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.

Contents

1. HIGHLIGHTS 3
2. HEALTH IN HUNGARY 4
3. RISK FACTORS 7
4. THE HEALTH SYSTEM 9
5. PERFORMANCE OF THE HEALTH SYSTEM 13
   5.1. Effectiveness 13
   5.2. Accessibility 16
   5.3. Resilience 18
6. KEY FINDINGS 22

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-Hungary.xls

Demographic and socioeconomic context in Hungary, 2017

<table>
<thead>
<tr>
<th>Demographic factors</th>
<th>Hungary</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population size (mid-year estimates)</td>
<td>9,788,000</td>
<td>511,876,000</td>
</tr>
<tr>
<td>Share of population over age 65 (%)</td>
<td>18.7</td>
<td>19.4</td>
</tr>
<tr>
<td>Fertility rate¹</td>
<td>1.5</td>
<td>1.6</td>
</tr>
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<table>
<thead>
<tr>
<th>Socioeconomic factors</th>
<th>Hungary</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita (EUR PPP²)</td>
<td>20,300</td>
<td>30,000</td>
</tr>
<tr>
<td>Relative poverty rate³ (%)</td>
<td>13.4</td>
<td>16.9</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>4.2</td>
<td>7.6</td>
</tr>
</tbody>
</table>

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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Highlights

Despite improvements since 2000, health outcomes in Hungary still lag behind most other EU countries, reflecting both unhealthy lifestyles and the limited effectiveness of health care provision. Levels of smoking, excessive alcohol consumption and obesity are among the highest in the EU, contributing to high rates of cardiovascular and cancer mortality. Public spending on health care is considerably below the EU average, and a large number of Hungarians rely on out-of-pocket payments to access care, which undermines equity. The health system remains excessively hospital-centric, with insufficient focus on primary care and prevention. Additional reforms and investments are needed to reduce the performance gaps with the rest of the EU.

Health status

Life expectancy in Hungary is lower than in most of its EU neighbours, and disparities across gender and socioeconomic groups are substantial. Life expectancy at birth was 76.0 years in 2017, an increase of four years since 2000, but still nearly five years below the EU average (80.9 years). There are large differences in life expectancy by education: men with the lowest level of education live on average 12 years less than the most educated, while the gap is more than 6 years for women.

Risk factors

Lifestyle risk factors account for half of all deaths in Hungary. More than one in four adults smoked daily in 2014 – the third highest rate in the EU. Adult obesity is also among the highest in the EU: one in five adults were obese in 2017, a rate that has increased steadily over the last decade. Overweight and obesity are also a growing problem in children, with nearly one in five 15-year-olds overweight or obese in 2013-14.

Health system

Hungary spends much less on health than the EU average, both in absolute terms and as a share of GDP. In addition, only slightly more than two-thirds of health expenditure is publicly financed, resulting in levels of out-of-pocket payments that are double the EU average. Overall, the health system remains excessively reliant on hospital care, with primary care insufficiently equipped to have a stronger role.

Effectiveness

High levels of mortality from preventable and treatable causes suggest that the effectiveness of the health system could be greatly improved. More focus on prevention and primary care could contribute to reducing avoidable deaths.

Accessibility

The health benefit package provided by the national health insurance fund is relatively limited compared with other EU countries, resulting in high out-of-pocket costs, particularly for pharmaceuticals. In addition, access to care is impeded by shortages of health professionals.

Resilience

Addressing the persistent underfunding of the Hungarian health system would help to improve access to care and, by extension, health outcomes. At the same time, substantial efficiency gains could be achieved by reforming and downsizing the hospital sector and strengthening primary care.
2 Health in Hungary

Despite gains, life expectancy at birth in Hungary remains among the lowest in the EU

Life expectancy at birth in Hungary grew by more than four years between 2000 and 2017 (from 71.9 years to 76.0 years), an increase slightly greater than the average across the EU (3.6 years). Despite this, in 2017 life expectancy at birth remained almost five years below the EU average (Figure 1), and the lowest among the countries of the Visegrad Group (Czechia, Hungary, Poland and Slovakia).

On average, Hungarian women live almost seven years longer than men (79.3 years compared to 72.5 years). This gender gap is greater than across the EU as a whole (5.2 years) and is largely due to greater exposure to risk factors among men – particularly smoking and excessive alcohol consumption (see Section 3).

Figure 1. Life expectancy at birth in Hungary remains almost five years shorter than the EU average

Source: Eurostat Database.

Inequalities in life expectancy by education are stark

Large inequalities in life expectancy in Hungary exist not only by gender but also by socioeconomic status. As shown in Figure 2, 30-year-old men with tertiary education live on average more than 12 years longer than those with low levels of education, the difference is over six years for women.

This education gap in life expectancy is well above the EU average, and is partly explained by greater exposure to various risk factors among people with lower levels of education. These include, for instance, higher smoking rates and poorer nutritional habits (see Section 3). As higher levels of education tend to be associated with 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 care.

Figure 2. The education gap in life expectancy at age 30 is 12.6 years for men and 6.4 years for women

Education gap in life expectancy at age 30:
- Hungary: 6.4 years
- EU27: 4.1 years
- Hungary: 12.6 years
- EU27: 7.6 years

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

Source: Eurostat Database (data refer to 2016).
Inequalities in life expectancy are also reflected in growing regional disparities. Geographical differences in health outcomes have widened since the mid-1990s, leading to a three-year gap in life expectancy at birth between the wealthiest region – central Hungary – and the relatively poor region of northern Hungary (ÁEEK, 2016; Uzzoli, 2016).

**Cardiovascular diseases are the leading cause of death in Hungary**

The increases in life expectancy since 2000 have been driven mainly by reductions in mortality rates from cardiovascular diseases – most notably strokes (Figure 3). Nonetheless, circulatory system diseases remained by far the leading cause of death in 2016, and rates of cardiovascular deaths in particular were much higher in Hungary than in most EU countries. While mortality from ischaemic heart disease fell by more than 40% across the EU between 2000 and 2016, the reduction was much more limited in Hungary, where mortality declined by only 12%. Mortality from stroke fell more rapidly over the same period, but still remains substantially higher than the EU average.

A striking feature is that Hungary had the highest cancer mortality rate in the EU in 2016, with lung, colorectal, liver and breast cancers the most frequent causes of cancer-related death, in part reflecting the low levels of investment in screening and public health programmes (see Section 5.1).

**Figure 3. Ischaemic heart disease, stroke and cancer account for the majority of deaths in Hungary**

<table>
<thead>
<tr>
<th>% change 2000-16 (or nearest year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischaemic heart disease</td>
</tr>
<tr>
<td>Stroke</td>
</tr>
<tr>
<td>Colorectal cancer</td>
</tr>
<tr>
<td>Liver disease</td>
</tr>
<tr>
<td>Lung cancer</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>Diabetes</td>
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<tr>
<td>Pancreatic cancer</td>
</tr>
<tr>
<td>Suicide</td>
</tr>
<tr>
<td>Liver disease</td>
</tr>
<tr>
<td>Lung cancer</td>
</tr>
<tr>
<td>Colorectal cancer</td>
</tr>
<tr>
<td>Stroke</td>
</tr>
<tr>
<td>Ischaemic heart disease</td>
</tr>
</tbody>
</table>

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

**Most of the population reports being in good health, but substantial disparities exist**

In 2017, three in five adults reported being in good health in Hungary, 10% less than in the EU as a whole. As in other EU countries, people with higher incomes are more likely to report being in good health than those on low incomes. In 2017, almost three-quarters (72%) of those in the highest income quintile considered themselves to be in good health, compared with only half (53%) in the lowest. This income gap in self-reported health is similar to that reported in the EU as a whole.

Similarly, the proportion of people reporting being in good health generally declines with age. Only 18% of Hungarians aged 65 years and older reported being in good health in 2017, compared with 70% of adults aged 16-64, rates much lower than the EU averages (41% and 78% respectively).

**After age 65 many Hungarians live with chronic disease and disability**

The general increase in life expectancy in Hungary has been due in part to gains at older ages. In 2017, Hungarians aged 65 could expect to live an additional 16.7 years on average – 1.6 years more than in 2000. However, many years of life after 65 are spent with chronic disease and disability (Figure 4). This is particularly the case among older Hungarian 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 similar between men and women since Hungarian women are more likely to live with chronic disease or disability in their later years.

Two-thirds of Hungarians aged 65 and over report having at least one chronic disease, a proportion 12 percentage points higher than the EU average. Most people are able to continue to live independently in old age, but one in six report some limitations in basic activities of daily living, such as bathing, dressing or getting out of bed, that may require long-term care.
**Antimicrobial resistance is a growing issue in Hungary**

Antimicrobial resistance is becoming a major public health concern in Hungary. In 2014 and 2015, Hungarian hospitals reported about 4 000 health care-associated infections due to antibiotic-resistant bacteria annually to the National Nosocomial Surveillance System. In addition, between 2005 and 2015, incidence of these infections increased substantially: from 5.4 to 24.8 per 100 000 patient-days. Overall, the proportion of antibiotic resistance of bacterial isolates in Hungary was higher than the European mean values in 2014 for most combinations of antimicrobial groups and bacteria, and the difference was statistically significant in almost all cases (Hajdu et al., 2018).

Both international quality indicators of antibiotic use and national studies indicate a widespread misuse of antibiotics in Hungary, even though the country is among the lower antibiotic users in the EU in terms of quantity. Data suggest that patients are often treated unnecessarily with broad-spectrum antibiotics, which may result in more side effects, higher expenses and more rapid resistance development (Hajdu et al., 2018).
3 Risk factors

Unhealthy behaviours are implicated in half of all deaths in Hungary

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

Some 28 % (34 000) of all deaths in 2017 may be attributed to dietary risks (including low fruit and vegetable intake, and high sugar and salt consumption), which is ten percentage points more than the EU average. Tobacco consumption, including direct and second-hand smoking, was implicated in an estimated 21 % of all deaths (over 25 500), with around 10 % (12 000) attributable to alcohol consumption (one of the highest levels in the EU) and 4 % (4 500) to low physical activity (Figure 5).

Figure 5. Poor diet and tobacco smoking are driving mortality rates in Hungary

Note: The overall number of deaths related to these risk factors (62 000) is lower than the sum of each one taken individually (76 000), because the same death can be attributed to more than one risk factor. Dietary risks include 14 components such as low fruit and vegetable consumption and high sugar-sweetened beverages consumption.

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

Despite reductions in the past decade, Hungarians are among the heaviest smokers in the EU

More than one in four Hungarian adults reported smoking daily in 2014 – the third highest rate in the EU after Bulgaria and Greece (Figure 6). Tobacco consumption has declined more slowly in Hungary than in most other EU countries over the last two decades. Furthermore, smoking rates show a significant gender difference, with almost one-third of Hungarian men reporting that they smoked daily in 2014, compared to one-fifth of women. Smoking rates among adolescents are also very high. In 2015, nearly one-third of 15- and 16-year-olds in Hungary reported having smoked in the past month – again, among the highest rates in the EU¹.

The Hungarian authorities have started to address this public health issue (Joó et al., 2018). In 2012 the Act on the Protection of Non-smokers was modified, leading to restrictions on smoking in enclosed places such as bars and in certain open public areas such as hospitals. The Tobacco Shop Act was also adopted in the same year. This drastically reduced the number of tobacco retail sale points and increased excise tax on tobacco products. The next policy option under consideration to curb tobacco consumption is the introduction of plain tobacco packaging.

¹: Based on the Special Eurobarometer survey, the proportion of people currently smoking in Hungary was 27 % in 2017, a proportion closer to the EU average (26 %).
High alcohol consumption, and adolescent binge drinking, are of significant concern

Alcohol consumption among Hungarian adults has decreased over the past decade but in 2017 remained more than 10% above the EU average: 11.1 litres per capita compared with 9.9 in the EU. Heavy episodic alcohol consumption (binge drinking) among adolescents is also a concern. In 2015, 43% of boys and 36% of girls aged 15 to 16 reported at least one episode of binge drinking during the preceding month – among the highest levels in the EU. This is of particular concern given the increased risk of accidents and injuries related to heavy alcohol consumption.

Overweight and obesity are a growing public health issue in Hungary

Poor nutritional habits partly explain the increasing prevalence of obesity in Hungary. In 2017, 60% of adults reported not consuming any fruit on a daily basis, and 70% said they did not eat vegetables daily – a higher proportion than in most EU countries (Figure 6). One in five Hungarian adults (20%) was obese in 2017 compared to 15% on average across the EU.

Overweight and obesity rates are also becoming a major problem among Hungarian children. Almost one in five 15-year-olds were overweight or obese in 2013-14, and overweight and obesity rates are even higher among younger children age 7 at around 22% in 2016, but appear to have stabilised since 2010 (Kovacs et al., 2018). Some recent government initiatives – such as the public health product tax – have aimed to tackle childhood obesity (see Section 5.1).

Socioeconomic inequality contributes to health risks

Many behavioural risk factors are more common among people with lower education or income levels. In 2014, 30% of Hungarian adults who had not completed secondary education smoked daily, compared with only 13% among those with tertiary education – a gap more than double the EU average. Similarly, 21% of Hungarians without secondary education were obese in 2017, compared to 17% of those with higher education levels. This higher prevalence of risk factors among socially disadvantaged groups contributes significantly to socioeconomic inequalities in health and life expectancy.

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.


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2: 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.
4 The health system

A single health insurance fund provides coverage for the Hungarian population

The Hungarian health system is organised around a single health insurance fund providing health coverage for nearly all residents. Funding comes from payroll contributions from employers and employees, and from direct government transfers. The fund is administered by the National Institute of Health Insurance Fund Management (NEAK), which is a government organisation currently under the supervision of the Ministry of Human Capacities.

The central government exerts strong control over the health system

Following a series of reforms initiated in 2011, the Hungarian health system has become highly centralised. The national government is now responsible for setting strategic direction, controlling financing and issuing and enforcing regulations, as well as delivering most outpatient specialist and inpatient care.

The Ministry of Human Capacities administers the health system through the National Healthcare Service Centre (ÁEEK), whose responsibilities include care coordination, hospital planning and management, and medical licensing. The ÁEEK also serves as the umbrella organisation for regional and local health system agencies. The central government resumed control of local hospitals from county and municipal governments in 2012 (the ÁEEK serves as the managing authority running these state-owned hospitals). In 2018, the National Health Programme was adopted; this defines the main government health policy priorities in the fields of cardiovascular, oncological and rheumatological diseases, as well as mental and child health.

Health expenditure is substantially below the EU average, resulting in high levels of out-of-pocket payment

The Hungarian health system is chronically underfunded. Expenditure on health care is EUR 1,468 per capita (adjusted for differences in purchasing power), which is among the lowest in the EU (Figure 7). Health expenditure per capita has increased at about the same rate as GDP since 2010, so health spending as a share of GDP has remained relatively stable, fluctuating between 7.5% in 2010 and 6.9% in 2017, still well below the EU average.

The public share of health spending (government and compulsory insurance) accounts for only slightly more than two-thirds of total health expenditure in 2017, while out-of-pocket (OOP) spending3 accounts for 27%, almost twice the EU average of 16% (see Section 5.2).

Figure 7. Hungary spends less on health care than most other EU countries

<table>
<thead>
<tr>
<th>Government &amp; compulsory insurance</th>
<th>Voluntary schemes &amp; household out-of-pocket payments</th>
<th>Share of GDP % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR PPP per capita</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 000</td>
<td></td>
<td>12.5</td>
</tr>
<tr>
<td>4 000</td>
<td></td>
<td>10.0</td>
</tr>
<tr>
<td>3 000</td>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>2 000</td>
<td></td>
<td>5.0</td>
</tr>
<tr>
<td>1 000</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>0.0</td>
</tr>
</tbody>
</table>

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

3: OOP payments include direct payments, cost-sharing for services outside the benefit package and informal payments.
The Hungarian parliament is responsible for determining the size of the health insurance budget – setting the contribution rate, agreeing direct government transfers to the fund, and imposing taxes to raise the necessary revenues. Since the social contribution tax (paid by employers) funds not only the health system but also pensions, the amount allocated to health has been subject to fluctuations based on government priorities (Szigeti et al., 2019). As a result, health spending in Hungary has a level of instability, even within a single financial year, with the government sometimes changing allocations between the pension security fund and health insurance fund as the year progresses (Hungarian State Treasury, 2018).

**Health care providers face challenging budget constraints**

In primary care, general practitioners (GPs) are paid on a capitation basis (accounting for about 70% of practice income), with an amount assigned for each person enrolled whether or not they seek care, albeit with some adjustments for age and physician qualifications. This is complemented by some other sources of revenue: a pay-for-performance component and some location-based fixed allocations, both accounting for the remaining 30%. Outpatient specialists are paid on a fee-for-service basis: each procedure is assigned a number of points and providers claim payment of their points directly from the health insurance fund. The health insurance fund pays for hospital inpatient services according to diagnosis-related groups (DRGs) for acute care and hospital days for chronic care, except for a few specific interventions.

The government controls outpatient and inpatient budgets via a so-called ‘performance volume limit’. At the beginning of each year, this limit is defined for each health service provider, based on data from preceding years. However, the health sector struggles to operate within these budget constraints, often leading to growing hospital debt and other difficulties in supplier payments (see Section 5.3).

**Hungary provides close to full population health coverage, but the benefit package is limited**

The Hungarian constitution states that all Hungarian citizens have the right to access care unconditionally for emergency life-saving services, services that prevent serious or permanent health damage and reduction of pain and suffering. Access to all other health services is subject to participation in the statutory health insurance scheme. Since 2007, publicly funded providers are obliged to verify the entitlement status of each patient using an online system. In 2017, about 6% of the population had unclarified social health insurance status, mostly Hungarian citizens working abroad in other EU Member States and covered by their country of residence. Some Hungarians living in the country are not insured because they do not have a fixed address. In practice, however, no Hungarian resident is denied access to services at the point of care. Some groups of non-EU foreigners can voluntarily join the system for a fixed premium. They are entitled to only a limited benefit package, which excludes dental care, cross-border treatment and transplantation.

**Figure 8. Pharmaceuticals and medical devices account for nearly one-third of health expenditure**

Note: Administration costs are not included. 1. Includes curative-rehabilitative care in hospital and other settings; 2. Includes only the outpatient market; 3. Includes home care; 4. Includes only the health component.

Source: OECD Health Statistics 2019; Eurostat Database (data refer to 2017).
The benefit package covered by the health insurance fund is relatively limited compared with other EU countries. While most hospital and outpatient (ambulatory) spending is publicly funded, public coverage for pharmaceuticals and medical devices and dental care is much more limited (OECD/EU, 2018). The restricted nature of the package partly explains the high levels of OOP expenditure on medicines and medical devices (see Section 5.2).

Inpatient care and pharmaceuticals represent the largest cost items in the health system

Together, inpatient care and pharmaceuticals account more than 60 % of health spending. At 31 %, inpatient care is only slightly above the EU average of 29 %, while pharmaceuticals (also 31 %) well exceed the EU figure (18 %). Despite this, in absolute terms per capita, expenditure on pharmaceuticals (EUR 449 per person, adjusted for differences in purchasing power) is still below the EU average of EUR 522 (Figure 8). The shares allocated to prevention and long-term care are also lower than averages seen across the EU.

The numbers of doctors and nurses in Hungary are below EU averages

Compared to the EU average, Hungary has fewer doctors (3.3 vs. 3.6 per 1 000 population) and fewer nurses (6.5 vs. 8.5; Figure 9). Workforce shortages have been exacerbated by an ageing health workforce and the emigration of many doctors (particularly specialists), which accelerated after the country’s accession to the EU in 2004. Almost 5 500 doctors left the country to work in other EU countries or elsewhere between 2010 and 2016 (OECD, 2019). Emigration of nurses has also been substantial in recent years.

In response, the Hungarian government has raised the salaries of health professionals, including an unprecedented 19.4 % salary increase for paramedics in May 2018. As a result, outflow of health professionals has slowed down in recent years, even though the current average salaries of health professionals remain low compared with most other EU countries. The distribution of doctors is also uneven across regions, which further limits access to care – notably for populations who are already disadvantaged and living in poorer rural areas (see Section 5.2).

Figure 9. Hungary has fewer health professionals per capita than most other EU countries

Practicing nurses per 1 000 population

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 includes only those working in hospitals.

Source: Eurostat Database (data refer to 2017 or the nearest year).
Health care delivery remains very hospital-centric

Despite a reduction in the number of hospital beds since 2000 (see Section 5.3), in 2017 Hungary had the fourth highest number of hospital beds per capita in the EU. High hospital discharge rates and average length of stay also point to a strong reliance on hospital care.

The transfer of control of hospitals previously run by local authorities to direct national management has made the national government the main provider of both inpatient and outpatient (ambulatory) services (since 70 % of outpatient services are still provided by hospitals), although a few local governments still own multi-speciality outpatient facilities (polyclinics). EU Structural Funds have supported infrastructure improvements in regional hospitals. In 2017, the Healthy Budapest Programme was also established to modernise hospitals in the capital city. This aims to reduce the total number of facilities in the capital city while at the same time ensuring that each is better equipped and staffed.

The Hungarian health system has been the largest beneficiary of EU funds dedicated to health

Hungary has received considerable funding to modernise its health system through the EU Structural and Investment Funds (ESIF). In the 2014-20 period, Hungary will receive EUR 483 million, divided between financing for health infrastructure (EUR 253 million), access to health and social services (EUR 215 million) and development of eHealth (EUR 15 million). Hungary also received ESIF funds during the preceding 2007-13 period (EUR 1 336 million), when the country was the largest beneficiary of ESIF funds at that time. Overall, ESIF funds represent as much as 2.4 % of total health expenditure in Hungary (European Commission, 2016).

5 Performance of the health system

5.1. Effectiveness

Many deaths in Hungary could be avoided through better prevention and health care

In 2016, Hungary had the third highest preventable mortality rate and fifth highest mortality rate from treatable causes in the EU, indicating substantial room for improvement (Figure 10). Nearly 30 000 deaths could have been avoided in Hungary in the same year through more effective public health and prevention interventions. A further 16 000 deaths could have been prevented through more effective and timely health care.

Recent policy measures have tried to promote healthier lifestyles

Historically, Hungary has lagged behind many other European countries in investing in health promotion and disease prevention. In 2017, Hungary spent 2.6 % of total health expenditure on prevention, slightly lower than the EU average (3.1 %). As described in Section 3, many risk factors in Hungary are more prevalent than in most EU countries, with high rates of smoking and higher levels of alcohol consumption, obesity and poor nutrition.

In recent years, the Hungarian government has implemented ambitious programmes to improve population nutrition. A public health product tax was introduced in 2011, aiming to reduce consumption of unhealthy food products. In 2014, an evaluation concluded that the tax had achieved its public health goal of reducing consumption of these products, and that this reduction had generally been maintained in the first few years following its introduction. Further, more than two-thirds of people who did not choose the higher-tax products modified their eating habits by choosing healthier alternatives. The programme also achieved its financial objectives, meeting the expected revenue goal for each year, and the extra funds were used to increase health sector wages (WHO Regional Office for Europe, 2015).

In the same vein, legislation on control of trans-fatty acids (TFAs) in foodstuffs was adopted in 2013. It defined a maximum tolerable level of TFAs, revised marketing requirements and initiated monitoring of TFA intake in the population. Hungary is one of the few European countries to adopt such stringent legislation on TFAs. In 2015, stricter nutritional rules for public catering (including schools) were also introduced. One objective of this legislation is to ensure proper intake of energy and nutrients by children to support their healthy development.

Although recent increases have been implemented, the excise tax rates on tobacco and alcohol products remain relatively low, despite broad evidence that the use of taxes to raise tobacco and alcohol prices, along with regulation of promotion, is effective in reducing smoking and harmful drinking.
Figure 10. Hungary has among the highest mortality from preventable and treatable causes in the EU

Preventable causes of mortality

Treatable causes of mortality

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).

Routine vaccination programmes for children have been very successful

For many years, rates of childhood immunisation have been high in Hungary – the result of robust policies to ensure good coverage. Vaccination programmes are regulated by ministerial decree, and mandatory routine childhood immunisation now includes 12 vaccines since the government decided in 2019 to introduce vaccination against varicella. At-risk populations may also receive other vaccines, including influenza and HPV for girls aged 12, through the public vaccination programme. Immunisation programmes are defined at the national level, but their implementation is organised through public health units in county and district government offices.

Mandatory vaccines (and some voluntary vaccines, such as influenza) are provided free of charge and vaccination rates exceed the 95 % targets defined by WHO (Figure 11). Hungarian authorities have also developed an effective electronic monitoring system for vaccination coverage in the country (Rechel, Richardson & McKee, 2018). Consequently, measles cases are extremely rare and mainly imported.

Influenza vaccination coverage for people over 65 remains very low, however, with only 27 % of this cohort vaccinated in 2017. This rate is considerably below the EU average of 44 %, and even further from the WHO target of 75 %.
As in many other countries, anti-vaccination sentiment has gained momentum in Hungary in recent years. In response, a constitutional review declared that refusing consent for compulsory vaccinations without a legitimate reason could result in limiting parents’ rights in raising their children. As a last resort, if parents do not co-operate with the authorities and refuse to vaccinate their child, the government can take the child by law to vaccinate them.

**Figure 11. Immunisation rates for childhood vaccinations are excellent in Hungary**

![Immunisation rates](image)

**Note:** Data refer to the third dose for diphtheria, tetanus, pertussis, and the first dose for measles

**Source:** WHO/UNICEF Global Health Observatory Data Repository for people aged 65 and over (data refer to 2017 or nearest year).

**Cancer care is lagging behind other EU countries**

As described in Section 2, Hungary has the highest cancer mortality rates in the EU. High smoking rates partly explain mortality rates from lung and other smoking-related cancers, but the country also has other important deficits in cancer prevention, detection and treatment. Although for some cancers, such as breast and cervical cancer, early detection can improve both quality and length of life, screening rates for these two conditions are among the lowest in the EU. In 2017, only 41 % of Hungarian women aged 50-69 were screened for breast cancer in the preceding two years, compared with 61 % in the EU as a whole. Cervical cancer screening rates are even lower, with only one-third of woman aged 20-69 screened in 2017 – nearly half the EU average.

Hungarian authorities are currently developing a new cancer plan with the objective of transforming cancer care and improving patients’ survival and quality of life. The effort to promote early detection has already led to the announcement of a new colorectal screening programme (Box 1). In addition, a tax-benefit package has been introduced for patients suffering from breast, ovarian, cervical, testicular or prostate cancer.

**Strengthening primary care could help improve chronic disease management**

As described in Section 4, the Hungarian health system remains very hospital-centric and the primary care sector does not have a significant role. While the numbers of hospital admissions for chronic obstructive pulmonary disease, congestive heart failure and diabetes have declined in Hungary since 2005, they remain the second highest among EU countries reporting these data (Figure 12) and many could be avoided through more effective primary care.

Individual practice remains the predominant model for Hungarian GPs, which increases the challenges in attracting young doctors to the field and intensifies the complexity of care in the primary care setting. In recent years, a pilot programme to establish group practices in disadvantaged rural areas has led to better access to health services and improved health in the target populations (Dózsa K et al., 2017). Such initiatives show the potential gains from reforming and strengthening the primary care sector (see Section 5.3).

**Box 1. A national colorectal cancer screening programme is being established in Hungary**

The introduction of a National Colon Screening Programme was announced in 2016, supported by EU funding and coordinated by the National Public Health Centre. It aims to reduce colorectal cancer mortality by 10 % over a three-year period.

The commencement of the programme was postponed several times when substantial issues emerged during the development phase, such as inadequate preparation of health professionals, shortage of testing material and lack of capacity to absorb increased numbers of diagnostic colonoscopies. The programme finally began in 2019 and, to date, more than 72 000 people have received screening packages from their GPs. Of the 223 500 people aged 50-70 invited, more than 61 000 have sent back their samples. According to the National Public Health Centre, more than 600 000 invitations will be sent by the end of 2019.
5.2. Accessibility

Unmet medical needs are low, but high out-of-pocket payments cause financial hardship

The proportion of the Hungarian population reporting unmet needs for medical examination and treatment is relatively small. Only 1.0% of the population reported that they could not access care in 2017 because of waiting lists, costs or distance from care. Moreover, the differences between income groups were relatively modest. However, the same survey showed higher levels of unmet needs for less well-covered services, such as dental care (see Section 4). High OOP payments are also a major issue in Hungary (see below).

Although few Hungarians report unmet needs for medical care for financial reasons, OOP payments create financial hardship for many. OOP payments accounted for more than one-quarter (27%) of health spending in Hungary – one of the highest proportions in the EU and nearly twice the EU average (Figure 13).

Almost 12% of households in Hungary faced catastrophic spending on health in 2015, one of the highest levels across the EU countries for which data are available (Figure 14). The greatest financial impact of these high OOP payments was mainly concentrated among people in the lowest income quintile.
In addition, almost half of all OOP spending in Hungary goes to pharmaceuticals and medical devices – one of the highest rates in the EU. Substantial user charges are imposed and protection mechanisms for vulnerable populations are weak. Patients in Hungary must make co-payments on most prescribed medicines. In general, a higher reimbursement rate is granted if the disease is considered more severe or longer lasting, or if the medicine is deemed more effective. While the outpatient reimbursement scheme provides some exemption mechanisms for specific, vulnerable populations, in practice these are rather limited. Co-payments are waived only up to a monthly ceiling of 12 000 Hungarian forints (approximately EUR 40), and patients whose monthly co-payments exceed this have to pay the difference (WHO Regional Office for Europe, 2018).

The authorities are trying to improve access to medicines

The question of access to medicines has gained attention in recent years. The government has taken action to enhance generic competition, including prescription by international non-proprietary name, revision of treatment protocols and centralised procurement.

Hungary also started to engage in regional collaboration to improve access to medicines. The Fair and Affordable Pricing initiative, established in March 2017, is an inter-country regional collaboration 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 (Lithuania is one of its founding members and Latvia an invited guest). Several regional meetings and technical consultations have been organised. The project is being shaped as a complementary platform allowing better, proactive preparation of national reimbursement and pricing decisions. A pilot joint negotiation is under way to define possible mechanisms for future regional negotiation strategies.

Health workforce shortages are a major issue in Hungary

As noted in Section 4, Hungary not only has a lower physician to population ratio than the EU average but the health workforce is also unevenly distributed across the country. The central region has almost twice as many doctors per capita than the north, and shortages in each region are concentrated in rural areas. This is reflected in the number of permanently vacant GP practices, which are concentrated in poorer counties (Figure 15).

New service houses are being built or refurbished for GPs as part of the Hungarian Village Programme in small settlements, where positions have remained vacant for a long time. The aim of the project is to make the positions more attractive for young professionals. Some 11 billion forints (EUR 34 million) will be dedicated to renovating and modernising doctors’ premises.
Ageing and emigration factors also exacerbate physician shortages. The progressive retirement of a substantial proportion of Hungary's practising doctors will worsen regional disparities and impair access to care unless a sufficiently large number of new doctors replace them. Between 2000 and 2017, the proportion of doctors aged over 55 years increased from around 25 % to 43 %. Ageing of the medical workforce is even more acute among GPs, one-third of whom are already above the retirement age (Ministry of Human Capacities, 2014).

As mentioned in Section 4, nearly 5 500 doctors (around 15 % of all active physicians) left Hungary to work abroad between 2010 and 2016. The government has substantially increased the remuneration of doctors, to provide a greater incentive to stay in the country, and net wages have increased by more than 60 % since 2010 (Figure 16). These pay raises have started to have a measurable impact: between 2017 and 2018, the number of professionals asking for foreign work certificates decreased by 13 % for doctors and by 26 % for other health professionals.
5.3. Resilience

Public spending on health was affected by the economic crisis

Over the past ten years, public spending on health in Hungary has fluctuated in line with the national economic context. It remained below GDP growth from the time of the 2008-09 economic crisis until 2012, leading to a reduction of the share of publicly financed health expenditure in real terms (Figure 17). However, since 2013 it has been mostly equal to or higher than the growth of the general economy, and reached pre-economic crisis levels in 2017.

As noted in Section 4, Hungary currently spends much less on health than most other EU countries, both on a per capita basis and as a share of GDP. This is driven by low levels of public spending, reflecting the limited political priority given to health. Only 10% of all government spending is allocated to this sector, compared with an average of 16% in the EU as a whole. Public spending on health in Hungary accounted for only 4.9% of GDP in 2016, a much lower proportion than the EU average (7.8%). It is also projected to grow more slowly than in the EU as a whole in the coming decades, increasing by only 0.8 GDP percentage points overall by 2070 under current policies (below the 0.9 percentage point average growth expected for the EU). Public spending on long-term care is projected to increase by only 0.4% of GDP by 2070, also much less rapidly than in most EU countries (European Commission, 2019). Increasing public spending on health could help improve access to and quality of care and, by extension, health outcomes – assuming the resources are well allocated.

Hungary faces low fiscal sustainability risks in the short run. Conversely, in the medium and long term, the risks are high, even though the contributions of health care and long-term care to these risks could be relatively minimal (European Commission, 2019).

Figure 17. Public spending on health decreased following the economic crisis

Source: OECD Health Statistics 2019; Eurostat Database.

5. Resilience refers to health systems’ capacity to adapt effectively to changing environments, sudden shocks or crises.
Reorganising hospital care provision could result in more efficient use of resources

As noted above, health care provision remains highly hospital-centric in Hungary. In the past decade, the number of hospital beds per 1 000 population has reduced marginally; as a result, by 2017 there were almost 40 % more beds per 1 000 population in Hungary than the EU average (Figure 18). Hungary also reports the second longest average length of stay (ALOS) in the EU (9.6 days vs. 7.9 across the EU). However, the higher ALOS in Hungary is mainly the result of increased use of rehabilitative and long-term care, as the ALOS for acute care decreased in the past ten years.

Figure 18. The number of hospital beds in Hungary is far above the EU average

By reducing the number of hospitals, Hungary could focus on ensuring that the remaining hospitals are well equipped and funded. For example, the numbers of high-technology medical equipment such as magnetic resonance imaging units and computed tomography scanners per capita are the lowest in the EU (OECD/EU, 2018).

More reliance on day surgery could improve efficiency of hospital expenditure

Further development of day surgery is also a promising option to increase timely access to services while making more efficient use of hospital resources. While day surgery for some interventions has progressed in recent years, current use is still low relative to most EU countries (Figure 19). In 2016, only 55 % of cataract surgeries were carried out on a same-day basis, well below the EU average of 84 %. Similarly, while almost one-third of tonsillectomies are performed as day surgery in the EU, this is rarely the case in Hungary. A new project within the framework of the Structural Reform Support Service is being implemented to further enhance day surgery services.

The hospital funding system does not provide incentives to deliver services in the most efficient way. DRGs were introduced in Hungary in 1993, but the system has not been updated regularly and does not take depreciation into account. As a result, current tariffs do not reflect the true costs of health services, limiting their usefulness as a means of improving the general efficiency of the hospital sector. Updating tariffs more regularly would therefore restore some price signals.

In addition, the lack of local autonomy and decision-making authority at the institutional level limits the ability of hospitals to manage care effectively and adjust the supply of health services. The current hospital funding system that includes output volume limits has unintended consequences, such as higher referral rates from smaller hospitals to larger ones and increased hospital debts, which are eventually absorbed by central government.

Rising hospital debts remain a problem; they increased by around EUR 10.5 million per month between December 2017 and September 2018 to total debts of EUR 142 million in September 2018 (Hungarian State Treasury, 2018). To remedy the situation, in 2019 the authorities decided to appoint budgetary supervisors to the most indebted hospitals. Together with the hospital management, the budgetary supervisors will review the expenditure and economic situations and identify the main factors leading to current levels of indebtedness.
Recent pilot projects at the primary care level show promising results

Development of a robust primary health care sector is essential to respond more efficiently to the growing burden of chronic diseases. Shifting more care out of hospitals and increasing the focus on preventive services can save costs overall but increases the burden for the primary care sector. Traditionally organised primary care, with solo GPs and minimal support staff, would be hard pressed to meet this increased demand (see Section 5.1). Strengthening the primary care sector was also the subject of the country-specific recommendation issued by the Council of the European Union in the context of the 2019 European Semester⁶ (Council of the European Union, 2019).

The Swiss-Hungarian Primary Health Care Development Model Programme was intended to initiate the transformation of the primary care system by implementing an innovative pilot project between 2013 and 2017. The project expanded the responsibilities of primary care providers, with the co-operation of GPs, and the involvement of allied health professionals including dieticians, physiotherapists, psychologists and public health professionals. The project transformed local primary health care in two main ways. First, it provided preventive tools and human workforce for local GPs so that other options beyond medicine treatment, such as diet and physical therapy, were made available to patients. This resulted in enhanced health promotion and prevention interventions in primary care through the involvement of qualified allied health professionals. Second, solo GP practices were functionally integrated into group practices, which enabled sharing of working processes and patient data, enhanced collaboration with other service providers and introduced innovative IT solutions (Dózsa K et al., 2017).

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⁶ In July 2019, the Council of the European Union issued Hungary a country-specific recommendation to “improve health outcomes by supporting preventive health measures and strengthening primary healthcare”.

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**Figure 19. The use of day surgery has increased in recent years but remains much more limited than in most EU countries**

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<td>Cataract</td>
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<tr>
<td>Inguinal hernia</td>
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<td>Tonsillectomy</td>
<td>5</td>
<td>10</td>
<td>15</td>
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Source: OECD Health Statistics 2018; Eurostat Database (data refer to 2000 and 2016, or nearest year).
Task-shifting could help address health workforce shortages

As described in Section 5.2, the Hungarian authorities have already taken important action to address the shortages of human resources in health. Further development of the roles of different health professions may also help to improve access and efficiency. One example is greater task-shifting between health professionals. Many European countries have already expanded the scope of practice for non-physicians. The advanced practice nurse tertiary education programme launched in Hungary in 2017 is an important step in that direction, aiming to facilitate delegation of certain tasks to nurses (Box 2). Apart from task-shifting between doctors and other health professions, the shift of competence from specialists to GPs has high potential to increase health care accessibility and to enhance the attractiveness of the GP profession.

Hungary introduced an ePrescription system in 2017 which now covers 75% of prescriptions

A digitalised information infrastructure that ensures timely and reliable sharing of clinical and other information is an option to improve health outcomes and efficiency. The National eHealth Infrastructure (EESZT) was developed using EU Structural Funds.

In this system, treating physicians and other health professionals can record their actions and other patient-related information such as medical history electronically. The ePrescription function is a central component of the EESZT. When a health professional enters a prescription in the system, it is loaded into a central IT cloud and becomes visible immediately in the pharmacy system all over the country. Uptake of this system was quite rapid: by 2018, 75% of prescriptions were transmitted electronically to community pharmacies in Hungary (OECD/EU, 2018). The system currently only allows for prescription of medicines but will be expanded to therapeutic appliances and medical devices in the future.

The role of the private sector in fostering access to care is currently under discussion

Amid the struggle of the public system to maintain access to care and quality, increasingly discussions are focusing on clarifying the role of the private sector as a formal provider of health services. The government has not yet published a clear plan, but issues such as a more transparent separation of the functions and roles performed by public and private entities are being debated.

Box 2. Advanced practice nursing may help to compensate for the lack of physicians in Hungary

In 2016, a legislative decree regulated the competencies of advanced practice nurses (APNs), giving a formal role definition to these professionals in Hungary. An APN can specialise in six domains to become a nurse anaesthetist, primary care nurse practitioner, emergency care nurse practitioner, acute care nurse practitioner, geriatric nurse practitioner or perioperative nurse practitioner. Tasks that could eventually be transferred from GPs to primary care nurse practitioners include ordering and analysing laboratory tests and imaging; support management for chronic diseases such as hypertension or diabetes; and ordering and prescribing vaccines. Three Hungarian universities currently offer APN training programmes; however, although the first cohort graduated in January 2019, the formal legislative framework regulating which tasks will be transferred is still under development.
6 Key findings

- The life expectancy of the Hungarian population has improved substantially since 2000 but remains almost five years below the EU average and the lowest among the countries of the Visegrád Group. Substantial inequalities persist across genders, with women living seven years longer than men, and even more so by education level: at age 30, the most educated men live 12 years longer than the least educated, a much larger gap than the EU average of seven years.

- Half of all deaths in Hungary can be attributed to behavioural risk factors, including poor nutrition, high tobacco smoking and alcohol consumption, and low physical activity. More than one in four adults reported smoking daily in 2014, one of the highest rates in the EU. Smoking rates are more than two-times higher among the least educated people than the most educated. The obesity rate in adults is also among the highest in Europe, with one in five adults being obese in 2017, with disparities by education level. This high prevalence of lifestyle-related risk factors contributes to high mortality rates from cardiovascular diseases and cancer. The Hungarian government has taken a series of measures to improve nutrition, including the introduction of a public health product tax to reduce consumption of unhealthy food in 2011 and the adoption of a legislation to control trans-fatty acids in food in 2013.

- The high levels of co-payments disproportionately affect low-income groups and lead to significant rates of catastrophic health expenditure. Almost half of all out-of-pocket spending goes to pharmaceuticals and medical devices – one of the highest proportions in the EU – and protection mechanisms for vulnerable populations are weak.

- The shortages and uneven distribution of health professionals also undermine access to health services. The government substantially raised the remuneration of doctors and other health professionals in recent years in an attempt to attract and retain them, but improving other aspects of their working conditions and career prospects may also be required.

- Overall, health care provision remains highly hospital-centric and primary care does not yet play a prominent role in Hungary. There have been some efforts in recent years to shift more care to the outpatient sector, by promoting group practices for general practitioners as well as greater task-sharing between doctors and other health professionals such as nurses. Recent pilot projects in primary care have shown promising results, but ongoing funding and scaling up of these initiatives remain unclear.

- The Hungarian health system is organised around a single health insurance fund and is highly centralised. It provides coverage to nearly all the population, but the benefit package is less comprehensive than in most EU countries. The health sector remains chronically underfunded and health does not appear to be a high priority, as reflected by the relatively small share of government spending allocated to health. The public share accounts for only two-thirds of health expenditure, much less than the EU average (79 %), resulting in high levels of out-of-pocket spending (27 %) compared to the EU average (16 %).
Key sources


References


Dózsa K et al. (2017), *Public Health Focused Model Programme for Organising Primary Care Services Backed by a Virtual Care Service Centre*. Swiss-Hungarian Cooperation Programme, Budapest.


Country abbreviations

Austria AT
Belgium BE
Bulgaria BG
Croatia HR
Cyprus CY
Czechia CZ
Denmark DK
Estonia EE
Finland FI
France FR
Germany DE
Greece EL
Hungary HU
Iceland IS
Ireland IE
Italy IT
Latvia LV
Lithuania LT
Luxembourg LU
Malta MT
Netherlands NL
Norway NO
Poland PL
Portugal PT
Romania RO
Slovakia SK
Slovenia SI
Spain ES
Sweden SE
United Kingdom UK
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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, focusing on behavioural risk factors
- the organisation of the health system
- the effectiveness, accessibility and resilience of the health system

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