high in children but lower for elderly people

Although limited attention is given to prevention in general, child vaccination coverage is very good in Slovakia (Figure 13). Vaccination is mandatory and free of charge for ten vaccines. Despite the growing influence of anti-vaccine movements in the country, child immunisation coverage rates have remained above the 95 % target set by WHO. Yet a detailed review of the immunisation status of the population carried out by the Ministry of Health identified insufficient coverage in certain population groups in 2018 (e.g. 18 % of the 35-39 age group were not effectively immunised against measles). Some specific population groups, such as the Roma minority, also report lower immunisation rates than the general population (Duval et al., 2016; see Section 5.2).

Conversely, influenza vaccination coverage for people above 65 is very low, with only 13 % of people in that age group vaccinated in 2016, well below the EU average of 43 % and even further from the WHO target of 75 %. The absence of communication campaigns to promote this vaccination is one reason for these low vaccination rates (Rechel, Richardson & McKee, 2018).

Figure 13. Immunisation coverage rates for children are above the targets set 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 2017 or nearest year).*

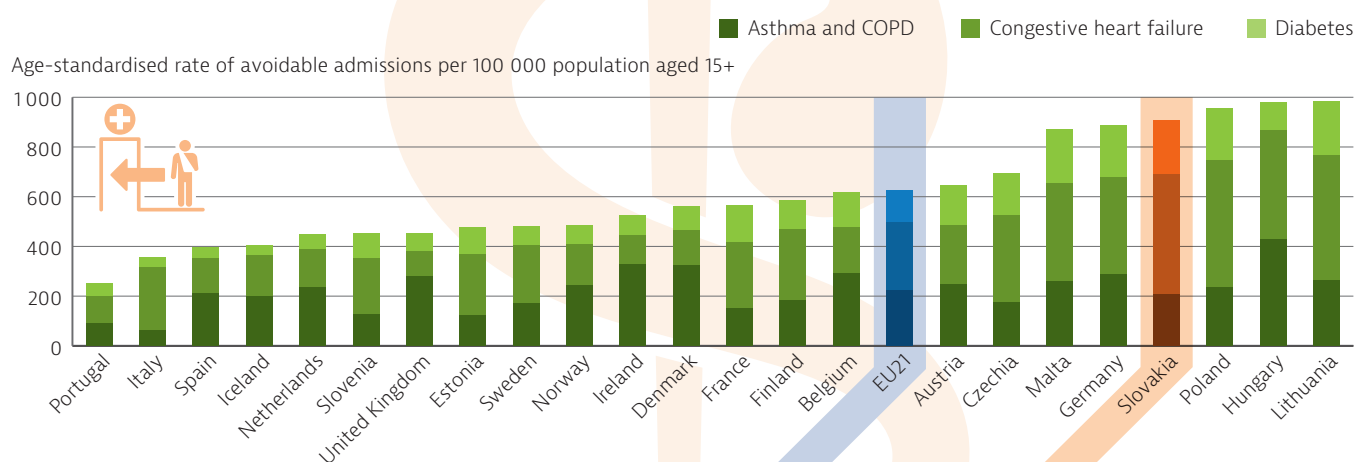
Strengthening primary care could help improve chronic disease management

A stronger primary care sector could help facilitate the management of the growing burden of chronic diseases. Potentially avoidable hospital admissions for asthma and chronic obstructive pulmonary disease (COPD), diabetes and congestive heart failure are much higher in Slovakia than in most other EU countries reporting these data (Figure 14). These results can partly be explained by the low number of GPs and their currently weak gatekeeping function, despite recent attempts by the government to address this issue. Some specific responsibilities have been transferred from specialists to GPs, and

the government is currently discussing a change in physicians' remuneration scheme towards a 'per episode' payment system. Such reforms could reduce unnecessary referrals to specialists and hospitals.

'Integrated care centres' are also under development. It is expected that 88 of these will open in the coming years with support from EU funds. These centres aim to gather specialists and GPs in one location, to improve care coordination and quality. They will be set up throughout the country, allowing more than 70 % of the population to reach a centre within a 20-minute drive. In 2018, some task shifting was also introduced between nurses and nursing assistants, and some nurse competencies were also expanded.

Figure 14. Many hospital admissions could be avoided through stronger primary care



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

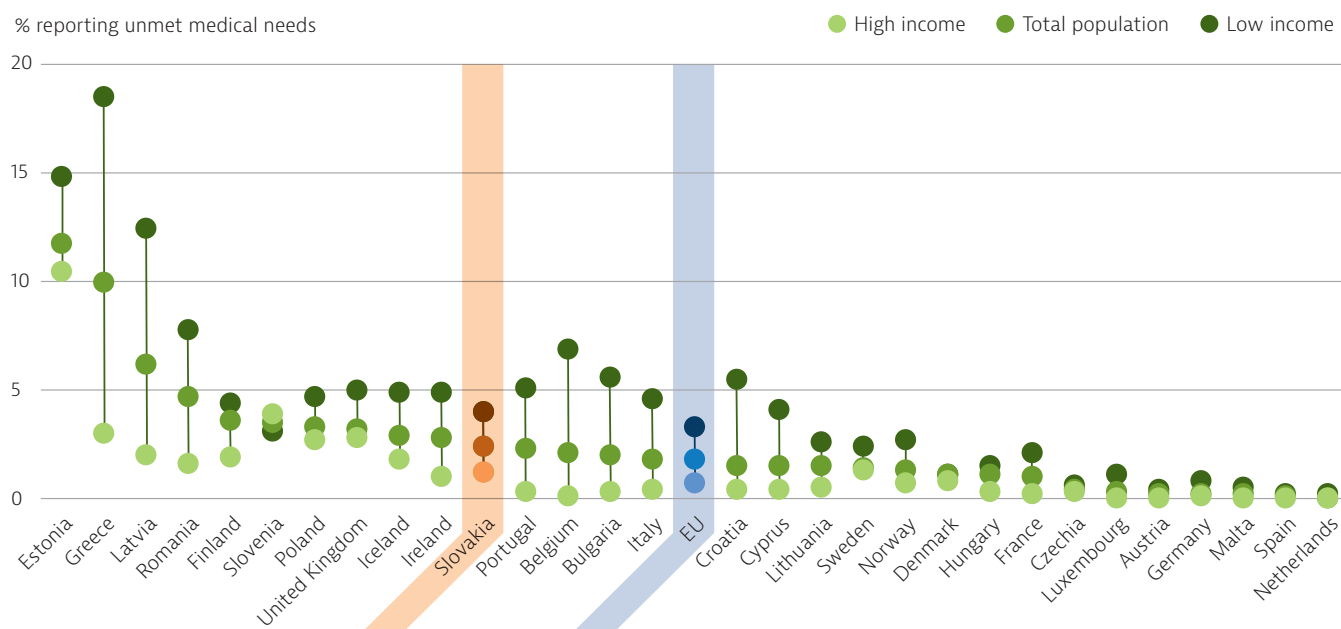
5.2. Accessibility

Unmet medical care needs are low

The share of the Slovak population reporting unmet needs for medical examination and treatment is relatively small: only 2.4 % of the population reported

unmet needs because of cost, overly long waiting lists or excessive travel distance in 2017, but the figure has increased slightly over the past ten years. The difference across income groups was relatively small and close to the EU average (Figure 15).

Figure 15. Slovaks report low levels of unmet medical needs



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).

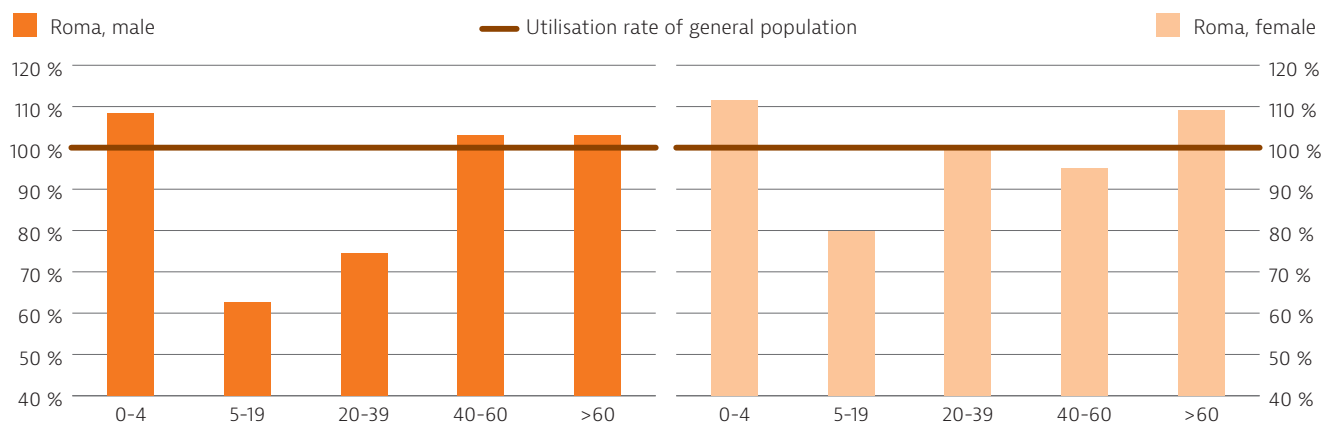
Marginalised communities face barriers to accessing care

The Roma population is estimated to account for about 8 % of the population in Slovakia and is in theory guaranteed access to health care on equal terms. However, various studies report lower health care utilisation levels by the Roma population, despite their relatively greater health needs (Figure 16). Many factors may explain this low use of health services, such as information barriers, discrimination, limited language and cultural understanding, transport and care affordability.

The Roma Health Mediators Programme, financed by EU funds, seems to be one of the most promising initiatives to improve accessibility to health care for the Roma population. Roma health mediators work as a bridge between the community, health professionals and the local health authorities to improve access to health care for Roma. The mediators are members of the community and their role includes, among others, offering language interpretation between Roma patients and physicians during medical consultations;

assisting Roma people in claiming health insurance rights; and supporting health professionals with implementation of prevention programmes in the community, such as immunisation or ante- and postnatal care.

More generally, in some districts in southern and eastern Slovakia, poverty is considerably higher than in the rest of the country. These regions have higher proportions of municipalities with poor young or high levels of in-work poverty (European Commission, 2019a). Unfortunately, it is in these areas that the health workforce shortages are the highest.

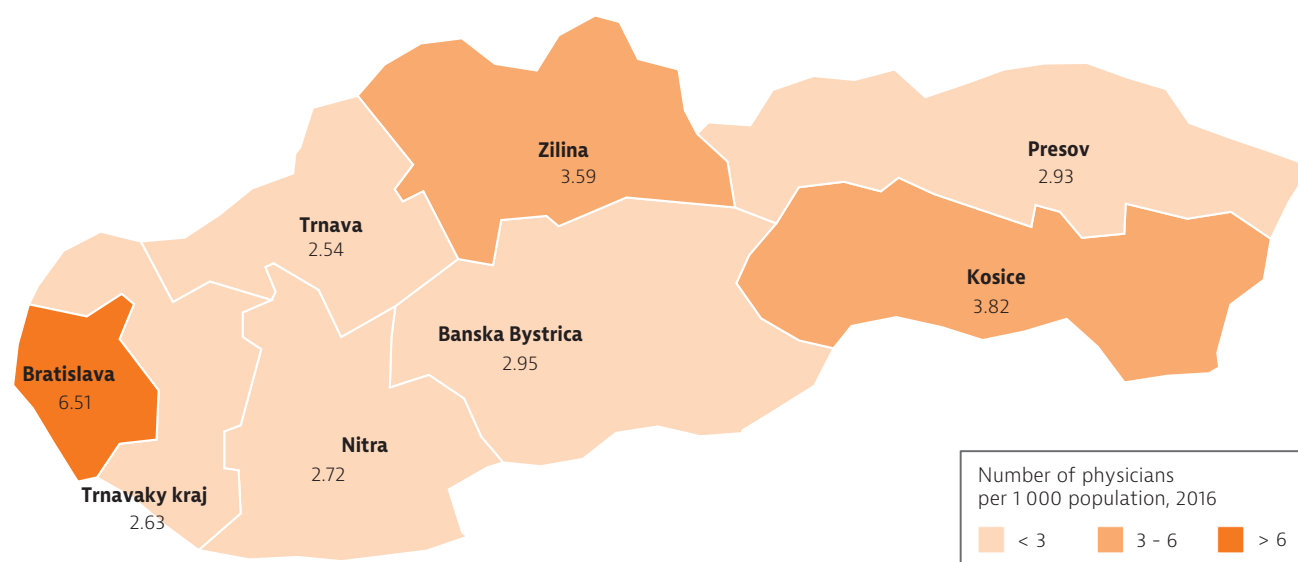
Figure 16. Health services are less used by middle-aged Roma people

Source: Geva, Hidas & Machlica (forthcoming).

The government is addressing health workforce shortages and uneven geographical distribution

While the density of physicians is very high in the capital region, it is much lower in most other regions, with many reporting less than three doctors per 1 000 population, compared to a national average of 3.4 (Figure 17). In addition, the physician workforce is ageing, and there are concerns over whether sufficient new doctors will be available to replace those due to retire in the coming years, particularly in regions where numbers are already low. In 2017, more than one-third (36 %) of all doctors in the country were aged 55 and over (about 6 700 of 18 600 doctors).

More than 700 students graduate from Slovak medical schools each year – a number that should, in principle, provide a sufficient pool of new recruits to replace the doctors who will be retiring. However, about half of these new medical graduates are foreign students and most do not pursue their postgraduate training and do not end up practising in Slovakia. Moreover, the emigration of Slovak doctors is greater than the immigration of foreign-trained doctors to the country, resulting in a yearly net outflow of human resources. As a consequence, in 2018 the government took measures to increase the training capacity of new doctors across the country.

Figure 17. The capital region has considerably more doctors than the rest of the country

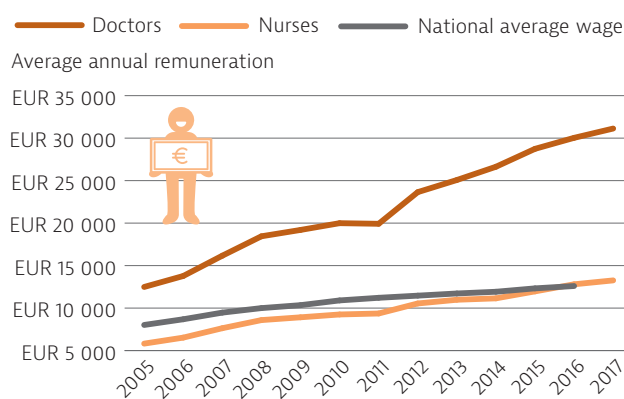
Source: NCHI (2018).

Slovakia has also low numbers of nurses (see Section 4) and the number of students and graduates from nursing education programmes has decreased since 2010. In 2018, to improve the attractiveness of nursing studies, the government introduced a scholarship for nurse students of EUR 6 000 during the training period, on the condition that they stay in the country for at least five years after graduation.

To address these human resources challenges, the government also authorised substantial pay raises. The income of doctors and nurses has increased more rapidly than that of many other Slovak workers since 2011, making these professions more attractive for students and reducing incentives for health professionals to move to other sectors or emigrate to other countries. The average remuneration of salaried doctors – including both GPs and specialists – increased by over 50 % between 2011 and 2017, while the remuneration of nurses rose by about 40 % (Figure 18). The introduction of minimum wages for hospital doctors in January 2012, with staged increases in the following years, played an important role in this substantial pay increase. In 2018, the government decided to increase the salaries of nurses and all non-medical health professionals further by at least 10 %.

Further development of the ‘integrated care centres’ and the introduction of greater task sharing between doctors and other health professionals could also help to address the shortage of doctors, while improving career prospects for the non-medical workforce.

Figure 18. The remuneration of doctors and nurses has increased quite rapidly since 2011

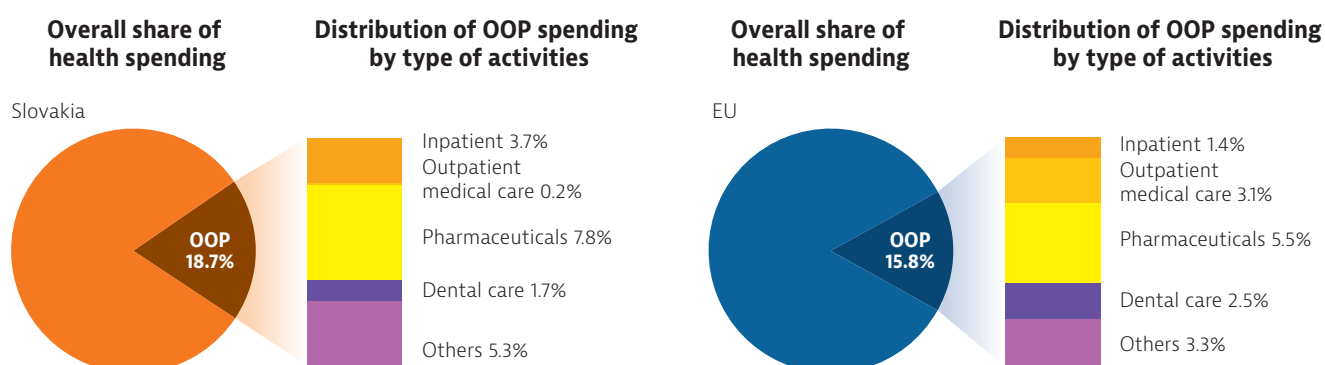


Source: Ministry of Health (Quarter Report on Wages and Employees in Health Service in Slovakia).

Out-of-pocket payments are mainly driven by pharmaceuticals

On average, 19 % of health expenditure is borne directly by patients, a share that has decreased steadily over the past decade but remains slightly above the EU average (16 %; Figure 19). The level of financial protection overall is good: only 3.5 % of households experienced catastrophic expenditure³ on health in 2012 (latest year available). A large proportion (more than 40 %) of OOP payments are used to pay for pharmaceuticals; however, co-payments on medicines have not increased markedly and have stabilised at levels that do not seem to impair access (see Section 5.3).

Figure 19. The level of out-of-pocket payments is comparable to the EU average



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

3: Catastrophic expenditure is defined as household out-of-pocket spending exceeding 40 % of total household spending net of subsistence needs (i.e. food, housing and utilities).

5.3. Resilience⁴

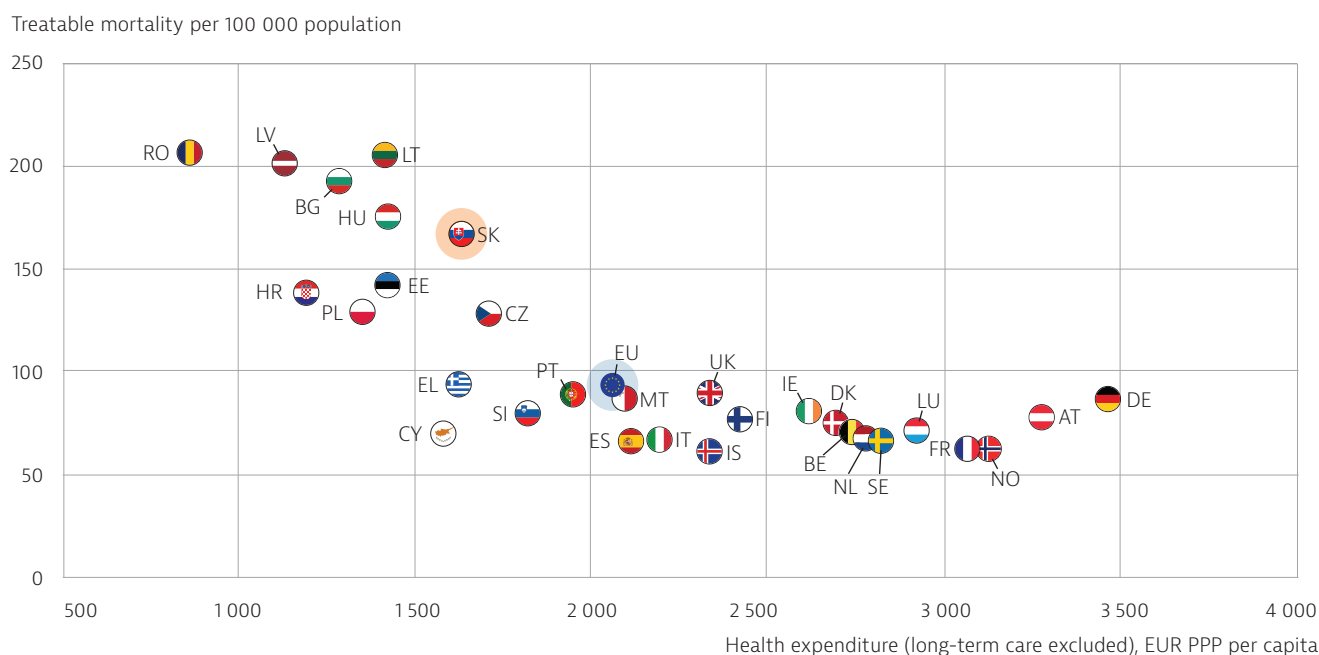
Population ageing will put pressure on health and long-term care expenditure

Over the medium to long term, population ageing, technological and other factors are projected to increase public health and long-term care spending. Public spending on health accounted for 5.6 % of Slovak GDP in 2016, below the EU average of 6.8 %. Health spending is projected to increase by 1.2 percentage points of GDP between 2016 and 2070 – slightly above the EU average increase of 0.9 percentage points (European Commission, 2019b). According to the reference scenario, this would bring the country closer to the EU health spending average by 2070. Over the long term, medium fiscal sustainability risks arise for Slovakia, deriving primarily from the projected impacts of age-related public spending (notably health care and pensions), and this was the subject of a country-specific recommendation issued by the Council of the European Union in the context of the 2019 European Semester⁵ (Council of the European Union, 2019).

The Value for Money project has identified many opportunities for efficiency gains

Slovakia stands out as having relatively high treatable mortality rates compared to other EU countries, given its level of health care spending (Figure 20). In its 2019 Country Report, the European Commission acknowledged the recent progress made to adopt measures improving the overall cost-effectiveness of the health system (European Commission, 2019a). The Value for Money project is one of the initiatives that helped to identify where public spending on health could be optimised (see Box 1). In addition, health budget programming was initiated in 2019. This exercise is gathering teams from the Prime Minister's office, the Ministry of Health and Ministry of Finance to create detailed health expenditure projections.

Figure 20. Slovakia has an opportunity to improve health care effectiveness at limited costs



Source: Eurostat Database; OECD Health Statistics 2019.

Diagnosis-related groups may create incentives to improve efficiency in hospital spending

Despite the reduction in the number of beds per population by roughly 30 % since 2000 (Figure 21), the Slovak health system remains excessively hospital-centric (see Section 4). In addition, state-owned

hospitals have substantial levels of debt, impeding their investment capacities. Many factors may explain the current state of affairs, but hospital funding mechanisms and the low level of competition across structures have certainly contributed to this issue.

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

5: In July 2019, the Council of the European Union issued Slovakia a country-specific recommendation to 'safeguard the long-term sustainability of public finances, in particular that of the health care and pension systems'.

Box 1. The Value for Money project has contributed to improving the efficiency of the health system

In 2016, the Value for Money project aimed to identify areas of inefficient spending and resource allocation in the health sector through an in-depth analysis of all key accounts and processes. This initiative was led by the Ministry of Finance, the International Monetary Fund and the World Bank.

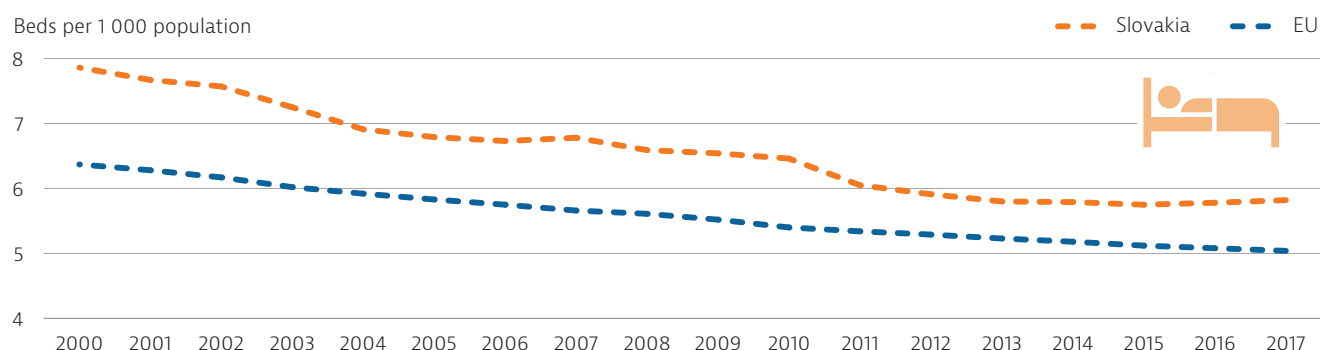
Two types of measure were introduced: some were designed to reduce overall health expenditure while others focused on reducing hospital debts specifically. After the first year of the project

(Implementation Unit, 2017), 75 % of the targets on health expenditure reduction were achieved, and the achievement increased slightly to 76 % in 2018. The greatest improvement was recorded in reducing overconsumption of medicines, with EUR 29.7 million savings achieved mainly due to the introduction of ePrescriptions. Substantial savings were also achieved in the purchase of medical aids (EUR 22.4 million) due to reference pricing.

Hospitals were paid fixed rates and since 2016 the authorities have started to introduce a payment system based on diagnosis-related groups (DRGs). This is expected to increase transparency in hospital spending and create incentives for cost management and improved efficiency via, for instance, promotion of day surgery (which is not yet very developed). The

calculations of base rates for each DRG case are still in the draft phase; the objective is to begin formal implementation of the new funding mechanism within the next five years. However, increasing efficiency in the hospital sector will also require improvements in primary care (see Section 5.1).

Figure 21. The number of hospital beds decreased steadily but remains far above the EU average



Source: Eurostat Database.

The role of primary care doctors is being strengthened

The Slovak authorities have taken measures to achieve more even distribution of patient volumes managed by specialists and GPs, from the current 80/20 distribution to a ratio closer to 60/40 in the next few years (European Commission, 2019b). Efforts to make the GP profession more attractive to young doctors have been made. Training schemes were revised, with the creation of a residency programme for GPs and the inclusion of training sessions in outpatient facilities during undergraduate medical studies. Since 2014, GPs have also had the opportunity to perform pre-operation examinations of patients with common diseases. In addition, in 2015 legislation was passed allowing GPs broader rights and responsibilities in treating chronic patients who previously required treatment by specialists (e.g. patients with diabetes).

Further savings could be achieved by controlling pharmaceutical expenditure

The level of expenditure on pharmaceuticals in Slovakia is substantially higher than in most countries (see Section 4), even though the share of generics in volume is relatively high. Overconsumption and relatively high prices are possible drivers.

To control pharmaceutical expenditure more effectively, the government introduced changes to the pharmaceutical sector in 2017. Specific conditions were set for the reimbursement of drugs, subject to exceptions, and the entry of innovative and generic drugs to the market became more regulated (although this led to unintended consequences – see Box 2). Centralised procurement was initiated, with a revision of the external reference pricing system. Finally, international non-proprietary name prescription and internal reference pricing were introduced to further

Box 2. Reforms of the pharmaceutical sector led to unintended consequences

The continuing high share of pharmaceutical spending has prompted several legislative changes in recent years. In 2017, the Innovative Medicine Act introduced a new cost-containment policy that reformed the regulations, criteria and procedures for inclusion of pharmaceuticals in the benefit basket. This legislation further aimed to grant faster access to innovative medicines and increase generic penetration.

In 2018, it became clear that the legislative wording allowed certain new pharmaceuticals to be classified

as 'orphan drugs', enabling a fast-track procedure without health technology assessment or price referencing. This resulted in lower savings than anticipated from the new regulations and fewer generics entering the Slovak market in 2018. The Ministry of Health estimated that this had cost the health system an additional EUR 54.3 million in 2018. Consequently, the legislation was amended in January 2019.

improve efficiency in pharmaceutical spending. These measures have already delivered important results: 2017 was the first year in which overall pharmaceutical expenditure decreased. Further savings are expected from increased take-up of biosimilar medicines, following policy interventions implemented by the authorities in 2019 aimed at facilitating their entry into the Slovak market.

These changes in the pharmaceutical sector will have to be closely monitored against the risks of parallel trade and possible subsequent shortages. In previous years Slovakia faced substantial issues with parallel trade, which led the authorities to restrict the possibilities to export medicines marketed in Slovakia to countries where prices are higher. A European Commission infringement procedure was initiated against Slovakia and two other countries on this question, but later closed as it was acknowledged that reconciling respect for the free movement of goods with the right of patients to access health care was a fine balancing act.

Slovakia also started to engage in international collaborations to improve access to medicines. The Fair and Affordable Pricing initiative, established in March 2017, is an inter-country regional platform to improve access to medicines for the citizens of member countries. This project was established among the Visegrád Group (Czechia, Hungary, Poland, Slovakia), but is also open to other countries.

The public eHealth system was launched in 2018

A digitalised information infrastructure that ensures timely and reliable sharing of clinical and other information is an option to improving health outcomes and health system efficiency. After nearly ten years of development, and with financial support provided by the EU, Slovakia launched its public eHealth system on January 2018. This allows physicians and other health professionals to record

their actions and other patient-related information – such as medical history – electronically. Owing to the lack of a public eHealth solution before this, a privately developed system gained popularity and is still used extensively by practitioners, even though it has become mandatory for practitioners to switch to the public eHealth system since 2018. Overall, 90 % of primary care physicians were using an electronic medical records system in 2018 (OECD/EU, 2018).

A reform reconfiguring the hospital network is under discussion

The authorities have been developing a proposal for significant health reform legislation which, among other things, plans a reconfiguration of the hospital network. The draft hospital stratification sets out a network of 46 hospitals distributed optimally across the country. Hospitals are to be divided into three categories: local hospitals accessible to patients within half an hour from their homes, regional hospitals reachable within an hour and national hospitals reachable within two hours. Local hospitals will provide common acute care, while regional hospitals will provide more comprehensive health treatment. National hospitals will be responsible for providing the most complex medical procedures. Adoption of this legislation remains uncertain, however, because of important political opposition.

6 Key findings

- The health status of the Slovak population has improved since 2000. Life expectancy increased by four years to reach 77.3 years in 2017, but it remains almost four years below the EU average. Substantial inequalities persist by gender and education level. Women tend to live seven years longer than men, while the life expectancy at age 30 is 14 years longer for the most educated men compared with the least educated.
- Around half of all deaths in Slovakia can be attributed to behavioural risk factors, a proportion far above the 39 % EU average. Persistently high tobacco consumption and the rising overweight and obesity rates among children are threats to the health of the Slovak people. While in most EU countries smoking rates have decreased substantially over the past decade, tobacco consumption remained stable in Slovakia, with more than one in five adults still smoking on a daily basis.
- Health spending in Slovakia is much lower than most EU countries, at 6.7 % of GDP compared to 9.8 % in the EU. Despite this relatively low level of expenditure, the Slovak health system provides a comprehensive benefit package to nearly the entire population, with limited levels of out-of-pocket expenditure. Nevertheless, the system remains hospital-centric and has yet to prioritise expansion of its primary care sector.
- Slovakia reports high mortality rates from preventable and treatable causes, suggesting a pressing need to reduce premature deaths through public health and health care policies. Investing in prevention could help to improve the health status of the population and reduce health inequalities. Only 1 % of health spending is allocated to prevention, compared with an EU average of 3 %. Strengthening the primary care sector could also enhance the detection and management of chronic diseases and reduce unnecessary hospitalisations.
- While access to health care is generally good for most of the population, some marginalised populations (such as ethnic minorities and those living in deprived areas) face considerable barriers to accessing care. In principle, Roma people have equal access to health services, but lower vaccination coverage, lower consumption of health services and considerably higher mortality rates are the reality. Some initiatives to improve their access to health care have been introduced in recent years.
- Doctors are unevenly distributed across the country and the current workforce is ageing. There are concerns about the future retention of young doctors currently being trained to replace those who will retire in the coming years. Important actions have been taken in recent years to address this issue, such as pay increases for health professionals and a reform of training curricula.
- Population ageing will put significant pressure on health and long-term care expenditure in Slovakia, and the growth rate of health expenditure is expected to be above the EU average in the next few decades. At the same time, the current health system shows great potential for efficiency gains through further control of pharmaceutical expenditure, shifting the focus to outpatient care and greater investment in prevention and health promotion.



Key sources

Smatana M et al. (2016), *Slovakia health system review*. Health Systems in Transition, 18(6):1-210.

OECD/EU (2018), *Health at a Glance: Europe 2018: State of Health in the EU Cycle*, OECD Publishing, Paris, https://doi.org/10.1787/health_glance_eur-2018-en.

References

Babinská I et al. (2014), *Does the population living in Roma settlements differ in physical activity, smoking and alcohol consumption from the majority population in Slovakia?* Central European Journal of Public Health, 22(Supplement):S22-7.

Council of the European Union (2019), *Council Recommendation on the 2019 National Reform Programme of Slovakia*. Brussels, <http://data.consilium.europa.eu/doc/document/ST-10178-2019-INIT/en/pdf>

Decade of Roma Inclusion Secretariat Foundation (2015), *Roma Inclusion Index*

Duval L et al. (2016), *The Roma Vaccination Gap: Evidence from Twelve Countries in Central and South-East Europe*. Vaccine, 34(46):5524-5530.

European Commission (2014), *Roma Health Report: Health Status of the Roma Population*. Brussels, https://ec.europa.eu/health/sites/health/files/social_determinants/docs/2014_roma_health_report_en.pdf

European Commission (2016), *Slovakia: Health Care and Long-term Care Systems: an Excerpt from the Joint Report on Health Care and Long-Term Care Systems and Fiscal Sustainability*. Brussels, https://ec.europa.eu/info/publications/economy-finance/joint-report-health-care-and-long-term-care-systems-fiscal-sustainability-0_en

European Commission (2019a), *Country Report Slovakia 2019. 2019 European Semester*. Brussels, https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-slovakia_en_0.pdf

European Commission (2019b), *Joint report on health care and long-term care systems and fiscal sustainability – Country documents 2019 update*. Institutional Paper 105. Brussels, https://ec.europa.eu/info/publications/joint-report-health-care-and-long-term-care-systems-and-fiscal-sustainability-country-documents-2019-update_en

Geva A, Hidas S, Machlica G (forthcoming), *The Benefits of Social Inclusion of Roma in the Slovak Republic: Technical background paper*.

Implementation Unit (2017), *Súhrnná implementačná správa* [Summary implementation report], Ministry of Finance, Bratislava.

Kuenzel R, Solanič V (2018), *Improving the cost-effectiveness of Slovakia's healthcare system*, European Commission, Brussels.

NCHI (2018), *Sieť zdravotníckych zariadení a pracovníci v zdravotníctve v SR 2016* [Network of healthcare providers and healthcare personnel for 2016], National Centre for Health Information, Bratislava.

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.

Country abbreviations

Austria	AT	Denmark	DK	Hungary	HU	Luxembourg	LU	Romania	RO
Belgium	BE	Estonia	EE	Iceland	IS	Malta	MT	Slovaia	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

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