European Commission









State of Health in the EU

Croatia

Country Health Profile 2017

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European Observatory on Health Systems and Policies
a partnership hosted by WHO

The Country Health Profile series

The *State of Health in the EU* profiles provide a concise and policy-relevant overview of health and health systems in the EU Member States, emphasising the particular characteristics and challenges in each country. They are designed to support the efforts of Member States in their evidence-based policy making.

The Country Health 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 Member States and the Health Systems and Policy Monitor network.

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Data and information sources

The data and information in these Country Health Profiles are based mainly on national official statistics provided to Eurostat and the OECD, which were validated in June 2017 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.

To download the Excel spreadsheet matching all the tables and graphs in this profile, just type the following StatLinks into your Internet browser:
http://dx.doi.org/10.1787/888933593418

Demographic and socioeconomic context in Croatia, 2015

		CROATIA	EU
Demographic factors	Population size (thousands)	4 208	509 394
	Share of population over age 65 (%)	18.8	18.9
	Fertility rate[1]	1.4	1.6
Socioeconomic factors	GDP per capita (EUR PPP[2])	16 700	28 900
	Relative poverty rate[3] (%)	13.5	10.8
	Unemployment rate (%)	16.3	9.4

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 50% of median equivalised disposable income.

Source: Eurostat Database.

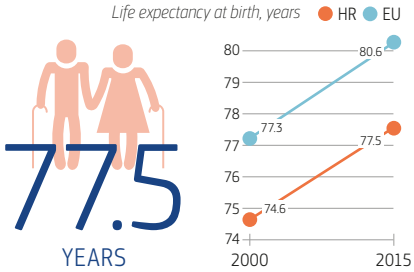
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1 Highlights

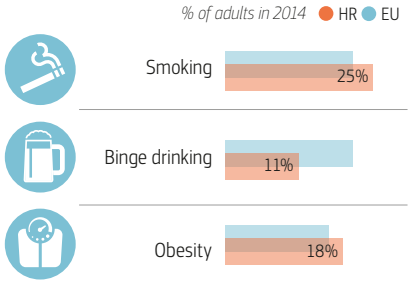
Despite a challenging economic context and major fiscal pressures on health expenditure, Croatia has managed to keep publicly funded health services accessible to its population. The country has undertaken a number of important health reforms in recent years to improve health system performance, but the reforms have not been systematic and some have been abandoned.

Health status



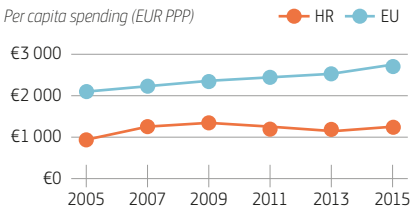
Life expectancy at birth was 77.5 years in 2015, up from 74.6 years in 2000, but still more than three years below the EU average. Mortality rates from cardiovascular disease are almost twice as high as the EU average and mortality rates from lung, breast and colon cancer are among the highest in the EU, pointing to shortcomings in health care delivery and public health interventions.

Risk factors



In 2014, a quarter of adults in Croatia smoked tobacco every day and the rate among 15-year-olds was almost as high. Regular heavy episodic drinking (binge drinking) is below the EU average, but a much higher proportion of Croatian adolescents than in most other EU countries reported having been drunk at least twice in their life. Obesity rates are rising, particularly among children, where the rate has grown by 50% since 2001.

Health system

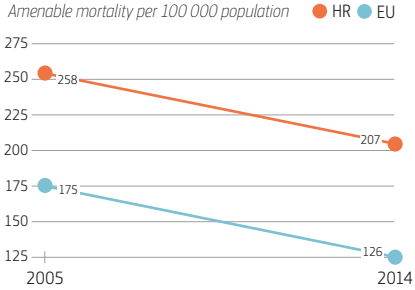


At EUR 1241, health expenditure per capita is among the lowest in the EU. Nevertheless, the share of public expenditure is high (77%) and the benefits package is broad. While co-payments are levied on an increasingly wide range of health benefits, there are exemptions for vulnerable groups and out-of-pocket payments accounted for only 15% of total health spending in 2015, equal to the EU average.

Health system performance

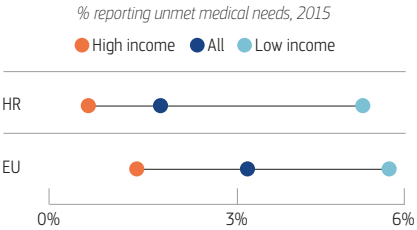
Effectiveness

There are high rates of amenable mortality but Croatia does better than other countries with the same level of health expenditure.



Access

Self-reported access to health care in Croatia is good, with low numbers reporting unmet needs for medical care, but there is substantial variation between income groups.



Resilience



Croatia has seen major fluctuations in its per capita health expenditure in recent years, due to high unemployment rates and a challenging fiscal context. Strengthened health system governance will be crucial to ensure financial sustainability.

2 Health in Croatia

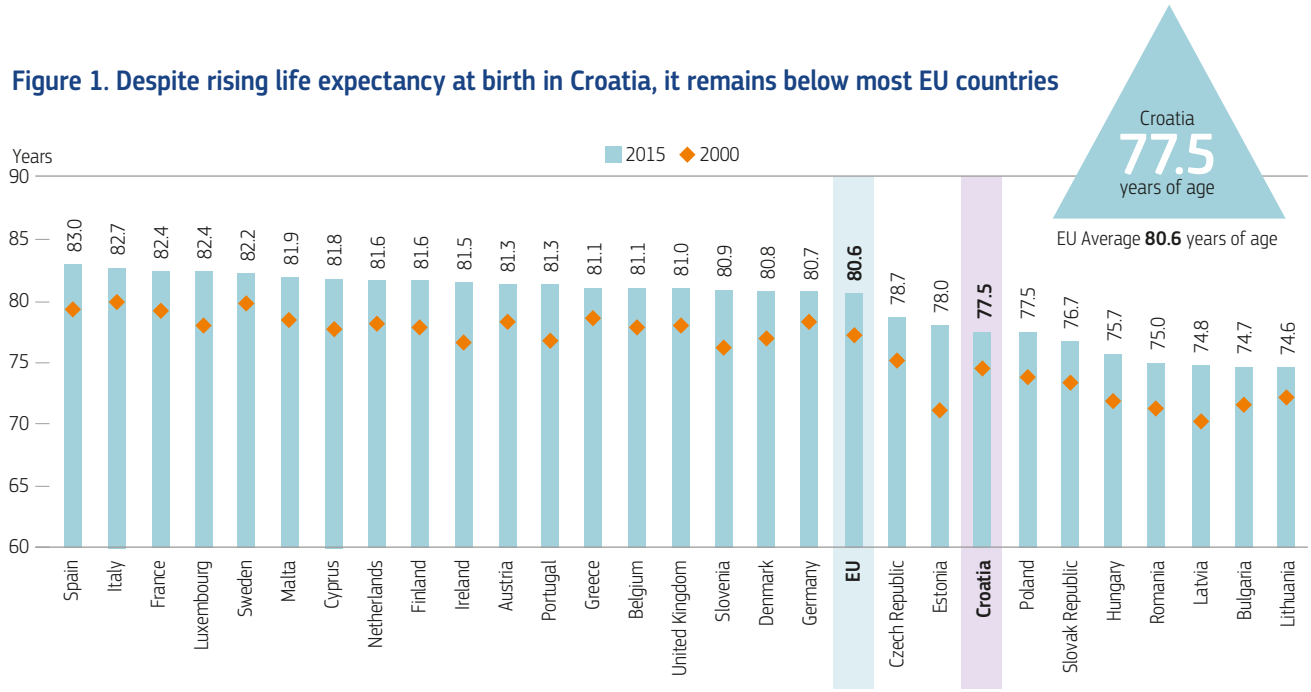
Life expectancy at birth has improved but is still far below the EU average

Life expectancy at birth in Croatia has increased overall by almost three years since 2000, rising from 74.6 to 77.5 years in 2015, but it remains more than three years below the EU average of 80.6 (Figure 1). There is a large gender gap, with women living about six years longer than men (81 years for women compared with slightly less than 75 years for men).

However, the gap in life expectancy between socioeconomic groups is the smallest among EU countries where data are available. Still, life expectancy at birth among Croatians with university education is more than three years higher than among those with no more than lower secondary education.[1]

1. Lower education levels refer to people with less than primary, primary or lower secondary education (ISCED levels 0–2) while higher education levels refer to people with tertiary education (ISCED levels 5–8).

Figure 1. Despite rising life expectancy at birth in Croatia, it remains below most EU countries



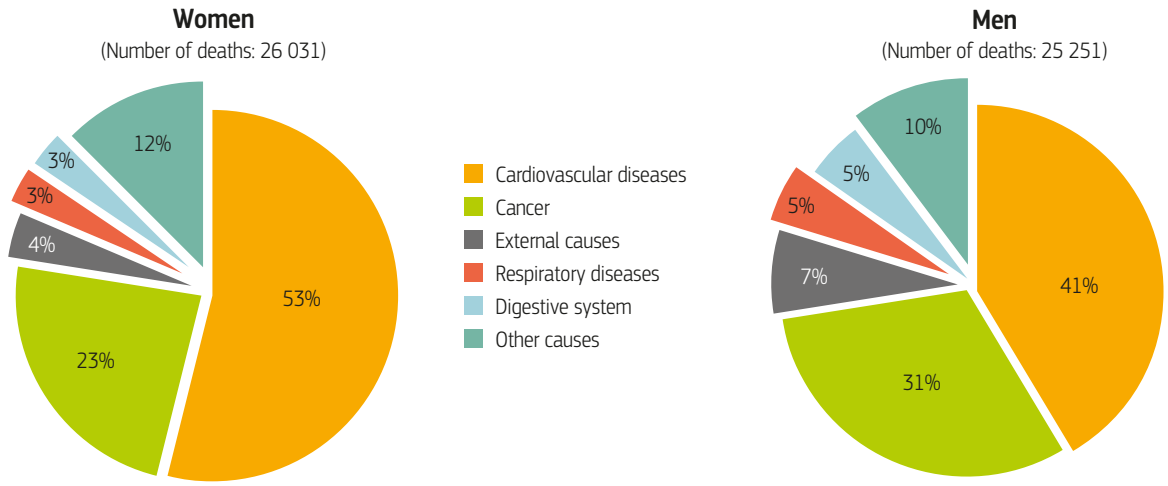
Source: Eurostat Database.

Almost three quarters of all deaths in Croatia are due to cardiovascular diseases and cancer

Cardiovascular diseases and cancer are the two main causes of death, accounting for a total of 76% of all deaths among women and 72% among men (Figure 2). Standardised death rates from cardiovascular diseases were 679 per 100 000 population in 2014, 1.8 times higher than the EU average of 374. There are also high mortality rates due to external causes of death (73 per 100 000 population, compared to an EU average of 46), including a high rate of road traffic deaths. Infant mortality, at 4.6 per 1 000 live births in 2015, was among the highest rates in the EU, where the average is 3.6.

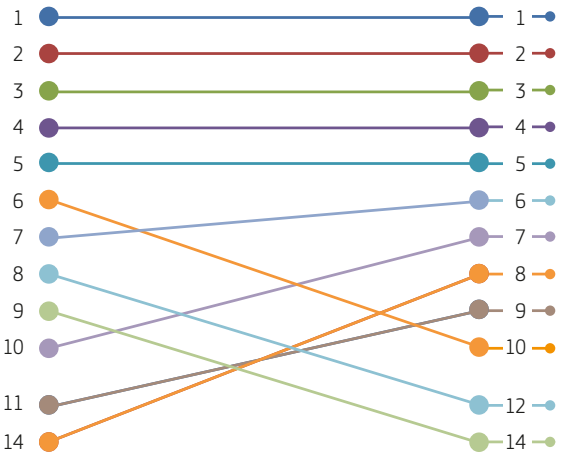
Looking at more specific causes of death, the ranking of the top five causes has not changed since 2000. Standardised mortality rates from lung, breast and colon cancer in Croatia are among the highest in the EU. In addition, the absolute numbers of chronic lower respiratory diseases, diabetes, and falls recorded substantial increases over the last 14 years (Figure 3). In particular, deaths from falls have more than doubled (539 deaths in 2001 to 1 123 deaths in 2014) and it is unclear what lies behind this trend, as population ageing might only partially explain this increase.

Figure 2. Cardiovascular diseases and cancer account for the most deaths among women and men



Note: The data are presented by broad ICD chapter. Dementia was added to the nervous system diseases' chapter to include it with Alzheimer's disease (the main form of dementia).
Source: Eurostat Database (data refer to 2014).

Figure 3. The top five causes of death remain stable, but deaths from diabetes and falls have risen sharply



	% of all deaths in 2014
Ischaemic heart diseases	21%
Stroke	14%
Other heart diseases	6%
Lung cancer	6%
Colorectal cancer	4%
Lower respiratory diseases	3%
Diabetes	3%
Falls	2%
Breast cancer	2%
Liver diseases	2%
Stomach Cancer	2%
Suicide	1%

Source: Eurostat Database.

Ischaemic heart diseases and chronic conditions are among the leading determinants of poor health

The leading determinants of disability adjusted life years[2] (DALYs) in 2015, taking into account the burden in terms of both mortality and morbidity, are ischaemic heart diseases, musculoskeletal disorders (including low back and neck pain), and stroke (IHME, 2016). The disability and mortality burden from Alzheimer's disease and other dementias has increased sharply since 2000, with associated DALYs up by more than 50%, reflecting population ageing, better diagnosis, more precise coding and lack of effective treatment.

Based on self-reported data from the European Health Interview Survey (EHIS), nearly one in four Croatians is aware of living with hypertension, while one in fourteen lives with diabetes, asthma or other chronic respiratory diseases. Wide inequalities exist in the prevalence of these chronic conditions by education level, as people with the lowest level of education are twice as likely to live with diabetes and more than 50% more likely to live with asthma or other chronic respiratory diseases as those with the highest level of education.[3]

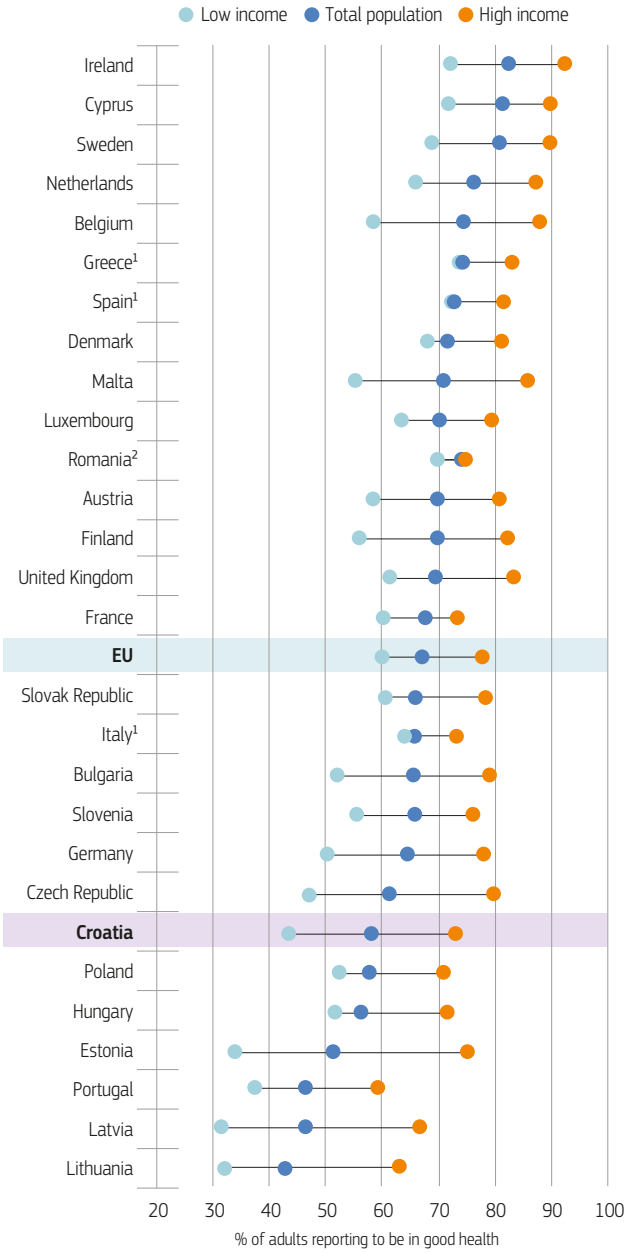
2. DALY is an indicator used to estimate the total number of years lost due to specific diseases and risk factors. One DALY equals one year of healthy life lost (IHME).

3. Inequalities by education may partially be attributed to the higher proportion of older people with lower educational levels; however, this alone does not account for all socioeconomic disparities.

About three fifths of Croatians report being in good health, lower than in most other Member States

The proportion of people in Croatia reporting being in good health (58% in 2015) has risen in recent years, but remains below the EU average (67%) (Figure 4). As in other EU countries, there are large disparities in self-rated health between people in different income groups: 73% of those in the highest income group reported being in good health compared to less than half (44%) of those in the lowest income group.

Figure 4. There are large disparities across income groups reporting that their health is good



1. The shares for the total population and the low-income population are roughly the same.
2. The shares for the total population and the high-income population are roughly the same.

Source: Eurostat Database, based on EU-SILC (data refer to 2015).

3 Risk factors

Behavioural risk factors play an important role in health in Croatia

Croatia has a high prevalence of many behavioural risk factors. Based on Institute for Health Metrics and Evaluation (IHME) estimations, more than one third (36%) of the overall burden of disease in Croatia in 2015 (measured in terms of DALYs) can be attributed to behavioural risk factors, including notably smoking, but also alcohol use, dietary risks and physical inactivity contributing to high body mass index (IHME, 2016).

Smoking rates are high, with more young people smoking than in almost any other EU country

Smoking still represents a serious public health issue in Croatia among both adults and children, with little progress made over the last few years. One quarter of Croatian adults reported being daily smokers in 2014, well above the EU average (21%). Regular smoking among 15-year-olds, at 23% in 2013–14, is the second



highest rate among EU countries (after Bulgaria) and nearly 1.5 times greater than the EU average, which can be linked to generally weak anti-smoking policies (see Section 5.1).

Alcohol consumption is higher than in other EU countries, particularly among adolescents

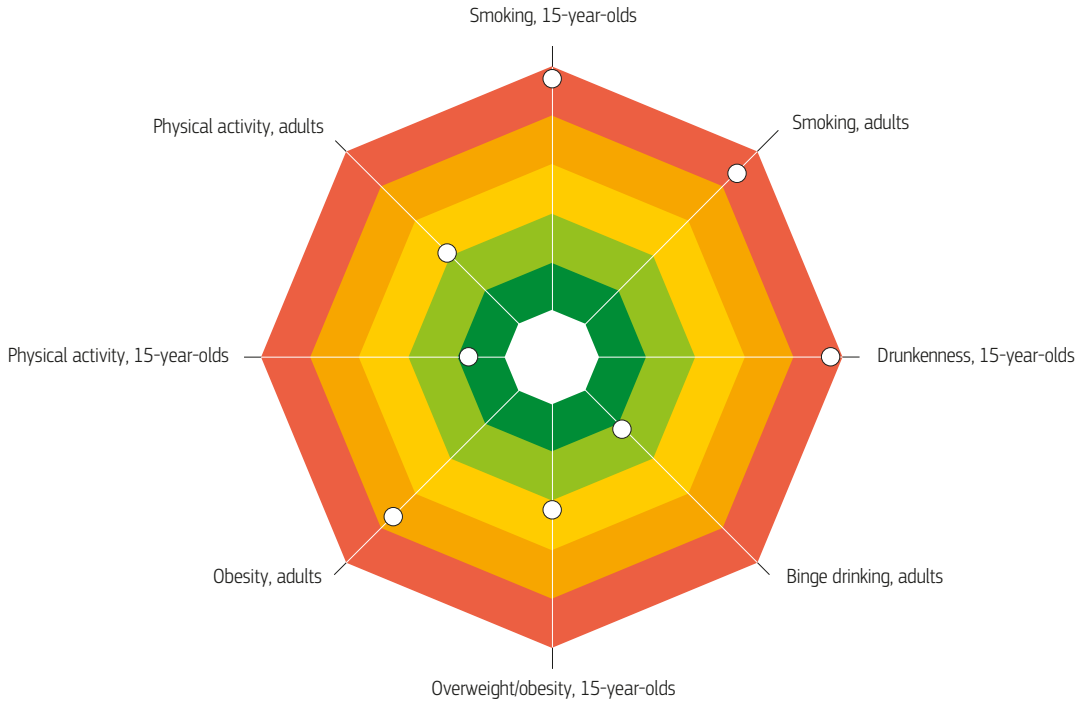
Alcohol is another major public health issue. Consumption among adults, as recorded by the number of litres of pure alcohol per capita, has remained stable since 2000 and was the fourth highest in the EU in 2014, at more than 12 litres per adult (compared with 10 litres for the EU average). But the percentage of adults who report regular heavy episodic drinking (binge drinking[4]) is lower than in most other EU countries (11% in Croatia compared with an EU average close to 20%). Among 15-year-olds, about one third of Croatian adolescents reported having been drunk at least twice in their life in 2013–14, a much higher proportion than in most other EU countries. Boys are more prone to engage in this behaviour (40%), compared to girls (24%) (Figure 5).

Obesity rates in children have been rising

Based on self-reported data (which tend to under-estimate the true prevalence of obesity), just over one in six adults in Croatia were obese in 2014. While only a slightly higher percentage than the EU average (16%), it was still in the top third of EU countries. Conversely, the percentage of adolescents who were overweight or obese in 2013–14 was just under the EU average (17% compared with 18%), but it has increased by more than 50% since 2001. The growing rates among children may transition into continued high rates as they become adults. On a more positive note, a higher percentage of adolescents and adults in Croatia report doing regular physical activity (Figure 5).

Large disparities in obesity rates are observed between people with the lowest level of education or income and those with the highest level: people with no more than a lower level secondary education are almost two times more likely to be obese than those with a university education (21% vs. 13% in 2014). Health inequalities have been addressed in several national health policy documents, but few specific measures have been implemented so far.

Figure 5. Smoking, alcohol drinking and obesity are major public health issues in Croatia



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 Eurostat Database (EHIS in or around 2014), OECD Health Statistics and HBSC survey in 2013–14. (Chart design: Laboratorio MeS).

4. Binge drinking behaviour is defined as consuming six or more alcoholic drinks on a single occasion, at least once a month over the past year.

4 The health system

Croatia's sole insurer plays a major role in the health system

Croatia has a mandatory health insurance system, with the Croatian Health Insurance Fund (CHIF) being the sole insurer and the main purchaser of health services. The CHIF contracts with health care providers for the provision of services and plays a key role in defining which health services are covered by the publicly financed system. It also oversees performance standards and price-setting for services; is responsible for the payment of sick leave compensation, maternity benefits and other allowances; and is the main provider of complementary Voluntary Health Insurance (VHI) covering user charges (termed 'supplemental insurance' in Croatia).

Population coverage is broad

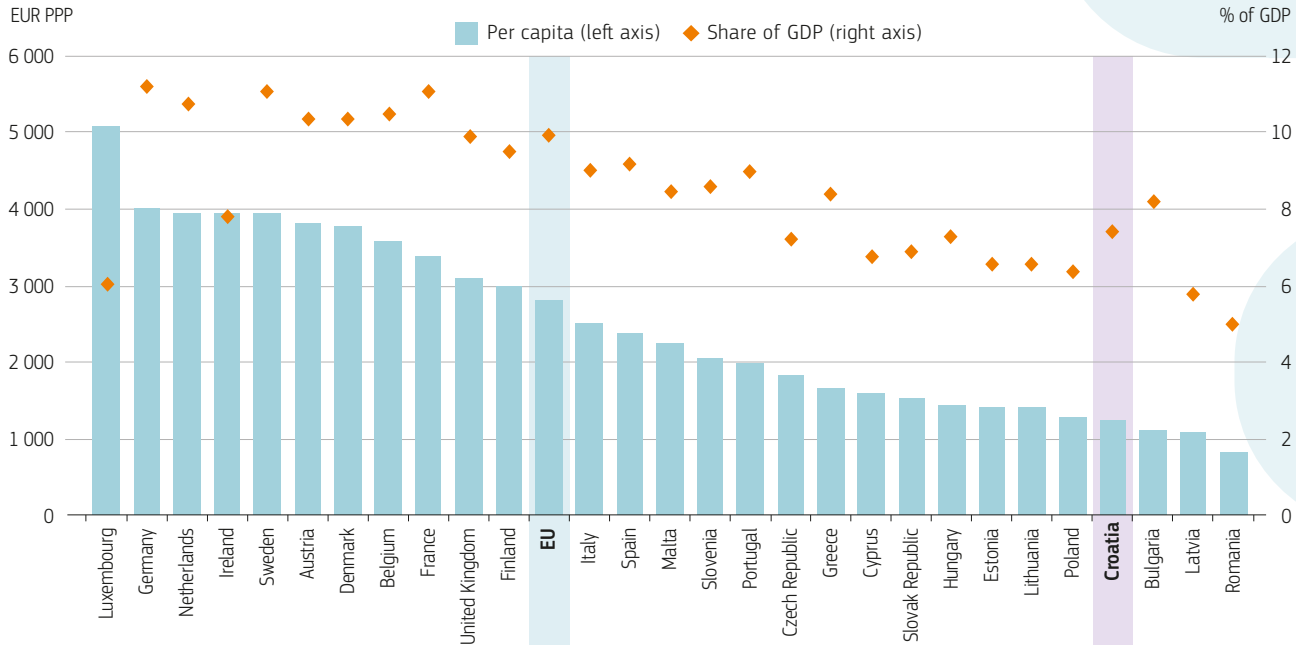
The CHIF provides universal health insurance coverage to the entire resident population and it is not possible to opt out of the mandatory health insurance system. Dependents are covered through the payroll deductions of 15% made by working family members while vulnerable groups, such as pensioners, people with disabilities, the unemployed and people on low incomes, are exempt from contributions. Complementary health insurance (mainly to cover user charges in the mandatory health insurance system, see below) is voluntary and is purchased individually from either the CHIF or a private insurer.

Spending on health is low but the share of public expenditure is high

Health expenditure in Croatia is among the lowest among EU Member States, both in per capita terms and as a percentage of gross domestic product (GDP). At 7.4% of GDP current health expenditure is much lower than the EU average of 9.9%. This translates to EUR 1 241 per capita (adjusted for differences in purchasing power) in 2015, the fourth lowest in the EU (Figure 6). Out-of-pocket expenditure amounted to 15%, equal to the EU average. The past few years in particular have seen large fluctuations in health spending per head, reflecting the impacts of the economic crisis (see Figure 7 and also Section 5.3). There is also evidence of informal payments, with nearly one in six respondents in a 2011 study reporting that they made such payments (EBRD, 2011).

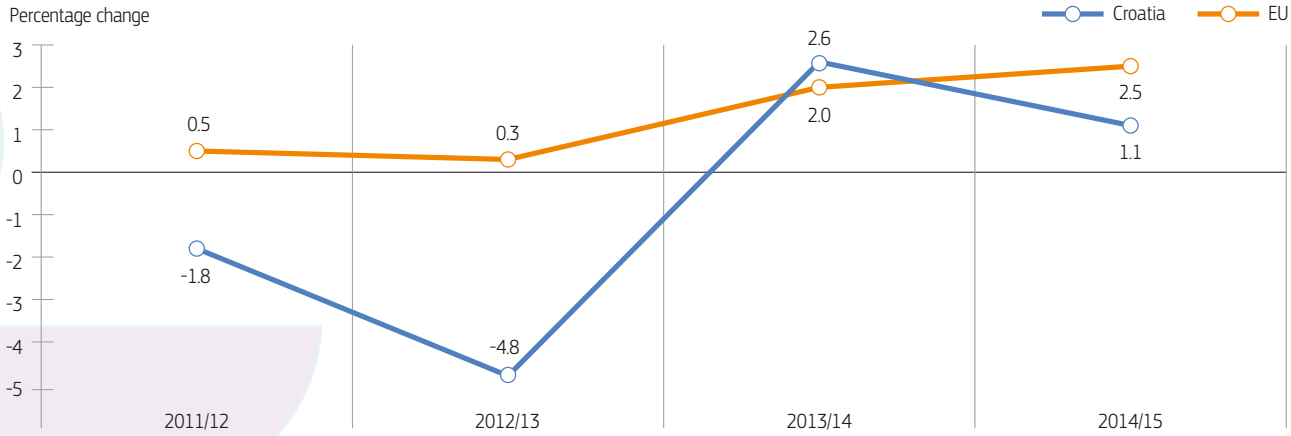
Although it has been eroding in recent years, Croatia still has a higher share of public expenditure on health than most countries with comparative levels of expenditure, amounting to 77% of

Figure 6. Croatia has among the lowest health spending in the EU



Sources: OECD Health Statistics, Eurostat Database, WHO Global Health Expenditure Database (data refer to 2015).

Figure 7. Croatia has witnessed large fluctuations in per capita health spending



Source: Eurostat Database.

health expenditure in 2015 (see Section 5.2, and Figure 10). The benefits covered through the mandatory health insurance system are generous in scope, covering most types of health services. And while the depth of coverage (i.e. not requiring user charges by patients) has been reduced since the early 2000s, vulnerable population groups such as pensioners, people with disabilities, the unemployed and those on low incomes are exempted from copayments. By international standards, Croatia also provides one of the most generous sick leave compensation packages, with 18 months of sickness cash benefits.

Voluntary health insurance mainly covers co-payments

Complementary voluntary health insurance (VHI) is also available, which mainly covers user charges under the mandatory health insurance system. In 2015, it accounted for 8% of health expenditure. Certain population groups (e.g. people with disabilities, organ donors, frequent blood donors, students and people on low incomes) have the right to free complementary health insurance membership in the CHIF and their respective contributions are financed from the state budget.

Payment of providers is increasingly based on performance

Providers of primary health care are paid by the CHIF through a combination of capitation, activity-based payments (fee-for-service), and payments for salaries and operating costs. Bonus payments are made depending on performance and quality indicators. Hospitals contracted by the CHIF have been paid since 2009 using a diagnosis-related group (DRG) system, with the aims of reducing costs and increasing efficiency (see Section 5.3).

Croatia has sufficient resources in terms of hospital beds but its stock of health workers is low

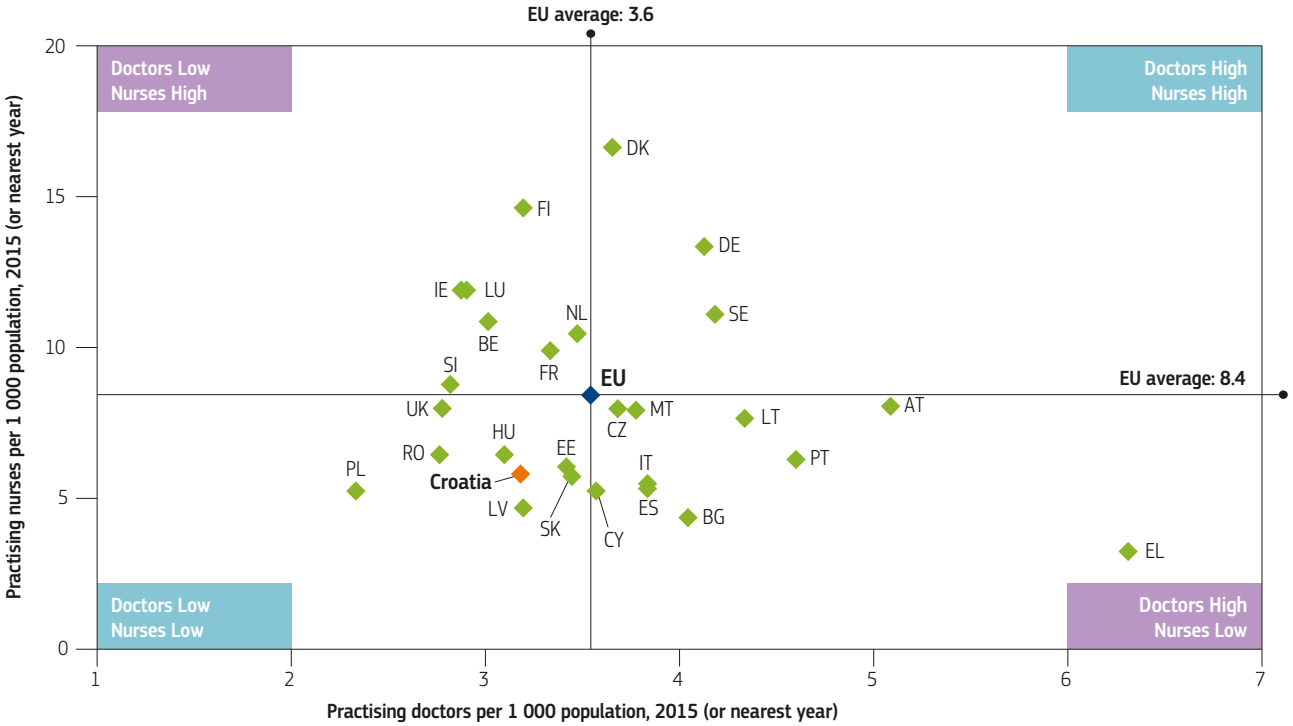
Despite its low levels of health expenditure, physical resources in Croatia's health system are on a par with many other European countries. The number of acute care hospital beds per 100 000 population in 2015 was 358, which was below the EU average of 418 in the same year. On the other hand, the average length of stay for acute hospital care in Croatia was 8.6 days in 2015, slightly higher than the EU average of 8.0.

Croatia has fewer numbers of physicians and particularly nurses than many other EU countries (Figure 8), with only 5.8 nurses per 1 000 population in 2015 (despite an overall increase since 2000), compared to an EU average of 8.4. There are concerns that this number will decline further in the years to come following the country's entry into the EU in 2013, which creates opportunities to move at a time when there is a lack of employment in Croatia. There is also a perceived shortage of physicians, especially in primary care, and shortages are observed in rural areas and on the country's islands (see Section 5.2).

A developed public health infrastructure works alongside a first contact primary care system

The provision of public health services is organised through a network of public health institutes, with one national institute and 21 county institutes. There are a number of national public health programmes, including a mandatory vaccination programme, but a lack of action in tobacco control, as evidenced by high levels of smoking among adults and adolescents (see Section 3).

Figure 8. There are low numbers of both doctors and nurses



Note: In Portugal and Greece, data refer to all doctors licensed to practice, resulting in a large over-estimation of the number of practising doctors (e.g. of around 30% in Portugal). In Austria and Greece, the number of nurses is under-estimated as it only includes those working in hospital.

Source: Eurostat Database.

Each insured citizen is required to register with a general practitioner (adults) or a paediatrician (children), whom they can choose freely. The majority of primary care physicians' practices have been privatised but they rent facilities inside public health centres. Primary care physicians (general practitioners, paediatricians and gynaecologists) are usually patients' first point of contact with the health system.



Ownership of secondary care hospitals is decentralised to the counties

Most secondary care hospitals (all general hospitals and most specialist hospitals) are owned by the counties, while all tertiary health care facilities are owned by the state. Specialised outpatient health care services, such as consultations provided by secondary care specialists, are mostly delivered in hospital outpatient departments. A national reform of emergency care started in 2009, introducing a countrywide network of County Institutes for Emergency Medicine, each with a dispatch unit.

5 Performance of the health system

5.1 EFFECTIVENESS

Overall amenable mortality in Croatia is higher than the EU average

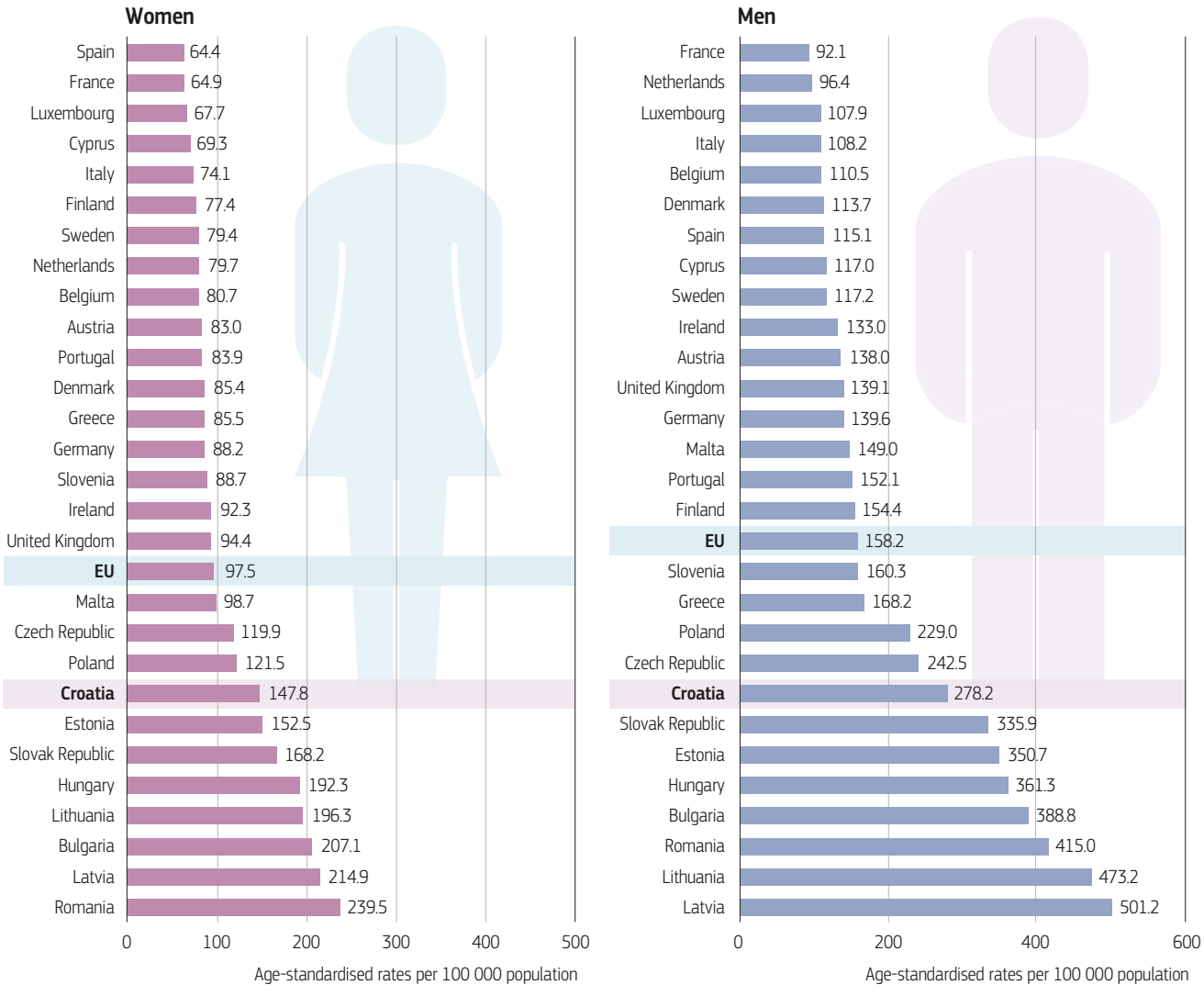
Mortality that is amenable to health care interventions[5] in Croatia is the eigth highest in the EU for both men and women. Furthermore, there is a considerable difference in the rate between men and women (Figure 9). More detailed information on leading causes of amenable mortality shows that age-standardised amenable mortality rates in Croatia are comparatively high for ischaemic heart disease (307 per 100 000 population in 2014) and some forms of cancer, such as lung cancer (fifth highest in the EU in 2014), breast cancer (second highest rate in the EU in 2014) and colon cancer (second highest rate in the EU in 2014). These high rates point to potential shortcomings in the quality of health care and cancer screening programmes.

5. Amenable mortality is defined as premature deaths that could have been avoided through timely and effective health care.

Preventable mortality is also high, particularly for smoking-related causes of death

Croatia is doing poorly in terms of mortality that can be prevented through inter-sectoral policies, with high rates of smoking (see Section 3). As mentioned in Section 2, lung cancer is the fourth most common cause of death, and mortality from smoking-related causes of death was 315 per 100 000 population in 2014,

Figure 9. The amenable mortality rate for men is almost double that of women



Source: Eurostat Database (data refer to 2014).

far exceeding the EU average of 176. Since joining the EU, anti-smoking policies have been strengthened in line with EU directives. New anti-smoking legislation has been in effect since May 2017, extending smoke-free places and health warnings on cigarette packaging. However, there is scope to step up media campaigns against tobacco use (WHO, 2015).

While showing a declining trend, deaths from alcohol-related causes and traffic accidents also exceed the EU average. Alcohol control policies have been adopted, including a minimum age of 18 years for on- or off-premise sales, but there is scope for further restrictions, particularly in view of drinking behaviour among adolescents (see Section 3).

Vaccination rates are high for children but low for older people

Vaccination coverage for children is reasonably high, standing at 92.8% for the primary vaccination against diphtheria, tetanus and pertussis in 2016, but take-up of (non-compulsory) influenza vaccination among people aged 65 and over is low, at 21.5% in 2016. Coverage for childhood vaccinations has decreased continuously in the last five years and, for the first time in 20 years, coverage with the first dose of the measles-mumps-rubella (MMR) vaccine dropped below 90% in 2016.

Little is known regarding quality of care

Information on the quality of care in Croatia is still in the process of being developed. Up-to-date statistics on indicators such as the in-hospital case-fatality rate for acute myocardial infarction or ischaemic stroke are not readily available for all hospitals. A 2015 analysis of a sample of hospitals found marked differences in the quality of care. For example, the mortality rate for myocardial infarction ranged from 2.1% to 27.7% (with an average of 11.5%), while the mortality for stroke ranged from 7.1% to 35.6% (Mesarić, Hadžić Kostrenčić and Šimić, 2016).

While organised screening programmes have been adopted, coverage varies across programmes

One of the strategic goals of the National Health Care Strategy 2012–2020 is to improve the efficiency and effectiveness of the health system, while one of its priorities is to improve quality of care. In 2006, Croatia introduced its first cancer screening programme, concerning breast cancer, and early detection programmes for colorectal cancer and cervical cancer were launched in 2007 and 2012 respectively. However, as mentioned above, mortality rates from breast and colorectal cancer remain far above the EU average.

Self-reported screening coverage rates from the European Health Interview Survey for 2014 indicate breast cancer screening rates close to the EU average (67.9% of women aged 50–69 reporting examination by X-ray over the last two years), higher rates of cervical cancer screening (76.9% of women aged 20–69 reporting a cervical smear test over the past three years) and lower rates of colorectal cancer screening (27.6% of 50–74 year olds reporting colorectal cancer screening over the last there years). However, the mortality rates suggest that there are wider issues related to treatment that need to be addressed.

5.2 ACCESSIBILITY

The benefits package is generous

The benefits package covered through the mandatory health insurance system is generous in scope, covering most types of health services (Section 4). Benefits are defined through a negative list, except with regard to pharmaceuticals, where positive lists have been drawn up to distinguish pharmaceuticals that are provided free of charge and those that require patient co-payments.

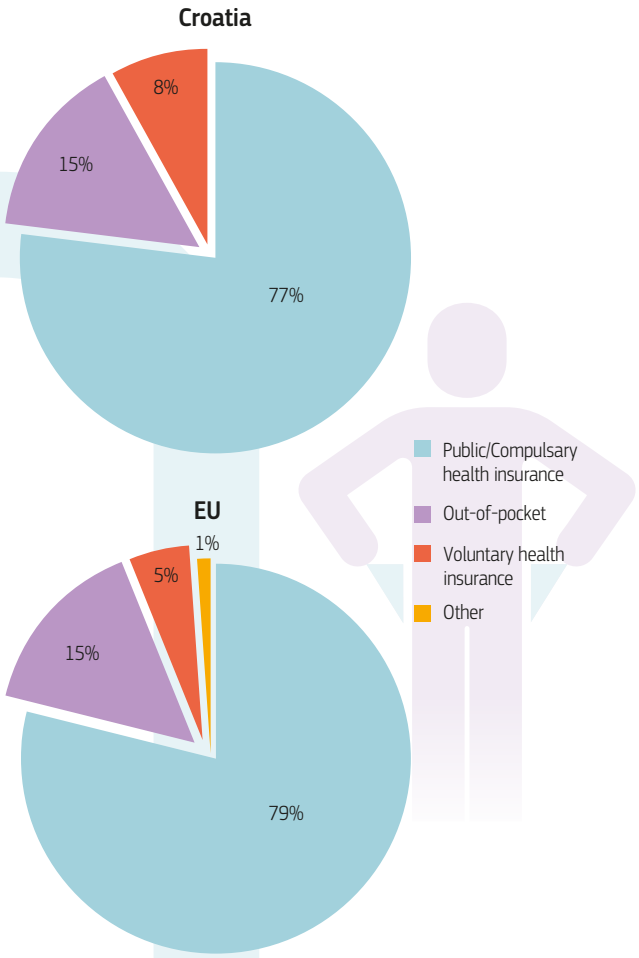
Affordability is declining due to increased cost sharing but is still relatively good

Overall, out-of-pocket expenditure is equal to the EU average but VHI, largely to cover co-payments, plays a substantial role (Figure 10). Since 2003, the depth of the benefits package has been gradually reduced through the introduction of an extensive list of patient user charges. These include copayments for days of hospitalisation, visits to primary care physicians and prescribed outpatient pharmaceuticals. All drugs provided in hospitals are free of charge, and cost sharing is capped at HRK 2 000 (approximately EUR 264) per episode of illness in secondary or tertiary care. There are also a number of exemptions from copayments for vulnerable population groups (e.g. children, students, pensioners, people with disabilities, the unemployed and those on low incomes).

Overall, self-reported unmet needs for medical care due to the combined reasons of cost, distance and waiting times have declined significantly since 2010, to reach only 1.9% in 2015. Nevertheless, unmet needs are over five times higher in low income groups than in high income groups (5.2% compared to 0.8%) (Figure 11).

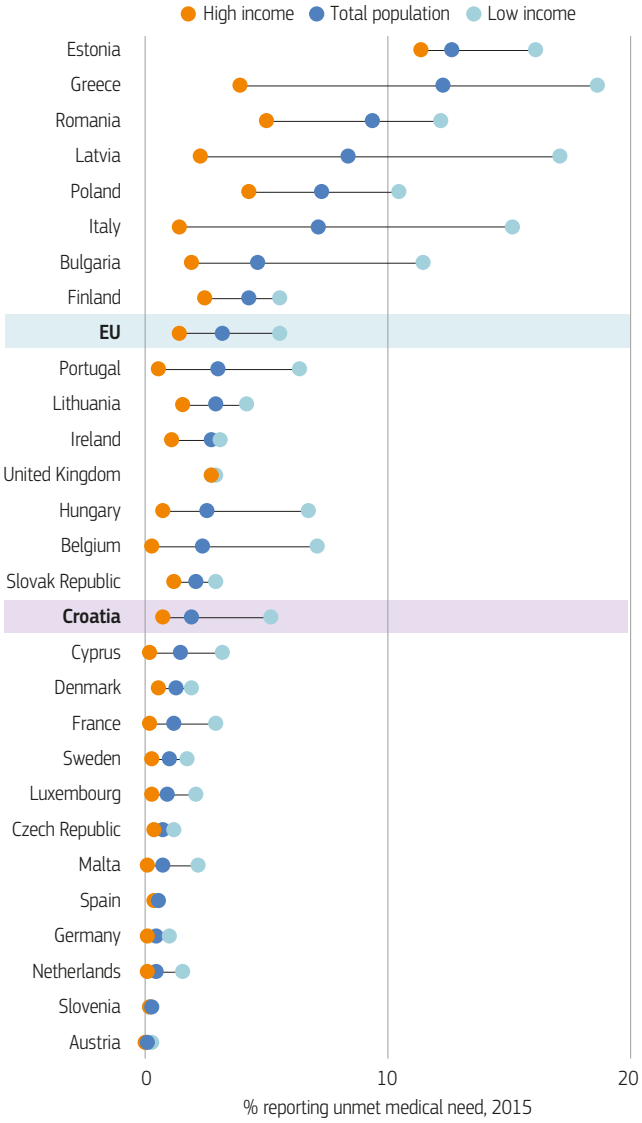
Despite the higher unmet needs reported by low income groups, the overall prevalence of catastrophic health expenditure[6] in Croatia is among the lowest in Europe, amounting to 4.0% in 2014. However, the lowest income quintile is disproportionately

Figure 10. Out-of-pocket expenditure in Croatia is equal to the EU average but Voluntary Health Insurance plays a larger role



Sources: OECD Health Statistics, Eurostat Database (data refer to 2015).

Figure 11. Unmet needs for medical care differ five-fold between income groups



Note: The 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 2015).

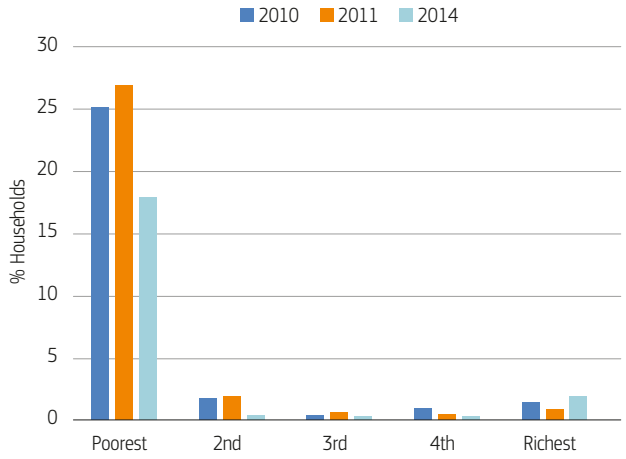
affected by catastrophic out-of-pocket payments, with 17.7% facing catastrophic out-of-pocket payments in 2014 (Vončina and Rubil, 2017; see also Figure 12).

The unequal distribution of resources presents barriers to access

In Croatia, the geographical distribution of health care infrastructure and human resources is uneven, with the largest number of hospitals and health workers located in central Croatia, mainly in Zagreb county and the city of Zagreb. Croatia faces a shortage of physicians and nurses, in particular in rural areas and the country's islands off the Adriatic coast, and an oversupply of some other types of health professionals. The outmigration of health professionals following the country's accession to the EU in 2013 and low salaries are additional challenges that contribute to access barriers. Croatia has started to address these issues through increased enrolment quotas, attempts to encourage young people to study medicine, and salary increases. In May 2015 the government adopted the Strategic Plan for Human Resources in Healthcare for 2015–2020 which aims to establish a human resources management system.

6. 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).

Figure 12. Catastrophic out-of-pocket health care spending in Croatia is particularly high among the poorest households



Source: Vončina and Rubil, 2017

5.3 RESILIENCE[7]

Fiscal pressures pose a challenge for health system sustainability

Croatia has been hit hard by the 2008 economic and financial crisis. GDP contracted by more than 12% between 2008 and 2014, with unemployment peaking at 18% in mid-2013. The country returned to positive GDP growth in 2015 and unemployment fell to 12.8% in 2016, but public debt remains far above pre-crisis levels, with little fiscal space to finance productive investment, education or social spending. A European Commission report has expressed concern that the fiscal sustainability of the health system appears to be at high risk in the medium term (European Commission, 2017).

Population ageing poses another challenge

According to the 2015 Ageing Report (European Commission and Economic Policy Committee, 2015), health care expenditure is projected to increase by 1.7% of GDP by 2060 (compared to an EU average of 0.9%), driven by population ageing. Since health care in Croatia is largely financed through social security contributions, in the short term the still weak labour market constrains the system's revenue-generating potential. Currently, only one third of the population is liable to pay full contributions, and high contribution rates may have a detrimental impact on the labour market (European Commission, 2017). This is due to the fact that contributions are paid fully by employers.

A number of reforms have been abandoned

A number of structural reforms aimed, among other things, at increasing the fiscal sustainability of the health system have been abandoned, including increasing the basic insurance payment to the CHIF and increasing the cap on patients' copayments. Plans to reform the 'additional insurance' scheme and introducing new rules for emergency services have also not gone ahead. The long-awaited reorganisation of the hospital system is stalling, and the reform of hospital resource allocation has also been halted (European Commission, 2017; also see below). One of the steps that has been taken is to separate the CHIF from the state treasury, which is hoped to increase transparency and accountability and improve the sustainability of the health system.

There is scope for increased efficiency

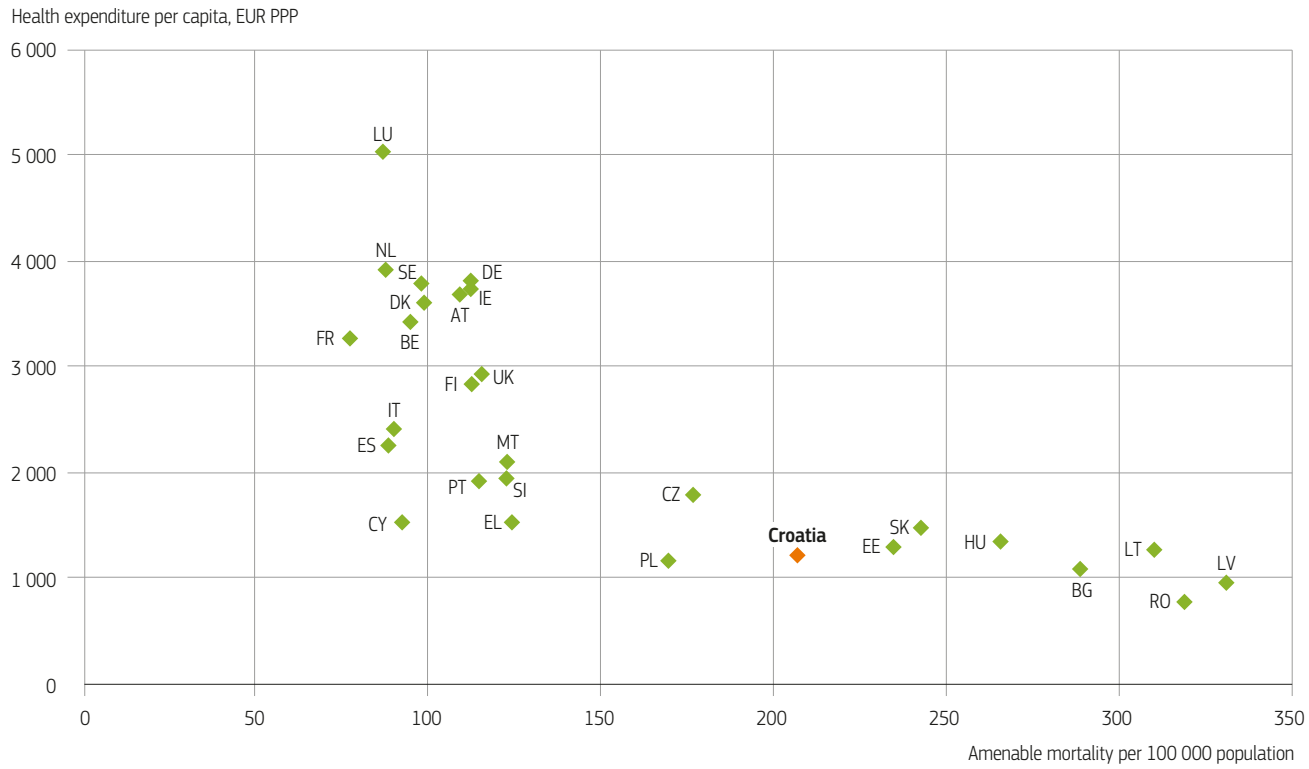
The cost-effectiveness of the health system can be intimated, albeit rather crudely, through relating amenable mortality rates to total per capita expenditure levels, but with the proviso that health behaviours as well as health system factors influence the level of amenable mortality. On this measure, Croatia does relatively well in terms of outcomes given its low health spending (Figure 13). There is, however, clear scope for improving health system efficiency, particularly in the hospital sector. Average length of stay in acute care hospitals has shown a consistent decline in the last decades, down to 8.6 days in 2015, which was slightly higher than the EU average of 8.0 days. However, bed numbers have shown an inconsistent trend, with the reversal of the downward trend since 2009 only changing recently (Figure 14).

Reforms of the hospital sector have started, with progress made on provider payments

Improving the efficiency of the hospital sector has been the focus of several recent reforms, not least in view of the debts accumulated by a number of hospitals (Box 1). In 2002, Croatia began to implement case-based provider payment reforms in hospitals, starting with broad-based categories according to therapeutic procedures. Since 2009, services provided by hospitals contracted by the CHIF have been paid through a comprehensive prospective case-adjusted payment system, based on DRGs. The aim was that the introduction of these payment mechanisms would improve efficiency.

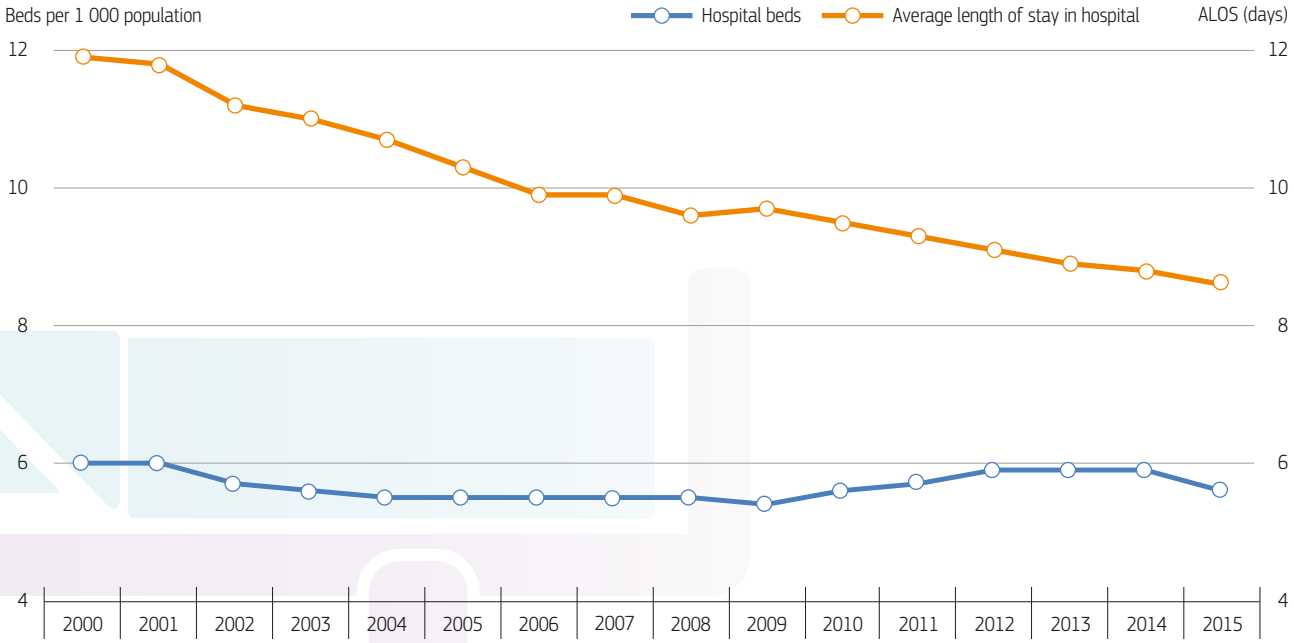
7. Resilience refers to health systems' capacity to adapt effectively to changing environments, sudden shocks or crises.

Figure 13. Croatia achieves reasonable amenable mortality outcomes considering the low levels of expenditure



Sources: OECD Health Statistics, Eurostat Database, WHO Global Health Expenditure Database (data refer to 2014).

Figure 14. Average length of stay in hospitals has fallen steadily, but bed numbers have not



Source: Eurostat Database.

BOX 1. HOSPITAL PAYMENT SYSTEMS ARE IN NEED OF REFORM

There are major problems with the sustainability of the current system of paying providers, in particular hospitals. An underlying problem is that the health insurance system is underfunded to pay for publicly funded hospital services. Debts are being accrued by both the CHIF and the hospitals, amounting at the end of 2016 to EUR 724 million by health care providers and EUR 374 million by the CHIF. Only a few hospitals have a balanced financial situation and the government has to periodically inject public funds into the sector to prevent it from collapsing.

According to a 2012 study (Bogut, Vončina and Yeh, 2012), both broad-based and comprehensive case-based payment systems have improved efficiency as measured by a reduction in average length of stay, with little impact on the number of cases treated and no adverse impact on quality as measured by readmissions. In 2015, a further change in hospital payment mechanisms was introduced, by which hospitals are paid only part of their monthly revenue upfront (currently 90% of the hospital's limit) and the rest is only disbursed after services have been delivered. The new model also involves monitoring of five quality and efficiency parameters. Since the introduction of these changes, hospitals appear to have further reduced average length of stay, increased the provision of day care and same-day surgery, increased the number of outpatients in specialist care, and increased the number of surgical operations and procedures performed.

The planned reorganisation of the hospital system has yet to be implemented

In February 2015, the parliament voted in favour of a new national hospital plan covering the period 2015–2016, which aims to improve effectiveness and efficiency. This hospital master plan, which determines the future configuration of the hospital system, was developed with the support of EU and World Bank loans. It emphasises 'functional integration' (reducing organisational complexity, fixed and variable costs) and 'subsidiarity' (shifting services from hospital to outpatient, or ambulatory, facilities). Resource allocation was anticipated to be based on the 'four region model', aiming to achieve functional hospital integration around four clinical centres (Zagreb, Rijeka, Split and Osijek). However, implementation of these wide-ranging measures has stalled.

Primary health care is well funded, but remains underdeveloped

Croatia spends a comparatively high share of its health expenditure on primary health care. In 2015, the country spent 35% of its health expenditure on outpatient care (a large component consisting of primary health care), compared to an EU average of 30%. In contrast, expenditure on inpatient care was slightly below the EU average (28% vs. 30%), with a similar number of inpatient care discharges per 100 000 population.

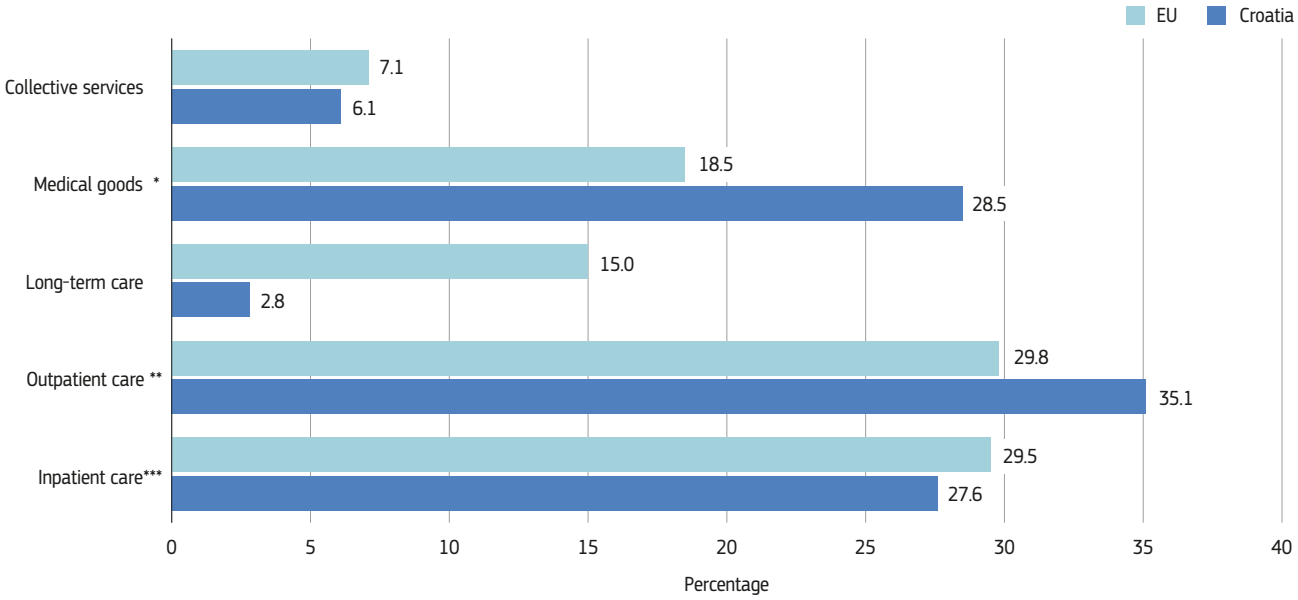
Nevertheless, primary care is still underdeveloped, puts little emphasis on primary prevention and does not perform a coordinating role with regard to chronic or palliative care. Efforts are under way to improve networking and to incentivise primary care doctors to work in group practices.

A large share of health expenditure goes to pharmaceuticals

Indicative of poor efficiency, Croatia is among the EU Member States with the highest expenditure on medical goods (mainly pharmaceuticals) as a percentage of current health expenditure, amounting to 28.5% in 2015, compared to an EU average of 18.5% (Figure 15). While comparable data on the share of generics in the pharmaceutical market in Croatia are not readily available, a study of outpatient utilisation of psychopharmaceuticals in 2001–10 found that the share of generics was decreasing rather than increasing (Polić-Vižintin et al., 2014).

In view of this, Croatia has taken a number of measures to reduce pharmaceutical expenditure through changed pricing and reimbursement, including updating the list of benchmark countries. The Ministry of Health also envisages cost-containment measures in primary care and the establishment of a central commission to distribute particularly expensive medicines to hospitals (European Commission, 2017). Centralised procurement of publicly paid pharmaceuticals for hospital services has been one of the targets of the 2014–2018 Health System Quality and Efficiency Improvement project supported by the World Bank, but has so far not been achieved. However, there has been progress in monitoring over-prescription by individual physicians and discussing corrective actions with them.

Figure 15. Pharmaceuticals account for more than a quarter of health spending



Notes:
* Medical goods mainly consists of pharmaceuticals
** Includes home-care and ancillary services.
*** Refers to curative-rehabilitative care in inpatient and day care settings

Sources: OECD Health Statistics, Eurostat Database.

Governance is strengthened through national health strategies and plans

The National Health Care Strategy 2012–2020, published in 2012, sets out the overall vision, priorities and goals for the Croatian health system. The National Health Plan is the medium-term planning tool (with a timeframe of about three years), setting out broad tasks and goals, priority areas and the health needs of particular population groups. It also specifies actors responsible for implementation, deadlines and benchmarking criteria. As health needs assessment is not well developed in Croatia, these objectives are based on basic health monitoring and on existing health care structures. The National Health Plan is used by the Ministry of Health to set out the catalogue of health care goods and services that must be delivered to the Croatian population, and in turn the CHIF uses both these instruments to prepare its annual plans for the provision of health care services.

Public and professional engagement could be improved

However, despite these strategic documents, health care reforms have often lacked strategic foundations and projections that could be analysed and scrutinised by the public, and insufficient attention has been paid to the professional opinions and experiences of those directly involved in the provision of health care during the drafting and implementation stages. Reforms have often been riddled with scandals and controversies, undermining their efficiency (Džakula et al., 2014). Frequent changes of Ministers of Health have further hampered the development of sustained health reforms.



6 Key findings

- Croatia has made important progress in recent years in improving the health status of its population, but life expectancy at birth is still more than three years below the EU average. Mortality rates from cardiovascular diseases are almost double the EU average and mortality rates from lung, breast and colorectal cancer are among the highest in the EU. These health challenges point to shortcomings in health care delivery and public health interventions. Moreover, smoking and obesity rates are higher than in many other EU Member States. Investing in public health interventions to address these high rates could yield substantial benefits.

- Despite a challenging economic context and major fiscal pressures on health expenditure, Croatia has kept publicly funded health services accessible to its population. Although health expenditure per capita is among the lowest in Europe, the share of public expenditure is comparable to the EU average and the benefits package is broad, encompassing most health services. Nevertheless, affordability for some population groups remains a challenge; while the overall prevalence if catastrophic out-of-pocket spending is relatively low (4%), 17% of low-income households face catastrophic out-of-pocket spending.

- The sustainability of health financing is a concern, with major fluctuations in per capita expenditure in recent years, due to a challenging fiscal environment and high unemployment rates. In addition, the ageing population is expected to exacerbate the financial pressure on the health system in the future.

- Croatia has pursued a number of important health reforms in recent years, many aimed at improving the effectiveness and efficiency of its health system. Building on and implementing these reforms could help to further improve the performance of its health system. A comparatively large share of health expenditure goes to pharmaceuticals, indicating that efficiency gains may arise if appropriate measures are taken.

- One of the focal points for health reforms has been the hospital sector, with efforts to improve the strategic planning of hospital infrastructure and the efficiency of the hospital sector. However, so far results have been mixed, with progress made on a new provider (DRG) payment system but stalled implementation of hospital reorganisation plans and continued accumulation of debts.

- The strategic planning of human resources for health is a further challenge. Numbers of physicians and particularly nurses are low compared to the EU average. Following the country's accession to the EU, the outward migration of health workers to other Member States has increased and contributed to the workforce shortage in the Croatian health system.

- Developing the stewardship function of the Ministry of Health will be crucial for safeguarding achievements so far and addressing the remaining challenges in health care delivery and public health. By building national capacity in health reform, Croatia can ensure that it meets the objectives it has set itself for the health system, including improvements in life expectancy, quality of life and reductions in health inequalities.



Key sources

Džakula, A. et al. (2014), "Croatia: Health System Review", *Health Systems in Transition*, Vol. 16(3), pp. 1–162.

OECD/EU (2016), *Health at a Glance: Europe 2016 – State of Health in the EU Cycle*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264265592-en.

References

Bogut, M., L. Vončina and E. Yeh (2012), "Impact of Hospital Provider Payment Reforms in Croatia", *Policy Research Working Paper 5992*, World Bank, Washington, DC, http://elibrary.worldbank.org/doi/book/10.1596/1813-9450-5992, accessed on 28/05/2014.

EBRD (2011), *Life in Transition: After the Crisis*, European Bank for Reconstruction and Development, London.

European Commission (DG ECFIN) and Economic Policy Committee (AWG), "The 2015 Ageing Report – Economic and Budgetary Projections for the 28 EU Member States (2013-2060)", *European Economy 3*, Brussels, May.

European Commission (2017), "Country Report Croatia 2017 including an in-depth review on the prevention and correction of macroeconomic imbalances, 2017 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011", European Commission, Brussels.

IHME (2016), "Global Health Data Exchange", Institute for Health Metrics and Evaluation, available at http://ghdx.healthdata.org/gbd-results-tool.

Mesarić, J., C. Hadžić Kostrenčić and D. Šimić (2016), "Report on Patient Safety Indicators for 2015", Agency for Quality and Accreditation in Healthcare and Social Welfare, http://aaz.hr/sites/default/files/Izvjesce_o_PSP-2015.pdf, accessed on 11/08/2017.

Polić-ViŽintin, M. et al. (2014), "Distribution and Trends in Outpatient Utilization of Generic Versus Brand Name Psychopharmaceuticals During a Ten-year Period in Croatia", *BMC Health Services Research*, Vol. 14:343.

Vončina, L. and I. Rubil (2017), *Moving Towards Universal Health Coverage: New Evidence on Financial Protection in Croatia*, WHO Regional Office for Europe, Copenhagen.

WHO (2015), "WHO Report on the Global Tobacco Epidemic, 2015, Country Profile Croatia", http://www.who.int/tobacco/surveillance/policy/country_profile/hrv.pdf?ua=1, accessed on 28/04/2017.

Country abbreviations

Austria	AT	Denmark	DK	Hungary	HU	Malta	MT	Slovenia	SI
Belgium	BE	Estonia	EE	Ireland	IE	Netherlands	NL	Spain	ES
Bulgaria	BG	Finland	FI	Italy	IT	Poland	PL	Sweden	SE
Croatia	HR	France	FR	Latvia	LV	Portugal	PT	United Kingdom	UK
Cyprus	CY	Germany	DE	Lithuania	LT	Romania	RO		
Czech Republic	CZ	Greece	EL	Luxembourg	LU	Slovak Republic	SK		

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