



# State of Health in the EU

# Cyprus

## 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/10.1787/888933593437>

## Demographic and socioeconomic context in Cyprus, 2015

	Cyprus	EU
<b>Demographic factors</b>	Population size (thousands)	509 394
	Share of population over age 65 (%)	18.9
	Fertility rate <sup>1</sup>	1.6
<b>Socioeconomic factors</b>	GDP per capita (EUR PPP <sup>2</sup> )	28 900
	Relative poverty rate <sup>3</sup> (%)	10.8
	Unemployment rate (%)	9.4

1. Number of children born per woman aged 15–49.

2. Purchasing power parity (PPP) is defined as the rate of currency conversion that equalises the purchasing power of different currencies by eliminating the differences in price levels between countries.

3. Percentage of persons living with less than 50 % of median equivalised disposable income.

Source: Eurostat Database.

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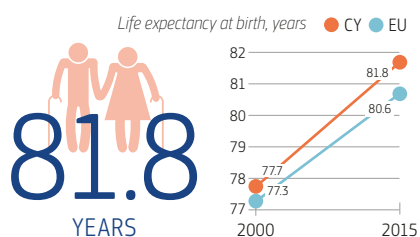
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# 1 Highlights

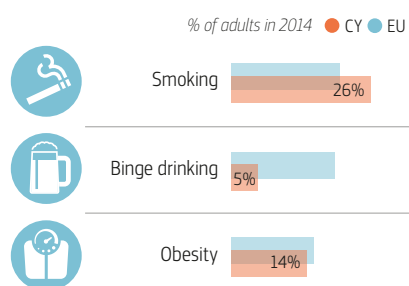
The health status of Cypriots is good in spite of a capacity-constrained public health care system that does not provide universal coverage, and an independent private health care system operating in parallel. Legislation approved in June 2017 paves the way for establishing a national health system with universal coverage by 2020, which will have profound effects on how care is financed and organised.

## Health status



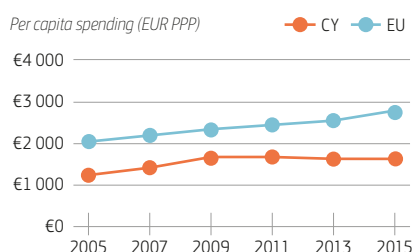
Life expectancy at birth was 81.8 years in 2015, up from 77.7 years in 2000 and above the EU average. Some 80% of the population reports to be in good health, though there are notable socioeconomic inequalities. Life expectancy gains are mainly due to fewer deaths from cardiovascular diseases, though they remain the leading cause of death.

## Risk factors



In 2014, 26% of adults in Cyprus smoked tobacco every day, which is above the EU average and comparable to the level in 2005. Alcohol consumption per adult has decreased while binge drinking is the lowest in the EU. Unlike many countries, adult obesity rates have fallen over the last decade (by 2%) to 14%. However, data suggest that over one quarter of adolescents are overweight or obese.

## Health system

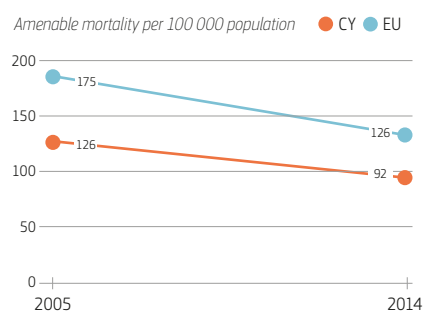


Health spending in Cyprus is lower than in most other EU countries. In 2015, Cyprus spent EUR 1 592 per capita on health care, compared with the EU average of EUR 2 797. Total health spending was 6.8% of GDP in 2015, of which nearly half is financed out-of-pocket on a fee-for-service basis. The government spent 7.1% of its total budget on health in 2015, the lowest share in the EU.

## Health system performance

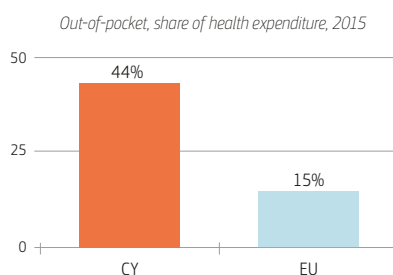
### Effectiveness

Amenable mortality in Cyprus remains one of the lowest in EU countries, in part due to low incidence of some treatable conditions, including some cancers.



### Access

Unmet need for medical care is above the EU average but still relatively low given the lack of universal access to the public system and the high share of expenditure paid out-of-pocket (44%).



### Resilience

The pressures exacted by the economic crisis highlighted the need for health system reform. After decades of delays, in 2017 the government took tangible steps towards implementing its new health care system.



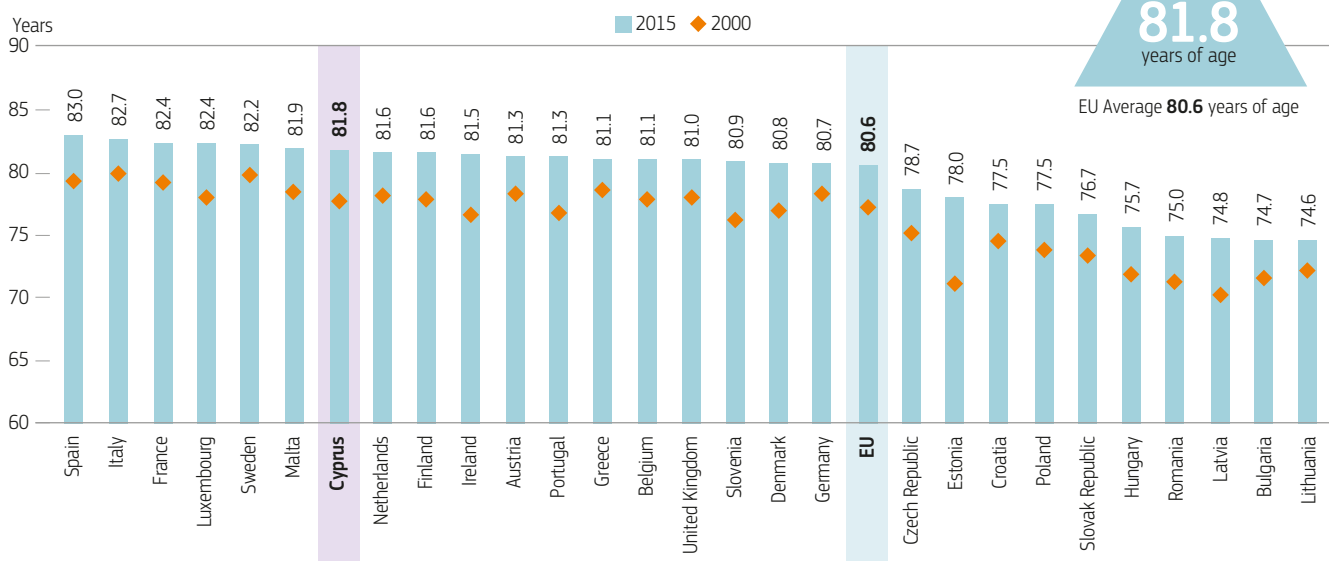
## 2 Health in Cyprus

### The population of Cyprus enjoys high life expectancy

Overall increases in life expectancy over the past decades have kept Cyprus among the top EU countries. In 2015, life expectancy

at birth was 81.8 years, above the EU average of 80.6 and seventh highest among all EU countries (Figure 1). Moreover, the difference in life expectancy at birth between men (79.9 years) and women (83.7 years) is lower than in most other EU countries. Life expectancy at age 65 has improved by roughly 2 years since 2000.

Figure 1. Cypriots live longer than the EU average



Source: Eurostat Database.

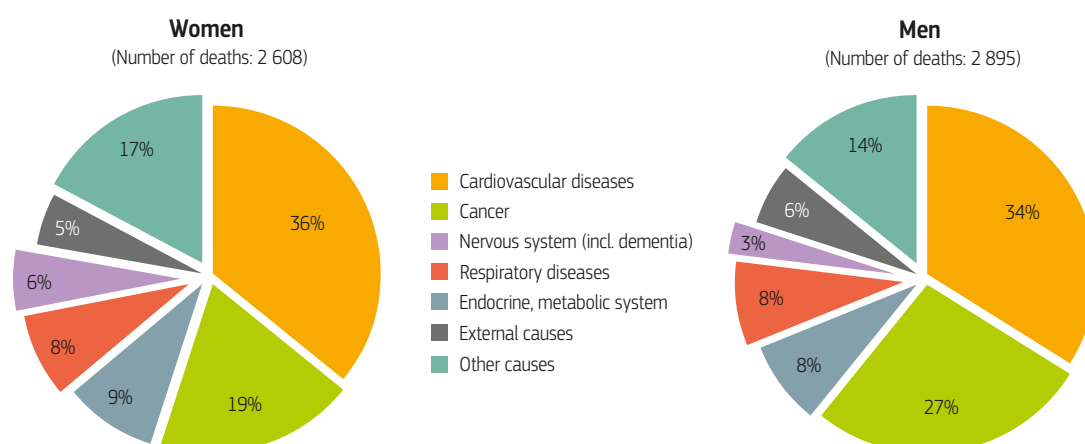
### Cardiovascular diseases remain the leading cause of death

Long life expectancy in Cyprus can be mainly attributed to reductions in mortality due to cardiovascular diseases, including heart diseases and stroke. Despite these improvements, cardiovascular diseases remain the main cause of death among women (36% of all deaths) and men (34%) (Figure 2). Mortality from cancer is the second leading cause of death, accounting for 19% of all deaths among women in 2014 and 27% among men, though the age-standardised death rate for cancer was still lowest in the EU.

Diseases of the endocrine and metabolic systems (including diabetes) are another leading cause of death, accounting for 9% of all deaths among women and 8% among men, a much higher proportion than in most other EU countries. Diabetes mortality rates are the highest in the EU. Nervous system diseases

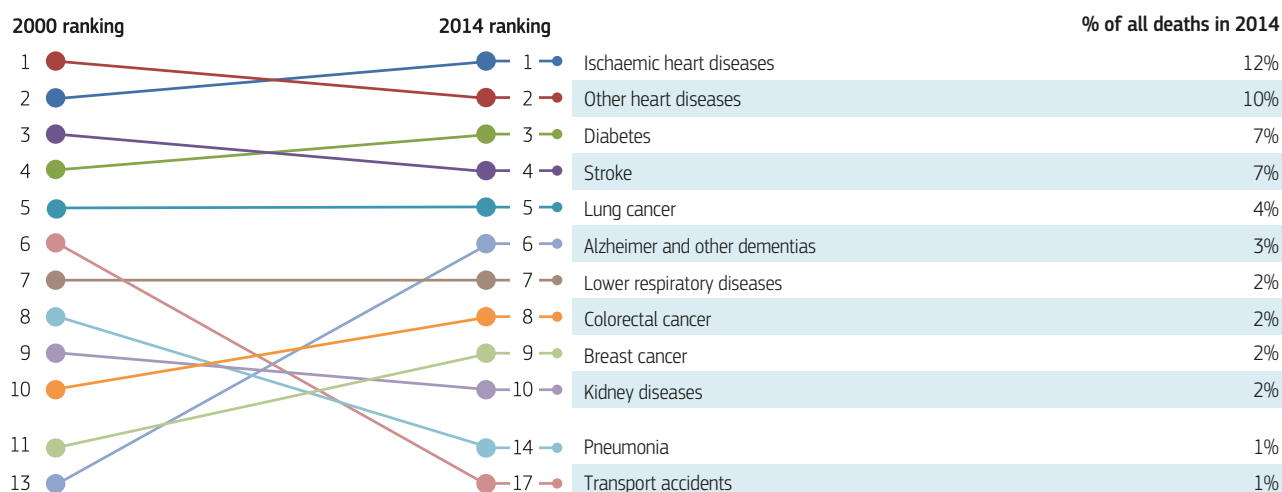
(including dementia) are also an important and growing cause of death, accounting for 6% among women and 3% among men.

Looking at more specific causes of death, while ischaemic heart diseases and other heart diseases continue to be the two leading causes of death, there has been a notable increase in the number of deaths due to diabetes over the past decade, making up 7% of all deaths in 2014. Additionally, the number of deaths due to Alzheimer's and other dementias has almost tripled since 2000, reflecting population ageing, better diagnosis, lack of effective treatments as well as more precise coding. Lung cancer continues to be the main cause of cancer death, with the number of people dying from this disease nearly doubling between 2004 and 2014. Nonetheless, rates are still low compared with other EU countries. Colorectal cancer and breast cancer are the second and third most common causes of cancer mortality, although they account for only a small share of total deaths (Figure 3).

**Figure 2. The majority of all deaths in Cyprus are due to cardiovascular disease and cancer**

**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. Deaths from diabetes, some cancers and dementia are rising as a share of total deaths**

**Source:** Eurostat Database.

## There has been a notable increase in the disability-adjusted life years lost due to diabetes

The leading causes of disability-adjusted life years<sup>1</sup> (DALYs) lost, taking into account the burdens in terms of both mortality and morbidity, are musculoskeletal disorders (including low back and neck pain), ischaemic heart diseases, diabetes and major depressive disorders. While the number of DALYs due to ischaemic heart diseases has dropped by over 40% between 2000 and 2015, DALYs due to diabetes have increased by over one third over this period (IHME, 2016). Some 6.1% of people 15 years or over in Cyprus reported having diabetes in 2014, a slight increase from 5.6% in 2008, though these self-reported data may underestimate prevalence.

1. 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).

Based on self-reported data from the European Health Interview Survey (EHIS), more than one in six people 15 years or over in Cyprus live with hypertension, while one in sixteen live with asthma or other chronic respiratory diseases. Wide inequalities exist in the prevalence of these chronic conditions by education level. People with the lowest level of education<sup>2</sup> were over three times more likely to live with hypertension, diabetes and asthma or other chronic respiratory diseases, and nearly five times more likely to live with depression than those with the highest level of education in 2014.<sup>3</sup>

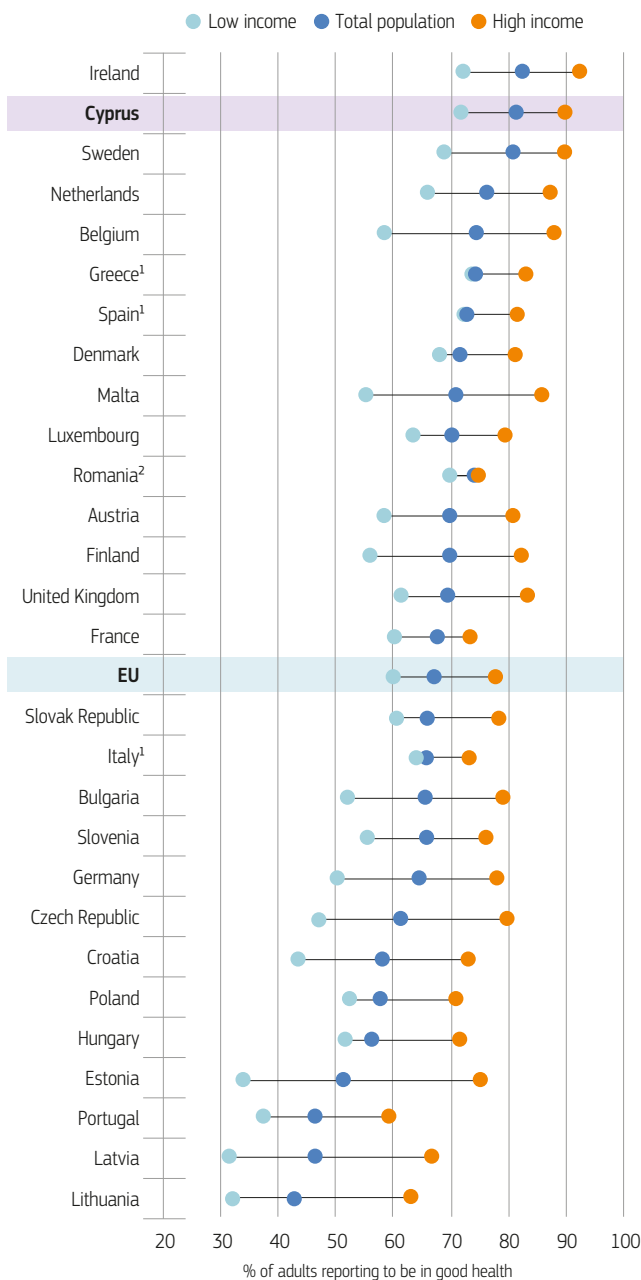
2. Lower education levels refer to people with less than primary, primary or lower secondary education (ISCED levels 0–2) while higher education levels refer to people with tertiary education (ISCED levels 5–8).

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

## Self-rated good health is high in Cyprus

The vast majority of people in Cyprus (80%) report to be in good health, a much higher proportion than the EU average of 67%. However, as in other EU countries, there are notable variations according to income group: about 90% of people in the highest-income quintile reported to be in good health in 2015 compared with only about 70% of people in the lowest income group (Figure 4).

**Figure 4. Most people report being in good health but large disparities exist by income group**



**Notes:**

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

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

## 3 Risk factors

### Behavioural risk factors are important determinants of favourable health status

The relatively good health status of the population in Cyprus is linked to a number of health determinants, including generally good living conditions and a relatively low prevalence of many behavioural risk factors. Nonetheless, based on the Institute for Health Metrics and Evaluation (IHME) estimations, nearly one quarter (24%) of the overall burden of disease in Cyprus in 2015 (measured in terms of DALYs) can be attributed to behavioural risk factors, notably smoking, but also risk factors often linked to poor diet and low physical activity (IHME, 2016).

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

The percentage of adults who reported smoking every day in Cyprus in 2014 remains well above the EU average (26% in Cyprus versus 21% for the EU average) and fourth highest overall (see



Figure 5). Men are considerably more likely to smoke than women (38% for men versus 14% for women; Figure 5). According to EHIS data, smoking in Cyprus is more frequent among the highly educated. This is not very common in EU Member States (where smoking rates are generally higher among people with lower levels of education). Indoor smoking bans are currently being enforced in an effort to reduce smoking rates (see Section 5.1).

## Alcohol consumption is lower than in most EU Member States

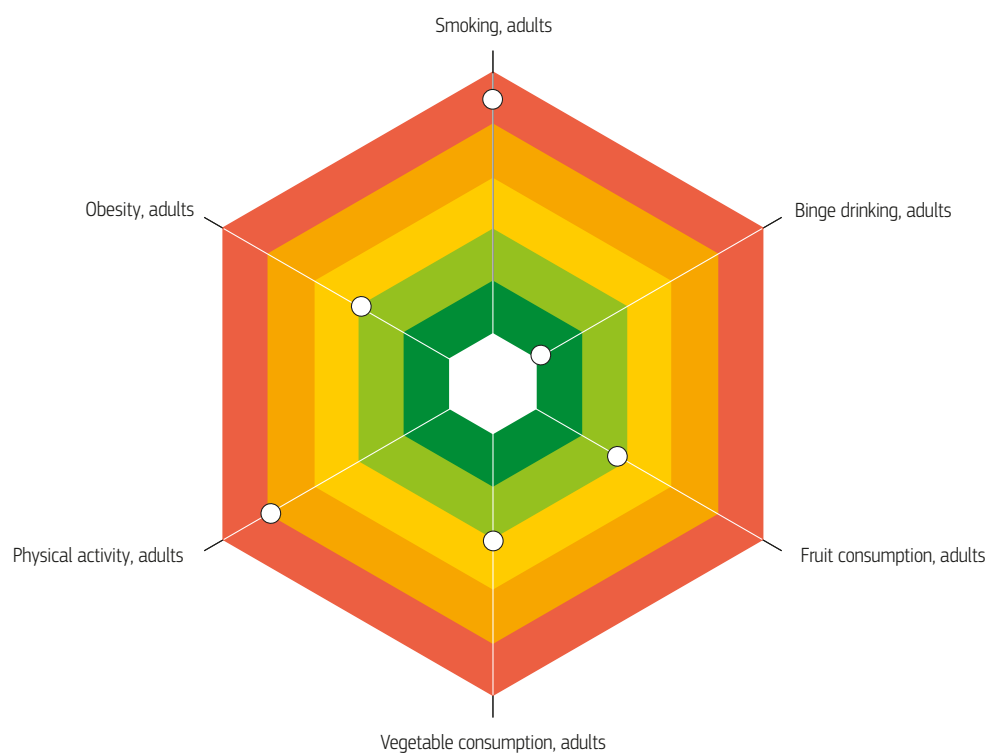
Alcohol consumption, whether measured in terms of total alcohol consumption or the percentage of adults reporting heavy episodic drinking (binge drinking<sup>4</sup>), is low compared with most other EU countries (see Figure 5). Overall alcohol consumption was about 9 litres per adult in 2014, 1 litre less than the EU average. The percentage of Cypriot adults who reported heavy episodic drinking in 2014 was the lowest of all EU countries (only 5% compared with an EU average of 20%).

## Large rises in obesity among children are a cause for concern

Based on self-reported data (which underestimate the true prevalence of obesity), about one in seven adults in Cyprus were obese in 2014, around the EU average (15%). However, there are large disparities in obesity rates by education: people with no more than a lower level secondary education are two times more likely to be obese than those with a university education (18% vs 9% in 2014). One study finds that more than 25% of adolescents aged 12 to 17 in Cyprus were overweight or obese in 2009–10 (latest year available), based on measured height and weight (which gives more precise measures but is not comparable with available EU averages) (Savva et al., 2014). This represents a significant increase from estimates a decade earlier. Overweight and obesity problems among children and adolescents greatly increase the risk of being overweight and obese in adulthood.

While a relatively high proportion of Cypriot adults report eating fruit and vegetables every day, a lower proportion report doing physical activity on a regular basis compared with other EU countries.

**Figure 5. Smoking continues to be a major public health issue in Cyprus**



**Notes:** 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. This figure does not show risk factors for children because Cyprus is the only EU country that does not participate in the HBSC survey.

**Source:** OECD calculations based on Eurostat Database (EHIS in or around 2014), OECD Health Statistics. (Chart design: Laboratorio MeS).

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

## 4 The health system

### The public and private sectors operate independently from one another

Cyprus' health care system is comprised of public and private sectors of similar sizes that operate in parallel. Nearly all aspects of the public system – planning, organisation, administration and regulation – are highly centralised whereas the private sector is fragmented.

Currently, there is no purchaser–provider split within the public sector where facilities are funded directly by the Ministry of Health and providers are salaried civil servants. Under the proposed new national health system (Box 1), there will be one purchaser (the Health Insurance Organisation), an autonomous public provider and several private providers who will have the option to contract with the Health Insurance Organisation. Purchaser–provider relations between the public and private sectors already exist in the current system on a limited basis when the public sector purchases services, mainly on a fee-for-service basis, from private providers.

### Cyprus has among the lowest levels of health expenditure in the EU

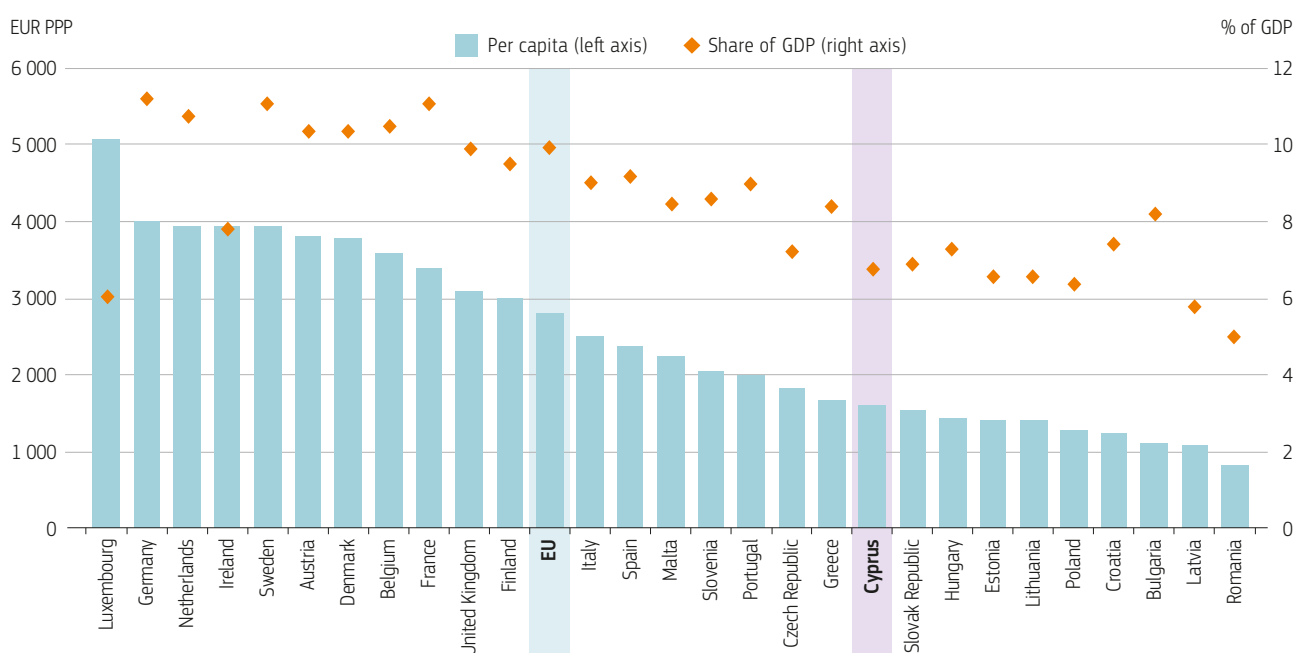
Overall, total health expenditure as a share of GDP has increased or remained steady since 2004, but this obscures the considerable

#### BOX 1. PROGRESS IS BEING MADE TOWARDS ESTABLISHING A NEW NATIONAL HEALTH SYSTEM

Major health system reform that would provide universal health care coverage has been mooted since the early 1990s. Although the legal foundation for the new national health system was agreed by Parliament in 2001 and a Health Insurance Organisation tasked with administering the new system has been established, full implementation has been continuously delayed due, among other reasons, to uncertainty regarding the costs, contribution rates, financial and administrative autonomy of public hospitals and involvement of private insurers. The reform programme and timetable were finally agreed by the major parties and the President in July 2016, and parliamentary approval followed a year later. Implementation of the new Health Care System is expected to be fully completed in 2020.

The reforms aim to establish an autonomous health organisation, restructure primary healthcare services and implement a national health system with the Health Insurance Organisation as the single purchaser.

**Figure 6. Total health expenditure is less than two thirds of the EU average**



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



decline in GDP during the financial crisis, which was accompanied by a comparatively smaller reduction in health spending. As of 2015, total health spending per capita was EUR 1592 (adjusted for differences in purchasing power), which is below the expenditure levels before the financial crisis and well below the EU average (Figure 6).

The current public system is financed through general taxation but does not offer universal coverage. Public expenditure as a share of total health spending, 42.6% in 2015, is the lowest in the EU. Since joining the EU in 2004, each year Cyprus has allocated less of its government budget to health (7.1% of total public expenditure in 2015) than any other EU Member State (Figure 7).

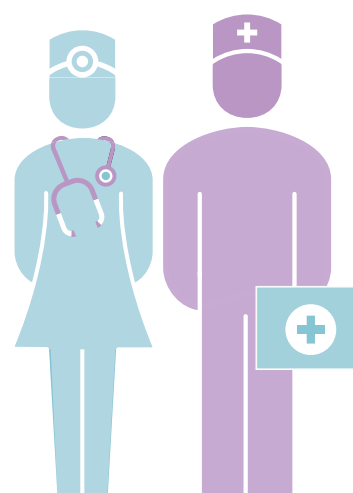
## The majority of physicians work in the private sector

Health services in the public system are provided by six hospitals, three specialist centres, two small rural hospitals and 39 health centres, as well as many sub-centres for primary care services. The private sector is comprised of for-profit hospitals, polyclinics, clinics, diagnostic centres and independent practices. In total, there were 342 beds in hospitals per 100 000 population in 2015, which has fallen only marginally since 2010.

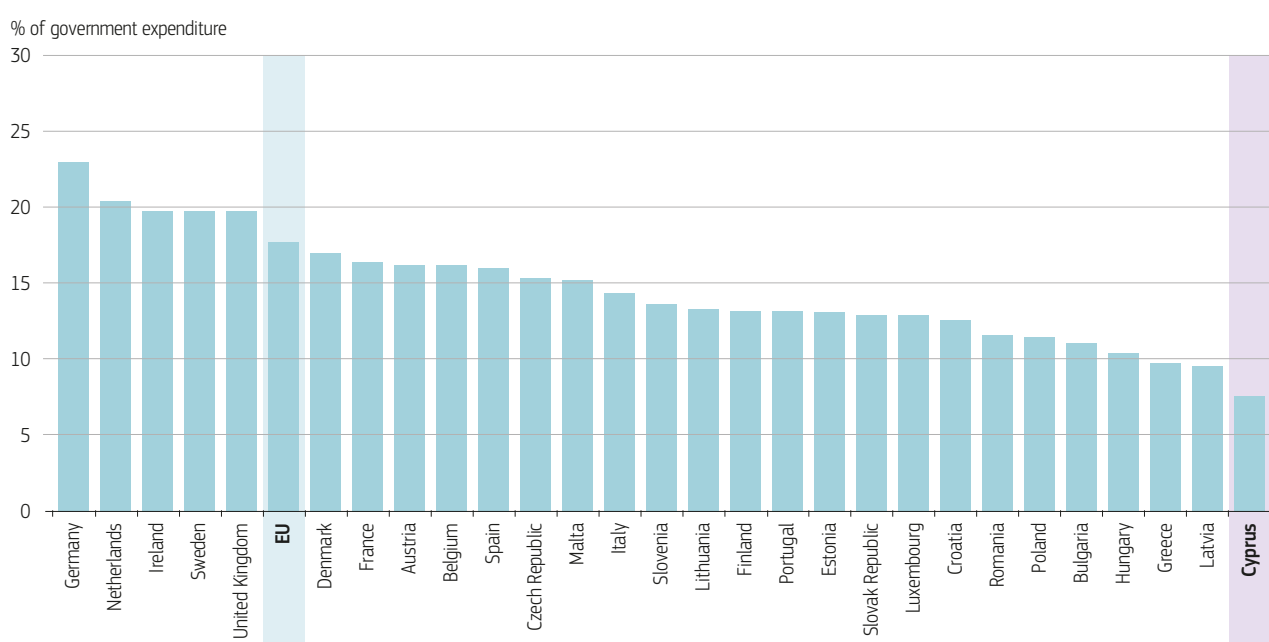
No health workforce forecasting or planning is performed in Cyprus. The majority of physicians, dentists and pharmacists work

in the private sector whereas the majority of nurses are employed in the public sector. The number of physicians has increased every year since 2006 and by 2015 there were 3.6 physicians per 1000 population, equal to the EU average (Figure 8). Further increases in the supplies of physicians and pharmacists are expected, as local universities recently initiated their first medical and pharmacy programmes.

There have also been recent increases in the number of graduating nurses as a result of new nursing programmes at four local universities. However, as of 2015, the number of nurses per 1000 population (5.2) was still well below the EU average and the ratio of 1.5 nurses for every doctor was among the lowest in the EU.

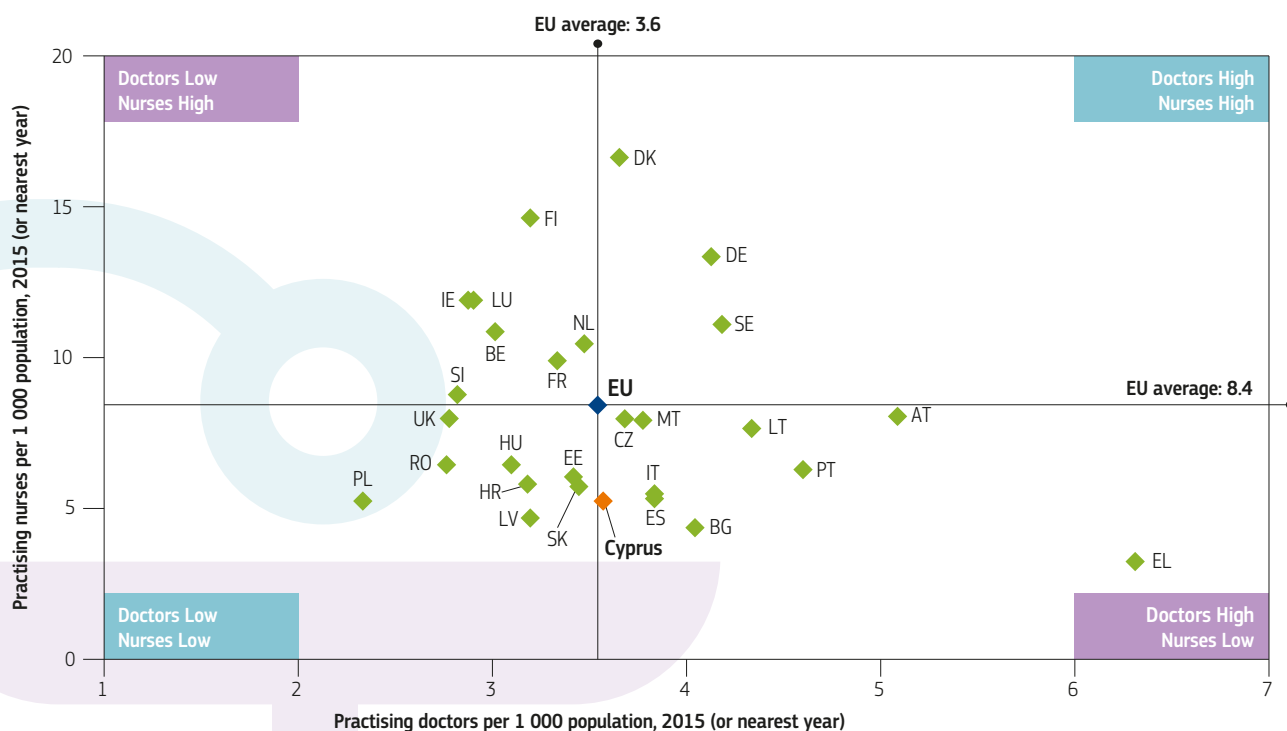


**Figure 7. Cyprus spends less of its government expenditure on health than any other EU Member State**



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

**Figure 8. The number of doctors is in line with the EU average but there is a shortage of nurses**



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

**Source:** Eurostat Database.

### Fragmentation and weak gatekeeping lead to poor care coordination

The public system has a large network of providers offering all levels of care, whereas the private sector offers mostly ambulatory (or outpatient) care and diagnostic services. Secondary as well as tertiary health care are also provided by the private sector. Public-private sector cooperation and communication is limited, such that even data (e.g. on utilisation, cost and quality) from the private sector are scarce and unreliable.

Public primary care services are delivered in health centres as well as hospital outpatient departments. There is no gatekeeping mechanism or formal referral system between primary and specialist care, though a referral system is in place for certain specialties. Many people seek specialist care from private providers because of long waiting times in public hospitals. Long waiting times for specific services, especially some surgical operations and high cost diagnostic services, has been an endemic problem in the public system for many years (see also Section 5.2).

The fragmentation within the health system and the lack of a universal electronic medical records system contribute to poor coordination between providers in both the public and private sectors. There is also inconsistent use of chronic disease management guidelines or clinical standards of care in primary care.

## 5 Performance of the health system

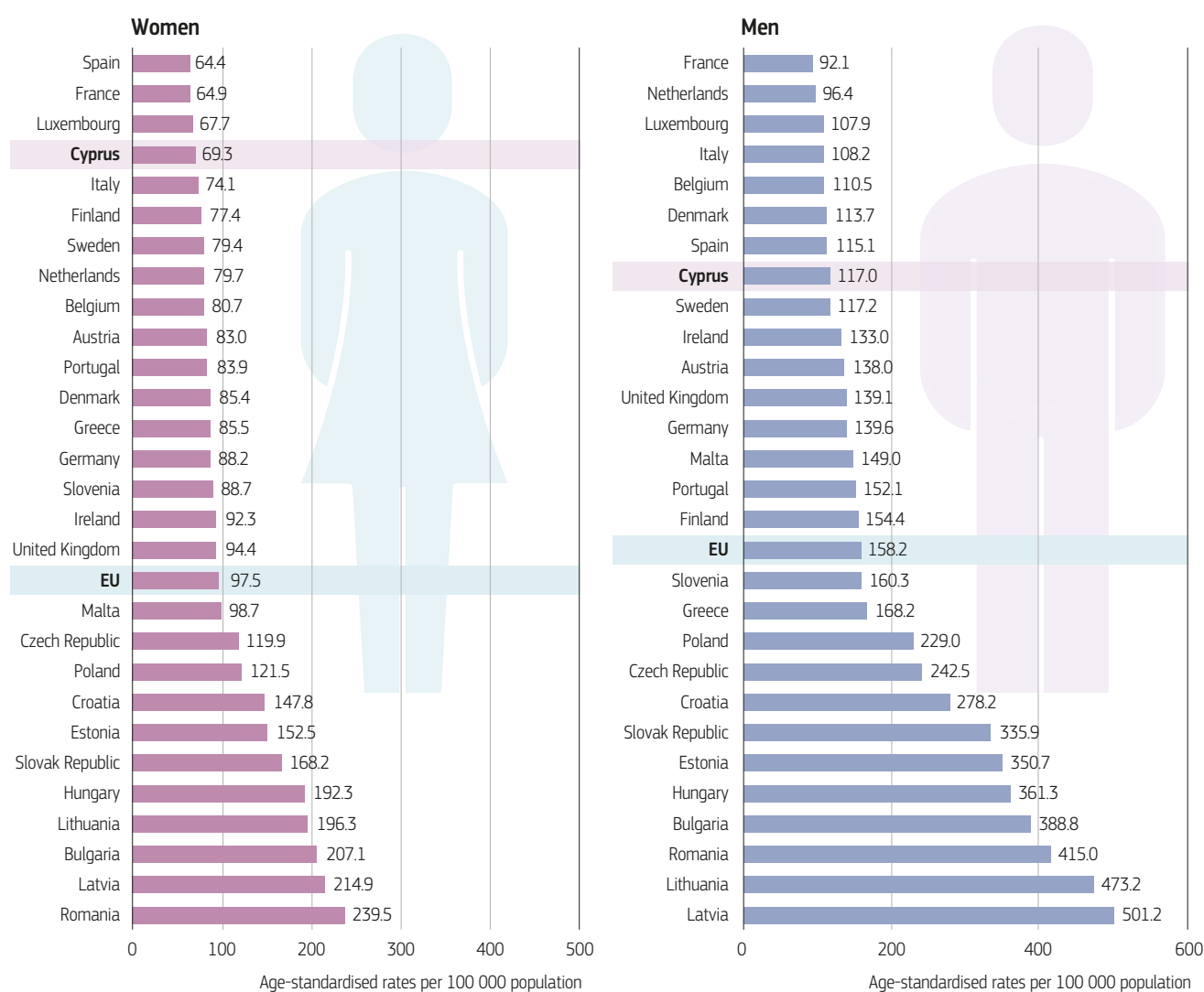
### 5.1 EFFECTIVENESS

#### The low incidence of some treatable conditions contributes to good amenable mortality results

Determining the effectiveness of the health system in Cyprus is challenging due to limited data availability; there is a general lack of data on quality of care and virtually no data from the private sector. Cyprus has consistently had among the lowest amenable mortality rates for both men and women in the EU (Figure 9).

These low rates are driven by cardiovascular disease mortality rates, which despite being the leading cause of death in Cyprus, are among the lowest in the EU. Consistently low amenable mortality rates are due in part to favourable environmental and living conditions, traditionally healthy diets and low alcohol consumption, though high smoking rates and rising overweight and obesity rates among adolescents (see Section 3) may foretell a change in the future.

Figure 9. Amenable mortality is among the lowest in the EU



Source: Eurostat Database (data refer to 2014).

## Cancer mortality is low overall but there are also relatively few cases diagnosed

Cyprus' cancer mortality rates are among the lowest in the EU at 2 per 1000 age-standardised population in 2014. CONCORD Programme data show that 5-year survival rates have risen steadily between 2000–04 and 2010–14 for some cancers and remain high for breast cancer, rectal cancer and cervical cancer. One reason for such low cancer mortality is that cancer incidence in Cyprus has historically been low. More recent data from the GLOBOCAN database reveal increases in incidence rates for colorectal, breast and prostate cancers, albeit from low baseline levels. Some of these increases may be attributable to the intensification of case finding efforts in the National Cancer Registry, the ageing of the population and improved diagnostics (i.e. introduction of new medical equipment, knowledge and increased diagnostic tests).

## Boosting uptake of cancer screening presents challenges

There are currently two cancer screening programmes. The national breast cancer programme provides free mammography for women between 50 and 69 years of age every two years; the response rate was low, only 42.4% in 2016. A programme for early detection of colorectal cancer for people aged 50 to 69 began in 2013 on a pilot basis in one district; there are plans to expand it nationally. According to EHIS data, more than 90% of people in Cyprus aged 50–74 have never been screened for colorectal cancer. This is a much higher rate than in many other EU Member States.

## Deaths preventable through public health policies are low, with the exception of diabetes

In terms of preventable causes of death, in 2013, alcohol-related death rates (excluding external injury) in Cyprus were the lowest in the EU for both men and women. This again reflects relatively low alcohol consumption compared with the rest of the EU (see Section 3). Deaths due to transport accidents have also declined over the last decade. In contrast, rates of mortality due to diabetes, which is largely avoidable, were more than three times greater than the EU average in 2014. Although there are no data available before 2004, there is no clear evidence of a downward trend.

Although it is difficult to directly link health outcomes to the health system, there have been some key achievements in public health, despite a low share of spending on prevention and public health services. For example, in 2017, a stricter law banning smoking in all public places was approved by Parliament as the previous indoor smoking ban had not been well-enforced.

## Child vaccination is good but fewer people over 65 are taking the flu vaccine

High child immunisation coverage has led to the eradication of neonatal tetanus, diphtheria and poliomyelitis, although a majority of immunisations are performed by private sector paediatricians paid fee-for-service. Of note, only 32.4% of the population over 65 obtained influenza vaccination in 2014, a reduction from over 40% in 2008, well below the average among countries with data available. The thalassaemia prevention programme has also led to close to zero new cases by increasing awareness among the general population, screening carriers and providing genetic counselling and prenatal diagnoses. In particular, antimicrobial resistance remains an important challenge going forward, particularly given the fragmentation of the health system (Box 2).

### BOX 2. ANTIMICROBIAL RESISTANCE RATES ARE A CAUSE FOR CONCERN

Antimicrobial resistance is a major public health threat in Cyprus. Surveillance data reported to EARS-Net show that in 2015, 12.9% of *Klebsiella pneumoniae* bloodstream infections were resistant to carbapenems, a major last-line class of antibiotics to treat bacterial infections. This is much higher than the EU/EEA median (0.5%) and the fourth highest in the EU/EEA (ECDC, 2017). Cyprus has had a national strategy against antimicrobial resistance in place since 2012.

## A lack of data on quality makes it difficult to assess the health system's effectiveness

The Structural Reform Support Service of the European Commission has recently provided technical assistance to Cyprus to develop clinical guidelines and audits. Nevertheless, there are few data on the quality of acute care in the public sector and no data from the private sector, which makes it difficult to draw firm conclusions about the effectiveness of the health care system. Better measurement of both quality and safety can be achieved through implementation of quality assurance programmes, which are currently lacking.

## 5.2. ACCESSIBILITY

### The publicly funded health system does not provide coverage to all Cypriots

Unlike in most other countries in the EU, not all of the population is covered by the publicly funded health system. Entitlement to free services is largely dependent on annual income levels, with the eligibility threshold varying according to the number of dependents. There are also varying eligibility criteria related to chronic diseases.

Since 2013, as part of the Economic Adjustment Programme for Cyprus, entitlement to public services has been restricted to those with Cypriot or EU citizenship residing permanently in Cyprus who have contributed to the social insurance scheme for at least three years and made a personal income tax declaration. Additionally, civil servants now must contribute 1.5% of their gross income to be entitled to free services, while families with three or more children (who were previously entitled to free access) must pay contributions to maintain coverage. Some low-income individuals who were previously eligible for care at reduced prices (known as 'beneficiaries B') are no longer covered by the public system.

Although exact numbers are not available, around 25% of the population is not covered by the public system – the highest share in the EU. These non-beneficiaries can access all public services by paying fees set by the Ministry of Health, though this is uncommon and most of them visit the private sector. To protect access to care for vulnerable groups, such as irregular migrants and asylum seekers, the Ministry of Health issued official guidance in 2011 guaranteeing access to free care. Most migrants living and working legally in Cyprus have private insurance coverage.

Considering the level of population coverage, self-reported unmet need for health care is relatively low. However, there are significant inequalities by income: 7.7% of households in the poorest income quintile reported unmet need for a medical examination in 2014 – noteworthy because this quintile is undoubtedly covered by the public system.<sup>5</sup>

### The public benefits package is comprehensive

Establishing the public benefits package is the responsibility of the Ministry of Health. The benefits package is comprehensive; the only explicitly excluded services are some dental services such as orthodontics for those over 18 years old and fixed prosthetics. When services are either not available in the public sector or there are long waiting lists, the Ministry of Health subsidises care provided to beneficiaries either in the private sector or abroad in rare circumstances; eligibility for these subsidies is based on an individual's financial and medical needs. Proposals over whether to include a service in the benefits package are made by the relevant department in the Ministry of Health and the final decision is taken by the Minister of Health. In some cases the approval of the Minister of Finance or even the approval of the Council of Ministers is required.

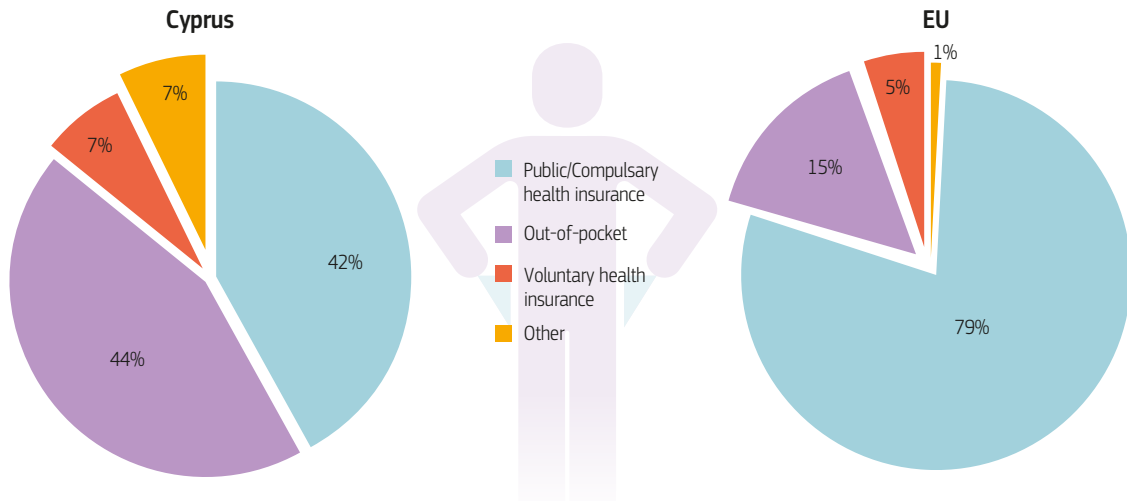
### Public sector user charges are relatively low but half of health spending is paid out-of-pocket

Prior to 2013, user charges for public sector beneficiaries were minimal and there were a number of exemptions. However, since then, user charge levels have increased and new charges have been introduced. Public services now generally require some form of out-of-pocket payment, and non-beneficiaries are charged full prices, except in the case of emergency department visits where beneficiaries and non-beneficiaries are both charged EUR 10 per visit.

Beneficiaries pay EUR 3 for a visit to a general practitioner and EUR 6 for a visit to a specialist. Public assistance recipients are exempt from dental care and emergency department user charges, while soldiers and some people with disabilities also do not pay emergency department user charges (Theodorou, 2014). Non-beneficiaries do not face excessive fees if they choose to obtain care from the public sector. For example, for diagnostics and inpatient care, non-beneficiary expenditure is capped per year by a means-tested maximum share of household annual income.

Despite minimal co-payments, capacity constraints in the public sector lead to long waiting lists, contributing to high levels of out-of-pocket expenditure as people seek care in the private sector. In 2015, nearly 45% of total health care expenditure was out-of-pocket, the second highest share in the EU (Figure 10). Although in most other EU Member States, much of the out-of-pocket expenditure goes towards pharmaceuticals, in Cyprus, most of this spending went towards curative and rehabilitative care (60% in 2015). Pharmaceuticals comprised only a quarter of out-of-pocket expenditure.

5. In the 2015 EU-SILC the question on unmet need was changed in Cyprus so that it is not comparable with previous years. For this reason we only report the 2014 data.

**Figure 10. Cyprus has the second highest out-of-pocket payment level in the EU**

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

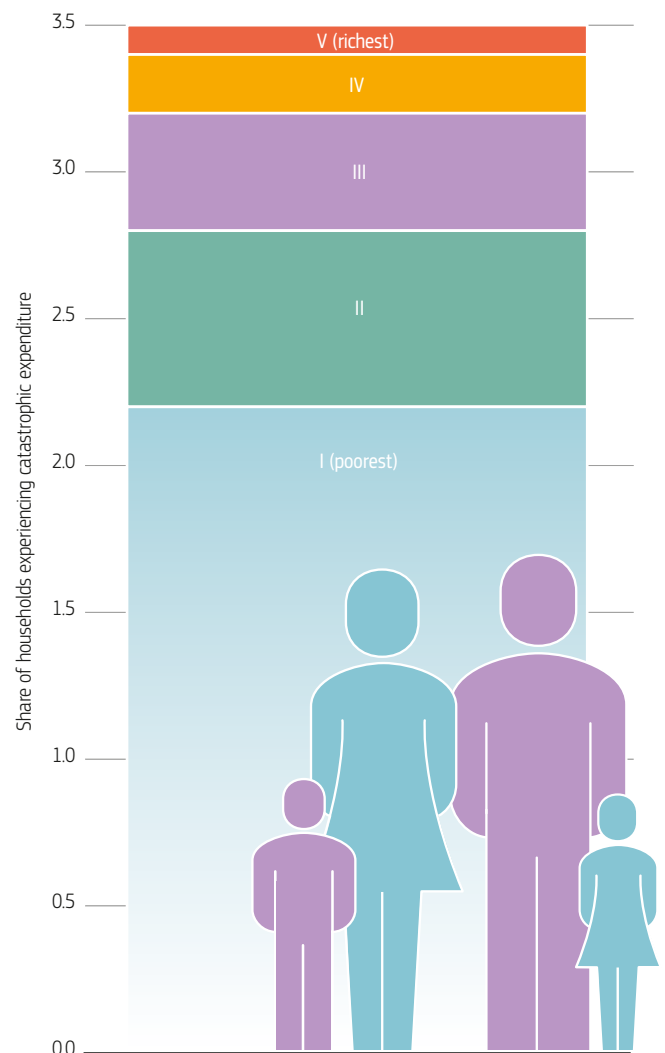
## The full impact of the crisis on financial protection is yet to be seen

The high reliance on out-of-pocket spending has not historically translated into poor financial protection according to data on catastrophic spending incidence. As of 2009 (latest year available), although out-of-pocket spending comprised around half of total expenditure, only 3.5% of households experienced catastrophic levels of out-of-pocket expenditure according to the WHO/Europe methodology for measuring financial protection.<sup>6</sup> More than half of those households experiencing catastrophic expenditure were in the poorest income quintile (Figure 11).

This relatively low share is most likely due to the fact that as of 2009, many of the most financially vulnerable households had a high degree of financial protection within the public system. However, whether this continued following both the crisis and the 2013 change to user charge policy remains to be seen because more recent household-level data are not yet publicly available. As an indication of increasing financial barriers to accessing care during the crisis, 7.5% of the poorest quintile reported unmet need, specifically due to cost in 2014, the highest share since 2007 (8.7%).

## Health workers and medical technology are poorly allocated between the public and private sectors

Some access barriers can be linked to skill-mix as well as the allocation of health professionals and medical technology between the public and private sectors. For example, the number of active physicians has risen over the past years, but most are

**Figure 11. Catastrophic spending is low but poor households are at highest risk in Cyprus**

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).

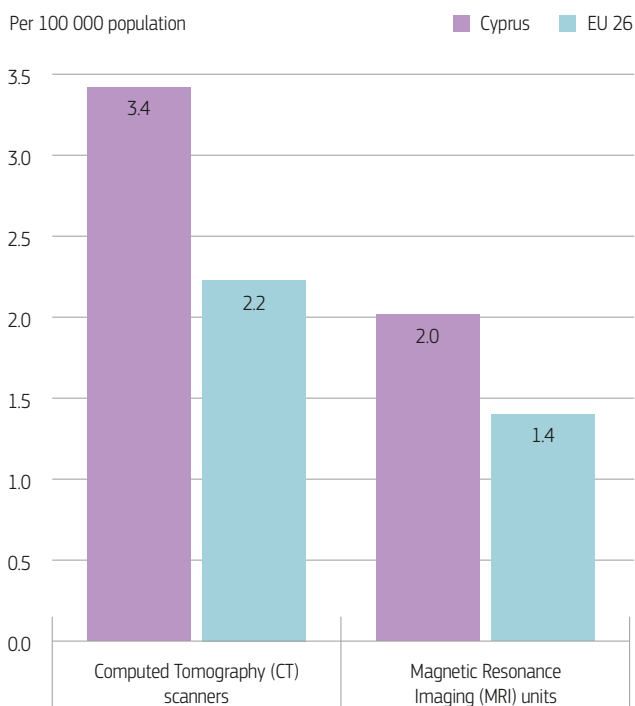
Source: WHO European Regional Office (data refer to 2009).

employed by the private sector. Most newly qualified physicians pursue careers in non-primary care specialties, contributing to low general practitioner numbers (Samoutis, Samoutis and Tedeschi, 2010). There is currently no national workforce planning for health professionals (see Section 4).

There is also a high density of high-cost medical technology, much of which is underused (Figure 12). For example, Cyprus has a very high number of computed tomography (1 for every 30 000 inhabitants) and magnetic resonance imaging (1 for every 50 000 inhabitants) scanners compared with other EU Member States, with most of these scanners concentrated in the private sector, and so are largely inaccessible to patients within the public system. The public sector has only one magnetic resonance imaging scanner, whereas there are 17 in the private sector, and public sector magnetic resonance imaging waiting lists are long.

Waiting times in general are a major challenge due to capacity constraints in the public sector and are a major reason why many public sector beneficiaries seek care from the private sector. Reported unmet need due to waiting times is relatively low. However, this may be because individuals so commonly choose to obtain care in the private sector. Even among the poorest quintile, only 0.2% reported unmet need due to waiting times in 2014. Various efforts to tackle waiting lists have been taken, including additional budget allocations to fund overtime work in the public sector and ‘coupons’ for some patients to obtain care in the private sector.

**Figure 12. Cyprus has a high density of expensive diagnostic technology**



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

### 5.3. RESILIENCE<sup>7</sup>

#### Low levels of public spending are not sufficient to support the health system

Fiscal sustainability forecasts suggest that changing demographics will increase public spending on health care as a share of GDP by only 0.3% between 2013 and 2060 (European Commission and Economic Policy Committee, 2015). However, these projections assume a continuation of the currently low priority given to health, which is not likely to be sufficient in the long term given that expenditure levels are already unable to provide coverage to the entire population and there are long waiting times for some services.

The public health care sector in Cyprus has historically been underfunded, leaving it unprepared to cope with shocks. This became particularly evident during the recent economic crisis. As GDP per capita declined each year from 2008 through to 2014, demand for publicly provided health services increased. At the same time, the revenue base shrank, causing total government revenue to fall in nominal terms by around 7%. Although health spending as a share of total government expenditure remained reasonably steady during this time, public debt increased rapidly – more than doubling as a share of GDP – to cope with the fall in government revenues.

With an aim of creating a sound financing system and increasing quality and efficiency of public health care provision, the 2013 Economic Adjustment Programme for Cyprus formulated a number of recommendations with reference to the health care sector. This included changes to user charge policy and public sector eligibility aiming to both raise revenues and reduce unnecessary demand for services. There were also renewed calls to implement the new universal health system (see Box 1).

As agreed by Parliament in June 2017, a mix of contributions from employees and pensioners, employers and the self-employed, and the state budget will fund this new health system. Although it is difficult to assess the long-term sustainability of this new financing system, the plan for a more diversified revenue base that incorporates some of the resources currently spent privately will help to improve the fiscal sustainability of the health care system.

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

## Equity and efficiency could still be improved

Given its total health expenditure per capita, Cyprus secures very good health outcomes; for example, amenable mortality rates are very low, particularly relative to its low level of health spending (Figure 13). Although this seems to indicate that the system operates cost-effectively overall, it is not possible to effectively disentangle the role of health behaviours and other determinants irrespective of the health care system in influencing the level of amenable mortality at such an aggregate level.

There are, however, various reasons to suspect that Cyprus' level and distribution of resources, including financial resources and health professionals, may contribute to inefficiencies at the provider and patient levels, which cannot be seen in Figure 13. For example, public sector resources are allocated to providers according to annual budgets based on historical spending patterns, not according to health needs or provider performance. This makes it difficult to ensure that resources are distributed appropriately or efficiently. Political commitments to strengthen public primary care and establish gatekeeping have not been realised, although there are plans to do so under the new national health system.

Additionally, most nurses work in the public sector whereas physicians are predominantly based in the private sector (see Section 4). Although from a public sector unit cost perspective nurses are less expensive than physicians, this imbalance across sectors and the fact that nurse density is also quite low may partially explain why those who can afford to do so pay for care from the private sector.

## Changing payment structures may incentivise better care delivery

Across the entirety of the health care system there is also a lack of provider payment incentives to encourage efficient practices, since public sector health workers are salaried civil servants whereas private sector providers are paid fee for service. As part of the new national health system, some public health workers would no longer be salaried civil servants, which despite political barriers, has the potential to introduce greater incentives for efficient care delivery.

## Efforts also target better coordination and better value for money

Coordination among providers is also currently limited, especially between the public and private sectors. Besides the existence of a diverse and fragmented private sector and the scant information on the services it provides, there are operational barriers between the public and private sectors: an absence of an integrated information technology system, lack of communication and no formal system of referrals. In response, the tendering process for commissioning a new system-wide information technology platform to support the new national health system was successfully completed in March 2017.

Notable efforts have also been made to obtain value for money in the pharmaceutical sector despite the fact that Health Technology Assessment has not played a major role in determining the benefits package. In the public system, medicines are procured via tenders, where the bidder offering the lowest price wins the right to supply the entire market for two years. This has the potential to lead to low prices, presuming there is no monopoly producer. Private sector medicine prices are determined using external reference pricing. Generic substitution is required in the public sector, although in the private sector there are no incentives for doctors and pharmacists to prescribe generics. There are also clinical guidelines to discourage overprescribing, although no formal auditing system is in place to monitor compliance. Future plans in this area include the establishment of an autonomous medicines agency tasked with regulating medicines (Cyprus National Reform Programme, 2017).

## Implementing the new national health system has been a long-term governance test

Cyprus' health sector governance has been tested for nearly 30 years as the country has sought to implement a universal health care system with very limited success. There have been many reasons for delays, including a lack of political will. In addition, there has been stakeholder resistance at times among public sector workers not wanting to lose their civil servant status, private sector workers concerned about income losses, private insurers wanting to be included as part of the new system, and employers and employees unhappy about their proposed contribution rates.



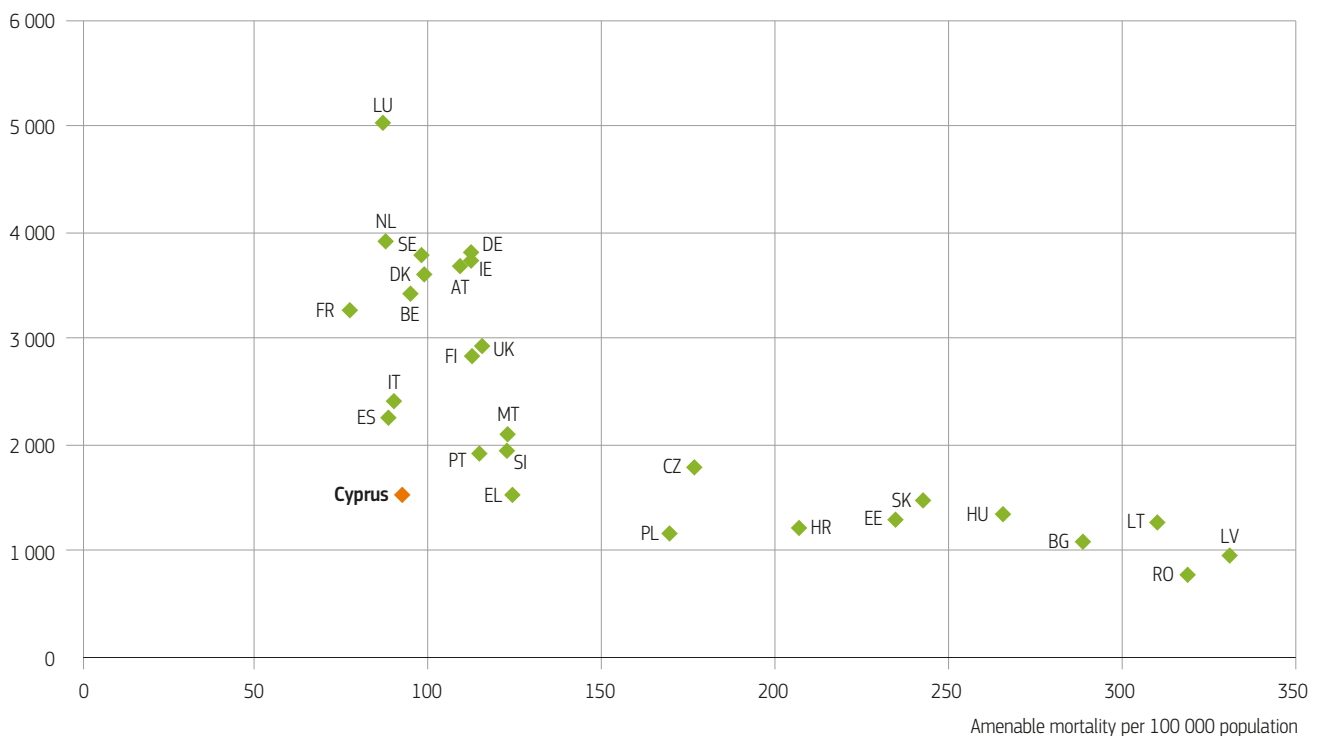
However, since the economic crisis there has been new momentum for reform. Following the 2013 Economic Adjustment Programme for Cyprus and with technical assistance from other EU Member States and the European Commission, among others, in June 2017, Parliament voted in favour of key bills providing for financial and administrative autonomy for public hospitals to be phased in over five years, as well as setting contribution and co-payment rates.

While this represents a major step forward, successful implementation of the new health system will undoubtedly face further governance-related challenges. For example, the basic goal of the new national health system is to bring together the public and private sectors under a single, competitive system. However, to date, private sector data, such as provider costs and performance, are not available, which will make it difficult to develop contracts and monitor quality of care. The Ministry of Health is also currently responsible for nearly all aspects of the current public health care system. Under the new national health system, the Health Insurance Organisation will take on a key administrative role. The success of this shift in responsibility will be dependent on clear, distinct lines of accountability.



**Figure 13. Considering the level of expenditure, amenable mortality rates are particularly low**

Health expenditure per capita, EUR PPP



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

## 6 Key findings

- The Cypriot population is in good health overall, with among the highest life expectancy in the EU. Mortality rates for common causes of death, such as cardiovascular diseases and cancers, are below the EU average.
- There has been an upward trend in incidence of some cancers, in particular colorectal, breast and lung cancers. Although cancer is the second leading cause of death, there are only national cancer screening programmes for breast and colorectal cancer. Diabetes mortality rates are also well above the EU average.
- Healthy behaviours have had important, long-standing positive effects on the Cypriot population's health. Alcohol consumption is low relative to other EU Member States and dietary habits are generally favourable. However, smoking remains a significant public health issue, as smoking rates have not fallen in the way they have in many other countries. There are recent and on-going initiatives aiming to prohibit smoking in public indoor places. Growing childhood obesity rates are also a cause for concern.
- The health care system is split between public and private sectors and the public system does not offer universal access. In addition, coordination between the public and private sectors is minimal. Approximately 75 % of the population is covered by the public sector but there are long waiting lists for some services, in part because of limited resources.
- Many people opt to pay out-of-pocket to visit private providers. Out-of-pocket spending represents approximately half of total health care spending, which is the highest share in the EU after Bulgaria. Although most of this expenditure is for private sector services, since 2013, as part of the Economic Adjustment Programme for Cyprus, public sector user charge levels have increased and new charges have been introduced. The impact of such high out-of-pocket spending in the years after the economic crisis will be known fully only when household-level data become available.
- There is no formal process on health workforce planning, contributing to the very low ratio of only 1.5 nurses per physician. Most physicians, dentists and pharmacists work in the private sector, whereas the majority of nurses are employed in the public sector; coordination between providers in the public and private sectors is minimal.
- Cyprus has allocated less of its government budget to health than any other EU country since 2004. During the financial crisis, as government revenues shrank, Cyprus was forced to take on significant public debt to maintain its low level of health care expenditure. With increasing demand for services associated with population ageing and other factors, the sustainability of the system will be tested further unless health is given greater priority.
- After three decades of delays, there have been recent steps towards implementation of a new national health system providing universal access to care. A contract for an IT system to support the new health system has been issued, and in June 2017 Parliament approved bills on financial and administrative autonomy for public hospitals, and on setting contribution and co-payment rates. The new health system is expected to be fully implemented in 2020.



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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.

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Please cite this publication as:

OECD/European Observatory on Health Systems and Policies (2017), *Cyprus: Country Health Profile 2017, State of Health in the EU*, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels.  
<http://dx.doi.org/10.1787/9789264283329-en>

ISBN 9789264283329 (PDF)

Series: State of Health in the EU  
ISSN 25227041 (online)