European Commission

State of Health in the EU

Greece

Country Health Profile 2019

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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*'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.

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Data and information sources

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

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

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

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

Demographic and socioeconomic context in Greece, 2017

Demographic factors	Greece	EU
Population size (mid-year estimates)	10 755 000	511 876 000
Share of population over age 65 (%)	21.5	19.4
Fertility rate[1]	1.4	1.6
Socioeconomic factors		
GDP per capita (EUR PPP[2])	20 200	30 000
Relative poverty rate[3] (%)	20.2	16.9
Unemployment rate (%)	21.5	7.6

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

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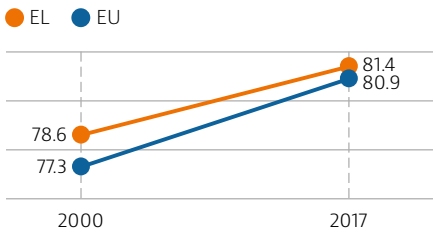
1 Highlights

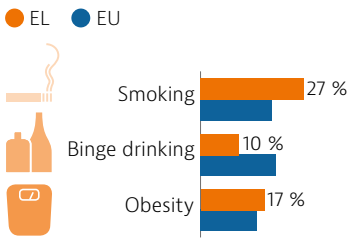
Over the past ten years, Greece's health system has undergone a major transformation, slowly moving towards a more modern, efficient and sustainable system. After an initial focus on efficiency enhancing structural reforms and cost reductions, more recent efforts have also focussed on introducing and strengthening mechanisms to achieve better outcomes. There is now comprehensive health insurance coverage for all residents and Greece is working on establishing a functioning primary care system. Previous shortcomings, such as fragmentation, excessive pharmaceutical spending, inefficient procurement and weak primary care, are being addressed.



Life expectancy at birth, years

Health status

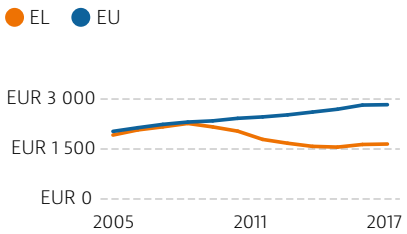
Life expectancy, at 81.4 years, is just above the EU average, but there are still inequalities in health across gender as well as social status. Deaths from ischaemic heart disease and stroke have fallen, but the rates for some cancer, diabetes and, more recently, infant mortality have increased. People aged 65 and over can expect to live around 40 % of their life free of disability, which is about two healthy life years less than the EU on average.



% of adults

Risk factors

Just over 40 % of deaths in Greece can be attributed to behavioural risk factors (above the EU average of 39 %), with smoking being the leading contributor. More than one in four adults smoke daily, the second highest rate among EU countries. High overweight and obesity rates are also a cause of concern, as is a lack of exercise among children. Relatively low rates of alcohol-related harm reflect low alcohol consumption among adults, but binge drinking among children is rising.



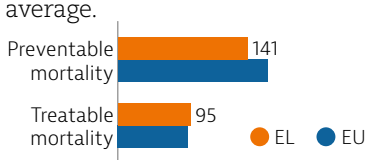
Per capita spending (EUR PPP)

Health system

Policies aimed at cutting waste and enhancing efficiency contributed to a rapid decrease in health expenditure during the economic crisis, with spending levels stabilising since 2015. In 2017, Greece spent EUR 1 623 per person on health care, well below the EU average of EUR 2 884. This equates to 8 % of GDP, also below the EU average (9.8 %). Over a third of health expenditure comes from households (including informal payments), one of the highest rates in the EU, and is due to high out-of-pocket spending on pharmaceuticals, outpatient (or ambulatory) care and hospital services.

Effectiveness

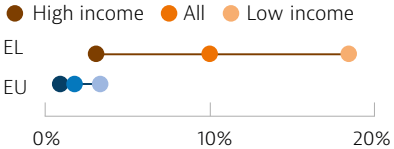
Achieving improvements in service effectiveness continues to be a challenge, while there is little data on health care quality. During the crisis, mortality from treatable causes has shown signs of worsening. However, despite weak preventive policies, preventable mortality is lower than the EU average.



Age-standardised mortality rate per 100 000 population, 2016

Accessibility

Cost presents the main barrier to accessing care, particularly for people on low incomes. One in ten households experience catastrophic spending on health, and the practice of making informal payments persists. Other barriers include limits on some reimbursed consultations and unequal distribution of resources.



% reporting unmet medical needs, 2017

Resilience

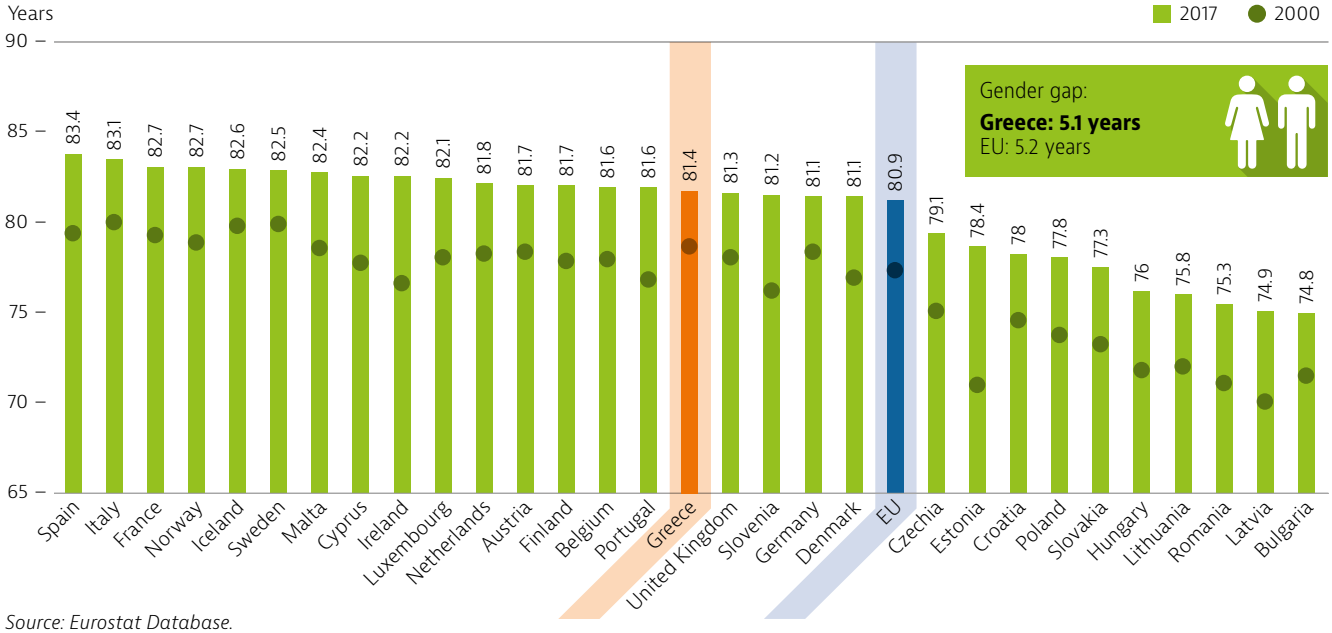
Adequate funding for health services, particularly to support the development of the new primary care system, is crucial. Governance can be strengthened through clearer definition of strategic, evidence-based objectives and a comprehensive national plan.

2 Health in Greece

Life expectancy in Greece is still above the EU average, but increasing slower than in many other EU countries

Life expectancy at birth in Greece reached 81.4 years in 2017, half a year more than the EU average (Figure 1). Since 2000, when it stood among the highest in the EU, it has increased by 2.8 years, and at a slower pace than observed in the EU as a whole. Life expectancy has increased slightly more rapidly for men while stagnating for women over the past few years, leading to a gender gap of about five years, which is similar to the EU average.

Figure 1. Life expectancy increased at a slower pace than in many EU countries

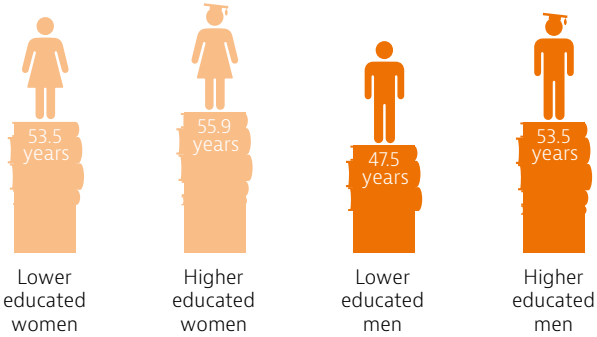


Source: Eurostat Database.

Social inequalities in life expectancy are larger among men than women

Beyond the gender gap, inequalities in life expectancy also exist by socioeconomic status. In 2016, the gap in life expectancy at age 30 between people with the lowest level of education and tertiary education was 6 years for men and 2.4 years for women (Figure 2), although this is less than the averages in the EU (7.6 and 4.1 for men and women, respectively). The difference can be explained, at least partly, by varying levels of exposure to risk factors and lifestyles (such as higher smoking rates among men with a lower level of education).

Figure 2. At age 30, Greek men with a higher level of education can expect to live six years more than those with the lowest level of education



Education gap in life expectancy at age 30:

Greece: 2.4 years
EU21: 4.1 years

Greece: 6 years
EU21: 7.6 years

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

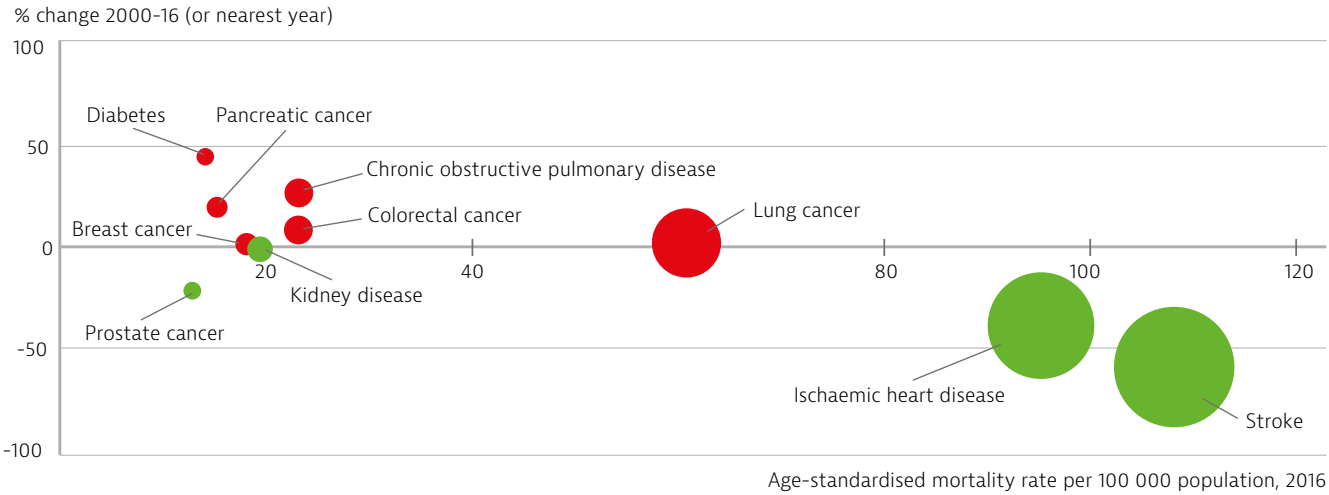
Stroke and ischaemic heart disease are by far the leading causes of death

Despite substantial reductions in mortality rates from stroke and ischaemic heart disease since 2000, these continue to be the leading causes of death (Figure 3). Lung cancer is the most frequent cause of cancer deaths with rates remaining fairly stable over the years; they were the sixth highest in the EU in 2016. Mortality from pancreatic and colorectal cancer has also increased since 2000. Deaths from diabetes and chronic respiratory conditions have become an emerging issue over the last two decades. While levels remain below the EU average, this increase may indicate weaknesses in chronic disease care (see Section 5.1).

With the exception of deaths from road traffic accidents, which have decreased (Section 5.1), the economic crisis had a discernible impact on the health of the Greek population. In particular, mental health, expressed in suicide rates and levels of severe depression, has deteriorated. While being the lowest after Cyprus, and well below the EU average (10.3 per 100 000 population in 2016), suicide rates have increased by 30 % – to 4.3 per 100 000 people on average since 2010 (compared to 3.3 during the preceding decade). A series of studies found an increase in the prevalence of severe depression symptoms among the general population, from 3.3 % in 2008 to 12.3 % in 2013 (Economou et al., 2016).

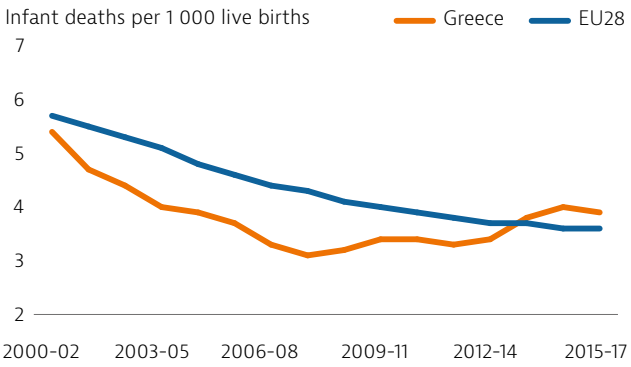
The steady reduction in infant mortality – an indicator that is sensitive to both the quality of health care and socioeconomic conditions – has reversed from its three-year average rate of 3.1 per 1 000 live births in 2007-09 to 3.9 in 2015-17, surpassing the EU average (3.6) (Figure 4). In 2016 infant mortality reached a peak of 4.2 deaths per 1,000 live births, before reducing to 3.5 (just below the EU average) in 2017.

Figure 3. While mortality from the leading causes of death is falling, mortality from diabetes and some cancers is growing



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

Figure 4. The infant mortality rate has reversed in Greece in recent years



Note: 3-year rolling average.
Source: Eurostat Database.

Greece is a major entry point for refugees

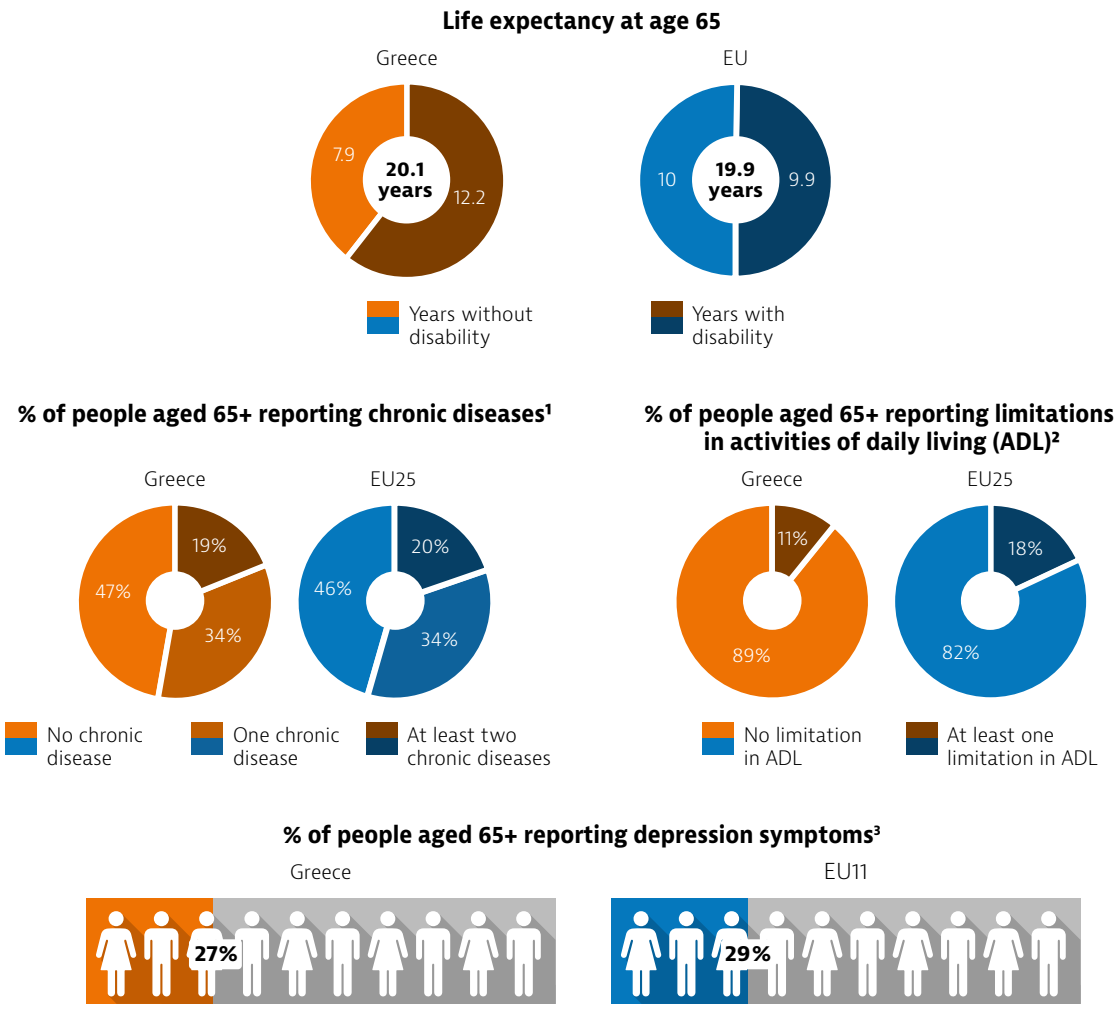
In recent years, Greece has served as an EU entry point for refugees fleeing conflicts in the Middle East, including the Syrian Arab Republic, with the number of people in transit peaking at 1 million in 2015. From 2016, refugees are entitled to the same level of services as Greek citizens, while asylum-seekers who suffer from specific conditions, have a disability or are hosted in social care units have access to services irrespective of their legal status (see Box 3 in Section 5.2). Beyond the effects of the conflicts and often perilous journeys, the health of these vulnerable groups is affected by living conditions. Common health problems observed among migrants and refugees in Greece are gastrointestinal and respiratory

disorders, chronic conditions such as diabetes and hypertension, pregnancy- and delivery-related complications, as well as physical and psychological trauma.

Many years of life after age 65 are spent with chronic diseases and disabilities

Because of the rise in life expectancy and low fertility rates, more than one in five (22 %) people in Greece are aged 65 and over, and this proportion is projected to rise to more than one third (34 %) by 2070. In 2017, life expectancy at age 65 was 20.1 years, slightly higher than in EU countries as a whole (Figure 5). However, people in Greece can expect to live only about 40 % of these years without disability, compared to about 50 % in the EU, which translates into two healthy life years less.[1] The proportion of Greeks reporting being free of chronic disease (47 %) is similar to the EU average (46 %), but a smaller proportion report having limitations in basic activities of daily living, such as dressing and showering (one in nine Greeks aged 65 and over, compared to one in six in the EU).

Figure 5. At age 65, only 40 % of the remaining years of life are free of disability



Notes: 1. Chronic diseases include heart attack, stroke, diabetes, Parkinson's disease, Alzheimer's disease and rheumatoid arthritis or osteoarthritis. 2. Basic activities of daily living include dressing, walking across a room, bathing or showering, eating, getting in or out of bed and using the toilet. 3. People are considered to have depression symptoms if they report more than three depression symptoms (out of 12 possible variables).
Sources: Eurostat Database for life expectancy and healthy life years (data refer to 2017); SHARE survey for other indicators (data refer to 2017).

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

3 Risk factors

More than two in five deaths can be attributed to behavioural risk factors

Estimates show that 42 % of all deaths in Greece can be attributed to behavioural risk factors (compared to 39 % in the EU), including tobacco smoking, dietary risks, alcohol consumption and low physical activity (Figure 6). Around one fifth of all deaths in 2017 were due to tobacco smoking (including direct and second-hand smoking). Dietary risks (including low whole grains, fruit and vegetable intake, and high salt consumption) together with low physical activity account for about 21 % of deaths, while about 4 % can be attributed to alcohol consumption.

Figure 6. Tobacco consumption and dietary risks are major contributors to mortality

Note: The overall number of deaths related to these risk factors (50 000) is lower than the sum of each one taken individually (58 000) 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 beverage consumption.
Source: IHME (2018), Global Health Data Exchange (estimates refer to 2017).

Greek men and women smoke more than in most other EU countries

Even though the proportion of Greek adults who smoke daily has decreased since 2000, more than one in four (27 %) still reported smoking every day in 2014, the second highest rate among EU countries after Bulgaria (Figure 7). As in many other countries, Greek men are much more likely to smoke than women (34 % compared with 21 %). While smoking is banned in indoor public places and legislation requires restaurants to have designated smoking areas (Section 5.1), enforcement of tobacco control policies is visibly lacking (WHO, 2017). On a more positive note, when it comes to adolescents, only about one in five 15- to 16-year-olds in Greece reported that they had smoked in the past month in 2015, a proportion that has declined over the past decade and is lower than in many EU countries.

High overweight and obesity levels, particularly among children, are a serious public health problem

Almost one in four 15-year-olds were overweight or obese in Greece in 2013–14, a higher proportion than in all other EU countries except Malta, and a significant rise since 2001-02. Boys are more likely to be overweight or obese than girls. Over one in six adults were obese in Greece in 2014. At 17 %, the obesity rate among adults is higher than in many other southern European countries such as Italy (11 %) and Cyprus (14 %).[2]

These high rates among both children and adults are driven partly by poor nutrition and low physical activity. Only half of adults report eating fruit, and 60 % eat vegetables daily, a share that is lower than in many EU countries. In addition, only one in nine 15-year-olds reported doing at least some moderate physical activity each day in 2013-14. This proportion was one of the lowest in EU countries. More positively, over two thirds of adults reported doing at least some moderate physical activity each week in 2014.

2: The 17 % obesity prevalence rate is based on European Health Interview Survey data (2014). The WHO Global Health Observatory estimates for Greece show a consistent increase since 2000 – to 24.9 % in 2016 (the eighth highest in the EU).

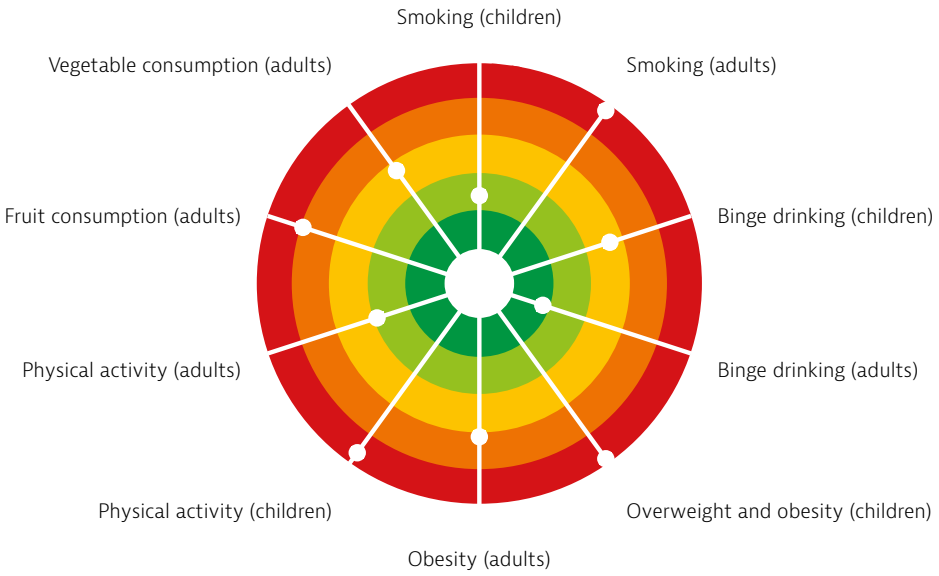
Binge drinking rates are among the lowest in EU countries

In contrast to high tobacco consumption, only one in ten Greek adults report binge drinking,[3] which is one of the lowest levels among EU countries. Men report binge drinking more often than women (16 % for men and 5 % for women). As in some other countries, binge drinking among 15- to 16-year-olds has increased in Greece since 1999, especially among girls. For girls, rates increased from 24 % in 1999 to 34 % in 2015, while for boys, they rose from 41 % to 43 %. Such trends are cause for concern considering the increased risk of accidents and injuries related to heavy alcohol consumption.

Socioeconomic factors, especially income, play an important role in inequalities in health

Many behavioural risk factors in Greece are more common among people with lower education or income. In 2014, 32 % of Greek men in the poorest income quintile smoked daily (this figure was 24 % across the EU), compared to 25 % of those with the highest incomes (16 % in the EU). Similarly, one in five adults who had not completed their secondary education are obese compared to one in seven among those with tertiary education. This higher prevalence of risk factors among socially disadvantaged groups contributes to inequalities in health and life expectancy.

Figure 7. Smoking and obesity are major public health concerns in Greece



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

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

4 The health system

A single purchaser has replaced the numerous social health insurance funds

Greece's previously very fragmented health care system has undergone an enormous transformation in recent years (Box 1). In 2011, the National Organisation for the Provision of Health Services (EOPYY) was established to manage a single unified health insurance fund and to act as the sole purchaser for publicly funded health services delivered by the National Health System. Private providers are also contracted by EOPYY, mainly to deliver primary and outpatient care and diagnostic services. The Ministry of Health is responsible for the extensive regulation of the entire system. Regional authorities are expected to play an increasing role in coordinating primary care; however, in practice, they currently lack power and resources.

Health expenditure dropped rapidly during the economic crisis

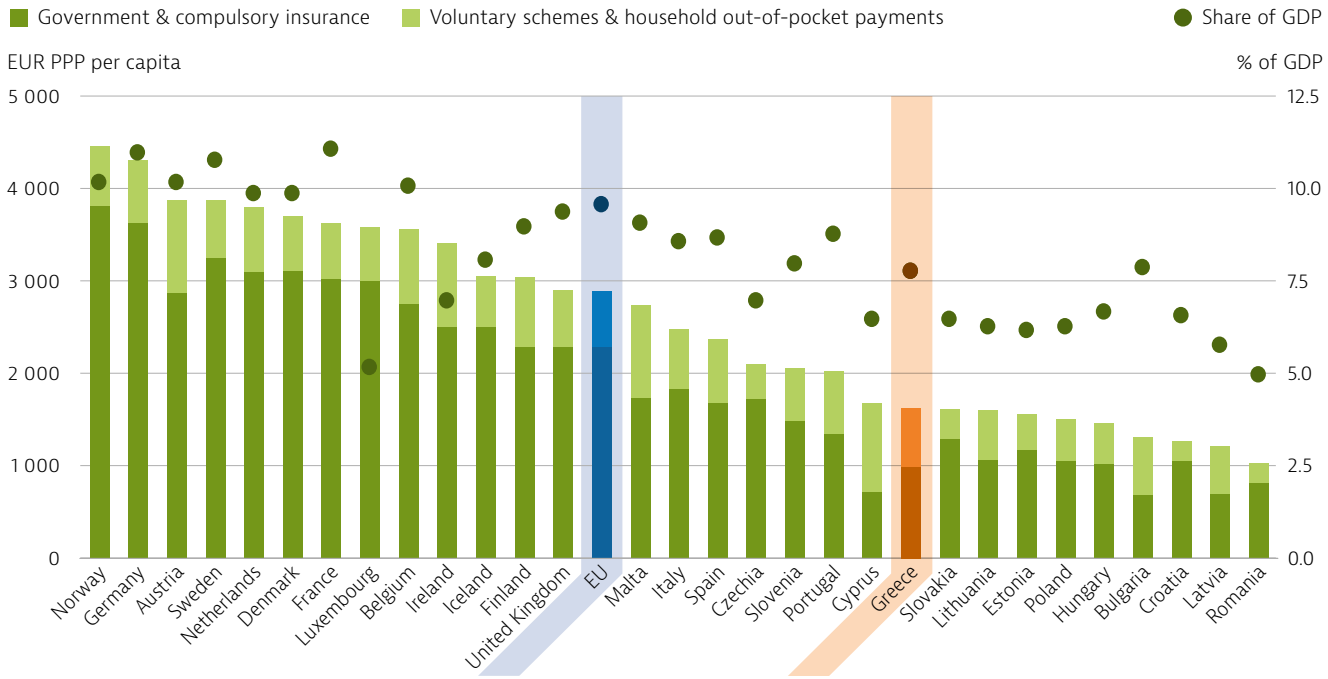
In 2017, Greece devoted 8 % of GDP to health.[4] This translates to EUR 1 623 per person (adjusted for differences in purchasing power) – well below the EU average of EUR 2 884 (Figure 8). After peaking at EUR 2 267 per person in 2008, health expenditure dropped by almost a third over the following five years.

An Economic Adjustment Programme (EAP) policy to contain public expenditure on health, as well as a substantial reduction in out-of-pocket (OOP) spending, contributed to this decline. In particular, wasteful spending on pharmaceuticals, which in 2009 ranked highest in the EU, fell by a third, achieving reductions in this area of more than EUR 2 billion between 2011 and 2014 (see Section 5.3).

Box 1. The health system has seen a decade of continuous reform

The economic crisis and a series of Economic Adjustment Programmes (EAPs) between 2010 and 2018 mandated the implementation of extensive structural and efficiency-oriented reforms in Greece. A game-changing reform was the establishment of EOPYY as the single insurer and purchaser. Wide-ranging measures also have been implemented in the pharmaceutical sector, transforming purchasing, pricing, and reimbursement, as well as prescribing methods and guidelines. A new health technology assessment (HTA) agency has recently been established and the case-based payment system for hospitals will be rolled out over the next five years. An extensive reform of primary care is also currently under way.

Figure 8. Health spending per capita in Greece is around 45 % less than the EU average



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

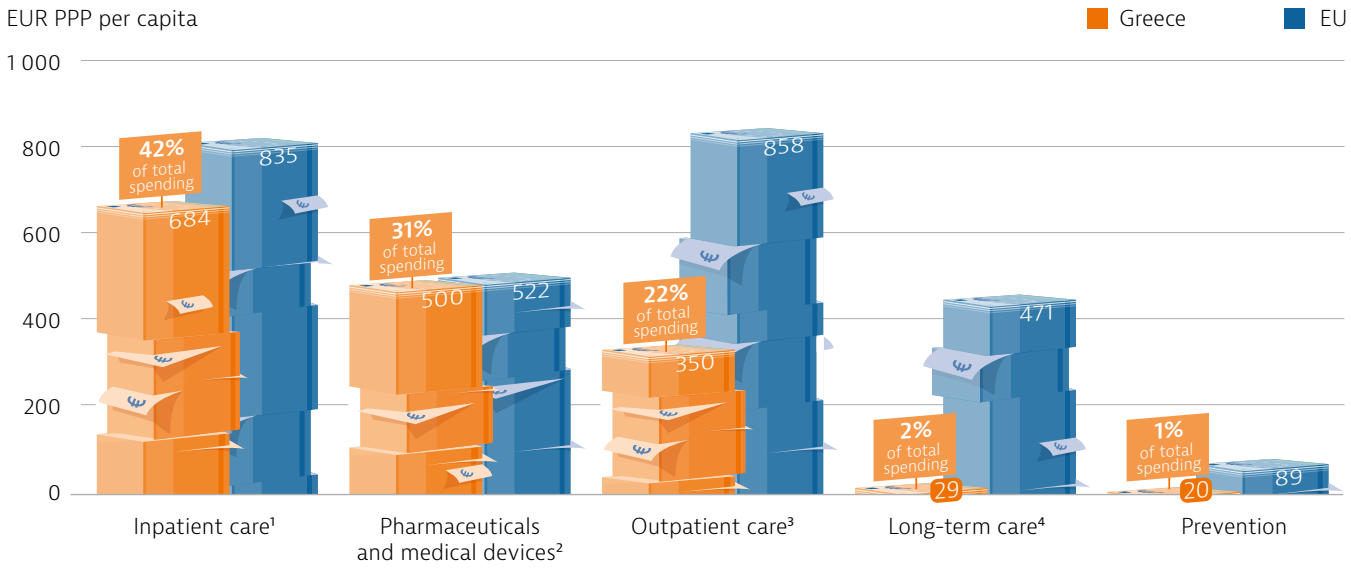
4: This figure does not include expenditure derived from a clawback mechanism that is in place, which channels an additional 1 % of GDP to health care.

In 2017, public spending on health was just under 5 % of GDP. However, the real value of public provision is higher than that captured by official figures – amounting to a further 1 % of GDP of public spending on health. This is due to the clawback mechanism, which applies to much of the EOPYY budget, whereby the public payer can provide more goods and services to meet needs, with costs beyond expenditure ceilings recovered from providers (see Section 5.3).

Financial support from the European Structural and Investment Funds (ESIF) and the European Regional Development Fund (ERDF) has played a very important role in the health sector. In the 2014-20 round of funding, an estimated EUR 545 million has been made available to carry out health care sector reforms, with half being spent on the development of primary care (WHO Regional Office for Europe, 2019a).

In 2017, the bulk of spending (42 %) went on inpatient care, followed by pharmaceuticals (31 %) and outpatient care (22 %) (Figure 9). About half of spending on pharmaceuticals and outpatient services, and a quarter of inpatient care spending come from OOP payments (Section 5.2). Greece spends comparatively little on preventive care, just EUR 20 per person (compared to an EU average of EUR 89) or 1.3 % of health spending, putting it, together with Cyprus and Slovakia, among the bottom three Member States.

Figure 9. Spending on inpatient care still dominates in Greece



Notes: 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.
Sources: OECD Health Statistics 2019, Eurostat database (data refer to 2017).

A very large share of spending comes from households, including informal payments

Overall, only 61 % of health care expenditure comes from public sources in Greece (Figure 8), whereas 35 % is financed by households out of pocket (the fourth highest share in the EU). This rate has fluctuated from a low of 28 % in 2010 to a peak of 37 % in 2014. High levels of cost-sharing are driven to a large extent by supplier-induced demand, and are mainly due to co-payments for pharmaceuticals and direct payments for services outside the benefit package, visits to private specialists, nursing care as well as dental care (see also Figure 15). In addition, informal payments represent more than a quarter of OOP payments, raising serious concerns about equity and access barriers to health care services (WHO Regional Office for Europe, 2018). Voluntary health insurance plays only a minor role and accounted for 4 % of total health spending in 2017.

Universal coverage has been introduced

Population coverage in Greece was mainly linked to employment status through compulsory social health insurance. The insured have access to a unified benefit package, which includes primary care, diagnostics, specialist outpatient and inpatient care. Since 2012, limits, intended to tackle supply-induced demand, have operated for doctors on the number of daily, weekly and monthly visits reimbursed by EOPYY. These, however, may have led in some cases to patients having to delay care, find an alternative provider, or pay for a visit out of pocket either formally or 'under the table' (Section 5.2).

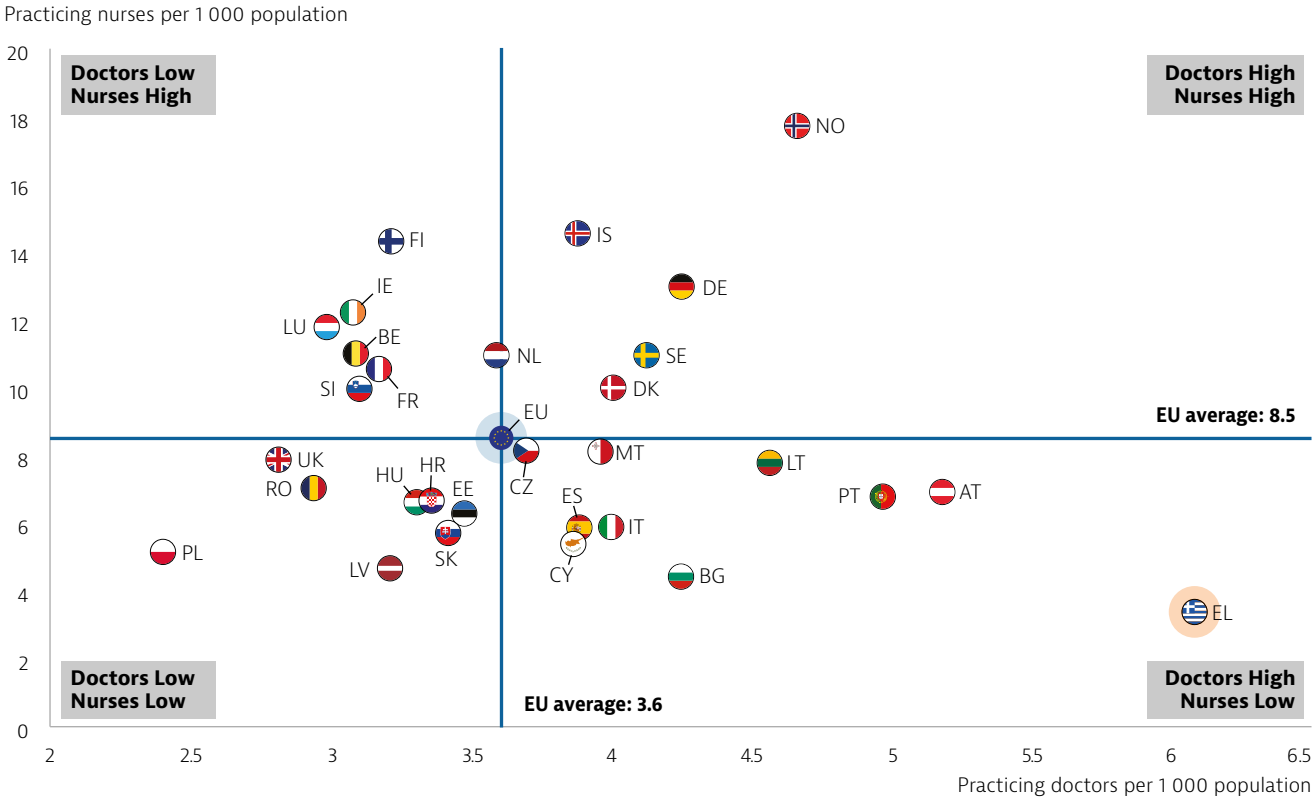
The economic crisis exposed a major gap in population coverage for the unemployed and their dependants, with over 2 million people not able to access publicly financed services by 2015. After a number of legislative and administrative attempts starting in 2013, this problem was successfully solved in 2016, when additional funding was allocated to cover previously uninsured groups of residents and registered migrants for services provided by the National Health System (see Box 3 in Section 5.2). Greece now offers universal coverage for health care.

The health workforce and facilities are disproportionately located in urban areas

To date, Greece lacks mechanisms to allow adequate planning and optimal allocation of physical and human resources. Services are very heavily concentrated in large cities, while rural areas lack both specialist staff and facilities. In 2017, there were 4.2 hospital beds per 1 000 population – somewhat below the EU average of 5.0.

There is also a large imbalance in the distribution of the health workforce, both geographically and in terms of skill mix. Greece has the highest number of doctors, along with the lowest number of nurses per 1 000 population in the EU (Figure 10).[5] Moreover, only 1 in 16 doctors in Greece are general practitioners (GPs), compared to 1 in 4 on average in the EU.

Figure 10. There is a pronounced imbalance in the availability of doctors compared to nurses



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

5: *Albeit with data comparability issues leading to an overestimation of doctors in Greece.*

Primary care has expanded rapidly but progress may stall due to a lack of general practitioners

For Greece's very specialist-focused health system, the development of primary care has become a prerequisite for improving efficiency and access (Section 5.3) and the main focus of reforms in service delivery. Since late 2017, an integrated primary care system with an eventual gatekeeping role has gradually been rolled out, through the establishment of smaller local health units and larger health centres. Together they provide a comprehensive range of services, including primary care, specialist ambulatory and diagnostics services, dental care, maternal and child care, basic emergency care and preventive activities. In the summer of 2019, about half of the planned number of facilities were functioning, mainly in urban or semi-urban areas. The biggest challenge at the moment is to attract enough GPs to maintain the expansion.

As primary care undergoes this transitional phase, the implementation of the gate-keeping function has been postponed. Referral to a specialist in not yet mandatory and people can still access specialist services directly, irrespective of being registered with a GP. Direct access to specialists will gradually be phased out, with the expectation that GPs will become the first point of contact for all residents.

5 Performance of the health system

5.1. Effectiveness

A focus on prevention and effective treatment could help to reduce avoidable deaths

Greece still has lower than EU-average mortality from preventable causes, and similar to EU-average mortality from treatable (amenable) causes (Figure 11). Premature deaths from cardiovascular diseases (ischaemic heart disease, stroke and hypertension) account for a quarter of all deaths from preventable causes and 38 % of deaths from treatable causes. This is partly due to shortcomings in diagnosing and treating patients at high risk of cardiovascular diseases and in managing patients with ischaemic heart disease. Greece is still in the process of building a comprehensive primary care system (Section 4) to provide effective, timely and co-ordinated treatment for patients with chronic conditions.

In terms of other preventable causes, 30 % of deaths were from lung cancer in 2016, reflecting the legacy of very high smoking rates. Although bound by the EU Tobacco Directive and fairly comprehensive tobacco control laws, most facilities in Greece have very poor compliance in ensuring a smoke-free environment (WHO, 2017). There have been some reductions in smoking prevalence (Section 3), which have been linked to price increases for cigarettes, coupled with drastic reductions in household incomes, but effective anti-smoking campaigns and ensuring compliance with existing legislation do not appear to be policy priorities.

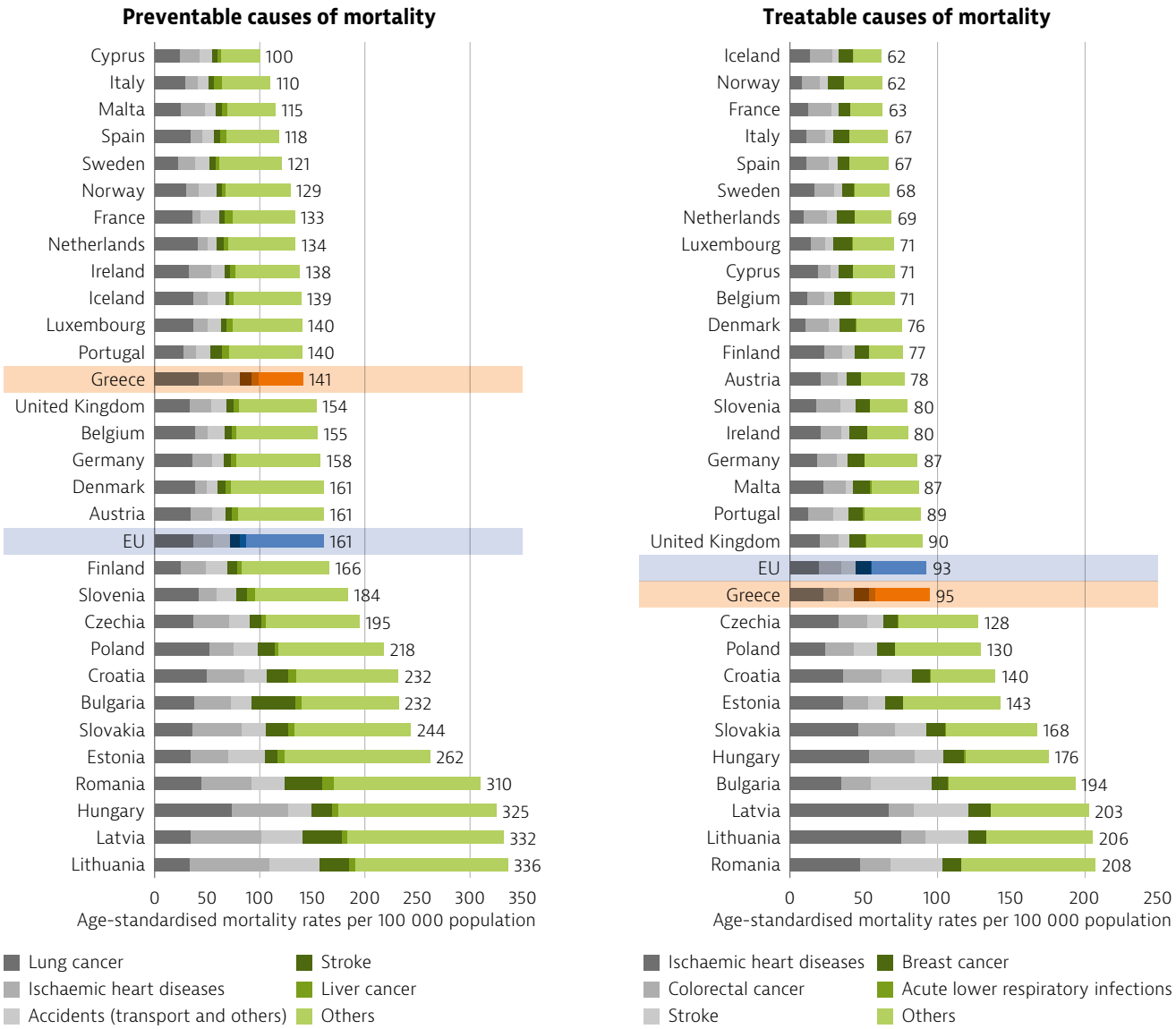
Greece is well known for its high mortality from road traffic injuries. In 2016, it had the sixth highest fatality rate in the EU – 9 per 100 000, compared to the EU average of 6 per 100 000. There has been a very steep drop in deaths from road traffic injuries over the past 10 years, linked to people switching to cheaper forms of transport and a 50 % hike in the price of petrol during the crisis; however, this fall has stagnated since 2014.

Mortality from treatable causes in 2016 was just above the EU average (95 and 93 per 100 000 population, respectively). There is some evidence showing that Greece's falling mortality rates from treatable causes in the 2000s have reversed for both men and women (Karanikolos et al., 2018). Possible explanations include reduced funding for health care services, along with the systemic problems pre-dating the crisis, such as fragmentation of coverage, poorly developed primary care, lack of referral mechanisms, and a lack of coordination of care across care pathways.

Cancer screening is not systematic and uptake is strongly influenced by education level

Treatable cancer (breast, colorectal and cervical) account for a quarter of deaths from treatable causes (Figure 11). There are no population-based or systematic cancer screening programmes, leading to inequities in preventive screening. For example, in 2014, 76 % of the target group were screened for cervical cancer over the previous three years (compared to 66 % in the EU), but nine out of ten of the women with tertiary education were screened,

Figure 11. Preventable mortality in Greece is better than in many other EU countries, but this is not the case for mortality from treatable causes



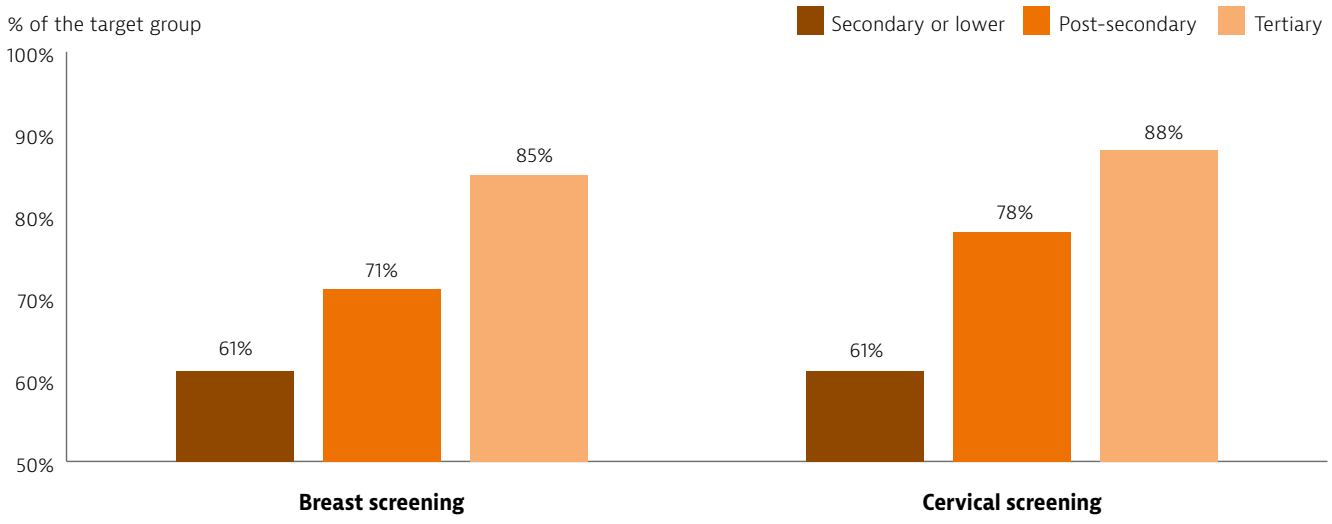
Note: Preventable mortality is defined as deaths that can be mainly avoided through public health and primary preventive interventions. Mortality from treatable (or amenable) causes is defined as deaths that can be mainly avoided through health care interventions, including screening and treatment. Both 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).

compared to six out of ten who had not completed their secondary education. Similarly, 60 % of women aged 50-69 had mammography screening (similar to the EU average), but more than four out of five with tertiary education were screened compared to three out of five among those who had not completed secondary education (Figure 12). There is also a lack of good quality data on the burden of cancer in Greece, as the absence of a nationwide cancer registry does not allow reliable estimations of adult survival rates for treatable and other cancers.

Vaccination rates are higher than in the EU

Greece has a national immunisation programme, with coverage for vaccinations exceeding EU averages (Figure 13) and the 95 % threshold for children recommended by WHO to maintain herd immunity. However, a recent measles outbreak shows that there are gaps in coverage (Box 2). While coverage for older people for the influenza vaccination is higher than the EU average, it is below the WHO target of 75 %.

Figure 12. Education is an important factor in the uptake of cancer screening

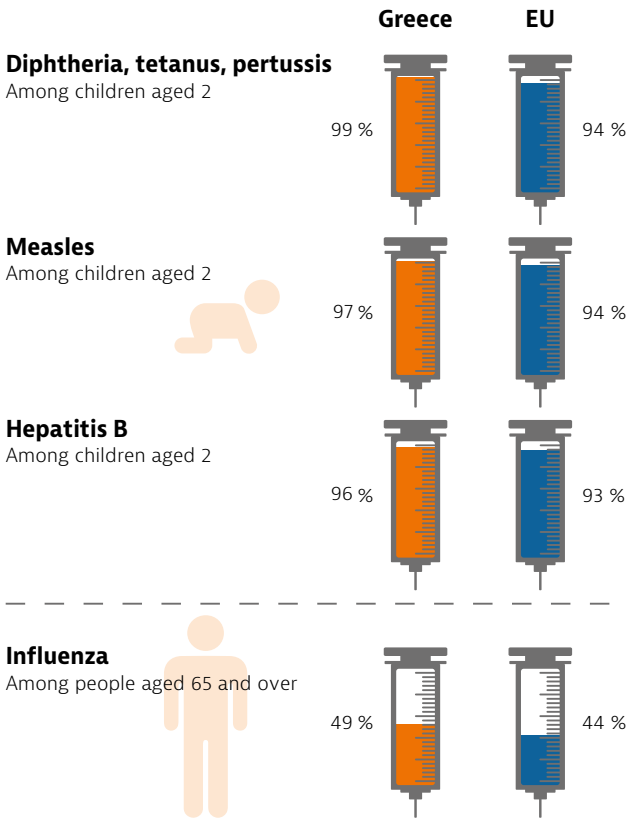


Source: Eurostat database (data refer to 2014).

Box 2. Greece maintains high children's vaccination rates but gaps are emerging

Vaccines included in Greece's national vaccination programme are provided free of charge for all legal residents, including asylum seekers. Immunisation is recommended, but enrolment of pupils in kindergarten and primary school requires vaccination in accordance with the national programme, making it, in essence, mandatory for children (Rechel, Richardson & McKee, 2018). Although rates for dispensing initial doses of certain children's vaccines are high, estimates for follow-up boosters are lower – for example, measles, mumps and rubella (MMR) second dose coverage falls to 83 %, compared to 97 % for the initial dose. In 2017–18, Greece had a large measles outbreak affecting more than 3 000 people – mostly children from the Roma population, among whom coverage is known to be very low. Notably, though, 3 out of 10 people affected were non-minority Greek nationals, mostly young adults and 4 % were health care workers (Georgakopoulou, 2018), suggesting that gaps in vaccination coverage go beyond ethnic minorities.

Figure 13. Greece records high vaccination coverage for many childhood vaccinations



Note: Data refer to the third dose for diphtheria, tetanus, pertussis and hepatitis B, and the first dose for measles.
Source: WHO/UNICEF Global Health Observatory Data Repository for children (data refer to 2018); OECD Health Statistics 2019 and Eurostat Database for people aged 65 and over (data refer to 2017 or nearest year).

Monitoring systems for patient safety and quality of care are lacking

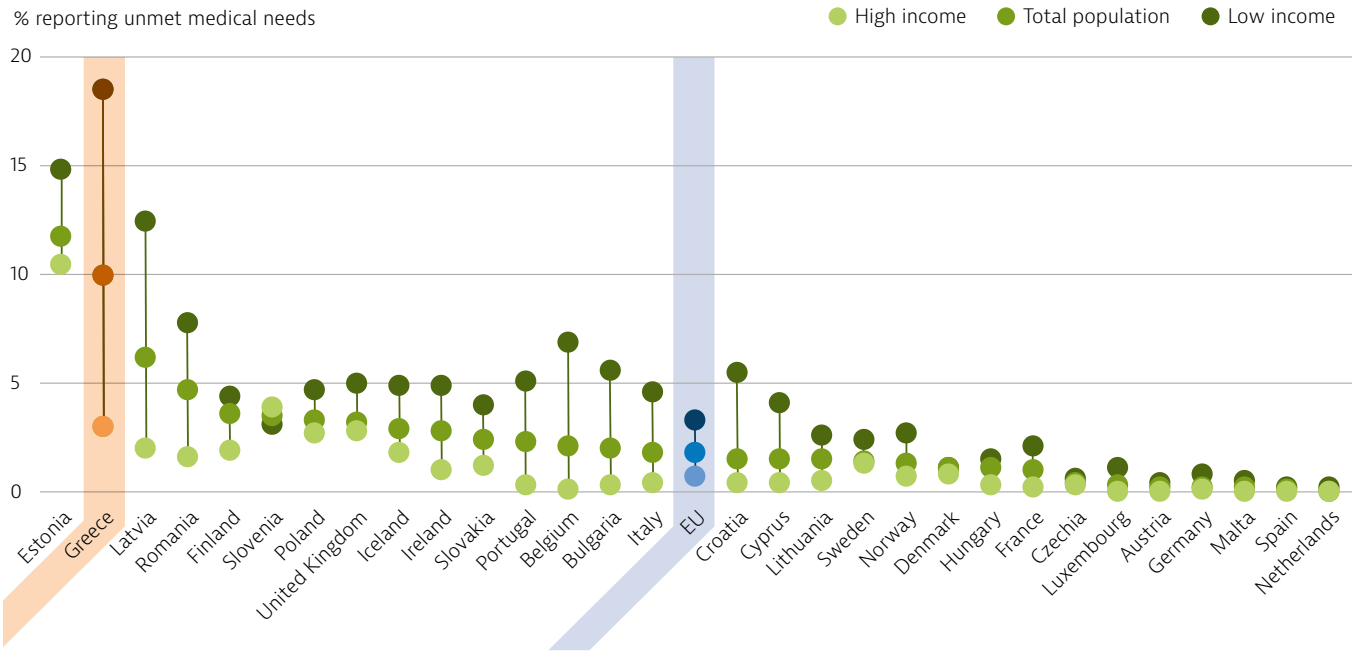
Greece lacks internationally comparable data on key health care quality indicators, such as avoidable hospitalisations, as well as mortality following hospital admissions for certain conditions. As primary care is being rolled out nationwide, it can be expected that the effectiveness of health care services in this area will gradually improve, subject to successful implementation and sufficient resources (Section 5.3).

In hospital care, there are long-standing issues with high levels of health care-associated infections, with one in ten patients developing this condition (the highest rate in the EU and twice the EU average; Suetens et al., 2018). In addition, Greece has the second highest burden of infections with antibiotic-resistant bacteria in the EU (after Italy), resulting in over 1 600 deaths per year (Cassini et al., 2019). In response, the Ministry of Health has collaborated with medical associations to introduce and disseminate clinical guidelines and treatment protocols, which aim to improve the quality of care.

5.2. Accessibility

In 2017, Greece had the second highest levels of self-reported unmet needs for medical care in the EU (after Estonia), as one in ten households reported that they were not able to access health services when needed (Figure 14). Unmet needs were also reported by almost one in five households in the poorest income quintile, but only by 3 % of the richest households, revealing the widest income inequality gap in Europe. On a more positive note, 2017 was the first year when the overall level of unmet needs fell, after rising for six consecutive years.

Figure 14. Despite recent reduction, levels of unmet needs and inequity in access to care are still very high



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

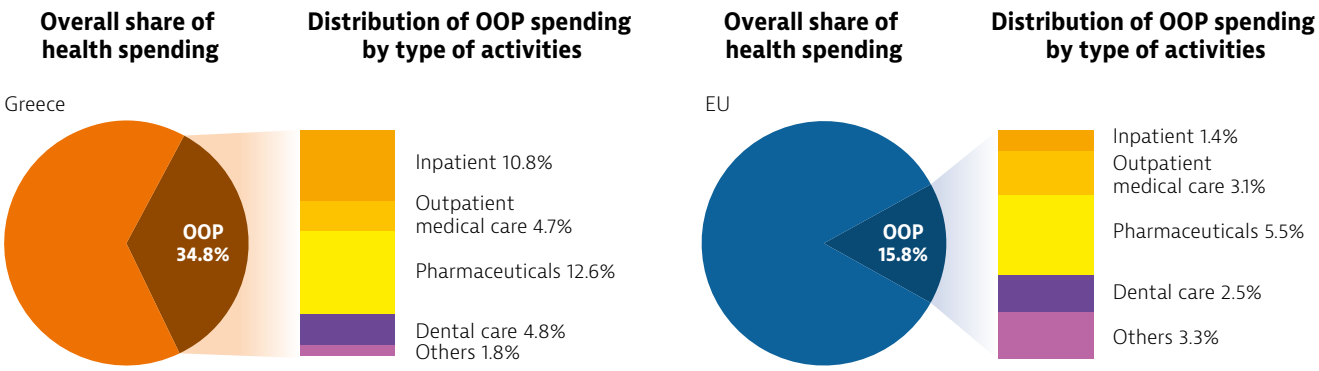
Cost is the main barrier preventing access to services

Of the 10 % of households with unmet needs, four out of five cite cost as the main barrier to accessing care. Greece has very high levels of OOP payments, at 35 % of health spending (Section 4), which is double the EU average (Figure 15) and is largely attributed to supplier-induced demand. Payments for pharmaceuticals make up the largest share of OOP expenditure (13 %), followed by payments for inpatient services (11 %). The latter figure is striking as care in public hospitals is free. While some of this spending may be for privately provided

hospital services, some indirect evidence suggests that informal payments are also being made in public hospitals. For example, data on catastrophic expenditure[6] on health by households show that the share of spending on inpatient care is high, with 12 % for the poorest income group (WHO Regional Office for Europe, 2019b). As poorer households are unlikely to seek hospital care privately to the point of depleting their finances, this figure suggests that payments are also made in publicly-provided inpatient care.

For medicines, measures introduced to lower government expenditure on pharmaceuticals (Section 5.3) resulted, in part, to shifting costs towards patients: the average proportion of cost-sharing for pharmaceuticals increased from 13 % in 2012 to 18 % in 2013, and the mean patient charge per prescription increased by two thirds between 2011 and 2014 (Yfantopoulos, 2018). A fixed fee of EUR 1 per prescription, unless patients belong to an exemption group (based on selected conditions), was introduced in 2014. Patients also need to pay the difference between the retail and reimbursement price up to a ceiling of EUR 20 per pack, where applicable. Exemptions from cost-sharing for medicines include those with life threatening conditions, people/families on very low incomes (below EUR 2 400/EUR 3 600 per year) and people with chronic conditions whose income is below EUR 6 000 per year.

Figure 15. Pharmaceuticals and inpatient care are the largest areas of out-of-pocket spending



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

Financial protection mechanisms can be strengthened

In 2017, Greece had one of the highest levels of OOP spending as a share of household budget in the EU (4.2 % compared to the EU average of 2.2 %). Such heavy reliance on OOP payments as a source of health financing can lead to inequalities in access. At the same time, among people who do access health services in Greece, the share of catastrophic spending increased from 7 % in 2010 to 10 % in 2016, the fourth highest in the EU after Lithuania, Latvia and Hungary (Figure 16). Further analysis shows that nearly 80 % of all catastrophic spending in Greece is concentrated among the poorest 40 % of households (WHO Regional Office for Europe, 2019b). These figures pre-date the expansion of coverage at the end of 2016 (Section 4), and highlight the need to establish robust mechanisms to protect vulnerable groups and patients with high health care needs, especially during times of economic crisis.

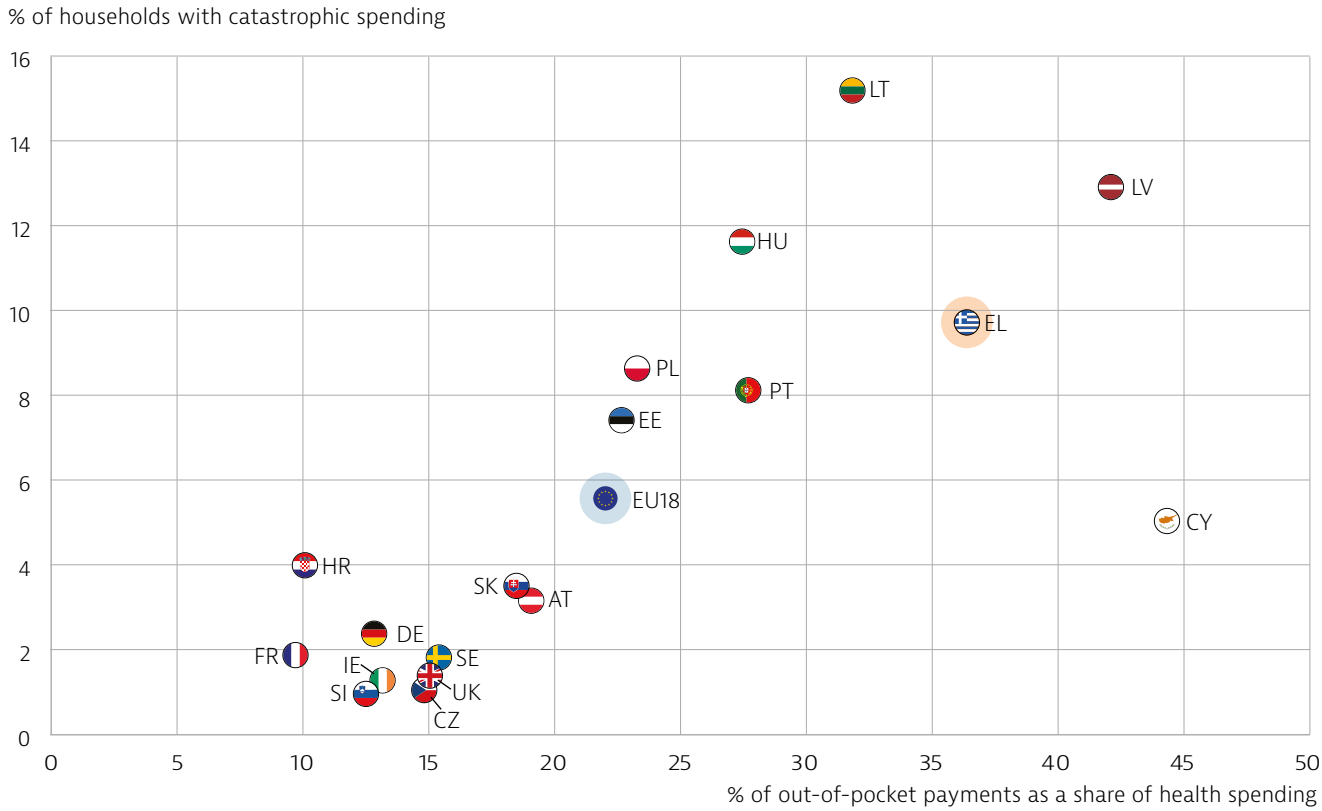
Informal payments are a problem in Greece: they represent about a quarter of all OOP payments and are a major risk to access, financial protection, and equity. A recent WHO report found that the bulk of informal payments stem from patients wanting to ensure better or faster care, demands from doctors, and insufficient knowledge about entitlements, particularly among poorer people and those living in rural areas (WHO Regional Office for Europe, 2018).

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).*

The benefit package is broad, given the limited resources

When the numerous health insurance funds were brought together under EOPYY in 2011, the benefit basket was rationalised and standardised to provide a comprehensive and fairly broad range of services (Box 3). This made coverage more equitable. In the process, some services that were previously covered were removed or reduced (including some with limited therapeutic value). In parallel, restrictions on the volume of EOPYY-funded consultations per doctor were put into place (Section 4). While reducing the scope for overtreatment, this may have led to some patients having to either delay care or seek it privately. Furthermore, services included in the benefit package may not be available in practice. For example, because there are no functioning contracts between EOPYY and dentists, dental care is currently almost entirely funded out of pocket.

Figure 16. Greece has one of the highest levels of catastrophic spending on health in the EU



Sources: WHO Regional Office for Europe (2019b); OECD Health Statistics 2019 (data refer to 2017 or the nearest year).

Imbalances in the availability of care affect access in rural areas and exacerbate regional inequalities

Greece lacks a balanced distribution of health care resources and personnel, and adequate mechanisms for planning and managing it (Section 4). As a result, some regions have three times more doctors and nurses than others. One population survey shows that in 2014, among people who needed care, only 3 % of those living in cities were not able to access it due to distance or lack of transportation, while this figure was 13 % for people living in rural areas.

Due to its complex topography, with many islands and remote regions, Greece has had an eHealth (telemedicine) programme for decades. In 2016, in a major boost, the National Telemedicine Network project was completed, which incorporates 43 telemedicine units connecting 30 health centres in the Aegean Islands with 12 hospitals in the capital region. Telemedicine units are equipped with cameras and diagnostic tools and offer access to a wide range of specialists, including cardiologists, oncologists and mental health specialists.

Box 3. Population coverage is now universal but with some differences in levels of access

Legislation in August 2016 established universal health coverage for all Greek citizens, including over 2 million people who had lost cover during the crisis through long-term unemployment or inability to keep up with contributions (Section 4). This came after a Health Vouchers programme introduced in 2013 and legislation passed in 2014 failed to adequately solve the issue. The 2016 legislation was a major step to ensuring that everyone is covered for publicly provided services. There is, however, still a difference in the levels of access: those who are covered by the legislation are only able to access health care in public facilities, while services such as diagnostics are to a large extent provided by private providers contracted by EOPYY, and are available to the insured population on a cost-sharing basis. In addition, some vulnerable groups still face further barriers to accessing services – for example, the Roma ethnic minority, irregular migrants and asylum seekers (until they receive refugee status), and homeless people.

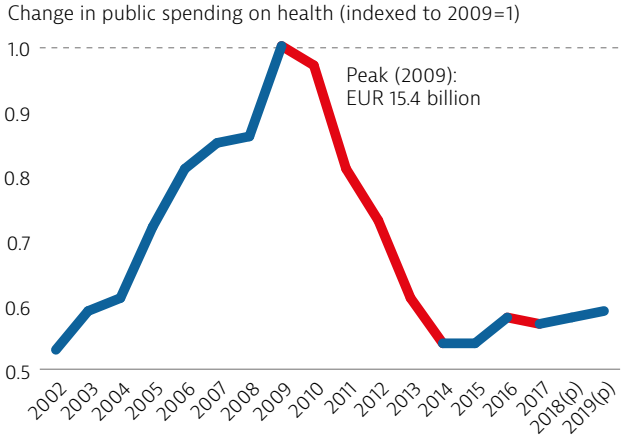
5.3. Resilience[7]

Public spending continues to be shaped by fiscal constraints

Prior to the economic crisis, the Greek health system was fragmented and poorly governed. Severe inefficiencies and supply-induced demand were the driving forces of sub-optimal performance. Greece's EAP, which it exited in August 2018, implemented a series of policies to contain costs and reduce wasteful spending. The government maintained a ceiling on public spending on health at 6 % of GDP and applied expenditure reductions across the health sector. As a result, public spending on health per person decreased considerably – from EUR 1 388 in 2009 to EUR 820 per person in 2017. More recently, in absolute terms, after receiving a boost in 2016 to increase public spending to EUR 9 billion, subsequent growth has flattened and the government budget for health in 2019 is estimated to be around EUR 9.1 billion (Figure 17), or just under 5 % of GDP. In addition, the automatic clawbacks introduced to reduce supply-induced demand (see Section 4), add a further 1 % of GDP to the public resources available for health care annually.

This fiscal context is important as Greece's continuing obligations following its exit from the EAP require it to maintain a budget surplus of 3.5 % at least until 2022. This means that growth in public spending on health will likely remain bound by fiscal constraints. This may mean that OOP spending is unlikely to drop in the short term.

Figure 17. Post-crisis growth in health spending in Greece is very slow



Note: Blue = positive growth, red = reductions in growth; (p) – provisional figure.
Sources: OECD Statistics (2019) for 2002–17; Ministry of Finance of the Hellenic Republic (2018) for 2018 and 2019.

Easing the freeze on recruitment can help primary care expansion

The crisis resulted in a wave of emigration of health workers from Greece, as more than 1 000 doctors annually applied to practise in other EU countries between 2011 and 2016. The freeze on hiring personnel, imposed as part of fiscal consolidation measures, stipulated that only one new person could be recruited for every five that departed and led to widespread staff shortages. This policy was relaxed in February 2019, and the current recruitment to departure ratio is 1:1. This measure will allow the planned hiring of 10 000 health professionals (4 000 doctors and 6 000 nurses) over the next four years to fill shortages not only in the rapidly growing primary care sector but also in intensive care, emergency facilities, oncology departments, diagnostic centres

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

and mental health facilities. Sourcing such a large number of doctors and nurses will be a challenge given the length of training required, the need to entice doctors to switch from working in the private sector to public facilities, and the constraints on securing sufficient funding.

Cost ceilings, clawbacks and rebates mean less is spent by the state on pharmaceuticals and services

Reducing public spending, including through expenditure ceilings, clawbacks and rebates for services delivered through contracted providers and pharmaceuticals, was a key focus of the EAP. In 2010, public expenditure on outpatient pharmaceuticals reached EUR 4.8 billion and, as a share of GDP, was the highest in the EU. It then dropped spectacularly – at a rate exceeding EUR 700 million a year, to EUR 2 billion in 2014, and has since remained stable and more in line with the EU average. This is due to the introduction of the hard expenditure ceilings (EUR 1.95 billion in 2016-18). Exceeding these limits triggers clawback mechanisms from pharmaceutical companies to even out the difference.

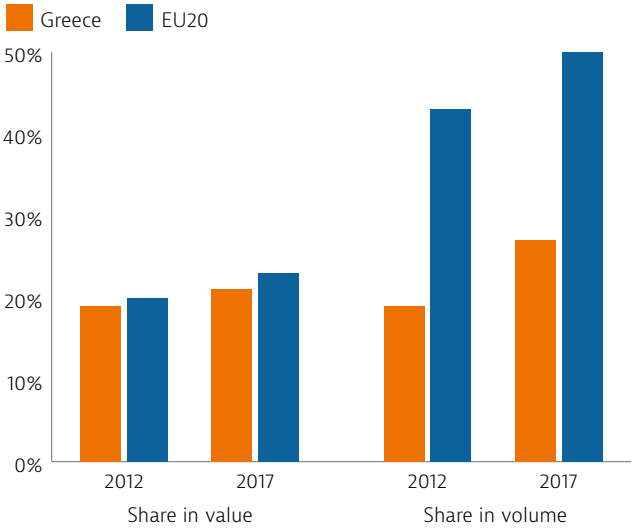
Pharmaceutical spending and patient consumption of reimbursed medicines still regularly exceeds the ceiling by about a third, as the total clawback and rebate value for outpatient and inpatient pharmaceuticals amounted to EUR 1.2 billion in 2017 (IOBE, 2017). Other measures, such as major reductions in the wholesale price of medicines based on reference pricing, ePrescribing by International Nonproprietary Names (INN), generic substitution by pharmacists, modification of user charges and, to some extent, attempts to curb consumption have been implemented to rationalise pharmaceutical spending. Greece is also part of the 'Valletta Declaration', an alliance of southern EU member states, which aims to explore strategies to jointly negotiate prices with the pharma industry.

Promoting generics and Health Technology Assessment are key efficiency-enhancing policies

To increase the share of generics, a target of 60 % was introduced in 2017 on the share of INN prescriptions for outpatient medicines. While this is in line with the EU average, in 2017, regardless of the numerous measures to support generic penetration, the share (in volume) in Greece was 27 % (up from 18.5 % in 2012) – still among the lowest in the EU (Figure 18).

In a welcome new effort designed to enhance the efficiency of the health system, Greece established its new HTA body in 2018, further strengthening its HTA activities. The agency is responsible for revising the list of reimbursable medicines, as well as deciding on new inclusions.

Figure 18. The share of generics is growing, but volumes are the lowest in the EU



Note: EU20 estimated average.
Source: OECD Health Statistics 2019.

A new case-based payment system for hospitals is on the way

In hospital financing, Greece's first EAP set out requirements to replace per-diem payments with prospective case-based ones within a year in order to increase efficiency and improve resource allocation. Initial attempts since 2011 to implement payments by diagnostic-related groups (DRGs) required multiple revisions in order to adjust them adequately for real costs. The first full version of the Greek DRGs is expected to be prepared over 2019, along with a road map for a full rollout over the next five years.

Strong primary care is a precondition for an efficient health system

Historically, the health system has been reliant on hospital care and specialist care to the detriment of comprehensive primary care. In 2017, after a number of unsuccessful attempts, the focus of primary care reform shifted to providing access to essential, quality services in the short-term. Building a strong primary care system with an effective gatekeeping function is the longer-term goal. Infrastructure and workforce are now being put in place to strengthen prevention services and treat patients in more appropriate settings (Box 4).

Figure 19 shows how European Social Fund (ESF) support for primary care reform was distributed in the first six months of 2018, taking into account regional needs. While it is too early to evaluate results as the system is still being rolled out, the current initiative could improve efficiency in the entire system – subject to continuous investment in primary care (Council of the European Union, 2019) and the appropriate skill mix of sufficient staff.

A multitude of changes calls for overarching strategic direction

The capacity to monitor various parts of health system performance in Greece has been strengthened in recent years. Multiple instruments and reporting requirements on EAP-mandated reforms have improved transparency and accountability in areas such as pharmaceutical and hospital procurement. Nevertheless, Greece still lags behind many European countries in other areas, including patient involvement and the monitoring of health system-related outcomes.

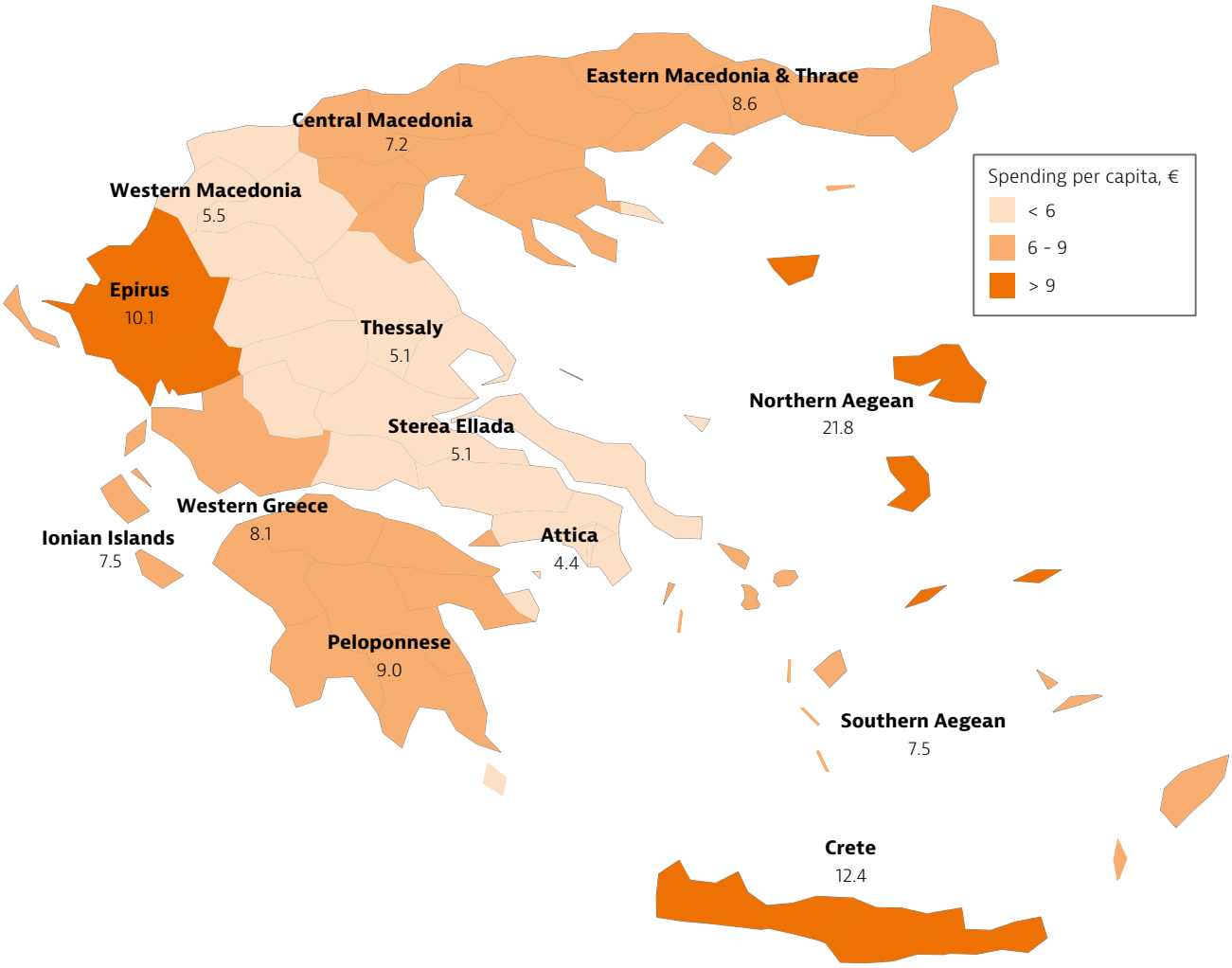
Another area that merits more attention is strategic planning. Major reforms have been occurring in the health system in a relatively short space of time, and an overarching high-level plan would allow the architects of future reforms to take stock of achievements made so far and build on them effectively. Governance also could be strengthened through clearer definition of strategic, evidence-based objectives and improved technical expertise (European Commission, 2019b). A comprehensive national plan would take account of current and future population health needs, outline strategies for adequate resource allocation and distribution across the country, and enable continuous monitoring of changes and their effects.

Box 4. Progress has been made on implementing primary care reforms

Since 2017, regional authorities have been granted wider responsibilities and funding to implement the primary care reform, deliver care, and build capacity within the primary care network. In the summer of 2019, over half (127) out of the 239 planned local health units were operational across the country and covered 2 million residents, a fifth of the whole population. This is close to the maximum capacity threshold of the current stock of public-sector GPs.

Further progress on expanding the number of doctors engaged in primary care units is expected to be slow, as many GPs working in the private sector find the contractual conditions within EOPYY to be less favourable (European Commission, 2019a).

Figure 19. European Social Fund investment for primary care in 2018 takes into account regional population needs



Note: Regional per capita ESF funding for the development of primary care network in the first six months of 2018.
Source: WHO Regional Office for Europe (2019a).

6 Key findings

- The Greek population enjoys a relatively high life expectancy at birth, but the lead over the EU average has narrowed over the past decade. Cardiovascular diseases continue to be the leading causes of death; however, mortality from diabetes, some cancers, respiratory and kidney diseases have increased. As in many other EU Member States, the prevalence of risk factors such as smoking and obesity is much higher in people with lower education, which contributes to a wide socioeconomic divide in population health.

- Since 2010, efforts started under the Economic Adjustment Programme have been consolidated. Greece is implementing an ambitious set of reforms to improve health system efficiency and reduce waste. Issues like fragmentation of benefits and coverage, excessive pharmaceutical spending, inefficient procurement and weak primary care have been, or are in the process of being, addressed. Others, such as prevention, patient and citizen engagement, and meaningful accountability and transparency mechanisms, have been targeted by specific measures, but additional efforts are needed. Tackling residue supplier-induced demand for some health services and inefficient spending remain concrete objectives.

- Despite the end of its Economic Adjustment Programme in August 2018, Greece's economic indicators remain under the close supervision of the EU and health spending will likely remain bound by fiscal constraints. Nevertheless, the fall in public spending on health halted in 2015 and has since stabilised. Moreover, due to the clawbacks in place, the value of publicly financed health care is higher than the level of public spending on health by about 1 % of GDP. Private spending on health, mainly in the form of household payments, is still very high, and results in a third of health care being paid out of pocket.

- Crucial legislation in 2016 succeeded in re-establishing coverage for the two million people who lost health insurance during the crisis. In addition, coverage was expanded to previously uncovered groups such as refugees, so the health system now offers universal coverage. As a result, unmet needs for health care decreased in 2017, particularly among the poorest. However, factors such as formal and informal user charges, thresholds on reimbursed services, and uneven availability of physical and human resources still contribute to the high levels of self-reported unmet needs.

- Existing financial protection measures mainly focus on pharmaceuticals. For example, there are exemptions from user-fees on medicines for people with certain conditions or on low incomes. Despite these, one in ten households experience catastrophic payments for health care, which is among the highest levels in the EU.

- The roll-out of primary care since 2017 has proceeded at a relatively good pace, with just over half (127) of the planned primary care units operating in the summer of 2019. These now cover about a fifth of the population, providing much needed preventive, primary care and some specialist services, particularly in rural areas. Further progress on this major strengthening of primary care depends largely on the availability of doctors – as the number of general practitioners is reaching the full capacity threshold and many doctors working in the private sector are reluctant to sign up. Adequate funding is also a pre-requisite.

- Organisational and operational improvements rely on strengthened governance and appropriate resourcing of policy priorities. Greece would benefit from an overarching and comprehensive reform plan that takes into account health system performance, population needs and provides for adequate planning and distribution of services.

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Country abbreviations

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

European Commission

State of Health in the EU
Country Health Profile 2019

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

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

Each country profile provides a short synthesis of:

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

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

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

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