



# State of Health in the EU Greece

## Country Health Profile 2017

## 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/10.1787/888933593570>

## Demographic and socioeconomic context in Greece, 2015

	Greece	EU
Demographic factors	Population size (thousands)	10 821
	Share of population over age 65 (%)	20.9
	Fertility rate <sup>1</sup>	1.3
Socioeconomic factors	GDP per capita (EUR PPP <sup>2</sup> )	19 700
	Relative poverty rate <sup>3</sup> (%)	15.0
	Unemployment rate (%)	24.9

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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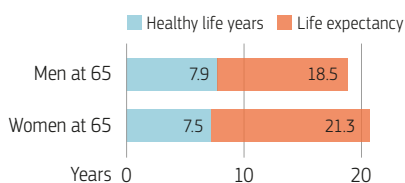
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# 1 Highlights

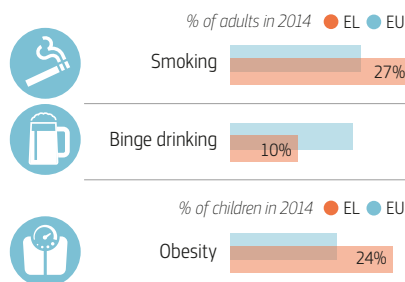
The health status of the Greek population has improved steadily over recent decades but the full impacts of the economic crisis on society and health will take some years to manifest themselves. Important changes to the health system have occurred as a result of the country's Economic Adjustment Programme but, despite plans to transfer more powers to regional health authorities the health system remains highly centralised.

## Health status



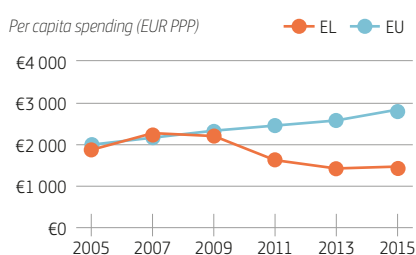
At 81.5 years, life expectancy is above the EU average but after age 65, two-thirds of these years are spent with disability. There is a persistent gender gap in life expectancy of five years between women and men, as well as social inequality, with a four-year difference according to educational attainment. Ischaemic heart disease, stroke and lung cancer continue to have a major impact on mortality, but transport accident deaths have fallen sharply.

## Risk factors



In 2014, 27% of adults smoked tobacco every day, significantly down from 40% in 2008 but still the second highest of EU Member States. In contrast, alcohol consumption per adult has declined and is considerably below the EU average, as is binge drinking. While obesity rates among adults (17%) are only slightly higher than the EU average, almost a quarter of 15-year-olds are overweight or obese, the second highest rate among EU countries.

## Health system

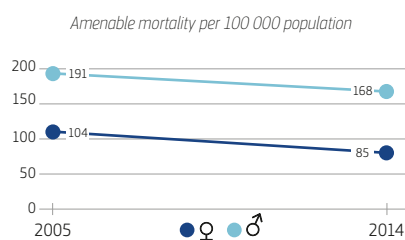


Greece spends EUR 1 650 per capita on health care, over one-third less than the EU average. This is 8.4% of GDP but, in the context of a shrinking economy, health spending has declined significantly since 2009. Public expenditure on health is one area being contained as part of fiscal sustainability measures. Currently, 59% of health spending is publicly funded while out-of-pocket spending (35%) is more than double the EU average.

## Health system performance

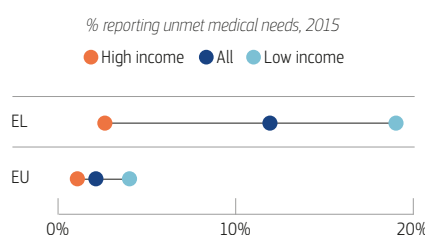
### Effectiveness

While amenable mortality has fallen slowly over the last decade the rate for men is nearly twice as high as for women. The primary care system is currently not geared towards health promotion or preventive activities.



### Access

Access to health care presents some challenges in terms of the availability of services and their affordability, leading to high levels of reported unmet need for medical care, particularly among low income groups.



### Resilience

There is sustained pressure on health system finances. Since 2010, policies have focused on cost containment and improving efficiency, particularly in the pharmaceutical and hospital sectors. Greater transparency and accountability have also been emphasised.



## 2 Health in Greece

### Life expectancy at birth has increased steadily but the time spent in good health is declining

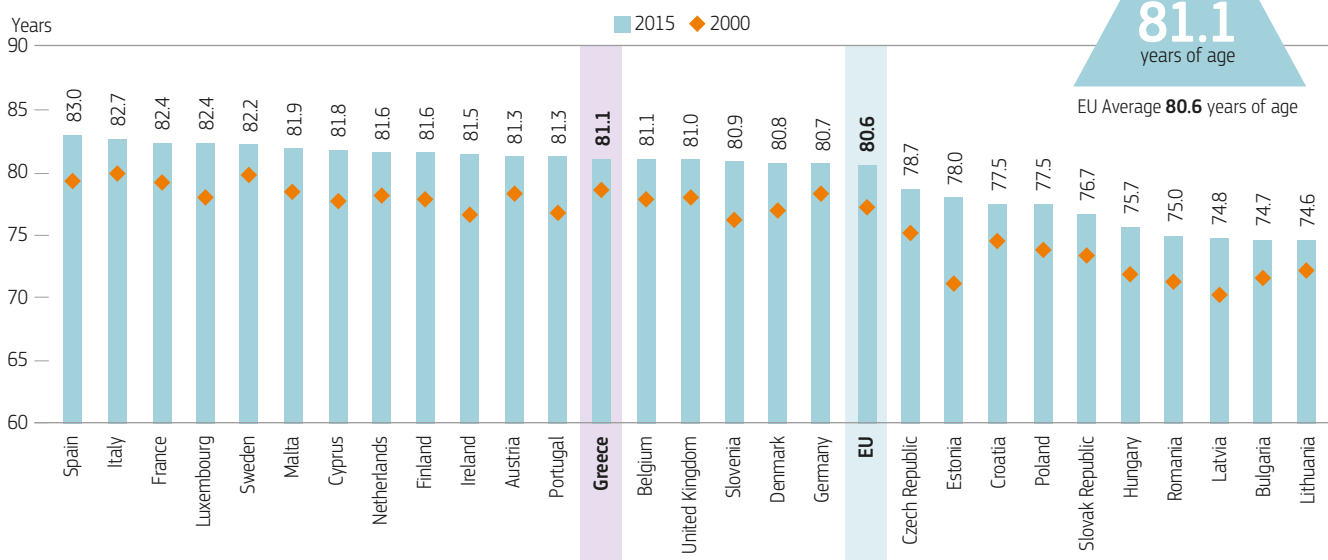
In 2015, life expectancy at birth reached 81.1 years in Greece, just above the EU average (Figure 1). As in other EU countries, there continues to be a substantial gender gap, with women living on average five years more than men (84 years versus 79). At the same time, there is a four-year gap in life expectancy between people with lower and higher educational attainment.<sup>1</sup>

Although most life expectancy gains were in people aged over 65, the proportion of time spent in good health is falling. In line with the EU average, at age 65 Greek women can expect to live a further 21.3 years but only about one-third of these will be free of disability. Similarly, men can expect to live around 40% of their remaining 18.5 years in good health.<sup>2</sup>

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).

2. These are based on the indicator of 'healthy life years', which measures the number of years that people can expect to live free of disability at different ages.

**Figure 1. The growth in life expectancy at birth has slowed but remains above the EU average**



Source: Eurostat Database.

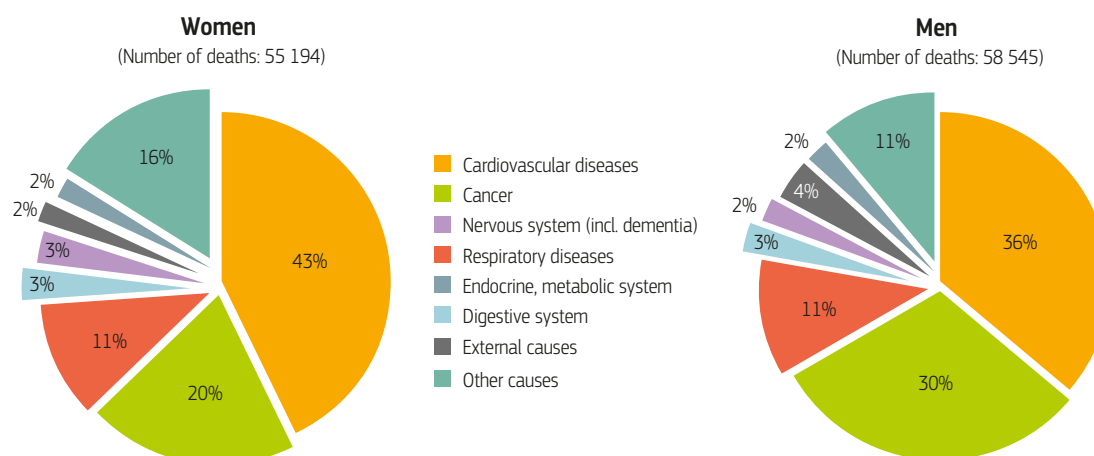
### Cardiovascular diseases and cancer are the main causes of death

Despite a decrease of 14% in the number of deaths since 2000, cardiovascular diseases remain the number one cause of death, accounting for two-fifths of all deaths among women and around one-third among men (Figure 2). Among the total 45 000 deaths in this category, stroke, ischaemic and other heart diseases continue to have the largest impact on overall mortality (Figure 3).

Cancer is the second leading cause of death, accounting for 20% of deaths among women and 30% among men, some 29 000 deaths. The overall cancer rate has not changed substantially since 2000 but results for individual cancers tell a more nuanced story. Lung cancer is the leading cause of cancer mortality, with

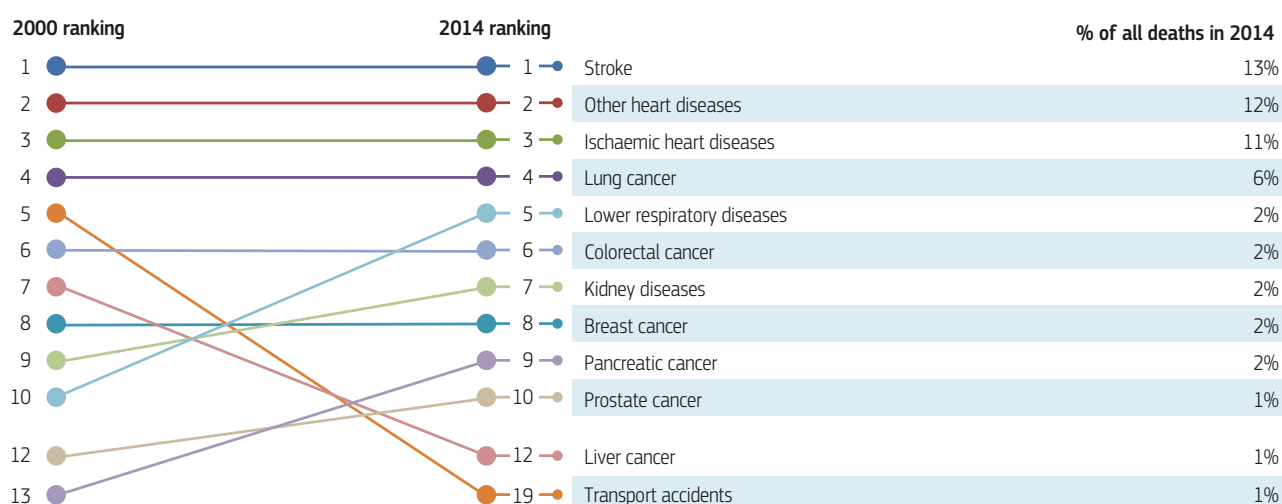
the rate for men five times higher than for women and a 27% increase in the total number of deaths between 2000 and 2014. Rates for several other types of cancer have remained steady, but with increases in the absolute number of deaths reflecting population ageing: colorectal cancer (up 51%), breast cancer (up 25%), pancreatic cancer (up 55%) and prostate cancer (up 35%).

Following the economic crisis, there has been a notable increase in deaths from suicide (from an average of 362 per year in 2000–08 to 475 in 2009–14). On the other hand, there has been a substantial (38%) reduction in the number of deaths related to road traffic accidents since 2009, even though they are still among the highest rates in the EU (Section 5.1).

**Figure 2. Cardiovascular diseases and cancer cause the majority of deaths for both men and women**

**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 four most common causes of death are unchanged but transport accidents have fallen sharply**

**Source:** Eurostat Database.

## Chronic conditions are leading determinants of disability-adjusted life years

The leading determinants of disability-adjusted life years<sup>3</sup> (DALYs), taking into account both the burden of mortality and morbidity, are ischaemic heart diseases, followed by musculoskeletal disorders (including low back and neck pain), and lung cancer. The disability burden of Alzheimer's disease and other dementias has also increased sharply since 2000, with associated DALYs up by more than 50% (IHME, 2016).

Based on self-reported data from the European Health Interview Survey (EHIS), one in five people in Greece live with hypertension, one in ten live with diabetes, and almost one in twenty live with asthma. Wide inequalities exist in the prevalence of these chronic

diseases by level of education. People with the lowest level of education are far more likely to live with chronic disease than those with the highest level of education, such as diabetes (four times), hypertension and chronic depression (three times), and asthma or other chronic respiratory diseases (more than twice as likely).<sup>4</sup> Hepatitis B and Hepatitis C are also emerging problems, with high prevalence of infection in the general population (ECDC, 2016; see also Section 5.1).

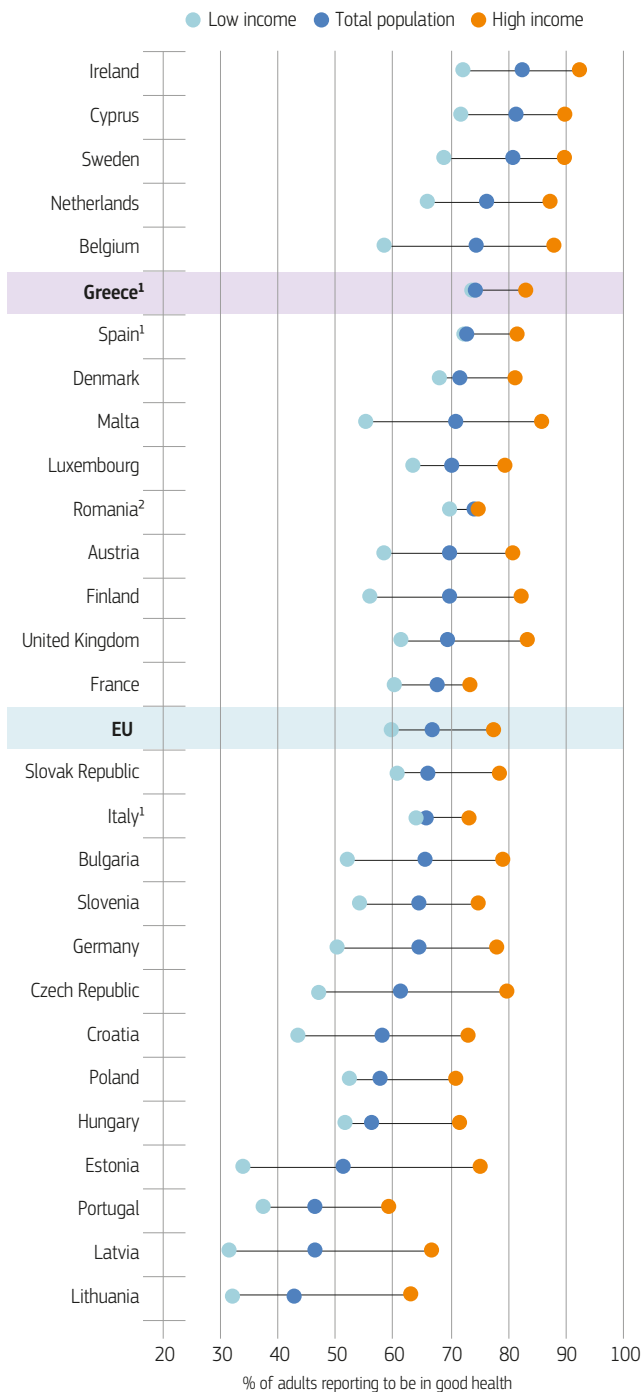
3. DALY is an indicator used to estimate the total number of years lost due to specific diseases and risk factors. One DALY equals one year of healthy life lost (IHME).

4. 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 socio-economic disparities.

## Self-reported good health has declined over the past decade but only slightly

Close to three-quarters of people in Greece (74%) report being in good health, a proportion that is higher than in most other EU countries (Figure 4), but slightly down from 10 years ago (77% in 2005).

**Figure 4. A majority of the Greek population report that they are in good health**



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

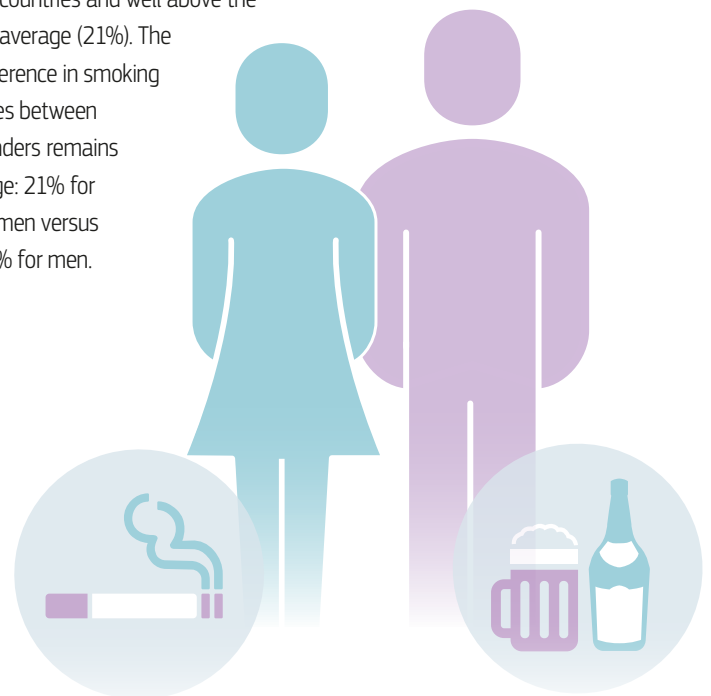
### Diet and alcohol consumption are good but behavioural factors contribute markedly to poor health

The relatively good health status of the population in Greece is historically linked to a number of factors, including healthier diet and lower alcohol consumption. Nonetheless, based on Institute for Health Metrics and Evaluation estimations, 30% of Greece's overall burden of disease in 2015 (measured in terms of DALYs) can be attributed to behavioural risk factors, notably smoking, but more recently also to dietary risks and physical inactivity (IHME, 2016).

A 2008 National Action Plan for Public Health, targeted these areas but was not implemented (see Section 5.1). Moreover, since the onset of the economic crisis the socioeconomic context in Greece has changed, with an increasing risk of poverty, high unemployment rates and household budgets under considerable pressure (see Section 5.2). These factors are already having an impact on people's health behaviours and health status (Filippidis et al. 2017).

### Smoking remains a major public health issue in Greece

Although smoking rates are declining, over one in four adults reported smoking every day in 2014, the second highest among EU countries and well above the EU average (21%). The difference in smoking rates between genders remains large: 21% for women versus 34% for men.



Moreover, one in six 15-year-old boys (16%) and one in eight 15-year-old girls (13%) are also regular smokers. To date, the ban on smoking in public places has been poorly enforced and has not been very effective in tackling smoking rates (Section 5.1).

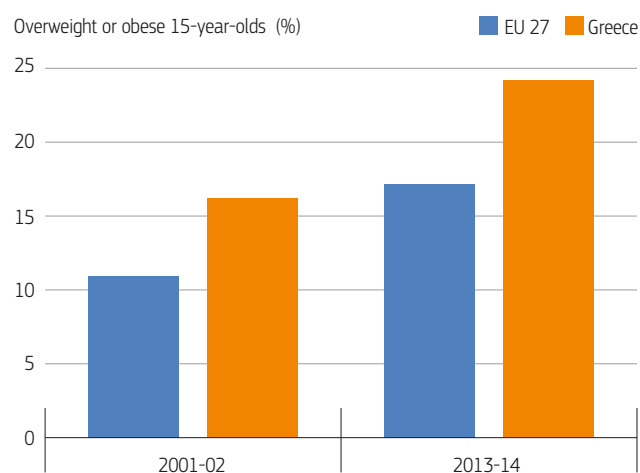
## Alcohol consumption is one of the lowest in the EU

In contrast, alcohol consumption in Greece, whether measured in terms of total alcohol consumed or the percentage of adults reporting heavy episodic drinking (binge drinking),<sup>5</sup> is quite low compared to most other EU countries (see also Figure 5). Overall, adults consumed about 7.5 litres of alcohol in 2014, 2.5 litres less than the EU average and the second lowest among Member States. The percentage of Greek adults who reported heavy episodic drinking in 2014 was the fifth lowest of all EU countries (10% compared with an EU average of 20%).

## Overweight and obesity rates are very high for children, particularly boys

More than one in six adults in Greece (17%) were obese in 2014, a slightly higher proportion than the EU average (15%). Substantial disparities exist according to level of education: people with no more than a lower level secondary education are almost twice as likely to be obese than those with a university

**Figure 6. Obesity rates among children have grown by 50% in a decade**

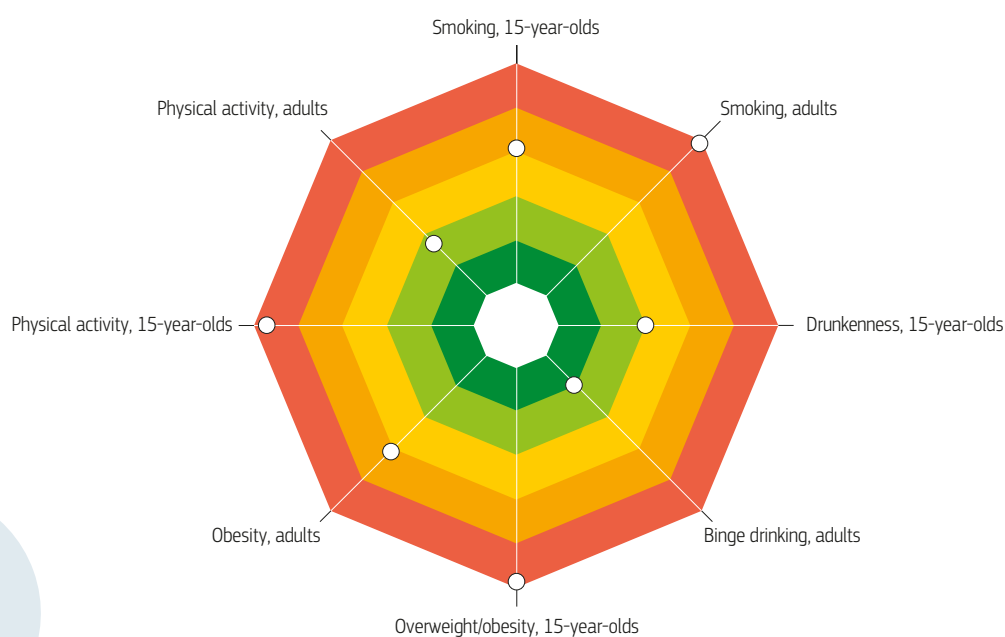


Source: HBSC survey 2013–14.

education (22% versus 13%). Overweight and obesity problems among children and adolescents have also been growing and were the second highest in the EU after Malta in 2013–14.

Almost one in four 15-year-olds (24%) were overweight or obese (Figure 6), with the rate being twice as high among boys (32%) than girls (16%). Greek adolescents also perform poorly in terms of doing regular physical activity.

**Figure 5. Smoking and being overweight or obese are major public health issues 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.

**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).

5. 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

### Wide-ranging changes were triggered by the economic crisis

The Greek health care system is a mixed system, combining Social Health Insurance (SHI) and central financing of the National Health System (NHS). Considerable structural and efficiency-oriented reforms have been initiated since 2010, many in response to the country's Economic Adjustment Programme (EAP). In a major reform, the National Organisation for the Provision of Health Services (known as EOPYY) was created in 2011 by merging the health branches of the major (occupation-based) social security funds, and it now acts as the main purchaser of health services. However, plans to transfer more powers to regional health authorities have had less impact and the health sector remains highly centralised.

### Health expenditure has declined in recent years

The profound and lasting economic crisis continues to impact on the health system. Greece spent 8.4% of GDP on health in 2015 but in the context of drastically shrinking GDP, health spending has actually been declining. Per capita spending has fallen since 2009, when it was EUR 2 287, to EUR 1 650 in 2015 (adjusted for differences in purchasing power), a 28% reduction that puts Greece significantly below the EU average (Figure 7).

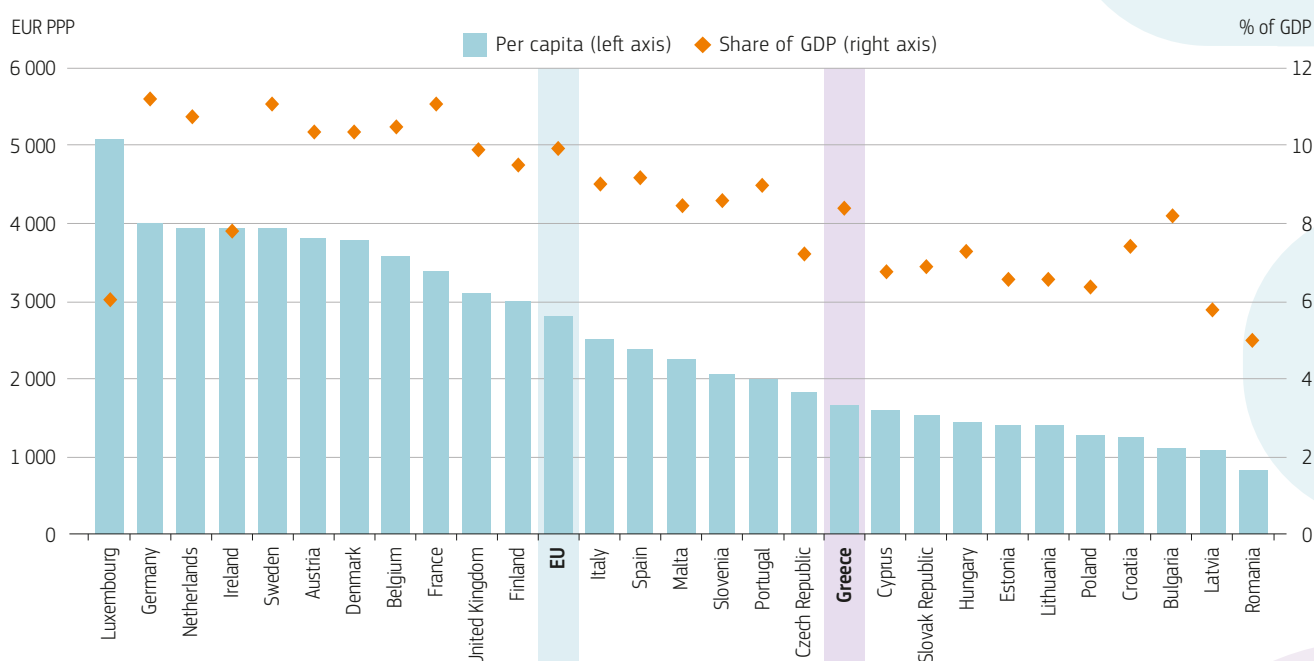
Although historically, public expenditure on health in Greece never exceeded the EU average, the crisis has had a significant impact. With the aim of achieving a more efficient use of public resources, a ceiling of 6% of GDP was set in the first EAP in order to reduce overall public sector spending. It was removed as an explicit target in subsequent EAPs but continues to shape fiscal sustainability measures. Public expenditure on health stands at 5% of GDP, compared to an EU average of 7.2% and accounts for just 59% of total health spending, the fourth lowest among Member States (see also Figure 12).

### High out-of-pocket spending is a feature of the health system

Coverage used to be mainly linked to employment status through SHI for employees and their families. However, since 2016,<sup>6</sup> coverage has become universal thanks to legislation to ensure that all Greek citizens, including those who had fallen out of insurance coverage through unemployment or inability to keep up contributions, can again access the health benefits package.

6. In 2014, universal access to health care was established by law. All Greek citizens were given the right to primary care, including diagnostic tests. Later legislation established free access to hospital care in the network of NHS public health care facilities and rights to pharmaceutical care for the uninsured, with the same conditions and co-payments as the insured. However, several administrative hurdles weakened these measures considerably and necessitated new action in 2016.

**Figure 7. Greece spends under two-thirds of the EU average on health care**



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



Nevertheless, loss of eligibility and coverage from 2009 through to 2016, due to an increase in long-term unemployment, is likely to have contributed to growing rates of unmet need (Section 5.2).

High private spending on health, primarily in the form of out-of-pocket payments, has always been a marked feature of the Greek health care system and continues to rise. In 2015 out-of-pocket payments comprised over one-third (35%) of total health spending, more than double the EU average (15%) and the fourth highest among Member States. The bulk of direct out-of-pocket payments (90%) are for privately purchased services rather than co-payments (see Section 5.2). Of this private expenditure, nearly one-third, is made up of informal payments, paid mainly to surgeons to bypass waiting lists and secure what is perceived to be 'better care'.

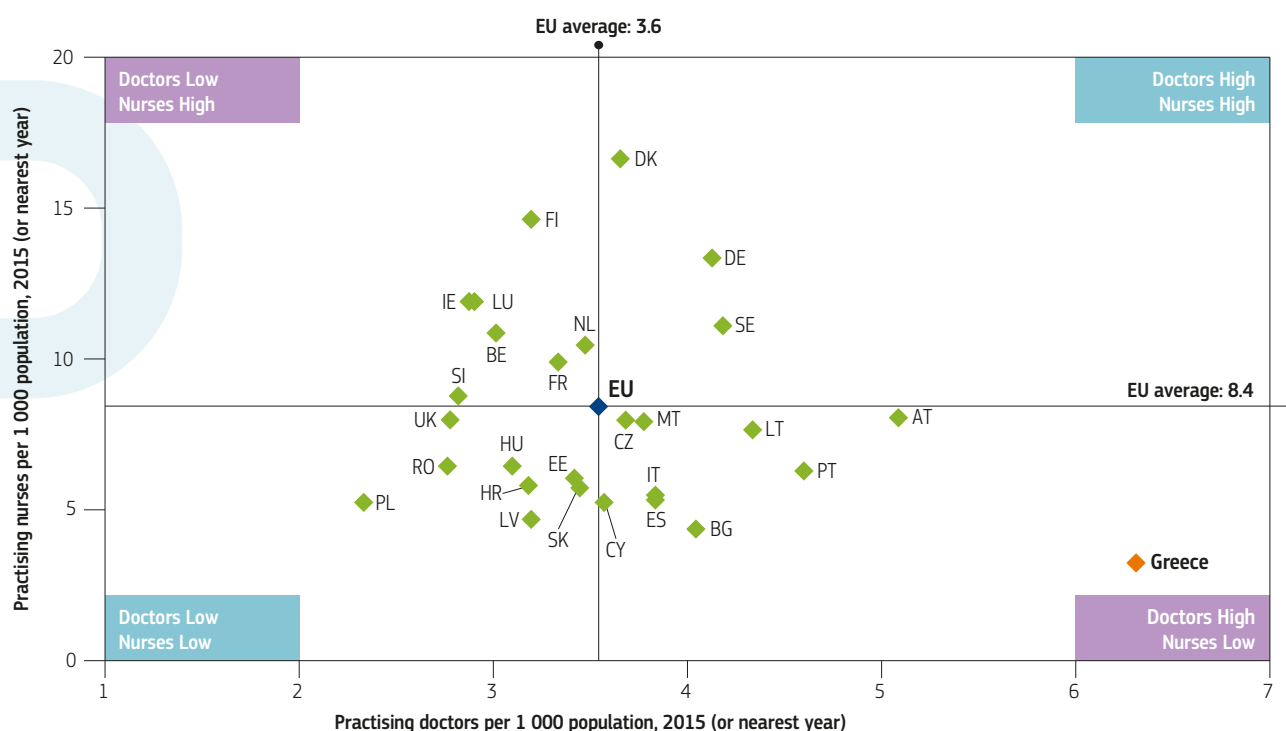
### Health resources and staff are unevenly distributed across the country

Physical resources in Greece are split between public hospitals and health care centres, and private hospitals, clinics and diagnostic centres. Over half of the country's 283 hospitals (with 35% of total bed capacity and some services reimbursed up to 50%) are for-profit private hospitals, and there are over 3 500 privately run diagnostic centres. Health facilities, staffing and medical equipment are unevenly distributed across the country, with higher

concentrations in urban areas and poorly served rural areas, which contributes to high levels of unmet need for medical care (Section 5.2). For example, the number of acute hospital beds in 2015 (360 per 100 000 population) is not only below the EU average (418) but also shows a three-fold difference between bed numbers in metropolitan Attica and rural central Greece.

A hiring freeze was imposed on public sector employees in 2010 and halted the steady growth in the health care workforce that typified the period prior to the crisis. It has led to a 15% decrease in staff employed in hospitals – despite which, Greece still records by far the highest ratio of doctors to population (6.3 per 1 000) in the EU (although registered doctors include the unemployed; see Section 5.2). The vast majority of physicians are specialists with only a small minority (6%) being GPs or family medicine physicians. In contrast to the number of doctors, the ratio of nurses to population is by far the lowest in the EU (3.2 versus 8.4 per 1 000) (Figure 8).

**Figure 8. Greece faces shortages of nurses but has a disproportionate number of specialist physicians**



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

**Source:** Eurostat Database.

## Efforts focus on establishing a structured primary care system

NHS services are delivered in a mix of public facilities operating in parallel with large numbers of (and different types of) private providers contracted by EOPYY. By far the most pressing need in the health system is to create an effective network of primary care services to meet population needs. Historically, the majority of public health centres, rural surgeries and private doctors' offices have not provided generalist or preventive care or acted as gatekeepers but rather have supplied specialised ambulatory (outpatient) services. There continues to be little coordination between primary care providers and hospital doctors. Moreover, the distribution of public facilities and staff across the country is very uneven. The government response is a new Primary Care Plan, which aims to transform existing facilities. Pilots started in late 2017, with full implementation over three years (Box 1).

### BOX 1. A MAJOR REFORM TO PRIMARY CARE AIMS TO MEET POPULATION NEEDS

The newest Primary Care Plan, launched in 2017, aims to rationalise first-contact primary care services and create a second-tier ambulatory infrastructure. Primary prevention and health promotion activities will also be strengthened. Regional health authorities are expected to coordinate services. There will be a gatekeeping system and patients will be required to register with their local clinic. Clinics will be staffed by multidisciplinary teams, including doctors, nurses and social workers, with a view to establishing better integration of care. The success of the primary care reform hinges on adequate resources, resolving staffing levels and the ability of regional authorities to act as coordinators

## 5 Performance of the health system

### 5.1 EFFECTIVENESS

#### Amenable mortality has fallen overall but with marked differences among men and women

Overall, amenable (treatable) mortality<sup>7</sup> has fallen steadily over the last decade, to reach just below the EU average (125 per 100 000 population versus 126), suggesting health services are having an impact. However, it is still higher than some EU countries and there is a striking disparity in the rate for men and women (Figure 9).

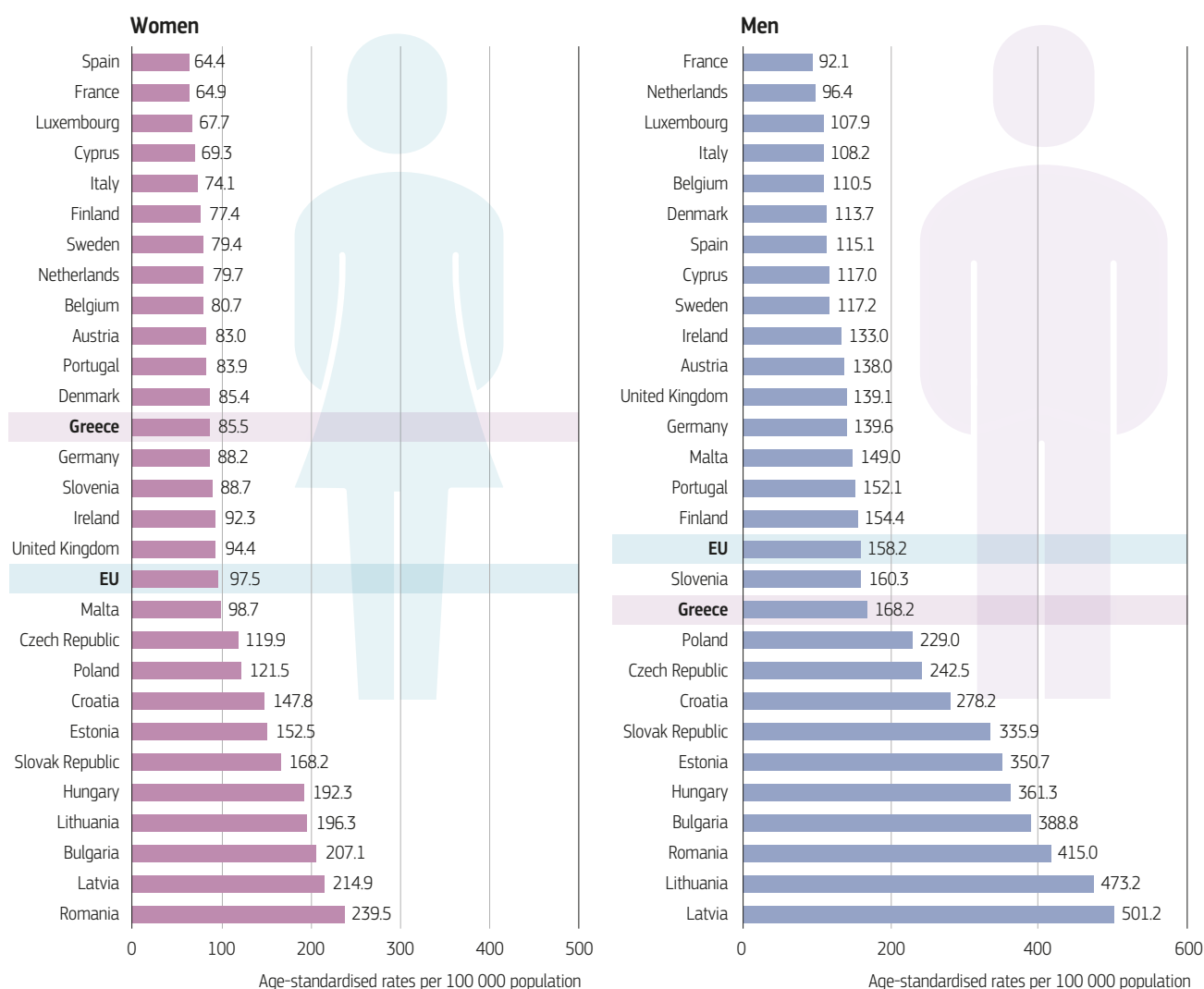
For treatable types of cancer, such as colorectal, breast and prostate cancers, incidence rates are significantly below EU averages (two or three times as low) but the mortality rates are similar. In this respect, it is noteworthy that there are no population-based or systematic cancer screening programmes in Greece, so preventive screening uptake is low, making timely treatment problematic. In addition, the current primary care system is not geared towards health promoting or prevention activities, with great variations in doctors' training and awareness of early detection methods. On the positive side, a new set of diagnostic tests, many used for screening, have recently been added to the list of reimbursable examinations.

7. Amenable mortality refers to premature deaths that could have been avoided through timely and effective health care.

#### Lung cancer is a primary cause of preventable mortality, and public health initiatives are weak

Greece shows a mixed picture in terms of deaths that are preventable through intersectoral policies – driven by high rates of smoking and road fatalities but offset by low levels of alcohol consumption (see Section 3). Lung cancer is the leading cause of cancer mortality in men and the second highest for women after breast cancer. Deaths have increased over the past few years and are now higher than the EU average (62 per 100 000 population versus 54 in 2014). While mortality rates are lower than the EU average for women, the picture for men is quite different, recording significantly higher mortality (110 deaths per 100 000 versus 85 in the EU). Although male smoking rates are higher, the figures may also suggest issues around utilisation of care.

In light of the health threats, Greece passed legislation to ban smoking from the workplace and all public places, including restaurants, bars and clubs in 2010. However, enforcement has been weak and the ban appears to be widely ignored except for on public transport and in medical facilities. Further legislation was passed in 2016 to reinforce the previous law with additional measures on the sale and advertising of tobacco products, but it is too early to assess the effects and certainly renewed efforts to enforce the ban will be needed to impact on health outcomes.

**Figure 9. Amenable mortality for men is twice the rate for women**

Source: Eurostat Database (data refer to 2014).

There are no specific national strategies to address risk factors for associated diseases beyond the basic information campaigns on the dangers of tobacco use and alcohol consumption. More generally, limited attention is given to public health strategies as illustrated by the fact that the first four-year National Action Plan for Public Health, published in 2008 (with its focus on 16 major health hazards), was never implemented.

### Road fatalities are high but falling and alcohol deaths are low

Although high, road fatalities have been decreasing steadily since 2009 (see Section 2) due to better police enforcement of road safety measures, particularly against speeding and drink driving. These efforts have been reinforced by the impact of the economic crisis, which has seen less distance travelled, less speeding and less aggressive driving behaviours. Nonetheless, rates remain relatively high and a National Road Safety Strategic Plan has been

developed, which includes European targets for further reductions in fatalities between 2010 and 2020. However, its supporting coordination instruments have not been fully operationalised (OECD/ITF, 2015). More positively, deaths from alcohol-related causes (5.1 per 100 000 population) are the lowest in the EU, reflecting the generally low levels of alcohol consumption.

### Vaccination coverage is good, albeit with some concerns over reaching specific groups

Childhood vaccination rates at 12 months are above 96%, but some studies point to delays in obtaining boosters. Moreover, adolescent vaccination coverage is not optimal, mainly due to non-compliance with the final booster dose. There are also problems with low coverage of specific groups of the population, such as children in Greek Roma families (Panagiotopoulos et al., 2013). On the other hand, a National Action Plan for Hepatitis C was launched in 2017 to respond to high prevalence rates (Section 2).

## Quality assurance strategies are lacking

Standard indicators to gauge the quality of acute hospital care, such as hospital case-fatality rates for acute myocardial infarction or ischaemic stroke are not available for Greece. Although there are quality committees in public hospitals tasked with promoting improvement in the quality of services, there is no wider public reporting based on a standard set of quality indicators. Some national bodies deal with quality of care, but they focus mainly on regulatory activities rather than pursuing systematic quality assurance programmes.

One area of growing concern is the high rates of hospital-acquired infections. Studies show high rates of device-associated infections in intensive care as well as wide variation among hospitals in the total number of infection cases (ranging from 230 to 450 per month) (Apostoloupoulou et al., 2013; Dedoukou et al., 2011; ECDC, 2017). Greece also posts very high levels of antimicrobial resistance, leading to government action in 2013 (Box 2).

## Primary care does not prevent an over-reliance on specialists and inpatient care

More generally, the system has not been successful in preventing avoidable hospitalisations for conditions that could have been managed in primary care (e.g. for surgical, ENT [ear, nose and throat], ophthalmology, gynaecology and orthopaedic emergency admissions) (Marinos et al., 2009; Vasileiou et al., 2009), underscoring the weakness of the current primary care system. On the other hand, a number of treatment protocols for key chronic diseases have been developed recently.

### BOX 2. ANTIMICROBIAL RESISTANCE IS A MAJOR PUBLIC HEALTH THREAT IN GREECE

The country has some of the highest levels of antibiotic consumption and antimicrobial resistance in the EU. Surveillance data shows that in 2015, 61.9% of *Klebsiella pneumoniae* bloodstream infections were resistant to carbapenems, a major last-line class of antibiotics to treat bacterial infections. This is the highest in the EU/EEA (European Economic Area) and much higher than the EU/EEA median (0.5%) (ECDC, 2017). In 2013, new legislation launched a comprehensive national strategy, which includes the establishment of annual action plans, strengthened mandatory surveillance and training of health care professionals in implementing infection control measures and the proper use of antibiotics. Implementation is ongoing and relies on the availability of adequate resources and growing awareness among health professionals.

## 5.2 ACCESSIBILITY

### Recent legislation fills major coverage gaps and ensures more equitable access

The crisis revealed that (health services) coverage stopped after a maximum of two years for most of those who became unemployed or could no longer afford to make contributions (such as the self-employed). The spiralling unemployment rate (over 25% in 2015) meant loss of coverage was very significant and affected an estimated 2.5 million people (or nearly a quarter of the population), including the dependents of those who were previously insured. Legislative attempts in 2013 and 2014 to address this gap proved unsuccessful, largely due to administrative hurdles. This prompted new legislation in 2016 that now makes access to health care a right for all Greek citizens and provides comprehensive coverage not only to them but also to irregular migrants and refugees (see also Box 3).

The benefits package was standardised when EOPYY was established, thus creating more equitable access to reimbursed health services. Previously, the different occupation-based SHI funds had their own contribution rates and benefits packages, resulting in fragmented and unequal access to services. Today, the public benefits package is relatively broad and dental services have been added under the legislation establishing the new primary care system.

### BOX 3. HEALTH SERVICES ARE DEPLOYED TO MEET THE MIGRANT AND REFUGEE CRISIS

Greece continues to be on the front line, receiving large numbers of migrants and refugees seeking an entry point into the EU. In 2015 alone, the state and non-governmental organisations dealt with approximately 870 000 new arrivals, providing shelter, food and required medical assistance. Greece has been primarily a transit point, but since early 2016, when borders along the Balkan route were closed, more than 62 000 people have been housed in tent camps across the country.

### Unmet need has grown and lower income groups experience greater difficulties accessing care

In Greece, self-reported unmet need for medical care due to cost, distance or waiting times has trebled over the last decade and is now the second highest in the EU (12.3% vs 3.3% EU average). There is enormous variability between the highest income quintile (3.9%) and the lowest (18.7%), highlighting unequal access to services experienced across income groups (Figure 10).

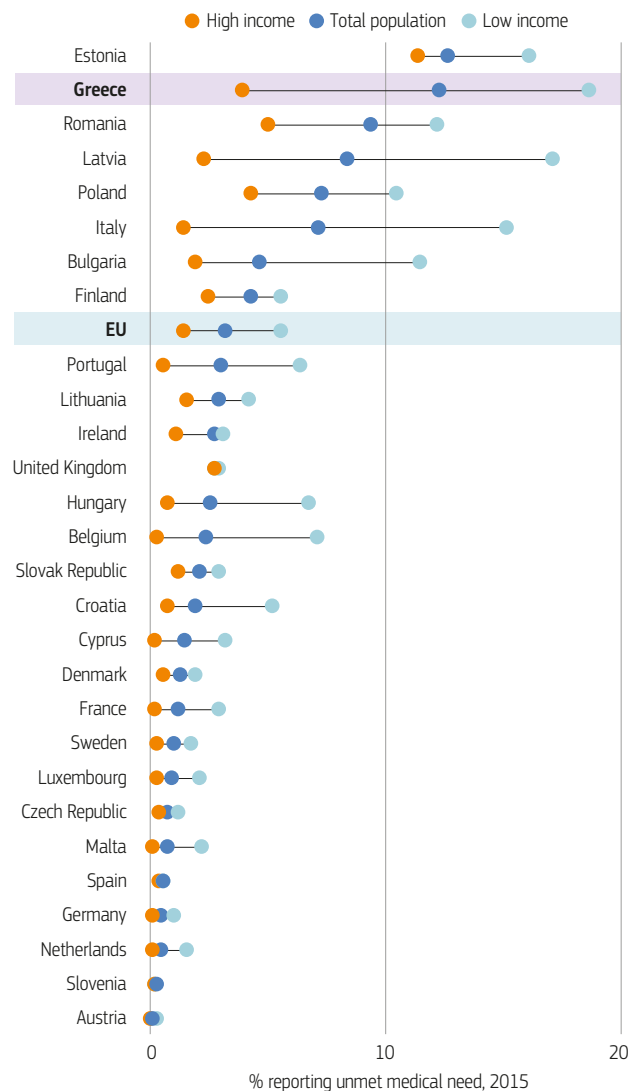
Cost is the most frequently quoted cause for unmet need in Greece and is likely driven not only by difficulties in affordability but also changes in household income and consumption patterns, and user preferences. The percentage of the population reporting unmet health care needs due to high costs more than doubled between 2010 and 2015 (from 4.2% to 10.9%), with very large inequities according to income group (Figure 11). Among the poorest quintile it reached 17.4%, the highest in the EU where the average is just 4.1%.

### Out-of-pocket spending may threaten the affordability of care

Greece has among the highest levels of private spending on health in the EU (Figure 12). Co-payments are levied on (privately provided) diagnostic and laboratory tests, outpatient medicines and for visits to private providers contracted by EOPYY. However, a variety of exemptions apply for certain conditions and vulnerable groups, such as those on low income or suffering from chronic diseases, to ensure that access is protected. Moreover, a co-payment for ambulatory visits (EUR 5) was revoked in 2015 following concerns about its impact on access.

In fact, direct payments, rather than copayments, constitute the highest share of private expenditure on health. There are several reasons for this, including waiting lists for some services; the large difference between official reimbursement rates and the actual fees paid to contracted providers (extra billing); monthly thresholds on the number of physician consultations which may force patients to seek primary care in private settings; fragmented public services; historical oversupply by private physicians (fueled by the lack of gatekeeping); patient visits to ‘afternoon clinics’ in (public) outpatient departments for which they pay a fee out-of-pocket; and, finally, the widespread use of informal payments.

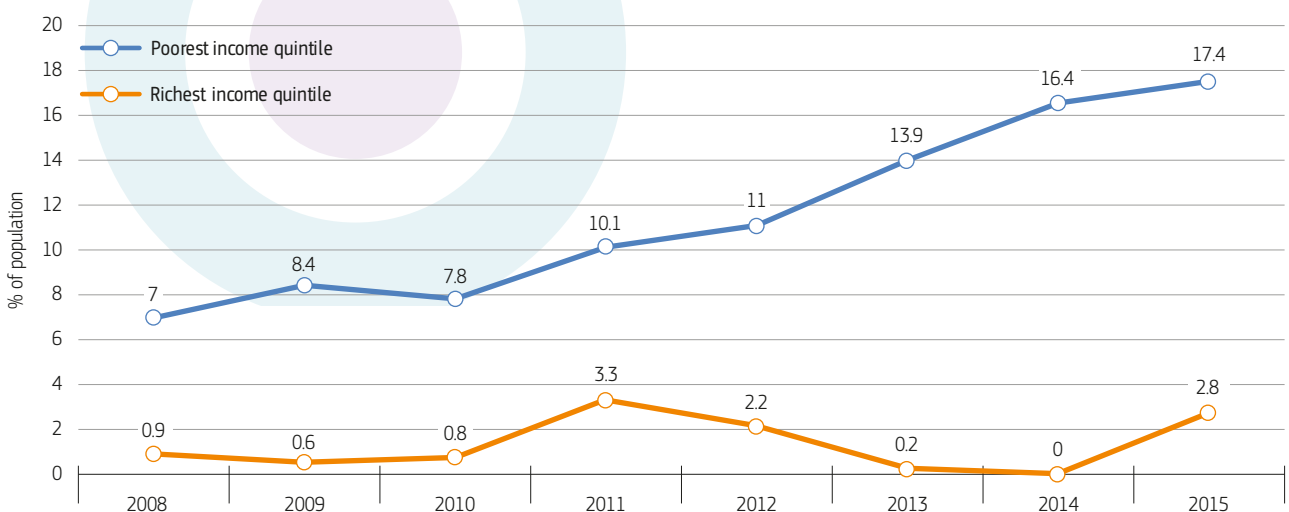
Figure 10. Unmet need for medical care is very high



Note: The data refer to unmet needs for a medical examination 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.

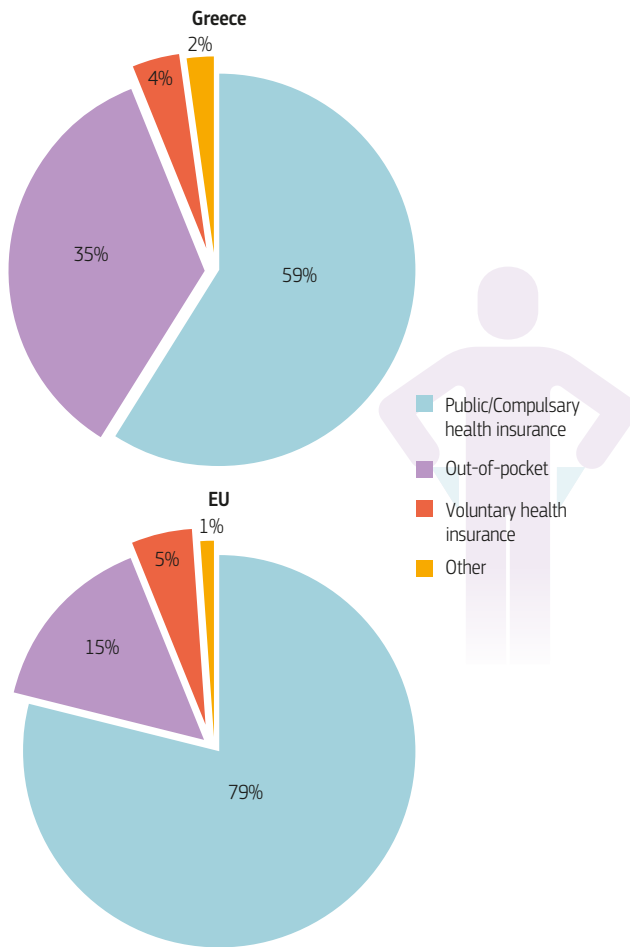
Source: Eurostat Database, based on EU-SILC (data refer to 2015).

Figure 11. There is a growing inequality gap in self-reported unmet need due to cost



Source: Adapted from Karanikolos and Kentikelenis, 2016.

Figure 12. Out-of-pocket spending is very high in Greece



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

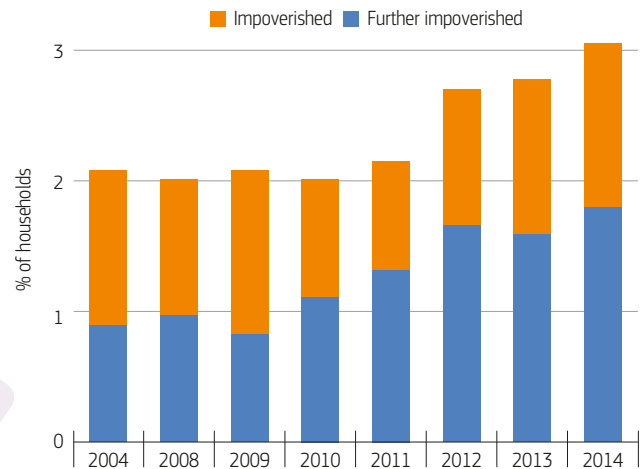
As a share of final household consumption in 2015, out-of-pocket medical spending in Greece reached 4.4%, the third highest among Member States, after Bulgaria and Malta, and almost double the EU average (2.3%). The rate of impoverishment due to out-of-pocket payments has been rising steadily since 2004, and affected 3% of all households in 2014 (Figure 13). According to WHO calculations, in the same year, one in ten households in Greece experienced catastrophic out-of-pocket spending,<sup>8</sup> rising to nearly one in three for the poorest households.

### Geographical inequities pose a challenge to accessibility

Greece faces large geographical inequities in the distribution of doctors (Section 4). Physicians' density in 2014 varied from 2.9 per 1 000 population in Western Macedonia and Central Greece to 8.6 per 1 000 in Attica (ELSTAT, 2016) (Figure 14). Although some (financial) incentives have been offered for doctors practising in rural parts of Greece, these have not been enough to recruit and

8. 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 13. Many more household are falling into poverty due to out-of-pocket payments



Source: Figure based on WHO Regional Office for Europe financial protection metrics.

retain staff in these areas. One innovative project co-financed by the EU, the National Telemedicine Network, harnesses the power of telemedicine to reach patients living in remote areas (Figure 15).

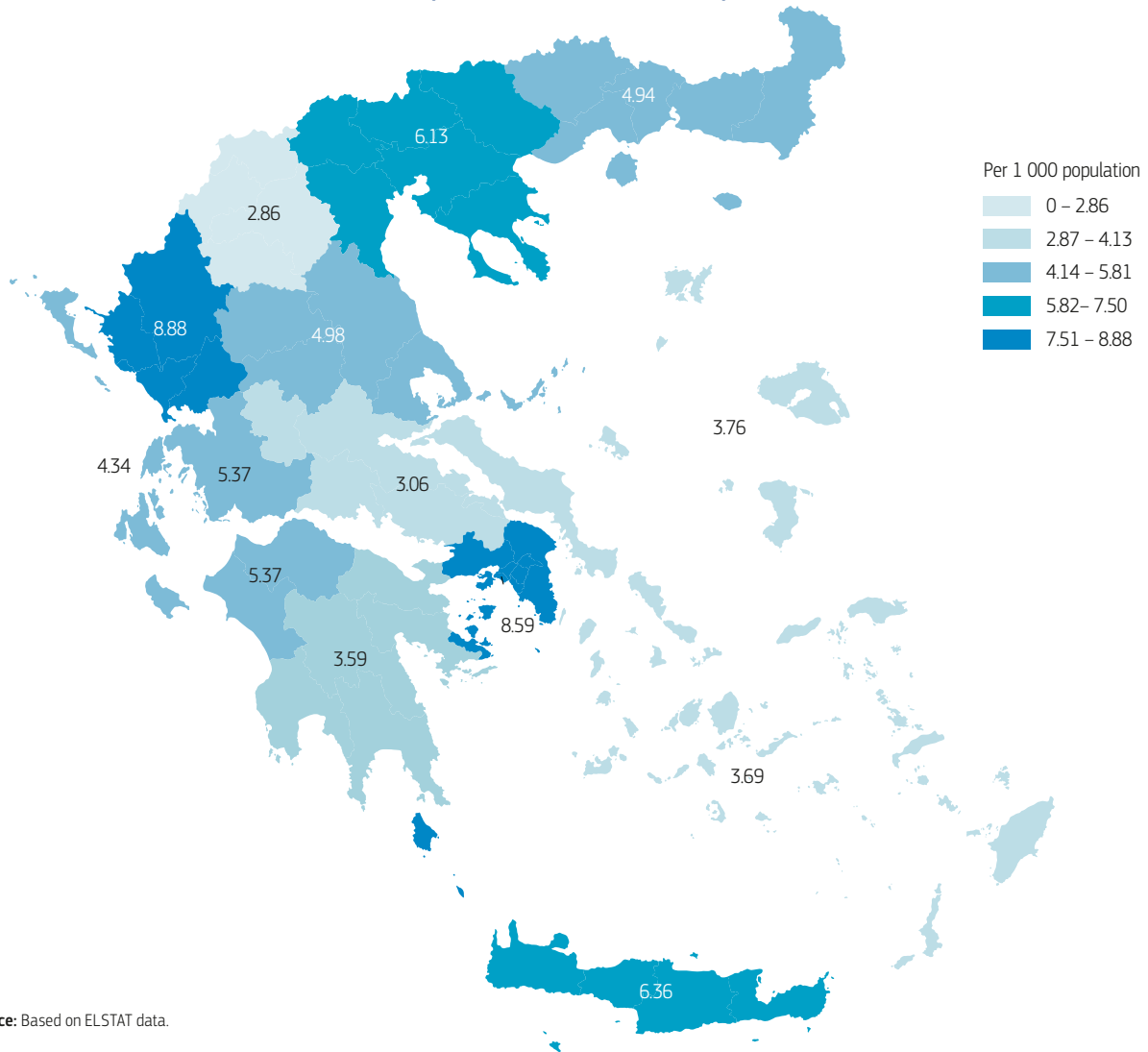
### Staff shortages mainly affect public facilities

Despite the overall oversupply of doctors, public hospitals and certain services are often understaffed or function below their operational capacity (Ifanti et al., 2013; Sakellaropoulos et al., 2012; Clarke, Houliaras and Sotiropoulos, 2016). Moreover, professional bodies estimate that nearly one-quarter of registered doctors are now unemployed and that 7 340 doctors left Greece between 2009 and 2015. The problem is even more pressing with regard to nursing personnel. There have always been shortages of nurses due to low numbers (Section 4) and this is particularly the case for public facilities. The challenge of staffing public facilities adequately is exacerbated by the hiring freeze on all public sector personnel, including health professionals, that has been in place since 2010. In particular, adequate staffing levels will need to be secured in the implementation of the new primary care system (Section 4).

A further element that requires monitoring for its impact on access to publicly funded health care is the system of administrative thresholds on physicians' activity. Historically, supplier-induced demand has been a major problem in the private sector, leading to unnecessary overconsumption of services. In response, limits were put in place on the number of visits an EOPYY-contracted doctor could conduct each month, and on the number of referrals for diagnostic and laboratory tests.<sup>9</sup> They also operate within a monthly ceiling on the value of pharmaceutical prescriptions that doctors can issue (adjusted in line with the speciality, number of patients, region and month of the year).

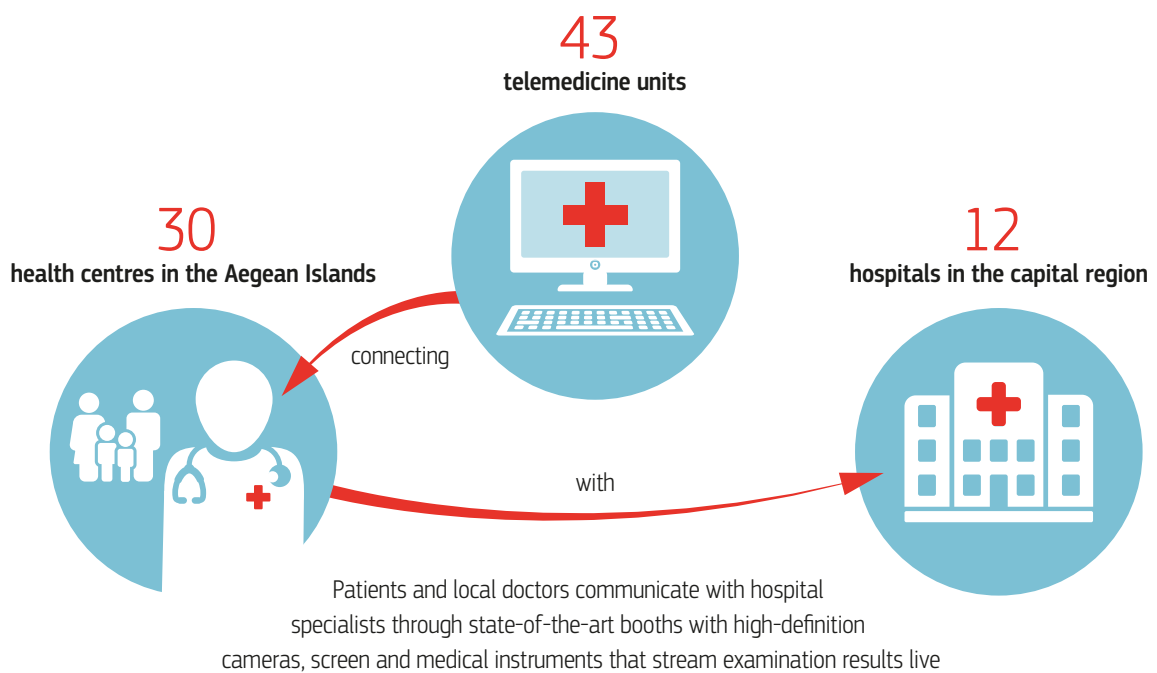
9. Rules on limits have been introduced based on estimated needs and can be exceeded by doctors who deem it necessary if they provide appropriate supporting evidence.

Figure 14. The distribution of doctors is very uneven across the country



Source: Based on ELSTAT data.

Figure 15. The National Telemedicine Network aims to increase access for those in remote locations



### 5.3 RESILIENCE<sup>10</sup>

#### The health system's main funding sources are under considerable pressure

The Greek health system is operating under severe fiscal constraints (Economou et al., 2015). Over recent years it has worked hard to deliver publicly funded services to an ever growing proportion of the population whose household budgets are contracting, making them less able to pay for private services.

The SHI system is a significant co-funder of NHS services (30%). However, its revenues are declining due to high unemployment and rising part-time employment as well as falling wages (and thus contributions). Greece's significant informal economy also means that some of those in work are not paying SHI contributions. At the same time, the NHS budget – the other main public source of health system funding (also 30%) operates within strict limits imposed by the fiscal sustainability targets. There have been across-the-board rationalisations of expenditure in all sectors of the health system and permanent cuts to public sector workers salaries, including those of health professionals, since 2010, in efforts to reduce costs. These pressures, combined with the fact that private spending is already high (Figure 12) and unlikely to be able to stretch further, create tangible concerns over the adequacy of health system funding, especially in the longer term.

#### Pharmaceutical reforms have spearheaded attempts at greater efficiency

Greece's EAP set a series of pharmaceutical expenditure targets to greatly reduce public spending from over EUR 5 billion in 2009 to under EUR 2 billion annually in 2015–17. In response, the sector has seen a number of evidence-based measures aimed at securing savings and enhancing efficiency (Box 4). However, despite the huge reductions, current spending on prescribed and over-the-counter medicines makes up over a quarter (26%) of all health expenditure, and is among the highest in the EU.

#### Reforms to the purchasing of services from private providers are increasing efficiency

Public purchasing of services from private providers (including private clinics and diagnostic centres) has long been problematic in Greece. Before the crisis, high private capacity combined with weak sickness fund bargaining power, poor payment procedures, the lack of clinical protocols/guidelines and a failure to monitor doctors' use of diagnostic tests created an incentive structure conducive to overconsumption and waste. In particular, over-

#### BOX 4. LARGE SAVINGS ARE BEING ACHIEVED THROUGH EVIDENCE-BASED MEASURES

Greece's high pharmaceutical spending has been tackled through:

- Introducing prescription guidelines coupled with a compulsory, country-wide electronic prescription system to monitor doctors' prescribing and pharmacies' dispensing
- Promoting the consumption of generics through compulsory prescribing by active substance, mandatory generic substitution in pharmacies and use of generics in NHS hospitals, although there is scope for much greater public acceptance and penetration of generics
- Establishing a positive list of reimbursable medicines
- Introducing reference pricing for branded drugs based on the three lowest EU prices and setting a maximum pricing level for generics
- Introducing a claw-back mechanism to claim rebates from the pharmaceutical industry should pharmaceutical expenditure exceed pre-agreed ceilings, thus controlling the budget and maintaining access to pharmaceuticals

prescription of diagnostics led to extremely high usage of CT and MRI scans. This worked against health policy goals, health system efficiency and equity.

In response, a claw-back mechanism (similar to that in the pharmaceutical budget) requires private providers to return any expenditure above EOPYY's budget ceiling. Its objective is to enable EOPYY to purchase all the health services required to meet population needs. Other measures in the area of diagnostics have included reducing prices paid by the public health system and curbing over-prescription of specialised diagnostics. As a result, expenditure on these items has fallen markedly and statistics are beginning to show a fall in the over-use of MRI and CT scans.



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



## The results are mixed for hospital reforms

The public hospital sector has been the target of major restructuring and cost-saving efforts as part of the EAP, particularly because of persistent deficits and inefficient management. Structural reforms got under way in 2013 to reduce the number of beds, clinics and specialist units but have had limited implementation. There has been more success with reforms to improve transparency, reduce the cost of supplies and change the hospital payment system (Box 5). These have helped hospitals to rationalise expenditures but have not necessarily translated into a fully efficient resource allocation (Kaitelidou et al., 2016).

## Greater emphasis on reform priorities and monitoring will strengthen governance and resilience

The need to improve health system performance is solidly on the agenda in Greece. The government, with technical assistance from the WHO, has developed a 100-point Action Plan for health system improvement and reform, which outlines strategies grouped into three priority areas (universal access to quality care; transparent, modern and efficient health system administration; and fair and sustainable financing). This plan lies alongside the health sector measures that are being implemented and monitored under the EAP.

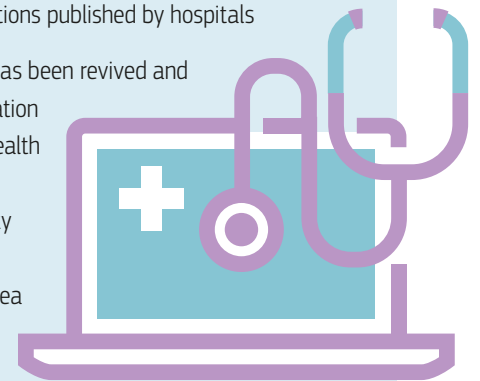
### BOX 5. HOSPITALS REFORMS ARE GEARED TOWARDS RATIONALISING EXPENDITURE

Policies to help hospitals operate more efficiently include:

- Improving information technology and introducing a double-entry accounting system, along with the annual publication of audited balance sheets
- Introducing all-day functioning of hospitals and extending working hours of outpatient offices; moreover, 500 public beds have been set aside for use by private insurance companies for their clients, as a revenue-raising measure
- Using a new centralised procurement system to rationalise public purchasing of medical supplies and devices, achieving substantial savings
- Continuing the development of the Greek diagnosis-related group payment system to ensure effective reimbursement of hospitals
- Introducing performance indicators to assess hospitals and target quality improvement

### BOX 6. NEW INFORMATION SYSTEMS AND MONITORING TOOLS UNDERPIN TRANSPARENCY

- The ePrescription system monitors pharmaceutical consumption and referrals for clinical examinations and tests
- The web-based ESYnet system collects monthly financial, administrative and activity data from public providers for analysis. It was recently integrated with the Business Intelligence System in hospitals that tracks revenue sources and funding flows in a transparent fashion
- A Price List Observatory collects and analyses tenders and technical specifications published by hospitals
- The 'Health Map' has been revived and will collate information on demography, health status, health care resource availability and utilisation, by geographical area



## Accountability and financial probity are essential goals

Reliable information systems and monitoring tools are preconditions for achieving transparency of resources and accountability. Box 6 captures some of the measures in place to allow effective scrutiny and to help make decision making clearer and less open to influence. They should also help address corruption in procurement contracts and tendering processes, which, although they are being tackled, are not completely eliminated and continue to be of concern.

The widespread use of informal payments to doctors and other health personnel cannot be readily captured by information systems but also requires dedicated attention. These payments exacerbate barriers to access, affect poor and vulnerable groups in particular, and form part of Greece's substantial black economy. Addressing this issue is part of the move towards accountability and probity.

## 6 Key findings

- The health status of the Greek population has generally improved over time, but key health challenges, such as cancer mortality and the impact of heart disease, remain. Trends in risk factors, particularly high smoking rates amongst adults and obesity in children, highlight the importance of establishing national cancer screening programmes, enforcing the ban on smoking in public places and promoting lifestyle changes geared towards diet and exercise.
- The adequacy of health system financing is a cause for concern because of the pressures on public expenditure, the falling revenue base of the social health insurance system and the already high proportion of private spending. The health system operates under considerable fiscal constraints, although thanks to the clawback systems, expenditure can de facto exceed the budget to meet patients' needs. This tool is crucial to ensuring that the public system can continue to deliver services, particularly as utilisation rates are growing and the capacity of households to purchase care privately has fallen since the onset of the economic crisis.
- Out-of-pocket payments have been traditionally very high in Greece and have even increased recently, which place an increasing financial burden on patients, often due to patterns of consumption driven by supply-induced demand, which may drive inequalities in accessing care. Tackling widespread informal payments, tax evasion through the provision of private health services without a receipt, as well as other forms of waste and health sector corruption (e.g. in procurement) is an ongoing challenge.
- Greece faces substantial problems in planning and rational allocation of health care resources, which has efficiency and access implications. There is a large imbalance in the distribution of physical resources, including medical personnel, between urban centres and rural areas, as well as between the public and private sectors. All these factors contribute to very high reported levels of unmet need for medical care, the second highest amongst Member States. Current reforms, such as that of primary care, are expected to address these issues directly.
- Despite the difficult economic context, significant reforms have addressed health system structures, costs and efficiency, tackling many long standing weaknesses. Successes include the establishment of a single purchaser, the standardisation of the benefits basket for reimbursable services, and significant reductions in pharmaceutical expenditure. Further efforts are ongoing, with particular scope for increasing the use of generics, improving hospital management and the broader application of clinical guidelines.
- Another major achievement has been to solve the problem of the health insurance coverage gap that affected an estimated 2.5 million people or a quarter of the population due to the lack of universal coverage. This took several attempts since 2011, during which access to services was severely constrained for the unemployed and other vulnerable groups without coverage. However, the new legislation in 2016 has now rectified these gaps and achieved universal coverage by finalising the process initiated in 2014, under the economic adjustment programme.
- A crucial element in meeting the goals of effectiveness, accessibility and resilience is the establishment of an effective network of first-contact primary care services to tackle population health needs appropriately. Currently, only a small minority of physicians are GPs and there is no gatekeeping to regulate patient pathways to higher levels of care nor sufficient health promotion or disease prevention. Nonetheless, a start has been made with the formulation of the new Primary Care Plan, launched in 2017, for implementation over the next three years.

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## 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		



# State of Health in the EU

## Country Health Profile 2017

The Country Health Profiles are an important step in the European Commission's two-year *State of Health in the EU* cycle and 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. This series was co-ordinated by the Commission and produced with the financial assistance of the European Union.

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 Member State. The aim is to create a means for mutual learning and voluntary exchange that supports the efforts of Member States in their evidence-based policy making.

Each Country Health Profile provides a short synthesis of:

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

This is the first series of biennial country profiles, published in November 2017. The Commission is complementing the key findings of these country profiles with a Companion Report.

For more information see: [ec.europa.eu/health/state](http://ec.europa.eu/health/state)

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