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Greece

Health system review

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Preface

The Health Systems in Transition (HiT) profiles are country-based reviews that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each review is produced by country experts in collaboration with the Observatory's staff. In order to facilitate comparisons between countries, the reviews are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a report.

HiTs seek to provide relevant information to support policy-makers and analysts in the development of health systems in Europe. They are building blocks that can be used:

- to learn in detail about different approaches to the organization, financing and delivery of health services and the role of the main actors in health systems;
- to describe the institutional framework, the process, content and implementation of health care reform programmes;
- to highlight challenges and areas that require more in-depth analysis;
- to provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in different countries; and
- to assist other researchers in more in-depth comparative health policy analysis.

Compiling the reviews poses a number of methodological problems. In many countries, there is relatively little information available on the health system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services are based on a number of different sources, including the

World Health Organization (WHO) Regional Office for Europe Health for All database, national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, the International Monetary Fund (IMF), the World Bank, and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.

A standardized review has certain disadvantages because the financing and delivery of health care differ across countries. However, it also offers advantages, because it raises similar issues and questions. The HiTs can be used to inform policy-makers about experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analysis of health systems. This series is an ongoing initiative and material is updated at regular intervals.

Comments and suggestions for the further development and improvement of the HiT series are most welcome and can be sent to info@obs.euro.who.int.

HiTs and HiT summaries are available on the Observatory's web site www.healthobservatory.eu.

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The HSPM is an international network that works with the Observatory on Country Monitoring. It is made up of national counterparts that are highly regarded at national and international level and have particular strengths in the area of health systems, health services, public health and health management research. They draw on their own extensive networks in the health field and their track record of successful collaboration with the Observatory to develop and update the HiT.

The Department of Sociology, Panteion University of Social and Political Science, aims to provide teaching, research, postgraduate studies and an international presence through a multidisciplinary approach to social problems. It undertakes the systematic study of society, social behaviour and social institutions, and also investigates changes in the structure of human society and contemporary social and individual problems. One of the Department's major areas of teaching and research is the health sector, more precisely the determinants of health, inequities in health status and health care access, organization of health systems and the formulation and implementation of health policy.

This edition was written by Charalambos Economou, Daphne Kaitelidou, Marina Karanikolos and Anna Maresso. It was edited by Anna Maresso and Marina Karanikolos, working with the support of Ewout van Ginneken of the Observatory's team at the University of Technology, Berlin. The basis for this edition was the previous HiT on Greece, which was published in 2010, written by Charalambos Economou and edited by Anna Maresso.

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The European Observatory on Health Systems and Policies is a partnership, hosted by the WHO Regional Office for Europe, which includes the Governments of Austria, Belgium, Finland, Ireland, Norway, Slovenia, Sweden, Switzerland, the United Kingdom, and the Veneto Region of Italy; the European Commission; the World Bank; UNICAM (French National Union of Health Insurance Funds); the London School of Economics and Political Science (LSE), and the London School of Hygiene & Tropical Medicine (LSHTM). The European Observatory has a secretariat in Brussels and hubs in London (at LSE and LSHTM) and at the Berlin University of Technology.

The Observatory team working on HiTs is led by Josep Figueras, Director, Elias Mossialos, Martin McKee, Reinhard Busse (Co-directors), Ewout van Ginneken, Ellen Nolte and Suszy Lessof. The Country Monitoring Programme of the Observatory and the HiT series are coordinated by Anna Maresso. The production and copy-editing process of this HiT was coordinated by Jonathan North, with the support of Caroline White and Jane Ward (copy-editing).

List of abbreviations

CT	computed tomography
DRG	diagnosis-related group
EAP	Economic Adjustment Programme
ECDC	European Centre for Disease Prevention and Control
EFKA	Unified Social Security Fund
EKAPTY	National Evaluation Centre of Quality and Technology in Health
EKAV	National Centre for Emergency Care
EKPY	Integrated Health Care Regulation
EOF	National Organization for Medicines
EOPYY	National Organization for the Provision of Health Services
ESY	Hellenic National Health System
ESYDY	National Public Health Council
EU	European Union
EU28	28 Member States in 2018
EU-SILC	EU Statistics on Income and Living Conditions (survey)
GDP	gross domestic product
GP	general practitioner
IKA	IKA ATHINON (social insurance fund)
KEELPNO	Hellenic Centre for Disease Control and Prevention
KESY	Central Health Council
MRI	magnetic resonance imaging
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
OOP	out-of-pocket (payment)
PEDY	national primary health care network
PPP	purchasing power parity
SHI	social health insurance
VAT	value added tax
VHI	voluntary health insurance
YPE	regional health authority

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Abstract

This analysis of the Greek health system reviews developments in its organization and governance, health financing, health care provision, health reforms and health system performance. The economic crisis has had a major impact on Greek society and the health system. Health status indicators such as life expectancy at birth and at age 65 are above the average in the European Union but health inequalities and particular risk factors such as high smoking rates and child obesity persist. The highly centralized health system is a mixed model incorporating both tax-based financing and social health insurance. Historically, a number of enduring structural and operational inadequacies within the health system required addressing, but reform attempts often failed outright or stagnated at the implementation phase. The country's Economic Adjustment Programme has acted as a catalyst to tackle a large number of wide-ranging reforms in the health sector, aiming not only to reduce public sector spending but also to rectify inequities and inefficiencies. Since 2010, these reforms have included the establishment of a single purchaser for the National Health System, standardizing the benefits package, re-establishing universal coverage and access to health care, significantly reducing pharmaceutical expenditure through demand and supply-side measures, and important changes to procurement and hospital payment systems; all these measures have been undertaken in a context of severe fiscal constraints. A major overhaul of the primary care system is the priority in the period 2018–2021. Several other challenges remain, such as ensuring adequate funding for the health system (and reducing the high levels of out-of-pocket spending on health); maintaining universal health coverage and access to needed health services; and strengthening health system planning, coordination and governance. While the preponderance of reforms implemented so far have focused on reducing costs, there is a need to develop this focus into longer-term strategic reforms that enhance efficiency while guaranteeing the delivery of health services and improving the overall quality of care.

Executive summary

The economic crisis has had an enduring impact on Greece

Greece is an European Union (EU) Member State with a population of almost 11 million, facing common demographic challenges such as an ageing population and diminishing natural population growth (2.7% decrease between 2010 and 2015). The economic crisis has had a severe impact on Greece since 2010, losing more than one quarter of its gross domestic product (GDP). A sovereign debt crisis led to a bailout by international lenders and the adoption of three successive Economic Adjustment Programmes (EAPs), with the current EAP due to expire in August 2018. In light of these economic circumstances, the country has implemented large-scale austerity measures, which have involved substantial reductions to public spending, including within the health sector.

In terms of health status, life expectancy at birth in Greece has been increasing since the 1990s and was 81.1 years in 2015, which was slightly above the EU average of 80.6 years. Cancer and cardiovascular diseases (including ischaemic heart disease and stroke) remain the most common causes of death in both men and women, accounting altogether for 65% of all deaths. Greece faces a number of long-standing health challenges, such as socioeconomic health inequalities, exceptionally high smoking prevalence and high rates of overweight and obesity. However, alcohol consumption has decreased by 20% since 2005 and is the second lowest (at just under 7.5 litres per person) in the EU (after Italy). More recent challenges include worsening mental health, emerging communicable disease outbreaks and caring for the physical and mental health needs of large numbers of migrants and refugees arriving in Europe.

The health system is highly centralized and regulated

Greece's health care system is a mixed system comprising elements from both the public and private sectors. In the public sector, a national health service

type of system coexists with a social health insurance (SHI) model. In 2011, the National Organization for the Provision of Health Services (EOPYY) was established. It acts as the sole purchaser of health care services for patients covered by the publicly financed National Health System (known as ESY). The private sector includes profit-making hospitals, diagnostic centres and independent practices. A large part of the private sector enters into contracts with EOPYY, providing mainly primary/ambulatory care for the ESY. After 2010, the role of voluntary initiatives, nongovernmental organizations (NGOs) and informal health care networks increased significantly. This was mainly a response to meeting the needs of the large portion of the population that lost insurance coverage and access to public health care, primarily through prolonged unemployment or other inability to pay contributions. Coverage was restored through remedial legislation in 2016.

The Ministry of Health is responsible for the planning and regulation of the ESY and EOPYY. Despite the establishment of regional health and welfare authorities as far back as 2001, and their renaming as regional health authorities (YPEs) in 2004, these entities, which were intended to carry out extensive health care planning, organization and provision, have exercised only limited powers to date. This may change with the implementation of more recent primary care reforms. In 2014, legislation formally transferred all public primary care facilities, health centres and rural surgeries to the jurisdiction of the YPEs. These are expected to take up their primary care coordination roles more fully under the implementation of further reforms being rolled out from 2017 to 2020, to create a more integrated, two-tier primary care system with a gatekeeping role.

There is extensive legislation controlling the activities of third-party payers and providers of services, the purchasing process and the levels of prices and reimbursement within the ESY. The training and licensing of health professionals are also highly regulated.

Health financing in Greece is shaped by significant fiscal constraints

Financing is through a mix of public and private resources, including SHI and tax, which account for approximately 30% each, with users' private spending making up the remaining 41%. Health expenditure in 2015 was 8.4% of GDP (compared with the EU average of 9.5%); however, in the context of drastically reduced GDP since the onset of the economic crisis, expenditure has fallen

substantially (by one fifth) since 2010. This spending translates to US\$ 2204 purchasing power parity (PPP) per capita, which is the lowest among the pre-2004 EU Member States and roughly two thirds of the average for the 28 Member States in 2018 (EU28).

Public expenditure on health constituted 5% of GDP in 2015. A public expenditure cap of 6% of GDP, set in the country's first EAP, continues to be applied in 2017. The share of public expenditure on health was 59% in 2015 (the fourth lowest in the EU), with the remaining 41% being found from private payments. The share of private financing in Greece is one of the highest in the EU and is mainly in the form of out-of-pocket (OOP) payments. These payments are made up of co-insurance for medicines, direct payments for services not covered by SHI (which represent more than 90% of OOP payments) as well as payments for services covered by SHI but bought outside the public system to enhance access and quality. In addition, informal payments are widely practised, partly because of underfunding of the system and partly through lack of control mechanisms. Voluntary health insurance (VHI) makes up only a small proportion of health expenditure (3.9% of current health expenditure in 2015).

Several employment-related SHI funds covered the entire population prior to the economic crisis. After 2011, population coverage for health care was undertaken by a single entity, EOPYY, which covers the insured and their dependents. At the same time, the benefit packages of the various SHI funds were standardized to provide a common benefits package under EOPYY.

Greece has had to deal with a health coverage gap for a period of approximately seven years – since the onset of the crisis until 2016. After 2009, it is estimated that 2.5 million people (those who became unemployed for more than two years and their dependents as well as the self-employed who could no longer afford to pay contributions) lost their health insurance coverage and thus access to publicly provided services. Following two unsuccessful attempts to address this situation, in 2016 new legislation was introduced to secure funding in order to provide health coverage for the whole population through EOPYY.

Financing mechanisms for providers are to a large extent retrospective. Health professionals (e.g. doctors and nurses) working in ESY primary care facilities and hospitals are paid salaries while providers contracted with EOPYY are paid on a fee-for-service basis. Previously, hospitals were paid on a per diem basis but since 2012 public hospitals as well as contracted private hospitals are mostly compensated under a diagnosis-related group (DRG) scheme, which aims to rationalize the use of resources.

Physical and human resources are distributed unevenly

There are few mechanisms that allow adequate planning and allocation of physical and human resources in Greece, with a lack of priority-setting processes, effective needs assessment and investment strategies, among others. Generally speaking, resources are unevenly distributed across the country, with a much higher concentration of health services and medical equipment in large cities compared with rural areas; private facilities are also largely located in urban centres.

In terms of hospital sector infrastructure, in 2014 (the latest year for which data are available) Greece had 346 acute beds per 100 000 population, which is below the EU average of 394 per 100 000. Reductions since 2009 reflect cuts to acute and psychiatric beds but wider government plans to reduce bed numbers and restructure the hospital sector have been only partially implemented.

Greece is among the EU countries with the highest number of computed tomography (CT) and magnetic resonance imaging (MRI) scanners: second highest for CT (3.5 per 100 000 population) and third highest for MRI (2.4 per 100 000) in 2013. Most of these are owned by ambulatory care providers in the private sector and are concentrated mainly in urban areas. Historically, there has been a problem with doctors overprescribing tests and procedures using such expensive medical technology. Consequently, as part of the country's EAP, monthly ceilings on prescribing diagnostic and laboratory tests were imposed in 2014 on doctors contracting with EOPYY.

In 2014, 210 000 were employed in health and social services in Greece. Health workforce increases from the mid-1990s to the late 2000s have been reversed by the economic crisis; for example, between 2009 and 2014 there was a 15% decrease in staff employed in hospitals. As with physical resources, the distribution of human resources is uneven. The doctor–patient ratio is the highest in the EU: the number of practising physicians reached 625 per 100 000 population in 2014 (compared with the EU average of 350). The vast majority of physicians are specialists rather than general practitioners (GPs). In addition, there are imbalances between various specialties, and shortages of both doctors working in public hospitals and GPs working in rural areas. In contrast, the nurse–patient ratio is the lowest in the EU (344 per 100 000 population in 2014 compared with an EU average of 864). The undersupply of nurses is particularly pressing in Greek public hospitals.

A weak primary care system is a major challenge for the delivery of services.

Historically, public health services have taken a back seat in favour of the development of secondary care services. The services that are delivered rarely engage in prevention, health promotion, social care and rehabilitation.

The primary care system has not been developed fully, and patients face problems with access, continuity of care and coordination as well as comprehensiveness of services. A mix of public and private providers delivers ambulatory care. The three main sources are (i) ESY's rural health centres and their health surgeries, polyclinics and outpatient departments in public hospitals; (ii) ambulatory clinics and welfare services offered by local authorities and NGOs; and (iii) private sector services, such as medical offices, laboratories, diagnostic centres and outpatient medical consultations at private sector hospitals. Specialized ambulatory care, in particular, is characterized by unequal geographical distribution of contracted EOPYY physicians, with a heavy concentration in large cities, and by a lack of some specialties across the country. As part of EAP measures, every doctor contracted with EOPYY has a limit of 200 visits per month and a monthly ceiling on the value of pharmaceutical prescriptions that can be issued. The latter varies according to specialization, number of patients prescribed for, the prefecture and the month of the year.

Currently, there is no gatekeeping mechanism that manages the referral system but a new Primary Care Plan announced in 2017 aims to establish first-contact, decentralized local primary care units staffed by multidisciplinary teams, which will also take on a gatekeeping role. The rollout of the Plan is expected to take three years, from 2017 to 2020.

The Greek health care system is strongly centred around hospitals. Of the 283 hospitals existing in 2014 (excluding military and prison hospitals), just under half (45%) were private. Approximately 65% of the country's hospital bed stock is in the public sector and 35% in the private sector, with a pronounced geographical concentration (60% of all beds) located in the regions of Attica (which includes the capital city of Athens) and Central Macedonia (where Greece's second largest city, Thessaloniki, is located). Substitution policies to replace inpatient care with less expensive outpatient, home care and day care largely do not exist and the degree of integration between primary and secondary care providers is low.

The pharmaceutical sector has undergone significant reforms since the early 2000s. All medicinal products are distributed through wholesalers to community

pharmacies, apart from products that are only for hospital use, which are sold directly to hospitals. A large range of pharmaceuticals are covered as part of the benefits basket, with varying degrees of co-payments. Measures have also been introduced to liberalize the pharmaceutical market to increase access and enhance efficiency, including a reduction in the population density threshold for setting up a pharmacy and allowing more than one pharmacist to work in the same pharmacy. In addition, to lower outpatient pharmaceutical expenses for some groups, such as chronically ill patients requiring expensive medicines, distribution is now possible through EOPYY public pharmacies, where prices are lower than in private pharmacies.

The provision of physical rehabilitation, long-term and palliative care by the private (profit-making) sector, voluntary organizations and NGOs has increased because of gaps in ESY services and staff as well as equipment shortages in public facilities. The development of mental health services since the creation of the ESY has increasingly focused on moving services away from institutional facilities (asylums) and the development of community-based services, with priority also given to supportive infrastructure, social inclusion and de-stigmatization.

Despite publicly funded dental services being part of the EOPYY benefits package, the lack of adequate funding and the absence of contractual arrangements with private sector dentists means that most services are not covered and patients must pay out of pocket. In practice, EOPYY members who are not able to pay OOP for private dental services can visit ESY units. Dentists working in public hospitals provide mainly secondary dental treatment for patients with medically complex needs. Dentists working in health centres provide dental treatment for children up to 18 years of age, and emergency treatment for all ages.

Greece is tackling an unprecedented number of reforms at the same time

The majority of reforms that have occurred in the health system since 2010 have been a direct result of the EAPs, which continue to shape the direction of policy.

The creation of the EOPYY in 2011 represented a major shift towards a single-payer health insurance system, replacing the health insurance funds that previously covered the population. EOPYY now acts as the sole purchaser of medicines and health care services for all those insured. The standardization of the numerous benefits packages that existed under the insurance funds

addressed long-standing inequities in the services covered for different employment groups and applicable co-payments. Although there was a major problem with population coverage between 2009 and 2016, during which approximately 2.5 million lacked comprehensive health coverage, current legislation now ensures universal access to health care services, including by the unemployed and underinsured vulnerable groups.

The pharmaceutical sector was a specific target of the EAP as it was one of the major sources of public spending that needed to be contained. Pharmaceutical expenditure was tackled through a variety of measures and has resulted in major reductions, mainly through cuts in drug prices, increased rebates and control of the volume of consumption. Apart from the establishment of positive and negative lists for reimbursement purposes and the introduction of reference pricing, an electronic prescription (e-prescription) system for doctors became compulsory in 2012, enabling the monitoring of their prescribing behaviour as well as the dispensing patterns of pharmacists. At the same time, prescription guidelines following international standards were issued in 2012 and prescribing budgets for individual physicians have been fixed since 2014. The use of generics has been promoted by a number of measures: including requiring physicians to prescribe drugs using the international nonproprietary name, allowing the use of brand names only in specific circumstances; requiring 50% of medicines prescribed/used in public hospitals to be generics; and introducing mandatory generic substitution in pharmacies.

In addition, substantial changes in procurement, monitoring and evaluation have taken place since 2012. Procurement of supplies for public health care facilities is now undertaken at the regional level. A number of specific monitoring and accounting changes have been introduced or are under consideration (e.g. establishment of the Coordination Committee for Procurement, electronic recording of prescriptions and development of the Price Monitoring Tool). Measures in the hospital sector have involved changes to hospital structures (ongoing), and the introduction of a Greek DRG system (DRG-KEN) in 2013.

Without doubt, the most far-reaching reform that has been attempted is the reconfiguration and delivery of primary care services. The reform of primary care started in 2014 with the establishment of national primary health care networks (PEDYs), coordinated by the YPEs. There have been delays in implementing reforms in primary care because of lack of funding and human resources, as well as the weak administrative capacities of the PEDYs. The latest plan was launched on a pilot basis in 2017 and a full rollout is expected over a three-year period. Its aim is to create a two-tiered primary care system with a gatekeeping function. Adequate resourcing, both budgetary and in

terms of workforce capacity, will be key to the reform's success as will the willingness of key providers and the population to adapt to a new way of accessing primary care services.

Continued action is required to improve health system performance, governance and sustainability

A number of important steps have been taken since 2010 to improve health system performance monitoring, including the implementation of the System of Health Accounts from the Organisation for Economic Co-operation and Development (OECD) and the development of web-based platforms for collecting and reporting data. Other information-based systems to be used for monitoring and planning include the Health and Welfare Map to monitor resources, allocation and utilization patterns across the country; the national pharmaceutical e-prescribing system; electronic systems to manage prescribing and cost reimbursement for diagnostic tests; and systems to enhance scrutiny of tenders and prices paid by hospitals for products and services.

In terms of the impact of the health system and wider policies on population health, the amenable mortality rate, which reflects quality and timeliness of medical care, has reduced overall but shows signs of stagnation over the last few years. By comparison, the preventable mortality rate, which reflects intersectoral measures affecting health, such as tobacco and alcohol consumption policies and road traffic safety, was similar to that of the EU (58 per 100 000), with little progress made since 2000. Concern has been raised over the effectiveness of disease management, however, particularly in addressing specific diseases such as treatable types of cancer and circulatory diseases. This issue reflects a combination of factors such as the weak primary care system, inadequate focus on public health and preventive activities, such as cancer screening programmes, and fragmented systems for managing patients with chronic diseases. However, it is noteworthy that efforts have been made over the past few years to improve the quality of care, including the development of new protocols for major chronic conditions.

Access to health services has been a major challenge in Greece since the advent of the crisis, with access deteriorated markedly between 2009 and 2016, particularly with the loss of health coverage by the unemployed and self-employed who could not afford to pay SHI contributions. During this period, the number of people reporting unmet needs for medical care, particularly for reasons of cost, increased markedly, particularly among the poorest segments

of the population. Informal payments are widespread in both inpatient and outpatient care, in the public and private sectors, thus adding to the direct financial burden on patients to pay for required health services. Moreover, access to medicines, principally some high-cost cancer drugs, has been an issue because of delays or disruptions in the supply chain. Finally, shortages of both personnel and supplies in public sector hospitals and medical facilities have had an impact on access, as have waiting times, the uneven distribution of health professionals across the country and the monthly limits on physician activity.

Historically, the Greek health care system has suffered from unequal and inefficient allocation of financial, human and material resources. In the present context and the prevailing goals of reducing government spending across the health sector (in both inpatient and outpatient care as well as pharmaceuticals), the systematic tackling of inefficiencies will require longer-term commitment. For example, initiatives such as the Health and Welfare Map aim to improve allocation of health resources but this system has not yet been implemented. The development of a DRG payment system for hospitals is a concrete attempt at improving technical efficiency but other longer-term measures such as restructuring of the hospital sector have experienced delays. However, the efforts to develop a more transparent and efficient procurement system, and the introduction of e-governance tools, are important steps leading towards increased efficiency.

The reforms that have been taking place in the Greek health care system since 2010 have mainly focused on financial and organizational dimensions, partially tackling long-term structural health system issues. However, carrying out major changes coupled with extensive financial cuts has proved to be very challenging, in terms of both the ability to conduct meaningful reforms and the consequences for service delivery. Despite the major efforts undertaken so far, a number of key sources of health system inefficiencies remain to be addressed, in particular, primary care, lack of planning and coordination, and lack of funding. Another challenge is the lack of administrative capacity to introduce managerial reforms and follow them through. The gaps in technical skills and, therefore, the flow of information between various state actors, as well as a lack of robust performance evaluation, further encourage resistance to change.

1. Introduction

Chapter summary

- Greece is an EU Member State with a population of almost 11 million, facing common demographic challenges such as an ageing population and diminishing natural population growth.
- Greece's economy has been severely affected by the economic crisis, characterized by the loss of more than 25% of GDP, international bailouts and the adoption of large-scale austerity measures, which have involved substantial reductions to public spending.
- Due to the impact of the crisis, Greece has faced a number of political challenges over recent few years, involving four general elections between 2010 and 2015, and a weakening of the traditionally dominant political parties.
- Life expectancy at birth in Greece has been increasing since the late 1990s and in 2015 was slightly above the EU average (81.1 and 80.6 years, respectively). Cardiovascular diseases and cancer remain the most common causes of death in both men and women.
- Greece faces a number of health challenges, including long-standing ones such as socioeconomic health inequalities, exceptionally high smoking prevalence and high rates of overweight and obesity. More recent challenges include worsening mental health, emerging communicable disease outbreaks and being at the front line of caring for the physical and mental health needs of migrants and refugees arriving in Europe.

1.1 Geography and sociodemography

Greece is located in south-eastern Europe, on the southern end of the Balkan peninsula and covers an area of 131 957 km². The country consists of a large mainland, the Peloponnesian peninsula, and

more than 3000 islands, out of which 169 are inhabited, including Corfu, Crete, Rhodes and the Ionian, Dodecanese and Cycladic groups. It has about 15 000 km of coastline (bordering the Aegean, Ionian and Mediterranean Seas) and land boundaries with Albania, Bulgaria and the former Yugoslav Republic of Macedonia to the north and Turkey to the east, totalling 1180 km (Fig. 1.1).

Fig. 1.1

Map of Greece



Source: United Nations, 2011.

The population of the country in 2016 was approximately 10.7 million (Table 1.1), which represents a 3.4% decrease compared with 2010. Population density is 83.4/km² but is unevenly distributed, with 78% living in urban areas and 35% in the area of greater Athens alone. According to the latest population census (2011), the total number of permanent residents with foreign citizenship was 912 000, constituting approximately 8.4% of the total population. Of these, about 53% had Albanian, 8% Bulgarian and 5% Romanian citizenship (Hellenic Statistical Authority, 2014).

Table 1.1

Trends in population/demographic indicators, selected years

	1995	2000	2005	2010	2015	2016
Total population	10 562 153	10 805 808	10 987 314	11 121 341	10 820 883	10 746 740
Population aged 0–14 years (% of total)	17.2	15.4	15.1	14.9	14.5	14.3
Population aged 65+ years (% of total)	14.7	16.4	17.8	18.4	19.9	20.2
Population growth (% annual growth rate)	0.5	0.4	0.3	0.1	-0.7	-0.7
Fertility rate, total (births per woman)	1.3	1.3	1.3	1.5	1.3	
Population density (per km ²)	81.9	83.8	85.2	86.3	83.9	83.4
Distribution of population (% rural)	27.9	27.3	25.5	23.7	22.0	21.7

Source: World Bank, 2018.

Age distribution has changed since the late 1990s, with people aged 65 and over now representing more than 20% of the total population. The key drivers of this demographic shift are low fertility and increased longevity. In addition, net migration has been negative since the start of the economic crisis, which contributes to natural population decline.

Greece is one of the main arrival countries for the migrant and refugee inflow from Afghanistan, Iraq, the Syrian Arab Republic and other Middle East countries. During 2015, Greece registered more than 850 000 arrivals (United Nations Refugee Agency, 2016). Migrants and refugees live in so-called hotspots, shelters and detention centres, camps and squats, characterized by overcrowding and poor hygiene.

These developments raise a number of challenges for the Greek health care system, including changing population health and social care needs (health and social care services for people on the move or stranded), setting up appropriate financing mechanisms, coordination between and integration of services and providing adequate health care for refugees. At the same time, the growing share of the ageing population and decreasing labour force raise concerns regarding future sources of financing for the health and social sectors (Chapter 3).

1.2 Economic context

Prior to the long-lasting economic crisis, which started in the country in 2009, Greece recorded high growth rates driven by buoyant private consumption and dynamic investment activity, particularly in the run-up to the 2004 Olympic Games. The large inflow of resources from EU Structural Funds boosted domestic demand and improved public infrastructure and total productivity. Major positive developments were observed in key social outcomes, including

unemployment, income inequality and poverty. However, at the same time the Greek economy faced serious challenges: the current account deficit widened and public debt increased markedly (Table 1.2). As a result, the Greek economy entered a deep, structural and multifaceted crisis in 2010, the main features of which were a large fiscal deficit and public debt, as well as continuous erosion of the country's competitive position (Desli & Pelagidis, 2012). At the start of the crisis, the deficit was 11.2% of GDP; public debt increased to 146.2% of GDP, and GDP contracted by 5.5%. At the peak of the crisis in 2013, unemployment reached 27.5%, while at this point the country had lost more than 25% of its GDP in comparison with 2008 (Eurostat, 2018b).

Table 1.2

Macroeconomic indicators, selected years

	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016
GDP per capita (€) ^a	9900	13200	18100	20300	18600	17300	16500	16400	16300	16200
GDP per capita, PPS (€) ^a	13000	17100	21700	21500	19700	19100	19200	19500	19700	19300
GDP growth (annual %) ^a	2.9 (1996)	3.9	0.6	-5.5	-9.1	-7.3	-3.2	0.7	-0.3	-0.2
Public expenditure (% of GDP) ^a	17.8	18.3	20.0	22.2	21.8	21.7	20.4	20.3	20.4	20.2
Cash surplus/deficit (% of GDP) ^a	-9.7	-4.1	-6.2	-11.2	-10.3	-8.9	-13.2	-3.6	-5.7	0.5
Public debt (% of GDP) ^a	99.0	104.9	107.4	146.2	172.1	159.6	177.4	179.0	176.8	180.8
Unemployment, total (% of labour force)	11.1 (1998)	11.2	10.0	12.7	17.9	24.5	27.5	26.5	24.9	23.6
At-risk-of-poverty rate ^b	22.0	20.0	19.6	20.1	21.4	23.1	23.1	22.1	21.4	21.2
Income inequality (Gini coefficient)	35.0	33.0	33.2	32.9	33.5	34.3	34.4	34.5	34.2	34.3

Source: Eurostat, 2018b.

Notes: PPS: Purchasing power standards; ^aData for 2011–2016 are provisional; ^b60% of median equivalized income after social transfers.

In order to address the problem, the Greek Government accepted a bailout from the EU, the European Central Bank and the International Monetary Fund, signing up for an initial EAP starting from May 2010. Greece is currently under its third EAP until August 2018, with financial assistance for all programmes amounting to €290 billion (European Commission, 2016). EAPs, aimed at reducing the public deficit and debt, are implemented under stringent conditions to deliver a set of reforms to fiscal policy, state ownership and market liberalization. This has required implementation of severe austerity measures, including funding cuts to health care, social welfare and education, achieving savings through reductions in the salaries and the number of public sector staff, reductions in pensions and increases in direct and indirect taxation.

From an economic and social perspective, some commentators have made four primary observations on the negative effects of EAP implementation. First, the EAPs involved some calculation errors, underestimating the effects of fiscal consolidation requirements on economic growth and not taking due account of the value of monetary expansion and investment during recessions (Blanchard & Leigh, 2013; Christodoulakis, 2013). Second, the EAPs have not adequately promoted recovery from the recession (Mavridakis, Dovas & Bravou, 2015), as the country still has not returned to growth, public debt has increased to 181% of GDP and total domestic demand has diminished. Third, less than 5% (€9.7 billion) of financial assistance received in the first two EAPs directly contributed to the fiscal budget, while the remaining amount was used for debt-related and interest payments, bank bailouts and to provide incentives for investors to engage in the private sector (Rocholl & Stahmer, 2016). Fourth, the economic crisis and EAP implementation have coincided with notable social effects, including substantial declines in employment and household incomes, and a rise in inequalities, poverty and social polarization (Koutsogeorgopoulou et al., 2014; Giannitsis & Zografakis, 2015; Zografakis & Sarris, 2015). Consequently, concerns have been raised in relation to the impact of austerity measures on social welfare, health, adequate housing as well as on the rights of people living in poverty and social exclusion (United Nations Human Rights Council, 2016).

1.3 Political context

Greece's political system has been a parliamentary democracy since 1975. The President of the Republic is the Head of State and is elected by the 300-member Parliament for a maximum of two five-year terms. The President approves new laws and formally appoints the Government, but direct involvement in policy-making is minimal. Executive power rests primarily with the Greek Government, headed by the Prime Minister and constitutionally controlled by the Parliament. The Prime Minister chooses the ministers, who then run their respective ministries independently but in close cooperation with the Prime Minister. At the beginning of its term, the government presents its policy programme to the newly elected Parliament in order to gain a confidence vote. The Parliament undertakes legislative tasks and is elected every four years by universal direct suffrage. Judicial power is vested in the courts, among which are the Supreme Court (*Areios Pagos*), the highest court that rules on civil and criminal cases, and the Council of State (*Symvoulio tis Epikratias*), which determines whether state laws and actions are in compliance with the Constitution.

For over 40 years the party system had been dominated by two parties, the liberal-conservative New Democracy and the socialist Pan-Hellenic Socialist Movement, and the country was ruled by one-party majority governments. The situation changed after the crisis, which brought about a dramatic fragmentation of the party system, weakening the dominant parties and empowering the rise of the left-wing SYRIZA and the far-right Golden Dawn as well as other smaller parties. Between 2010 and 2015, four elections took place (in May 2012, June 2012, January 2015 and September 2015) and all the new governments have been two- or three-party coalitions, with the latest one led by SYRIZA.

Since 2010, Greece's administrative structure has consisted of seven decentralized administrations (*apokentromenes dioikiseis*), 13 regions (*peripheries*) and 325 municipalities (*dimoi*). The heads of municipalities and the regions are elected every five years and the areas are run by a mayor and governor, respectively. The decentralized administrations are run by a general secretary appointed by the Greek Government. There is also an autonomous special administrative unit, Mount Athos (Holy Mountain), under the control of the Church of Greece.

In 1981 Greece joined the EU and has been a Member of the Economic and Monetary Union since 1 January 2001. Greece is also a member of international organizations such as the Council of Europe, the International Monetary Fund, the North Atlantic Treaty Organization, the Organization for Security and Cooperation in Europe, OECD and the United Nations.

1.4 Health status

Mortality and burden of disease

Greece has the 11th highest life expectancy at birth in the EU, which is slightly higher than the EU28 average (81.1 and 80.6 years, respectively); in 2015 life expectancy was 78.0 years for men and 83.7 for women (Table 1.3). Life expectancy increased by 3.6 years between 1995 and 2015, with the reduction in infant mortality being a significant factor that contributing to these gains: it fell by more than 50%, from 8.1 to 3.6 deaths per 1000 live births over the same period, although little change has been seen since the late 2000s. Greeks are expected to live longer than the EU average without disability: in 2015 this was 63.9 years for men and 64.1 for women (EU average 62.6 years for men and 63.3 for women) (Eurostat, 2018b). Disability-adjusted life-years have

broadly remained stable since the late 1990s, as there has been an increase in noncommunicable diseases while infectious diseases and injuries have decreased markedly (Table 1.4).

Table 1.3

Mortality and health indicators, selected years

	1995	2000	2005	2010	2015	EU28 2015
Life expectancy at birth, total (years)	77.5	78.2	79.5	80.6	81.1	80.6
Life expectancy at birth, male (years)	74.9	75.5	76.7	78.0	78.5	77.9
Life expectancy at birth, female (years)	80.1	80.9	82.3	83.3	83.7	83.3
Age-standardized mortality per 100 000						
All causes	1 335.0	1 329.4	1 215.6	1 035.9	966.6	1 003.1
Circulatory diseases	720.3	695.6	604.9	461.2	381.4	373.6
Malignant neoplasms	263.0	268.5	267.6	247.1	249.3	261.5
Communicable diseases	8.4	6.1	8.8	10.2	29.6	16.1
External causes	45.5	42.6	36.4	31.2	29.4	45.7
Infant mortality per 1 000 live births	8.1	5.9	3.8	3.8	4.0	3.6
Maternal deaths per 100 000 (3-year average) ^a	2.3	3.3	1.8	4.1	3.3	5.4

Sources: Eurostat, 2018b; ^aWHO Regional Office for Europe, 2016a.

Notes: Estimated provisional for 2015 for EU28 for life expectancy; 2014 latest year for cause of death for Greece and EU28; 2010–2012 latest year for maternal mortality for Greece and EU28.

Table 1.4

Disability-adjusted life-years, age-standardized rate per 100 000 population, selected years

	1995	2005	2015
All causes	26 953	26 572	26 979
Communicable, maternal, neonatal and nutritional diseases	1 271	1 108	969
Noncommunicable diseases	22 801	23 052	24 129
Injuries	2 881	2 412	1 881

Source: Institute of Health Metrics and Evaluation, 2018.

Based on data from Eurostat (2018b) for 2014, cardiovascular diseases, including ischaemic heart disease and stroke, remain the largest cause of death in Greece, constituting about 40% of all deaths. Ischaemic heart disease is responsible for 11% of all deaths, while mortality for those under the age of 65 is persistently higher than the EU average (28.4 and 19.2 per 100 000 in 2014, respectively). Greece has showed the least improvement on premature mortality from ischaemic heart disease among the EU Member States, performing worse than expected, possibly because of persisting patterns in lifestyle factors (high

smoking rates, high obesity rates, etc.) (Hirte et al., 2008; WHO Regional Office for Europe, 2016b). Mortality from stroke in Greece constitutes about 13% of all deaths, with deaths for those under 65 equal to the EU average (8.7 per 100 000 in 2014).

Cancer remains the second leading cause of mortality in Greece, accounting for a quarter of all deaths, with rates slightly lower than the EU average. For men, the most common causes of death in this category are lung (32%), followed by prostate (10%) and colorectal (9%) cancers; for women, the most common causes are breast (18%), lung (12%) and colorectal (11%) cancers. Greece has among the highest mortality rates for men from lung cancer in the EU (62 per 100 000, with EU average of 54). In addition, deaths from transport accidents in Greece are well above the EU average (8.6 and 5.8 per 100 000, respectively). However, there has been a substantial reduction since the late 1990s.

The suicide rate in Greece used to be among the lowest in the EU (5.0 per 100 000 population versus an EU average of 11.3 in 2014). Nevertheless, currently the rate stands at the highest level since records began in the 1970s, with recent increases starting in 2008 and associated with the effects of the financial crisis (Economou et al., 2016b; Papaslanis et al., 2016). Mortality from assaults has also increased in Greece since 2007; the rate in 2014 of 1.1 per 100 000 population being substantially higher than the EU average of 0.7.

Morbidity

In terms of general health, according to the EU Statistics on Income and Living Conditions survey (EU-SILC), 74% of the population perceived their health status as very good or good in 2015, compared with the EU average of 67%; 25% of the population reported having some form of health limitation (same as the EU average), and 24% of people reported having a chronic disease (EU average 34%) (Eurostat, 2018a). These results contrast with the results of the Hydria project (a recent large-scale survey of population health conducted by the Hellenic Health Foundation in collaboration with the Hellenic Centre for Disease Control and Prevention (KEELPNO) in 2013–2014), where three in five adults (60%) reported suffering from a chronic disease in 2014 (Hydria, 2016).¹

¹ The Hydria project was based on the standard of the European Health Examination Survey (www.ehes.info) and before broad implementation it was evaluated through a preliminary study (EHES-Pilot Joint Action 2009–2011), which was funded by the European Commission's Directorate-General for Health and Food Safety. In total, 4011 permanent residents (46.7% men and 53.3% women) from all 13 regions aged 18 years and older, participated in the study.

Reliable and comparable data on specific noncommunicable diseases in Greece are scarce. The data in the European Health Interview Survey from 2014 showed that 21% of the population reported hypertension, 9% reported diabetes and 4% reported asthma (Eurostat, 2016). For the same year, the Hydria project showed prevalence rates for diabetes at 11% and acute myocardial infarction at 3% of the population, with more women suffering from diabetes than men and the converse for acute myocardial infarction (Hydria, 2016). The International Diabetes Federation estimates for diabetes prevalence in Greece are 7.5% of the population (International Diabetes Federation, 2015). In 2012, Greece had an estimated cancer incidence for lung cancer in men that was higher than EU average (75 versus 66 per 100 000 population), but lower incidences than the EU average for most other types of common cancer (European Cancer Observatory, 2016).

The incidence of communicable diseases has been and remains low, with newly reported cases of tuberculosis, and hepatitis B being among the lowest reported to the European Centre for Disease Prevention and Control (ECDC) in 2017. However, some evidence suggests that there is a substantial degree of underreporting (Gibbons et al., 2014), with a study estimating that in 2004–2008 four out of five cases of tuberculosis went unreported (Lytras et al., 2012). In addition, there was a substantial increase in HIV infections (from 5.5 to 10.3 per 100 000 population) between 2009 and 2012 (ECDC, 2012a). The rise has been linked to the outbreak of HIV among injecting drug users, as the number of new cases among this population increased 15-fold from 2010 to 2011 and was linked mainly to cuts in prevention programmes as well as deteriorating socioeconomic conditions (Bonovas & Nikolopoulos, 2012; ECDC, 2012a; Economou et al., 2015). There was also a locally transmitted malaria outbreak (the first since 1974) in 2011–2012, with 62 non-imported cases over this period; this suggested a weakening of effective vector control measures and required international intervention by Médecins Sans Frontières (ECDC, 2012b; KEELPNO, 2013).

Mental health

In 2014, the Hydria project found that self-reported prevalence of chronic depression in Greece was about 7% of the population, with women reporting it four times more frequently than men (Hydria, 2016). Another study reports an increase in self-reported prevalence of major depression from 3.3% in 2008 to 8.2% in 2011 to 12.3% in 2013 (Economou et al., 2016a). Overall deterioration of general mental health status has been noted since 2010 and has been linked to the steep increase in unemployment rates and low socioeconomic

status (Drydakis, 2015) since the onset of the crisis. Concerns also have been raised regarding children's mental health; for example, the number of abused or neglected children admitted for child protection to the largest Greek paediatric hospital increased from 81 to 170 cases between 2011 and 2014 (Kolaitis & Giannakopoulos, 2015).

Risk factors for noncommunicable diseases

According to the Global Adult Tobacco Survey conducted in 2013, tobacco consumption in Greece remains the highest in the EU, with 38% of adults aged 15 or over (51% men and 26% women) currently smoking, 37% being daily smokers (Asma et al., 2015). WHO estimates show that age-standardized prevalence of smoking fell by 14% in men and 20% in women between 2002 and 2012 (WHO, 2015). The Hydria project revealed similar findings in that its data showed that 32% of the population in 2014 were daily smokers (35% of men and 29% of women), with the highest rates reported among those aged 25–64 years (Hydria, 2016). Despite widespread tobacco use and slow improvement in reducing smoking prevalence, health warning messages remain weak; there are gaps in prohibiting advertising of tobacco products, and compliance with smoking bans in restaurants and cafes is poorly enforced (WHO, 2015).

Greece has the second lowest level of alcohol consumption in the EU after Italy, with less than 7.5 litres per adult per year in 2014, compared with the EU average of 10.2 litres. Alcohol consumption has decreased by 20% in Greece since 2005. Deaths from alcohol-related causes also remain low, at 34 per 100 000 population, which is similar to other southern European countries such as Cyprus, Italy, Malta and Spain (compared with the EU average of 55 per 100 000) (WHO Regional Office for Europe, 2016a).

Around 65% of the population in Greece (fifth highest proportion in the EU) were overweight or obese in 2014, with more men (70%) than women (60%) having a body mass index over 25. Furthermore, 25% of the population were obese (similar to the EU average), affecting more women (27%) than men (24%). This translates to a two percentage point increase in both overweight and obesity in Greece since 2010 (from 63% and 23%, respectively) (WHO Regional Office for Europe, 2018). Results of the Hydria project show higher values, with 72% of the survey population being overweight or obese in 2014 (78% of men and 68% of women) (Hydria, 2016).

The dietary habits of a large proportion of the Greek population resemble the Mediterranean diet, which is characterized by a high intake of cereals, vegetables, fruits and olive oil, and low intake of meat, poultry and saturated fatty acids; this diet is associated with lower mortality from ischaemic heart disease and cancer (Trichopoulou et al., 2003). However, other studies suggest that a significant part of the population (younger age groups) has started to adopt the Western-type diet or to consume more sugar (Costacou et al., 2003). At the same time, the average consumption of fruit and vegetables has declined and in 2014 was below the WHO recommendations, with only 25% of adults consuming more than 400 g of fruits and vegetables per day (Hydria, 2016).

The promotion of healthy habits around alcohol, food and tobacco consumption is a good indicator to assess the impact of preventive policies. In this regard, Greece has not been effective in facing long-standing issues, particularly in reducing the burden of disease attributed to smoking and obesity, which are expected to continue to contribute to population ill health and increase pressure on the health system.

Vulnerable groups: migrants and refugees

The refugee crisis, which reached its peak during the conflict in Syrian Arab Republic, had very serious implications for Greece as one of the key reception countries (section 1.1). The living conditions for migrants and refugees have major implications on the health of these vulnerable groups. Common health problems have been observed, such as gastrointestinal diseases, trauma, cardiovascular events, pregnancy- and delivery-related complications, diabetes and hypertension. In addition, a large number of migrants are affected by upper tract respiratory disorders, potentially linked to their living conditions. KEELPNO (2018) has reported respiratory infections with fever, gastroenteritis, chickenpox, a few cases of tuberculosis, outbreaks of hepatitis A and some dermatological diseases (e.g. scabies), although no major outbreaks. The physical and mental health needs of increasing numbers of migrants and refugees from countries involved in military conflicts are expected to put additional pressures on the Greek health care system.

Socioeconomic inequalities

The health status of the population should also be assessed in relation to the extent of inequalities between different socioeconomic groups. Although this is quite difficult to achieve for Greece because of a lack of data, the Hydria project, based on data collected in 2014, showed the relationships between socioeconomic characteristics and the prevalence of chronic diseases such as

diabetes, cardiovascular diseases and hypertension. Indicatively, the prevalence of chronic diseases for the population under 65 years of age was higher for those with lower educational and socioeconomic status. A higher level of education was associated with lower prevalence of diabetes, hypertension and uncontrolled cholesterol levels among men and women, as well as lower prevalence of depression and better self-reported health among women. In terms of nonmedical determinants of health, in men smoking is more prevalent among those with lower education, while in women the association is inverted. Obesity was also associated with socioeconomic characteristics, with 80% men of lower educational level overweight or obese. Younger women with a higher level of education were three times more likely to have a body mass index within normal range compared with those of a lower educational level (Hydria, 2016).

Data from the European Health Interview Survey show that respondents with lower education report worse perceived health status than do those with higher education. This is in line with earlier studies (Kyriopoulos, Gregory & Economou, 2003). Another study reviewing educational and income inequalities in morbidity among the elderly in 11 European countries found that Greece has one of the largest absolute and relative inequalities in relation to self-assessed health, resulting in diminished daily activities because of physical or mental problems, or long-term disability for those at the lower end of the scale (Huisman, Kunst & Mackenbach 2003).

2. Organization and governance

Chapter summary

- The Greek health care system comprises elements from both the public and private sectors. In the public sector, a national health service type of system (ESY) coexists with an SHI model.
- In 2011, EOPYY was established, acting as a sole purchaser of health care services.
- The private sector includes profit-making hospitals, diagnostic centres and independent practices. A large part of the private sector enters into contracts with the EOPYY, providing mainly primary/ambulatory care.
- The Ministry of Health is responsible for the planning and regulation of the ESY and EOPYY. YPEs were established in 2001 but the Greek health care sector remains highly regulated by central government.
- There is extensive legislation controlling the activities of third-party payers and providers of services, the purchasing process, the levels of prices and reimbursement and the regulation of training and licensing of health professionals.
- After 2010, the role of voluntary initiatives, NGOs and informal health care networks increased significantly to cover the needs of a large portion of the population without insurance coverage and access to public health care.
- Intersectorality is not well developed in Greece as its two crucial dimensions, Health in All Policies and health impact assessment measures, are not systematically applied.
- Although patient rights are included in specific legislation, information on such rights is not broadly communicated. Information on the costs or quality of health services is not available.
- Greece has incorporated into national legislation the EU regulations and directives concerning professional qualifications of health personnel, medical equipment, pharmaceuticals, VHI and cross-border health care.

2.1 Organization

The Greek health care system comprises elements from both the public and private sectors. Historically, social insurance funds have always played a very important role with regard to the coverage, financing and provision of health-care services (especially ambulatory services). See Box 2.1.

Box 2.1

Historical background

Until 2010, there were a large number of occupation-based SHI funds (which, in fact, were the health branches of larger SHI funds that also administered pensions). Consequently, there were a variety of schemes, differences in contribution rates, coverage, benefits and the conditions for granting these benefits, resulting in inequalities in access to and financing of health services (Economou, 2010).

In 2011, a major restructuring of the health system resulted in the health branches of all SHI funds being combined to form the EOPYY, which would act as the purchaser of medicines and health care services for the insured, thus increasing bargaining power with suppliers.¹ Between 2011 and 2014, EOPYY was gradually transformed into a unitary health insurance fund and its role as the sole purchaser of health services was consolidated. As part of transitional arrangements, those who were members of SHI funds prior to 2011 still paid the health contribution rates stipulated by those funds, while people who joined the SHI system from 2011 onwards became direct members of EOPYY and paid the EOPYY standardized contribution rate for their SHI (see Table 3.3). Taking advantage of existing administrative infrastructure, contributions were collected by the individual SHI funds and then transferred to EOPYY.² Since 2017, this function has been taken over by a single organization, the Unified Social Security Fund (EFKA), which is responsible for collecting all health and pension contributions (section 3.2 and 3.3).

Until 2014, EOPYY was also the country's main body tasked with managing primary care. Its role was to coordinate primary care, regulate contracting with all health care providers and set quality and efficiency standards, with the broader goal of alleviating pressure on specialist and emergency care in public hospitals. However, in 2014, responsibility for primary care provision was transferred to PEDYs and coordinated by the YPEs (Law 4238 of 17 February 2014). YPEs have jurisdiction over all primary care facilities, including health centres and their surgeries as well as facilities formerly belonging to the various health insurance branches that were merged into EOPYY.

1 Restructuring was introduced via Law 3918 of 2 March, 2011. Five health insurance funds, mainly mutual self-administered funds covering bank employees (four funds) and journalists (one fund), together totalling no more than 130 000 people, remain outside EOPYY. Some of them have their own medical facilities while others enter into contacts with health providers.

2 For EOPYY members, their contributions are collected by the occupation-based funds that administer their pensions.

The National Health System (known as ESY) is financed by the state budget via direct and indirect tax revenues and social insurance contributions. ESY provides emergency pre-hospital, primary/ambulatory and inpatient health care through rural surgeries, health centres and public hospitals. Doctors working in public hospitals and health centres are full-time employees who are not allowed to engage in their own private practice and are paid a salary. Since 2011, the National Organization for the Provision of Health Services (EOPYY) has been the single purchaser of health services. Since 2014, responsibility for public primary/ambulatory care provision lies with the National Primary Healthcare Networks (PEDYs) coordinated by the Regional Health Authorities (YPEs) (Fig. 2.1).

The private sector includes profit-making hospitals, diagnostic centres and independent practices, financed mainly from OOP payments and, to a lesser extent, by private health insurance. In addition to indemnity insurance for health professionals, private health insurance can take either the form of preferred provider networks or integrated insurers and providers' schemes. A large part of the private sector contracts with EOPYY to provide mainly primary/ambulatory care.

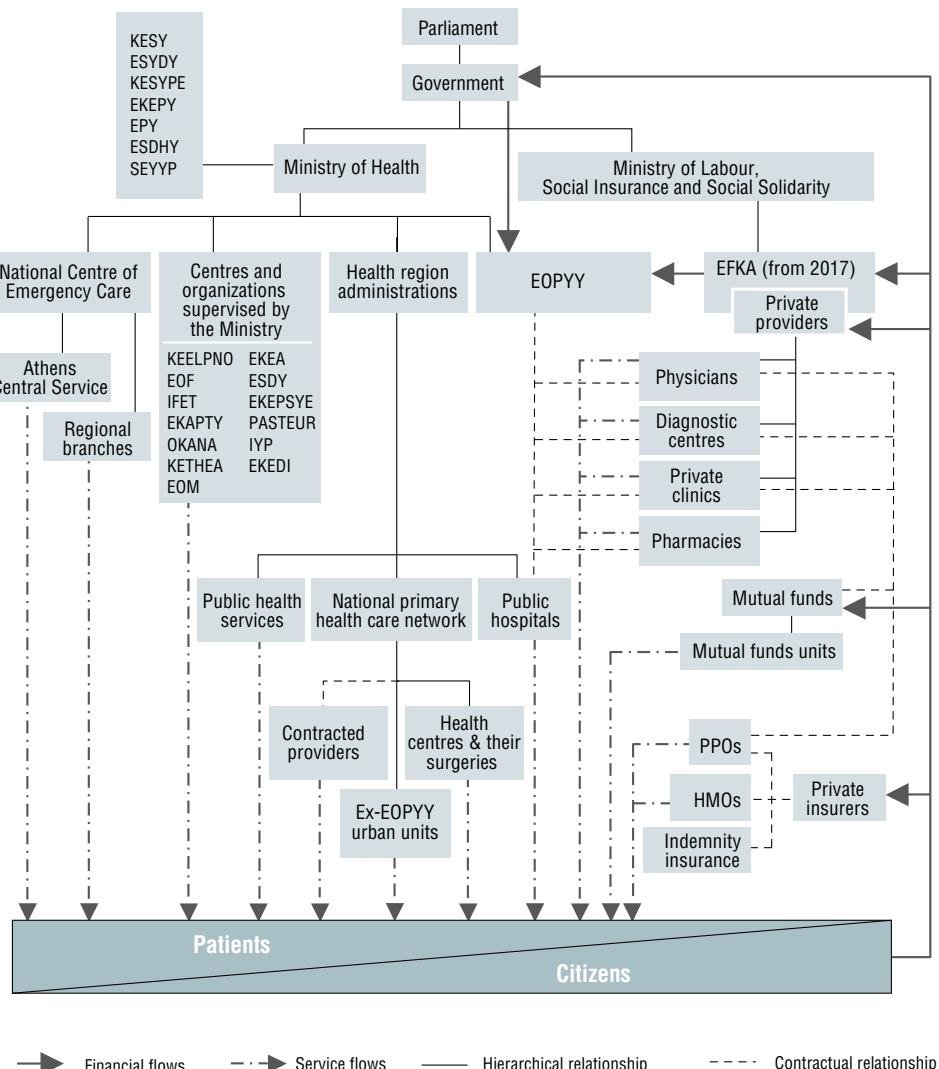
A large number of actors are responsible for the financing, planning, administration, regulation and provision of health care (Fig. 2.1). These are outlined below.

Ministry of Health

The Ministry of Health is responsible for ensuring the general objectives and fundamental principles of ESY, such as free and equitable access to quality health services for all citizens. The Ministry makes decisions on health policy issues and the overall planning and implementation of national health strategies. It sets priorities at the national level, defines funding for proposed activities and allocates relevant resources, proposes changes in the legislative framework and undertakes the implementation of laws and reforms. The Ministry is also responsible for health care professionals and coordinates the hiring of new health care personnel, subject to approval by the Ministerial Cabinet.

Although some of the Ministry's responsibilities have been transferred to YPEs (section 2.2), it still plays the dominant role in the regulation, planning and management of the ESY and the regulation of the private sector. Notably, EOPYY is also under the jurisdiction of the Ministry of Health, a significant change from the period prior to 2011 when the health insurance funds were under the jurisdiction of the Ministry of Labour, Social Insurance and Welfare.

Fig. 2.1
Overview of the Greek health care system



Notes: HMO: Health maintenance organization; PPO: Preferred provider organization; See text for the abbreviations of the organizations supervised by the Ministry of Health.

The Ministry, headed by the minister, a deputy minister and three general secretaries, is organized according to three general directorates: the Directorate General for Public Health and Health Services, the Directorate General for Human Resources and Administrative Support and the Directorate General of Finance. Various bodies participate in the governance and regulation of the public health care system (section 2.2). The Ministry also supervises a number of organizations and institutions (Fig. 2.1), including:

- the Centre for the Control and Prevention of Diseases (KEELPNO) disease prevention and epidemiological surveillance, as well as for the control of all communicable disease and HIV/AIDS;
- the National Organization for Medicines (EOF) responsible for the evaluation and market authorization of pharmaceuticals;
- the Institute of Medicinal Research and Technology (IFET) responsible for the statistical analysis of the pharmaceutical market and the distribution of pharmaceutical products;
- the National Evaluation Center of Quality and Technology in Health (EKAPTY) responsible for certification, quality control and research on medical devices;
- the Organization Against Drugs (OKANA) responsible for the planning, coordination and implementation of policies for combating drug addiction;
- the Therapy Centre for Dependent Individuals (KETHEA) provides help to people suffering from addiction, including alcohol, gambling and the Internet;
- the National Blood Donation Centre (EKEA) is the scientific and administrative body for transfusion medicine;
- the National Transplant Organization (EOM) responsible for managing and ensuring the correct utilization of transplants;
- the National School of Public Health (ESDY) responsible for the postgraduate training of health professionals;
- The Hellenic Centre for Mental Health and Research (EKEPSYE) responsible for research, prevention and provision of open mental health care;
- The Hellenic Pasteur Institute responsible for the study of infectious, auto-immune and neuro-degenerative diseases, the understanding of pathogenesis and the development of new therapeutic strategies;
- The Institute of Child Health (IYP) responsible for research, educational and preventive activities relating to children;

- The National Centre for Diabetes Mellitus (EKEDI) responsible for the monitoring and the coordination of research, prevention and treatment of diabetes; and
- The Greek DRG Institute (ESAN) established in September 2014 to develop and manage a transparent, fair, valid and reliable system for measuring the cost of hospital medical procedures based on international Diagnostic-related Groups (DRGs).
- The National Health Operations Centre (EKEPY) coordinates the institutions responsible for responding to emergency situations and disasters that are hazardous for public health.
- The National Central Procurement Authority for Health (EKAPY), established in May 2017 (law 4472) which is responsible for the national procurement policy in health care sector and the annual supply of products and services to the public health care organization.

The role of other ministries

A number of other ministries have responsibilities that are linked in one way or another to the public health care system.

The **Ministry of Labour, Social Insurance and Social Solidarity** is no longer responsible for the majority of the insurance funds and their health branches (see Box 2.1) but it still plays a significant role given that health insurance contributions are not paid by employees and employers directly to EOPYY but (since 2017) are collected through a single fund, EFKA.³ Since January 2017, EFKA has collected all SHI contributions and transfers the portion corresponding to health insurance to EOPYY (Fig. 2.1 and section 3.3.2).

The **Ministry of National Defence** owns and runs 14 military hospitals (with approximately 1900 beds), 10 of which have fewer than 100 beds. These hospitals and their personnel enjoy a special status as they operate outside the ESY. However, the military hospitals of Athens and Thessalonica have also provided services to civilians since 2011 and participate in the emergency rotation system.

³ After EOPYY's establishment in 2011 contributions continued to be collected through by the pension branches of the social insurance funds which are under the jurisdiction of the Ministry Labour, Social Insurance and Social Solidarity and were then transferred to EOPYY. Law 4387/2016 merged all of the social insurance funds into a single fund, EFKA.

The **Ministry of Education, Research and Religious Affairs** is responsible for undergraduate training of health care professionals and for awarding academic degrees such as masters and postdoctorates. In association with the Ministry of Health, it defines the occupational rights of health professionals. The Ministry also owns two small teaching hospitals, which operate outside ESY, under the authority of the National Kapodistrian University of Athens.

The **Ministry of Finance** prepares and controls the national budget and consequently decides on the amount of money allocated to the health care system. It is also responsible for covering any deficits within EOPYY.

The National Organization for the Provision of Health Services (EOPYY)

EOPYY is administered as a self-governing public entity and operates under the supervision of the Ministry of Health. It functions as a monopsony as it is the sole purchaser of health services, setting the preconditions required for contractual commitments with health care providers.

Regional and local authorities

The role of regional and local governments in health care planning, organization and provision has been limited; attempts to delegate more responsibilities to municipalities were never fully implemented (section 2.2). Regional and local governments have played a secondary role through the lack of power and economic resources to implement health policies at the regional level. Their role has been limited to the provision of poverty health booklets (giving entitlement to services for the poor and needy); the running of public infant and child centres and day care centres for the ageing population; and the implementation of certain welfare programmes such as Help at Home. Since 2013, they have also run social welfare centres (section 5.8). Some large municipalities also run health care centres, particularly in the greater area of Attica, providing services mainly to the socially excluded, the poor and the uninsured population. The increasing rate of unemployment and poverty after 2010 resulted in the increased utilization of the services of municipal health centres. Furthermore, many municipalities established municipal pharmacies for the provision of drugs free of charge to the needy, and developed welfare programmes providing shelter and meals to the increasing number of homeless people (e.g. the welfare and health programmes of the Municipality of Athens (Municipality of Athens, 2018)).

The role of the private sector

The private sector plays an important role in the provision of health services, although it does not have any direct involvement in the planning, financing and regulation of the public system. It is mainly financed through EOPYY, which contracts with private sector providers to supply services that meet the health care needs of its beneficiaries. It includes general and maternity hospitals, a large number of private diagnostic centres, and specialists either contracted by EOPYY or paid directly by patients privately through OOP payments. Rehabilitation services (e.g. physiotherapists) and services for the elderly (geriatric homes) are also predominantly offered by the private sector.

Professional associations and unions

There are numerous physicians' organizations with either a scientific or strictly professional interest. There are more than 50 medical scientific organizations, usually one for each specialty, subspecialty or even for a specific disease (e.g. diabetes mellitus or cancer). Professional groups include many small and larger professional associations for doctors, dentists, pharmacists, owners of private hospitals and so on. Some of them, such as the Association of Hospital Doctors of Athens and Piraeus and the Confederation of Hospital Doctors Unions, are very large and can exercise enough pressure through strike action to secure and promote their own interests. Some others are politically influential, such as the Pan-Hellenic Medical Association and the Medical Association of Athens, which have statutory roles as advisors to the Ministry of Health. They also participate in the Central Health Council (KESY). Apart from doctors, dentists and pharmacists, other health professionals such as nurses, social workers, midwives and physiotherapists have their own unions and organizations. The Pan-Hellenic Federation of Professionals in Public Hospitals represents all health professionals, except doctors, working in ESY hospitals; nurses are represented by the National Association of Nurses of Greece.

User groups and consumers associations

User groups and consumer associations are relatively weak in Greece, since they usually represent the narrow interests of a particular group of patients. The very large population groups of health beneficiaries or patients are not represented by any powerful organization. Instead, many small disease-specific self-help groups exist, such as those for renal disease, cancer or thalassaemia. Even these groups lack any institutional role in health care planning and regulation. However, under specific circumstances, these groups may be asked by the Ministry of Health to submit their own proposals for specific health issues.

Voluntary organizations, NGOs and others

Voluntary organizations, NGOs and international bodies undertake significant work in the health and welfare sectors, assisting specific population groups such as the disabled and chronically ill, refugees, Roma people, abused women and children, and the poor and socially excluded. Some of these organizations, such as the Hellenic Society for the Protection and Rehabilitation of Disabled Persons, Médecins du Monde, Médecins sans Frontières, Praksis, the Red Cross, The Child's Smile and the United Nations Children's Fund, are very active and influential among society, political parties and the Government, managing to attract quite significant funding and donations. They usually allocate their resources to primary/ambulatory and preventive health and welfare services programmes as well as to financing health and welfare units, hostels or hospital departments for special groups of patients (e.g. people with disabilities, children with cancer or people with neuromuscular diseases). This grouping also includes the numerous blood donor organizations. NGOs that are active in the areas of health and welfare services must be accredited and enrolled in the relevant NGO registries kept in the Ministry of Labour, Social Insurance and Social Solidarity and the Ministry of Migration Policy, as a prerequisite for any financing from the Government or for participating in the implementation of programmes that are financed by public or EU resources.

The role of voluntary organizations and NGOs increased even more after 2010 as a large portion of the 2.5 million people who lost their insurance coverage resorted to using NGO services (Economou et al., 2014; see also Chapter 3). Previous to the economic crisis, NGOs catered for foreign migrants and refugees but then expanded services to also cover the vulnerable groups in the Greek population, under the sponsorship of non-profit-making foundations. In addition, volunteering doctors, nurses and social workers put together informal health care networks by creating makeshift clinics, called social medical centres, usually in space provided by municipal authorities in various cities (Sotiropoulos & Bourikos, 2014; Zafiroploulou, 2014). A network of around 40 community clinics (e.g. the Metropolitan Community Clinic at Helliniko) operates across Greece providing mostly primary/ambulatory health services and medications free of charge to people not able or not eligible to use public services.

The Church of Greece

The Church of Greece plays a role, particularly in the welfare sector. Within the scope of its philanthropic work, it owns a significant number of nursing homes, orphanages and hostels and runs voluntary blood donation programmes. This

network of welfare services does not have any connection with the corresponding structures of the Ministry of Health, nor is any type of supervision or control exercised over it. It is financed exclusively by donations and by income derived from the Church's assets. The Orthodox Church does not have any responsibility or influence on the planning, administration and regulation of the ESY. In some cases and for some issues, particularly those with bioethical dimensions, the Church takes a public stance and submits proposals. Its Bioethics Committee (appointed in 1998) helps to express the Church's position in these circumstances. The role of the Church of Greece in providing assistance to the poor also increased after the economic crisis. Many social medical centres and social pharmacies established after 2010 are the products of collaborative initiatives among municipalities, NGOs, medical associations and the Church.

2.2 Decentralization and centralization

The most recent move towards centralization has been the establishment of the single-payer structure within the health system through EOPYY (sections 2.1 and Box 2.1).

However, the decentralization of the ESY has been a key issue since its inception in 1983. Attempts have been made over the past 35 years to introduce regional health administrations with considerable powers, but so far no such structures with real decision-making powers or budgetary autonomy have been implemented.

Reform legislation in 2001 and 2003 (Law 2889/2001 on the Regional Structure of Health Care Services and Law 3106/2003 on the Regional Structure of Welfare Services) initiated an explicit, formal process of establishing 17 regional health and welfare authorities and the devolution of political and operational authority to them. The plan was for the Ministry of Health to maintain a strategic planning and coordination role at the national level while regional health and welfare authorities would be responsible for the effective organization, operation and management of all health and welfare units. In practice, however, the regional health and welfare authorities could only make proposals to the Minister of Health and required ministerial approval for implementation; they also did not have the authority to manage their own budgets. Nevertheless, the establishment of regional health and welfare authorities could be considered as the first step towards decentralization in planning, management and regulation of the health system in a country where there is no long-standing experience of decentralized administration or any tradition of strong regional and local governments.

The change in government in 2004 resulted in the abolition of the previous legislation and new provisions (Law 3329/2005) that created the YPEs. On paper, their competencies were extensive, namely the planning, organization, coordination and supervision of all public health care and welfare services within their catchment area; they also would provide recommendations to the Ministry of Health for the effective and efficient delivery of health and welfare services according to the needs of their catchment population and monitor implementation of health programmes and policies. In order to contain operational costs and restrain bureaucracy, in 2007 the number of YPEs was reduced to seven. A significant problem for YPEs was that their boundaries and those of Greece's administrative regions were not identical, placing serious restrictions on the coordination of the two structures and the development of integrated health and social policies. In response, the geographical boundaries of YPEs were realigned in 2012 with the boundaries of the country's seven decentralized administrations (section 1.3) but up to now, this change has not been implemented. In 2014, specific jurisdiction over primary care facilities was formally transferred to YPEs and they are now tasked with coordinating the PEDYs.

Another major attempt to achieve greater decentralization of the health system occurred in 2010 in the context of the Kallikratis Plan, which reorganized the country's (political) administrative structure (section 1.3). With regard to health, certain competences were transferred from YPEs to municipalities, in particular responsibility for primary health care units, the implementation of public health programmes, immunization and school health. However, the presidential edict required to implement this change was never issued and the competencies formally remained under YPEs.

The conclusion that can be drawn is that historically Greece has made attempts to transfer responsibility and power from a smaller number to a larger number of administrative actors within a formal administrative structure. YPEs still retain formal control over primary care facilities but in practice have only an advisory and supervisory role, given that public administration is still highly centralized, and they do not manage their own budgets (Kakaletsis et al., 2013; Athanasiadis, Kostopoulou & Philalithis, 2015).

2.3 Intersectorality

Health in All Policies, as a horizontal, complementary policy-related strategy that identifies the impact of other public sector policies on the health of the population, has not been developed in Greece and in most cases attempts to

establish interministerial committees have not been fully implemented. For example, the role of the Inter-Ministerial Committee on Road Safety remains limited as the corresponding coordination secretariat has never been established (European Commission, 2015). Arguably, the only mechanism for intersectoral or cross-sectoral planning and implementation is the Governmental Council of Social Policy, established in November 2015. In addition to coordinating the implementation of the Government's social policy programmes and policies aimed at strengthening social cohesion, the Council aims to monitor the implementation of interministerial and intersectoral social policy actions in the domains of education and research, labour and industrial relations, social insurance, social solidarity, health, and culture and sports.

There are also various civil society organizations, some supervised by different ministries, addressing aspects of public policies that have an impact on health. However, this does not constitute a well-coordinated network for the protection of the health of the population. The following organizations fall into this grouping:

- the **Hellenic Institute for Occupational Health and Safety (ELINYAE)**, founded in 1992 by employees' and employers' federations to monitor and analyse various hazardous agents and conditions in the work environment and the effects they may have on the health and safety of employees, and to recommend solutions to such problems;
- the **Hellenic Food Authority (EFET)**, established in 1999 as Greece's principal food control body and supervised by the Ministry of Rural Development and Food; and
- various NGOs to protect consumer rights, health and safety, and improve quality of life (e.g. the Hellenic Consumer Institute and the Consumers' Association The Quality of Life).

Although different ministries also address various issues concerning health, health impact assessment is still generally neglected in Greece. For example, the Ministry of Environment and Energy prioritizes the protection of biodiversity and the reduction of pollution effects for human health and ecosystems, while the Ministries of Finance, Health and Economy, Development and Tourism are jointly responsible for policies on taxation, marketing and sales regulation of tobacco and alcohol. The potential health effects of policy decisions in different sectors have never been assessed in official Ministry of Health reports and there is little evidence of decision-makers using the results from health impact assessment activities or publications conducted in academic settings. An exception is a study published in 2015 on behalf of the WHO Regional

Office for Europe (in the context of technical assistance provided to the Greek Government) concerning the impact of the economic crisis on access to health services (Economou, 2015) (see Chapter 7).

2.4 Regulation and planning

The public Greek health care sector is highly regulated by central government. There is extensive legislation controlling the activities of third-party payers and providers of services, the purchasing process and the levels of prices and reimbursement, and training and licensing of health professionals. Greece has also incorporated into national legislation the EU directives concerning professional qualifications of health personnel, medical equipment, pharmaceuticals and VHI.

Various semi-autonomous bodies contribute to the regulation and planning of the public health care system (Fig. 2.1). The most important of these are:

- **Central Health Council (KESY)**, which has a predominantly advisory role on a wide range of health-related issues regarding planning, regulation and the operation of the health system, but also on issues concerning health professionals' postgraduate training (specializations);
- the **National Public Health Council (ESYDY)**, which is an independent authority responsible for the scientific supervision and coordination of public health organizations;
- the **Central Council of Health Regions (KESYPE)**, which coordinates the policies of the YPEs and maintains their cooperation with the Ministry of Health;
- the **Health Procurement Committee (EPY)**, which unifies hospitals' annual tenders with the aim to reduce procurement costs, improve payment time, make uniform medical requests, transfer redundant materials from one hospital to another and improve management of expired products;
- the **National eHealth Governance Council (ESDHY)**, which is responsible for the elaboration of the e-health strategy and the overall functioning, financing and monitoring of e-health projects; and
- the **Body of Inspectors for Health and Welfare Services (SEYYP)**, which is responsible for conducting performance audits in public and private health and welfare services in order to improve quality, productivity and effectiveness.

With respect to health policy planning, at the end of 2017 Greece had not developed a health targets programme for setting priorities or a national plan for the implementation of a Health For All policy (Box 2.2). In 2008, the Ministry of Health undertook a public consultation process and formulated a public health plan for the period 2008–2012, covering 16 areas of action, including cancer, HIV/AIDS, rare diseases, smoking, drugs, alcohol and oral health. However, progress has been slow and partial. Only a few measures have been introduced, including the banning of smoking in all enclosed public places. A similar proposal to formulate a national plan for health service development, accompanied by quantified targets, never materialized.

Box 2.2

Evaluating priority setting and planning

Greece does not have a tradition of conducting systematic research focusing on issues such as the social determinants of health or the contribution of health to economic development in order to determine priorities. Planning of health services is not based on needs assessment or the measurement of the output of health services but rather on political considerations. After 2010, the pressure under the EAP to achieve immediate results in health expenditure reductions did not specifically focus on the health needs of the population and instead put emphasis on operational, financial and managerial dimensions (Chapter 6). However, one notable initiative in priority setting is the collaboration between the Ministry of Health with the WHO Regional Office for Europe to develop a roadmap containing three reform axes and 100 priority actions, presented in the National Health Strategy and Health Sector Actions in the National Strategic Reference Framework 2014–2020 (Ministry of Health, 2014).

The development of the Health and Welfare Map as a fully fledged planning instrument for the rational distribution of health and welfare services across the country, and for matching the needs of the population with health care resources (launched in 2008 as a pilot project), has not yet been completed (and is currently suspended temporarily due to budget constraints; section 7.5.1). However, progress has been made in that in January 2017 the Ministry of Health and EOPYY produced a Health Atlas, which maps the available resources in the health sector across Greece (Ministry of Health, 2018).

2.4.1 Regulation and governance of third-party payers

EOPYY, the state budget and private health insurance are the third-party payers in the Greek health care system. EOPYY is governed by a nine-member Managing Board, four of which, including the Board's President, are appointed by the Ministry of Health. It could be argued that this limits the autonomy of

the fund, as does the fact that certain powers fall within the Minister's remit. The Minister has substantive supervisory competencies, which, for example, result in the power to withhold approval of the fund's budget and to check its accounts. Furthermore, for important administrative decisions, such as introducing qualitative or quantitative improvements to insurance benefits, the fund requires the Minister's approval. EOPYY's main financial sources include contributions from employees, employers and pensioners, plus a variety of minor sources of income (section 3.3.2). However, because of its large deficits, EOPYY receives transfers from the state budget.

Private health insurers are supervised by the Bank of Greece in four domains: (i) prudential supervision of Greek (re)insurance undertakings; (ii) supervision of private insurance intermediaries and product distribution channels; (iii) monitoring compliance of EU/European Economic Area branches/freedom of services setups operating in Greece with the Greek regulatory framework on market conduct; and (iv) representing the Bank of Greece on the Supervisory Board of the European Insurance and Occupational Pensions Authority and supporting the transposition to Greek law and implementation of EU guidelines from the European Insurance and Occupational Pensions Authority (Regulation 1094/2010). Since 2011, private health insurers can also contract with public providers and make use of private beds in public hospitals. There are also schemes that take the form of health maintenance or preferred provider organizations, integrating purchasing and provision functions.

2.4.2 Regulation and governance of provision

Primary health care units, rural health centres and their surgeries as well as urban ambulatory medical facilities are incorporated into PEDYs (section 5.3). Administratively and economically they constitute decentralized units of the YPEs. Greek hospitals may be classified into four categories (depending on their legal type) :

- **public law entities:** autonomous, self-governing and self-managed organizations under the jurisdiction of the Ministry of Health and accountable to the manager of the relevant YPE (includes ESY hospitals and university hospitals);
- **private law entities:** built by charitable foundations and operating under the supervision of the Ministry of Health as non-profit-making institutions (e.g. Onassis Cardiac Surgery Centre in Athens and Papageorgiou Hospital in Thessaloniki);

- **private clinics:** profit-making organizations, usually in the form of limited liability companies, with doctors usually being the shareholders; and
- **hospitals with special status:** including military hospitals operating under the supervision of the Ministry of Defence to cover the needs of military personnel and hospitals for prisoners operating under the supervision of the Ministry of Justice, Transparency and Human Rights.

Regulatory oversight for hospitals is generally vested with the Ministry of Health, except for the special status hospitals (section 4.1.1).

The National Quality Infrastructure System (ESYP), a private liability company operating in the public interest, is responsible for monitoring quality of care and managing the accreditation and certification of medical facilities. It incorporates the Hellenic Accreditation System and the Hellenic Organization for Standardization as decentralized autonomous operational units. The Hellenic Accreditation System provides its accreditation services to a variety of bodies, including testing and calibration laboratories and clinical laboratories. In addition, the Hellenic Organization for Standardization develops the Hellenic National Standards, maintains a central point for testing of materials, assesses management systems and certifies products and services accredited by the Hellenic Accreditation System; it also provides public or on-site training and technical information and operates an optional (voluntary) health services quality certification through the European Standards/International Organization for Standardization quality management systems. Since 2010, a quality committee has been established in every public hospital with a capacity of more than 400 beds. The committee's role is to adopt benchmarking criteria and accreditation procedures for the improvement of service quality. Table 2.1 provides an overview of the main regulatory actors overseeing health care providers.

2.4.3 Regulation of services and goods

In 2011, with the formation of EOPYY, the benefit packages of the various SHI funds were standardized into a single scheme of reimbursable services, known as the Integrated Health Care Regulation (EKPY). EKPY outlines a number of health care services, together with their duration, associated costs and how they are administered. Furthermore, the regulation specifies who is covered and how costs are reimbursed. EOPYY's Managing Board is responsible for proposing goods and services to be included or excluded, with the Minister of Health making the final decision. The benefits package has been revised twice. The criteria used for deciding what services are included have not been formally

stated by EOPYY but the two previous amendments to the benefits package have resulted in the removal of some services that were previously covered by SHI funds (section 3.3.1).

The National Evaluation Centre of Quality and Technology in Health (EKAPTY) is responsible for the certification and quality control of medical devices, which includes provision of a testing laboratory and a training organization. EKAPTY also certifies hospital departments; collaborates with hospitals on the quality control of medical devices; creates and maintains registries for health technology products, suppliers and specifications; and prepares specialized studies on behalf of agents engaged in providing health services.

Table 2.1

Overview of the regulation of providers in Greece

	Planning	Licensing/ accreditation	Pricing/tariff setting	Quality assurance	Purchasing/ financing
Public health services	Ministry of Health, ESYDY	Ministry of Health	Not applicable	ESYP	Ministry of Health
Ambulatory care (primary and specialist care)	YPEs, PEDYs, EOPYY	Ministry of Health, administrative regions, EKAPTY	Ministry of Health, EOPYY	ESYP	EOPYY, private insurance schemes
Inpatient care	Ministry of Health, YPEs, other ministries (depends on legal status of hospitals)	Ministry of Health, administrative regions, EKAPTY	Ministry of Health, EOPYY, private insurance schemes (negotiations with private hospitals)	ESYP	EOPYY, private insurance schemes
Dental care	–	Administrative regions, EKAPTY	Ministry of Health, EOPYY	ESYP	EOPYY
Pharmaceuticals and other medical nondurables (ambulatory)	Ministry of Health, EOF, EOPYY, IDIKA	EOF, EKAPTY	Ministry of Health, EOF, EOPYY	EOF	EOPYY; cost sharing by patients; pharmaceutical companies and pharmacies via rebates and clawbacks
Long-term care	Ministry of Health, YPEs	Administrative regions	Ministry of Health, EOPYY	ESYP	EOPYY
University education of personnel	Ministry of Education, Research and Religious Affairs	Ministry of Education, Research and Religious Affairs, HQA	Not applicable	HQA	Ministry of Health, Ministry of Education

Notes: HQA: the Hellenic Quality Assurance and Accreditation Agency, which is an independent body overseen by the Ministry of Education and responsible for quality assurance in tertiary education; ESYP: National Quality Infrastructure System ; IDIKA: Electronic Governance of Social Insurance.

2.4.4 Regulation and governance of pharmaceuticals

The Ministry of Health is responsible for planning and implementation of pharmaceutical policy. The competent authority for the pricing, evaluation and market authorization of pharmaceuticals is the EOF, which is a public entity of the Ministry of Health. EOF also monitors postmarketing product quality, safety and efficacy as well as product manufacturing procedures and clinical studies. It develops and promotes medical and pharmaceutical research and provides all stakeholders with useful information. EOF is assisted in its work by the Institute of Medicinal Research and Technology, which performs statistical analysis and distributes the products under EOF's authority in order to cover permanent or extraordinary product shortages in the market, and EKAPTY (section 2.4.3).

A Positive List Committee develops and updates the positive list of pharmaceuticals (sections 3.3.1 and 6.1). In addition, an EOPYY Negotiating Committee became operational in 2016 with the remit of negotiating with all providers for their remuneration, terms of contracts and the prices of pharmaceuticals and medical devices. Table 2.2 summarizes the main prices applied to medicinal products in Greece.

Table 2.2
Pricing of medicines

Price type	Definitions	Gross profit margin	Discounts
Ex-factory price	The price at which the pharmaceutical company sells to wholesalers prior to any discounts	Not applicable	Negotiated between pharmaceutical companies and wholesalers
Wholesale price	The price at which the drug is purchased by the pharmacist (i.e. pharmacy purchase price)	<ul style="list-style-type: none"> • 7.8% for over-the-counter medicines • 5.4% for non-reimbursable medicines • 4.9% for reimbursable medicines with an ex-factory price up to €200 • 1.5% for reimbursable medicines with an ex-factory price over €200 	Not applicable
Retail price	Derives from the pharmacy purchase price plus the pharmacist's profit margin and VAT	<ul style="list-style-type: none"> • 35% on top of the wholesale price for over-the-counter and nonreimbursable medicines • Ranges from 2.25% up to 30% for reimbursable medicines, depending on the ex-factory price 	Not applicable
Hospital price	The price at which public hospitals or health institutions supervised by the Ministry of Health purchase pharmaceutical products; derives from the ex-factory price reduced by 8.74%	Not applicable	Additional discount of up to 10% on the wholesale price to wholesalers

The pricing of reimbursed pharmaceuticals is not based on a health technology assessment procedure but on an external reference pricing system with the prices of new drugs set as the average of the three lowest prices in EU Member States. For off-patent and generic medicines, the price is fixed at 50% and 65%, respectively, of the branded price prior to expiration. Co-payments apply at a rate of 0% for life-threatening diseases, 10% for chronic diseases and 25% for all other types of disease (section 3.4.1). Where the retail price of a drug is higher than the reimbursement price, patients also pay half of the difference between the retail price and the reimbursement price. In order to control expenditure, rebates and clawbacks have been imposed on pharmacies and pharmaceutical companies for both inpatient and outpatient drugs; in addition spending caps and prescription budgets for each doctor are set based on specialty, number of patients and geographic location. Generic prescribing was introduced in 2012 (section 5.6).

Outpatient medicines are dispensed to patients mainly by private pharmacies. However, 29 pharmacies are operated by EOPYY, providing patients with very expensive drugs for long-term and life threatening diseases. The licence to practise pharmacy is awarded by KESY. The licence to establish a pharmacy is granted by YPEs to either pharmacists or non-pharmacists (under the precondition that the pharmacy will be operated by a limited company with a pharmacist owning a 20% share of the company). Restrictions allow for one pharmacy licence granted per 1000 population; however, there are no restrictions concerning the distance between pharmacies. Legislation passed in May 2016 allows the sale of 216 (out of 1582) over-the-counter medicines in stores other than pharmacies. These 216 drugs are included in a Drugs of General Provision list.

2.5 Patient empowerment

2.5.1 Patient information

All institutions under the Ministry of Health have their own publicly accessible websites, as do YPEs and EOPYY. The information available on these websites includes mainly statutory benefits, the range of services provided, and location and availability of public and private providers contracted with EOPYY. Those insured under EOPYY also have access to their personal medical records via a web application located within EOPYY's site. Furthermore, 24/7 telephone information is available for many public services and NGOs providing psychosocial or other support for those suffering from disorders such as drug

addiction, HIV/AIDS, psychological problems or cancer. Information for ethnic minorities and translations into minority languages concerning health service facilities and legal issues about migrants' rights to access health care are also available, although limited, on NGOs' websites and sites developed as a result of research projects.⁴ There is no information accessible to patients on costs or quality of services, medical errors, patient satisfaction, hospital clinical outcomes, hospital waiting times or comparative information about the quality of different providers (Table 2.3).

Table 2.3

Patient information

Type of information	Is it easily available?	Comments
Information about statutory benefits	Yes	EOPYY's website
Information on hospital clinical outcomes	No	
Information on hospital waiting times	No	No official data; only some anecdotal data published in newspapers
Comparative information about the quality of other providers (e.g. GPs)	No	
Patient access to own medical record	Yes	EOPYY's website
Interactive web or 24/7 telephone information	Yes	YPE and NGO websites
Information on patient satisfaction collected (systematically or occasionally)	No	No official data; some information can be found in relevant Eurobarometer surveys, publications in scientific journals and from academic research
Information on medical errors	No	No official data; some information can be found in relevant Eurobarometer surveys, publications in scientific journals and from academic research

2.5.2 Patient choice

In general, patient choice refers to choice of insurer, choice of provider and choice of treatment. In Greece, individuals do not have choice of insurer; for SHI, it is compulsory for all of the employed population to be insured under EOPYY. Instead, there is a large degree of choice of provider (Table 2.4). Patients can receive services at any PEDY primary health care unit (and their contracted providers) or at outpatient departments of public hospitals that provide ambulatory care. The introduction (in 2001) of afternoon outpatient

4 A website providing health information for migrants was been developed by a consortium of university departments led by the Department of Nursing University at the Athens under the THALIS project financed by the EU (<http://www.healthgate4all.gr/>).

clinics in public hospitals, where doctors offer care to private patients on a fee-for-service basis, increased the choice of specialists, albeit to those with sufficient income to afford it. In addition, given that a referral system has not yet been established, patients can choose any public hospital to undergo hospital treatment.

Table 2.4
Patient choice

Type of choice	Is it available?	Do people exercise choice? Are there any constraints (e.g. choice in the region but not countrywide)? Other comments
Choices around coverage		
Choice of being covered or not opting out	No	Social health insurance is obligatory
Choice of public or private coverage	No	Private coverage is an option only as a supplement to obligatory social health insurance
Choice of purchasing organization	No	Only for VHI
Choice of provider		
Choice of primary care practitioner	Yes	Choice is limited to PEDY units and providers contracting with EOPYY
Direct access to specialists	Yes	
Choice of hospital	Yes	
Choice to have treatment abroad	Under certain conditions	Section 2.5.4
Choice of treatment		
Participation in treatment decisions	Yes	Theoretically yes but depends on the doctor–patient relationship
Right to informed consent	Yes	Section 2.5.3
Right to request a second opinion	Yes	Section 2.5.3
Right to information about alternative treatment options	Yes	Section 2.5.3

One important limitation to patient choice should be highlighted, however. In the context of the health reforms introduced after 2010, (monthly) ceilings have been imposed on the activities of doctors contracted with EOPYY, including the number of patient visits, number of pharmaceutical prescriptions and number of diagnostic and laboratory tests prescriptions (section 6.1). As a consequence, patients may need to contact several doctors in order to find those who have not reached their visit and prescription limits. Theoretically, patients can opt for a second opinion, given that there are no restrictions concerning the choice of hospital. Nevertheless, their choice is conditional on their access to information about costs and quality of services, which is very limited.

2.5.3 Patient rights

Rights

Prior to 1992, patient rights in Greece were indirectly addressed through relevant provisions in civil, penal, administrative and disciplinary law, in the Code on the Practice of Medicine and the Code on Medical Deontology. In 1992, broader health care reform legislation directly addressed the rights of hospital patients and in 1997 further provisions extended the rights of patients to primary health care (Merakou & Tragakes, 1999; Goffin et al., 2007).

More specifically, under article 47 of Law 2071/1992 (Table 2.5), patients have the right to:

- access the most appropriate hospital services for the condition suffered;
- receive care (widely defined) with due respect for their dignity as human beings;
- give or refuse consent to any diagnostic or therapeutic procedure (if a patient is suffering from total or partial mental incapacity, the exercise of this right shall devolve to the person legally acting on his or her behalf);
- request information regarding their personal situation;
- act in their own interests and make informed decisions, or participate in any decision-making likely to affect their own lives subsequently, with a guarantee that the information provided to them is comprehensive (encompassing medical, social and financial aspects) and accurate;
- be thoroughly informed in advance of any risk likely to arise as the result of unusual or experimental diagnostic or therapeutic procedures, such procedures only being performed with the patient's consent, which may be withdrawn at any time;
- feel that they are entirely free to decide whether or not to consent to collaborate for the purposes of research or training, and such consent may be withdrawn at any time;
- have their private life protected, with confidentiality guaranteed with regard to the data and content of documents concerning each patient and also with regard to the file in which any observations or medical findings are recorded;
- have their religious and ideological convictions respected and acknowledged; and
- be able to present and submit, in an appropriate manner, any complaints and objections and to be fully informed of the effects and outcomes thereof.

Law 2719/1999 on the development and modernization of mental health services provides for the protection of the rights of people with mental health disorders. It also established within public hospitals an Office of Communication with Citizens, which contains a committee for the promotion of patient rights.

Table 2.5

Patient rights

	Is it available?	Comments
Protection of patient rights		
Does a formal definition of patient rights exist at national level?	Yes	Laws 2071/1992, 2519/1997
Are patient rights included in specific legislation or in more than one law?	Yes	Laws 2071/1992, 2519/1997
Does the legislation conform with WHO's patient rights framework?	Yes	
Patient complaints avenues		
Are hospitals required to have a designated desk responsible for collecting and resolving patient complaints?	Yes	Office of Communication with Citizens
Is a health-specific ombudsman responsible for investigating and resolving patient complaints about health services?	Yes	
Are other complaint avenues available?	Yes	
Liability/compensation		
Is liability insurance required for physicians and/or other medical professionals?	No	
Can legal redress be sought through the courts in the case of medical error?	Yes	
Is there a basis for no-fault compensation?	No	
If a tort system exists, can patients obtain damage awards for economic and non-economic losses?	Yes	
Can class action suits be taken against health care providers, pharmaceutical companies, etc?	Yes	

Greece has also signed and ratified the Council of Europe's Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine (Garanis-Papadatos & Dalla-Vorgia, 2003). A National Bioethics Committee under the jurisdiction of the Prime Minister was established in 1998 as an independent advisory body of experts for public authorities. Last but not least, in 2005 a new Code of Medical Ethics replaced the old Code, which dating back to 1955. The new Code is consistent with international documents on medical ethics, such as the Geneva Declaration, the Oviedo Convention and the World Medical Association International Code on Medical Ethics (Goffin et al., 2007).

Complaints

In 2004, the Ombudsman for Health and Social Solidarity was established. The Ombudsman investigates complaints regarding individual administrative actions or omissions or material actions taken by public health care services that infringe upon the personal rights to health or violate the legal interests of individuals or legal entities.

Other avenues for pursuing complaints date back to 1997 and use the Ministry of Health's Independent Service for the Protection of Patients' Rights, which was under the jurisdiction of the Secretary General of Health. This service monitors developments in patient rights and receives, classifies and follows up complaints by citizens who feel their rights as patients have been violated. These complaints are submitted to the Committee for Regulation of Protection of Patients' Rights, which is composed of a representative of the Legal State Council and representatives from professional, scientific and social groups, as well as trade unions. The Committee monitors health service compliance with patient rights and regulations and follows up on patients' complaints. Once a decision is made by the Committee regarding the accuracy of a complaint, it submits its conclusions to the General Secretary of the Ministry of Health, who will ensure that all necessary or corrective actions are implemented. Where there is evidence of a penal infraction, the case is transferred to the relevant prosecuting authority.

Medical errors

There are two dimensions of liability in Greece with regard to medical errors: disciplinary and legal. The medical associations, the regional disciplinary councils and the Central Disciplinary Council of the Ministry of Health are responsible for disciplinary regulations. Punishments imposed by these bodies range from a suspension to final expulsion from the profession. Legal liability refers to the competence of the courts; if a doctor is found guilty, the sentence may be imprisonment or economic compensation for the patient. Specific regulations or initiatives to prevent health care-related harm have not been adopted. For example, Greece has no central national authority to collect reports of medical errors; most adverse events are detected using spontaneous reporting, which identifies only a small number of adverse events.

Rights awareness

Initial studies conducted at the beginning of 2000 indicated that the vast majority of patients (84.3%) had no knowledge of their rights provided under legislation (Merakou et al., 2001). More recent studies show that the situation has improved. According to the results of a survey conducted in 2010, in a

sample of 500 patients from two public hospitals, 66.3% had knowledge of their rights (Koulizos et al., 2012). Nevertheless, many other patients failed to recall major aspects of their rights (Falagas et al., 2009).

2.5.4 Patients and cross-border health care

In Greece, the demand for cross-border health care is regulated by EOPYY. In addition, as EU members, Greek citizens are entitled to health care according to European Commission regulations on the coordination of social security systems. If a Greek citizen unexpectedly needs treatment while travelling in an EU Member State, the European Health Insurance Card ensures that the cost of treatment is covered. Prior authorization from EOPYY is required for coverage of the expenses of planned hospital care (in accordance with Directive 2011/24/EU on patient rights in cross-border health care). More precisely, EOPYY requires prior authorization for health care that involves overnight hospital accommodation of the patient for at least one night, or requires use of highly specialized and cost-intensive medical infrastructure or medical equipment, or involves treatments presenting a particular risk for the patient or the population.

3. Financing

Chapter summary

- The health care system in Greece is financed by a mix of public and private resources, including SHI and tax (about 30% each) as well as user fees (41%).
- Current health expenditure in 2015 was 8.4% of GDP, but in the context of drastically reduced GDP since the onset of the economic crisis, expenditure has fallen substantially (by one fifth) since 2010. This spending translates to US\$2204 PPP per capita, which is the lowest among the pre-2004 EU Member States.
- Public expenditure on health constituted 5% of GDP in 2015. A public expenditure cap of 6% of GDP, which was set in the country's first EAP, continues to be applied. The share of public expenditure on health was 59% in 2015 (the fourth lowest in the EU), with the remaining 41% made up from private payments.
- The share of private financing is one of the highest in the EU. It mainly relies on OOP payments: co-insurance for medicines, direct payments for services not covered by SHI and payments for services covered by SHI but bought outside the public system to enhance access and quality.
- In addition, informal payments are widely practised, partly because of underfunding of the system and partly through the lack of control mechanisms.
- Several employment-related SHI funds provided cover for the entire population until the economic crisis. Since 2011, population coverage for health care is undertaken by a single entity, EOPYY, which covers the insured and their dependents.
- It is estimated that 2.5 million people (those who became unemployed for more than two years and their dependents) lost their health insurance coverage after 2009 and, therefore, access to publicly provided services. Following two unsuccessful attempts to address this situation, in 2016

new legislation was introduced to provide health coverage (using public providers only) for this population group through EOPYY.

- In 2011, the benefit packages of the various SHI funds were standardized to provide a common benefits package under EOPYY.
- Financing mechanisms for providers are to a large extent retrospective, including ESY staff salaries, fee-for-service payments for providers contracted with EOPYY and, until recently, per diems for public hospitals. However, since 2012 public hospitals as well as contracted private hospitals are mostly compensated with DRGs, which are aimed at rationalizing the use of resources.

3.1 Health expenditure

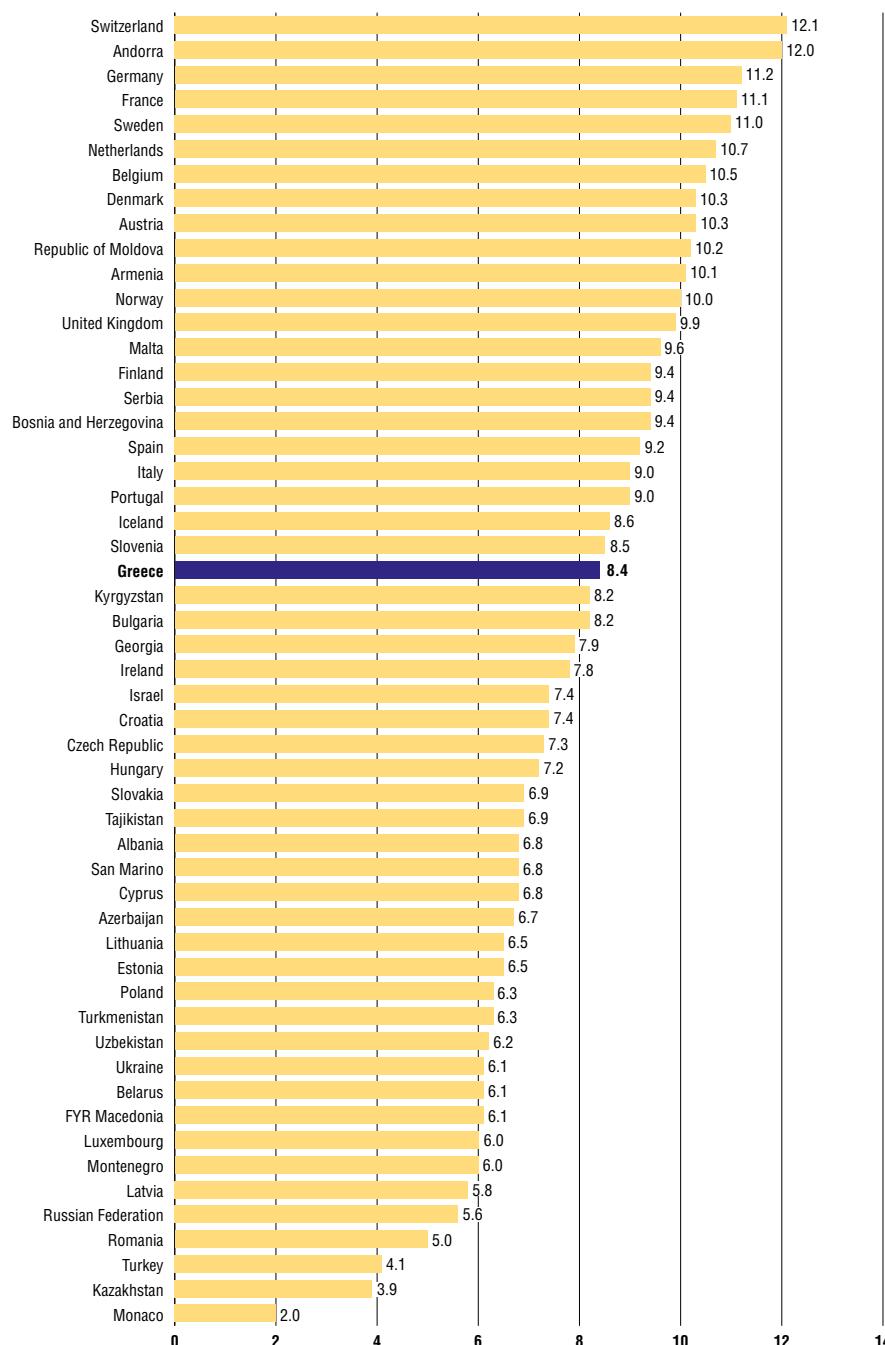
In 2015, the Greece spent 8.4% of its GDP on health care (Fig. 3.1). The proportion of current health expenditure as a percentage of GDP rose from 7.2% in 2000 to 9.6% in 2010 (Fig. 3.2), before it reduced substantially. Correspondingly, current health expenditure in PPP per capita almost doubled from US\$ 1417 in 2000 to US\$ 2697 in 2010, after which it rapidly dropped by one fifth over the next few years. Greece spent US\$ 2204 PPP per capita in 2015, which is the lowest among pre-2004 EU Member States (Table 3.1, Fig. 3.3). A reduction in the health budget from 2010 onwards followed the overall contraction of the Greek economy since the onset of the economic crisis (section 1.2).

Public expenditure on health constituted 5% of GDP in 2015. Although historically this figure has never exceeded the EU average and reached its peak of 6.6% in 2010, Greece's EAP to reduce mounting public deficits requires that public spending on health should not exceed 6% of GDP. The cuts in public expenditure on health reached €6.7 billion between 2009 and 2015 and largely came from reductions in financing for SHI funds.

In 2015, the share of public expenditure on health was 59% (the fourth lowest in the EU), with the remaining 41% made up of private payments (Fig. 3.4). High levels of private spending on health, primarily in the form of OOP payments, have always been a feature of the Greek health care system and have continued to be high even during the economic crisis. In 2015, Greece had the fifth highest share of OOP payments among the EU countries, constituting 35% of current expenditure on health (Table 3.1). At the same time, Greece has one of the lowest levels of public expenditure on health as a share of overall general government expenditure among the countries of the WHO European Region (Fig. 3.5).

Fig. 3.1

Current health expenditure as a percentage of GDP in the WHO European Region, 2015

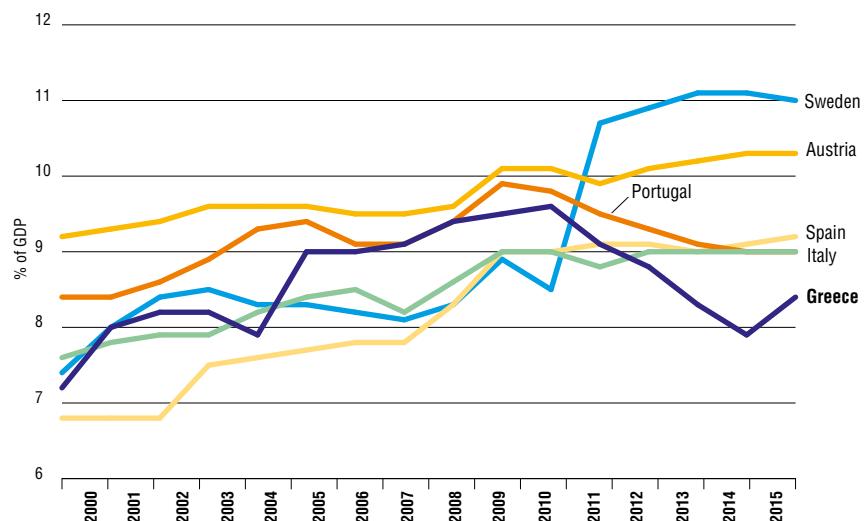


Source: WHO, 2018.

Notes: FYR Macedonia: the former Yugoslav Republic of Macedonia.

Fig. 3.2

Trends in current health expenditure as a percentage of GDP in Greece and selected countries, 2000–2015



Source: WHO, 2018.

Notes: FYR Macedonia: the former Yugoslav Republic of Macedonia.

Table 3.1

Trends in health expenditure in Greece, 2000–2015

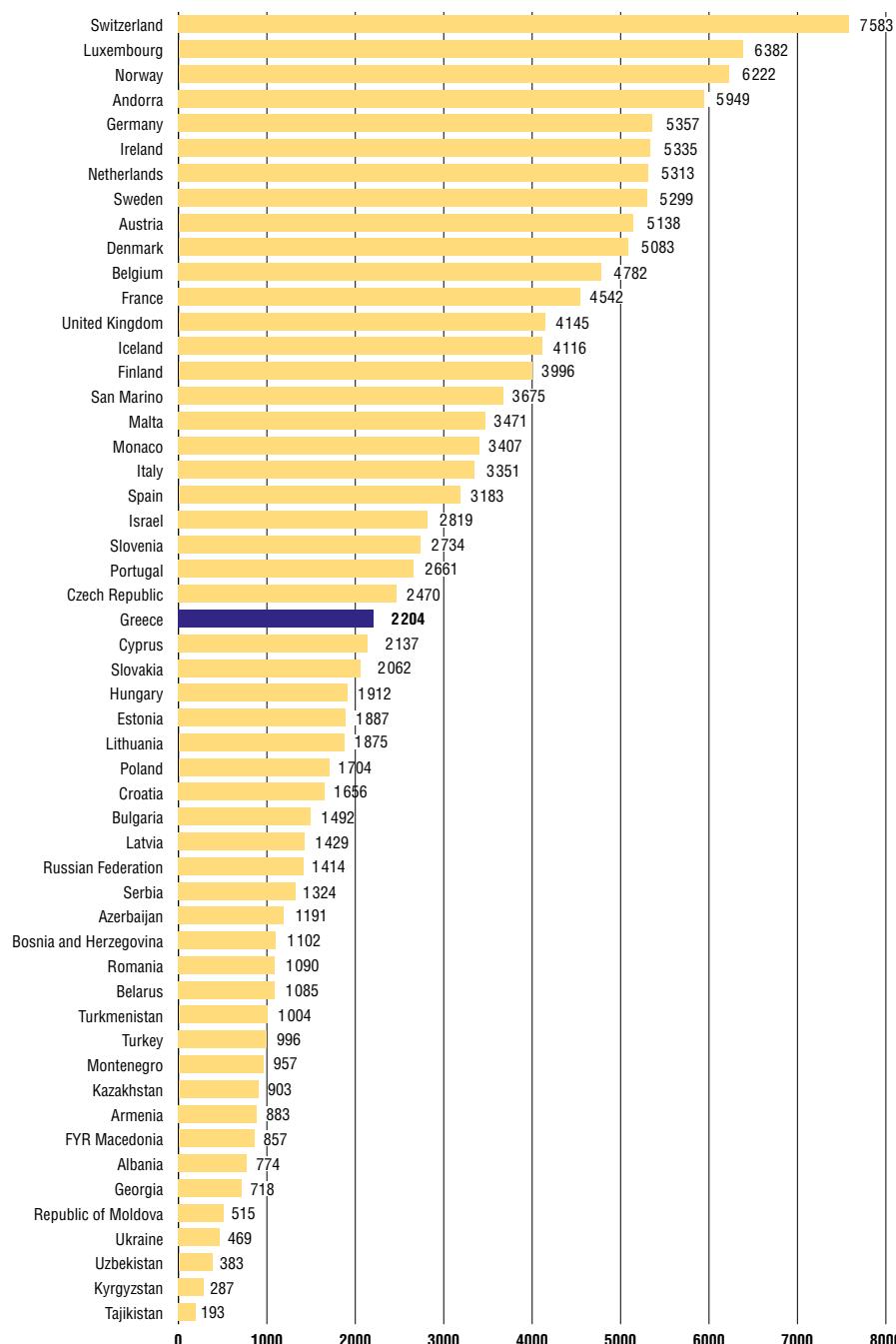
	2000	2005	2010	2011	2012	2013	2014	2015
CHE per capita (US\$, PPP)	1 417	2 305	2 697	2 374	2 211	2 170	2 094	2 204
CHE (% of GDP)	7.2	9.0	9.6	9.1	8.8	8.3	7.9	8.4
Public expenditure on health (% of CHE)			69.0	66.0	66.0	62.0	58.0	59.0
Private expenditure on health (% of CHE)			31.0	34.0	34.0	37.0	41.0	39.0
General government expenditure on health (% of general government expenditure)			12.6	11.1	10.5	8.3	9.1	9.1
Public expenditure on health (% of GDP)	4.5	5.6	6.6	6.0	5.8	5.1	4.6	5.0
OOP payments (% of CHE)			28.1	30.9	30.5	34.0	36.8	35.5
OOP payments (% of private expenditure on health)			90.9	90.8	89.8	89.0	87.6	86.7
Private insurance (% of private expenditure on health)			9.1	8.6	9.7	8.9	9.3	9.5

Source: WHO, 2018.

Note: CHE: current health expenditure.

Fig. 3.3

Current health expenditure in PPP per capita in the WHO European Region, 2015

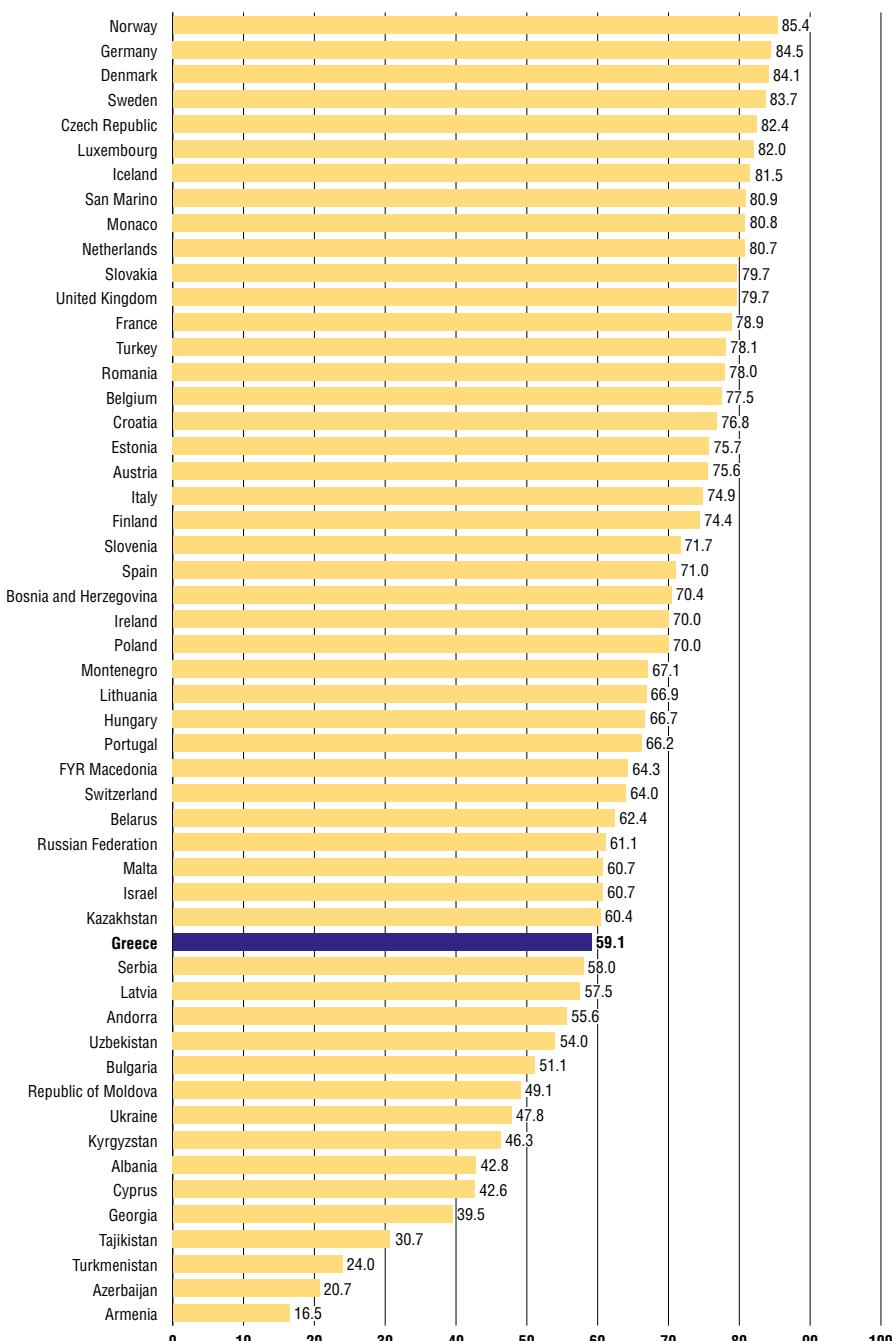


Source: WHO, 2018.

Notes: FYR Macedonia: the former Yugoslav Republic of Macedonia.

Fig. 3.4

Public sector health expenditure as a percentage of current health expenditure in the WHO European Region, 2015

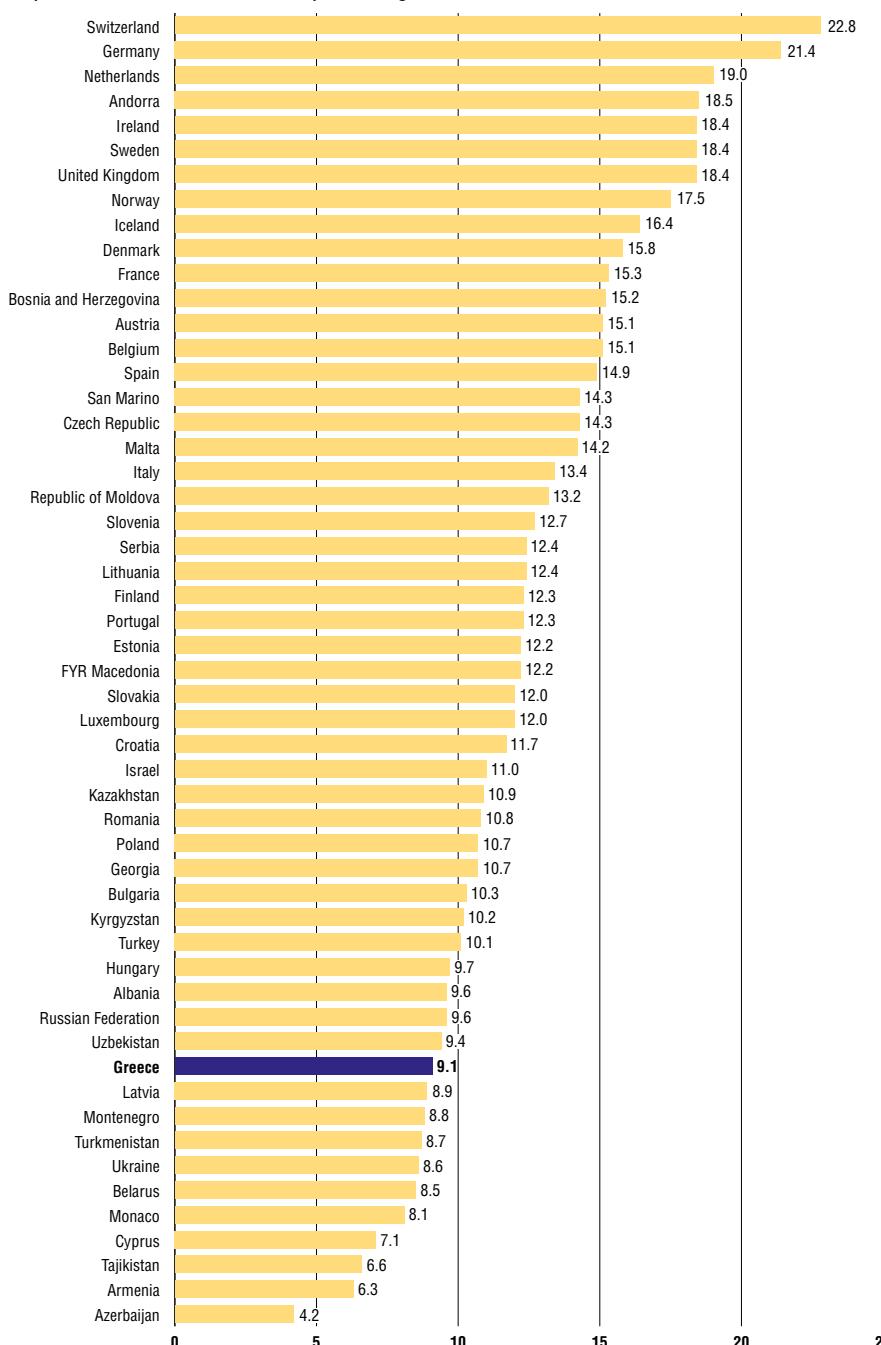


Source: WHO, 2018.

Notes: FYR Macedonia: the former Yugoslav Republic of Macedonia.

Fig. 3.5

General government health expenditure as a percentage of general government expenditure in the WHO European Region, 2015



Source: WHO, 2018.

Notes: For Israel latest data is from 2013; FYR Macedonia: the former Yugoslav Republic of Macedonia.

Table 3.2 shows the main areas and sources of health financing in Greece. According to Eurostat data in 2015, the largest share of health financing came from private expenditure (41%), followed by SHI and the state budget (30% and 29%, respectively) (Eurostat, 2018b). Inpatient care is the top area of expenditure, with 40.5% of current health expenditure (the highest proportion in the EU); this is a consequence of the very hospital-focused health care system (section 5.4.2). A further 26% is spent on pharmaceuticals and medical goods, while 21% of current health expenditure is allocated to outpatient care. The share of long-term care at 2% of current health expenditure is negligible compared with France and Italy, with a share of 10%, and many northern European countries, where it is more than 10-fold higher. Most of the private expenditure on health goes to providers of hospital inpatient services and to pharmaceuticals (14% and 13%, respectively), while private expenditure on outpatient care represents 10% of current expenditure on health.

Table 3.2

Percentage of current health expenditure outlaid according to function and type of financing, 2015

	In-patient care (including day care)	Out-patient care	Long-term care	Pharmaceuticals	Preventive care	Administration	Other services	Total
Public expenditure	26.5	11.6	0.4	13.4	1.2	2.1	4.0	59.1
General government	21.3	6.6	0.4	0.1	1.2	0.2	0.4	30.3
SHI	5.1	5.0		13.3	0	1.9	3.6	28.8
Private expenditure	14.0	9.7	1.6	12.5	0.1	0.6	2.4	40.9
Private OOP payments	11.2	9.3		12.5			2.4	35.4
Private insurance	2.8	0.4	0.03		0.1	0.6		3.9
Other (NGOs, rest of the world)			1.6					1.6
Total expenditure	40.4	21.3	2.0	25.9	1.3	2.6	6.4	100

Source: Eurostat, 2018b.

Expenditure on pharmaceuticals was highlighted in the EAP as an area where substantially reductions could be made. A hard ceiling was set, stating that pharmaceutical expenditure should not exceed €2.44 billion in 2013, €2 billion in 2014 and €1.94 billion in 2015–2017. If the limits are exceeded, clawback mechanisms are used to balance the budget. An estimated decrease of 39.4% (€2.7 billion) in outpatient pharmaceutical expenditure, mostly

within SHI fund spending, occurred between 2009 and 2014. In 2012, public expenditure on pharmaceuticals experienced the largest reduction (33.4%), from €5.39 billion in 2011 (roughly 2.6% of GDP) to €3.59 billion in 2012 (or 1.9% of GDP). Between 2011 and 2015, public pharmaceutical expenditure fell by 56.4%, reaching €2.35 billion (OECD, 2018b), which exceeded the EAP target.

3.2 Sources of revenue and financial flows

A mix of public and private resources finances the health care system in Greece. Fig. 3.6 presents financial flows within the system. The primary source of revenue for SHI funds is the contributions of employees and employers (including the state's contributions as an employer). From 2017, the newly established EFKA became the main social security fund, collecting and pooling contributions on behalf of all the individual social security funds that existed previously (Chapter 6). EFKA covers its members against all risks and contingencies, providing a monthly pension for old age, disability and death to its insured members and/or members of their families; pre-retirement and other benefits to retirees; sickness benefits in cash; specific welfare allowances; and any other benefit in money or services for which it is responsible. EFKA also collects the health insurance component of contributions on behalf of EOPYY and then transfers the funds to EOPYY.

The health insurance contribution for salaried employees is set by EFKA at a rate of 7.10% of income, made up of two parts: 6.45% for benefits in kind (2.15% contribution by the insured and 4.30% by the employer) and 0.65% for cash benefits (0.40% is contributed by the insured and 0.25% by the employer) (Table 3.3).

The state budget, via direct and indirect tax revenues, is responsible for covering administration expenditures, the salaries of the employees of public providers, funding primary/ambulatory health care, providing subsidies to public hospitals and EOPYY, investing in capital stock and funding medical education.

Private expenditure is a major source of health financing in Greece, which calls into question the social character of the health care system (section 3.4). It mostly takes the form of OOP payments for services not covered by SHI, payments for the services of private providers, co-payments (mainly for pharmaceuticals) and informal payments. Private expenditure also contains private health insurance premiums, which are, however, of limited importance (section 3.3.2).

Fig. 3.6
Financial flows

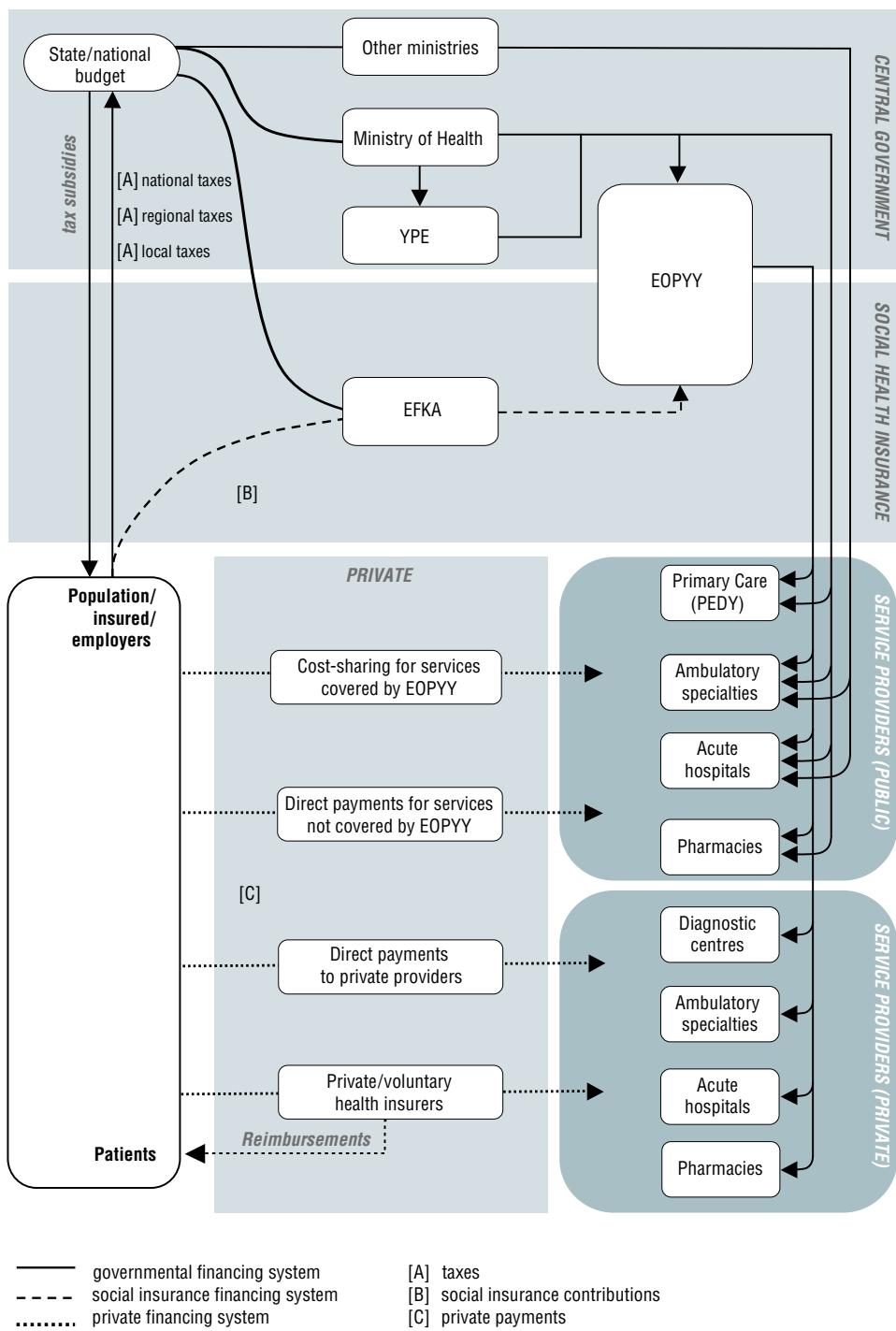


Table 3.3
Monthly SHI contribution rates, 2017

EFKA	Contribution (employees, self-employed, retirees)	Contribution (employers/state)
Salaried employees	<ul style="list-style-type: none"> • 2.15% of salary (benefits in kind) • 0.40% (cash benefits) 	<ul style="list-style-type: none"> • 4.30% of salary (benefits in kind) • 0.25% (cash benefits)
Civil servants	2.55% of salary	5.1%
Non-salaried, self-employed and farmers	<ul style="list-style-type: none"> • 6.45% of income (benefits in kind) • 0.50% of income (cash benefits) 	–
Pensioners	6% of pension	

Source: Based on Law 4254/1

3.3 Overview of the statutory financing system

3.3.1 Coverage

Breadth: who is covered?

Coverage in the Greek health system is mainly linked to employment status through SHI for employees and members of their family (section 3.3.2). Those covered by (compulsory) SHI are entitled to a comprehensive care package, including primary/ambulatory care, diagnostics, inpatient and outpatient specialist care, including from private providers contracted with EOPYY. After retirement, former employees continue to be covered by the fund to which their employer belongs, and their contribution is deducted from their pension. From 2016, the unemployed legally belong to an unemployment fund financed by the central government budget (see below). Another basis of entitlement for health coverage is Greek citizenship (or citizenship of another EU Member State), which allows free access to primary/ambulatory care and specialist outpatient services provided by the ESY. There is also entitlement to services for those with low incomes, who are entitled to free access to health centres and public hospitals.

In recent years Greece has experienced an extremely large influx of migrants and refugees, mainly from Afghanistan, Iraq and the Syrian Arab Republic – more than 1 million since 2015 (United Nations Refugee Agency, 2016). Asylum seekers are entitled to the same access to health care as citizens. However, until they succeed in obtaining that status migrants are only entitled to emergency care, as for irregular migrants. Irregular migrants were until recently only entitled to access hospital emergency services for the treatment

of life-threatening conditions until their health stabilized. However, under the legislation enacted in 2016 that established the unemployment fund financed by the central government budget, coverage expanded to provide access to care for those suffering from chronic, mental or rare diseases, people with disabilities hosted in social care units and people with a disability rate of 67% or higher, irrespective of their legal status. Qualifying individuals also have free access to primary/ambulatory health care (which is offered in a small number of local authority settings), and to services provided by NGOs. According to Law 4368/2016, emergency services as well as all inpatient services, laboratory and diagnostic tests and pharmaceuticals from hospital pharmacies are provided free of charge for those patients living in refugee shelters and camps when they are referred by doctors providing care in these settings.

Until 2011, the Greek SHI system provided coverage for almost 100% of the population through a network of SHI funds (Economou, 2010). EOPYY was established in 2011 with the intention to cover the vast majority of the population (workforce, dependents and pensioners), on the assumption that the majority of the population would only incur short-term unemployment. However, in the context of the deep economic crisis, unemployment rose rapidly, reaching 28% in 2013 and still exceeded 25% in 2015. EOPYY only effectively covered the unemployed for a maximum of two years, thus leading to a rise in the percentage of the population that was uninsured. In addition, many self-employed professionals were not able to maintain health insurance payments, thus also losing their coverage. According to estimates by the Ministry of Health (2016), approximately 2.5 million uninsured people, or one in four, did not have access to publicly provided health care in 2016.

The first effort to address the problem was the Health Voucher programme launched in September 2013, mainly funded by the National Strategic Reference Framework. It targeted people who had lost their insurance coverage and were unemployed for longer than two years, as well as their dependent family members, and gave them free access to primary/ambulatory care for a limited number of visits to contracted physicians and ESY facilities. The voucher was valid for four months and could not be renewed. Although the programme was limited to cover approximately 230 000 uninsured citizens in 2013–2014, only a small number of vouchers were issued, raising serious doubts about their effectiveness and, as a consequence, the measure was abandoned (Economou et al., 2014).

In June 2014, two joint ministerial decisions signed by the Ministers of Finance, of Health, and of Labour, Social Insurance and Welfare were issued (Y4a/GP/oik.48985 and GP/OIK.56432), according to which all citizens and

legal residents not covered by SHI, VHI or poverty booklets (giving entitlement to services for the poor and needy), as well as their dependents, would be covered for inpatient care (subject to referral from primary/ambulatory care, plus approval from a hospital committee set up to certify a patient's need for hospitalization) and for pharmaceuticals (excluding co-payments) prescribed by an ESY physician. While this step was expected to reduce gaps in coverage, issues were raised regarding its implementation in practice, including the role of the committee, unaffordable co-payments for pharmaceuticals and differences in how hospitals interpreted the law (Economou et al., 2014). As a consequence, uninsured people seeking inpatient treatment faced serious administrative barriers in accessing health care.

The ineffectiveness of the legislation resulted in its amendment in 2016 (Law 4368/2016). The new law ensured free access to health services for uninsured citizens and legal residents, the self-employed where health insurance contributions were not up to date, refugees, children, pregnant women and those with chronic conditions or disabilities. The implementation of a health care migrant card that would allow migrants access to health services has been delayed. However, they can still access care provided they have legal documentation (e.g. identity papers, passport).

Undoubtedly this legislation is of key importance in improving equity and access to health care for vulnerable groups. Nevertheless, it did not eliminate some barriers. For example, the uninsured can only access public providers, but not private providers contracted with EOPYY (e.g. diagnostic imaging laboratories). This continues to undermine equity of access, particularly in regions where public health care units are understaffed or face shortages of modern equipment, such as CT and MRI scanners. In addition, it should be noted that there was a remarkable delay of more than five years in finding a solution to cover the uninsured and poor. It is likely that the pressure imposed by the EAP to implement health expenditure cuts created additional obstacles to responding in a timely manner and finding appropriate solutions to reinstate universal access to health care.

Scope: what is covered?

In June 2011, the benefit packages of the various SHI funds were standardized to provide the same reimbursable services across all funds, creating a new, common benefits package under EOPYY. All benefits package services covered by EOPYY are explicitly defined in the EKPY. Health benefits include health prevention and health promotion; primary/ambulatory health care, medical care and diagnostic procedures; medical tests; physiotherapy, ergotherapy, logotherapy and psychotherapy; pharmaceutical care; dentistry and dental

care (but for a very limited number of services); hospital care; private nurses; costs for patient transport; obstetric care and childbirth; hospital treatment abroad; health rehabilitation; prosthetics; and subsidies for thermal treatment, air treatment and nutrition. Allowances for maternity benefits, various other payments and income lost through illness were provided through the SHI funds and are provided since 2017 through EFKA.

All primary/ambulatory health care facilities under EOPYY, rural health centres and their surgeries as well as urban health centres (Chapter 5), are accessible free of charge. A wide range of preventive procedures and tests is available at no cost to the patient for the purposes of early diagnosis and disease prevention. These include vaccinations; infant examinations and blood tests and fetal DNA tests; cancer prevention tests for early diagnosis of breast, cervical, colon and prostate cancers; prevention of heart disease, obesity and sexually transmitted infections; and smoking cessation services.

There is a positive list of reimbursed medicines with an average price based on the Anatomical Therapeutic Chemical Classification System plus a negative list of nonreimbursed medicines, introduced in 2011 and 2012, respectively. An over-the-counter drug list was also introduced in 2012, which contained many medicines that until then had been reimbursed (e.g. some pain relief medication) but now required purchasing OOP. Finally, very expensive drugs (described in detail in Law 3816/2010) are provided only through EOPYY and public hospital pharmacies.

A cash benefit is provided for childbirth and paid as a lump sum of €900 (in 2016). Optician services are covered with some limits (e.g. one pair of glasses every four years).

In standardizing the benefits package, a key feature has been the reduction in some benefits to which the insured are entitled. Some expensive examinations that used to be covered, even partially, on an outpatient basis by some of the SHI funds were removed from the EOPYY benefit package (e.g. polymerase chain reaction tests and tests for thrombophilia). In addition, entitlement restrictions were introduced in relation to childbirth, air therapy, balneotherapy, thalassaemia treatment, logotherapy, nephropathy treatment and optician services. A systematic health technology assessment procedure is not yet in place and there is no systematic assessment of the effectiveness of the services covered by the benefits package (section 2.4).

The Ministry of Health recently decided to revise the role of the current Positive List Committee (in charge of deciding which medicines will be reimbursed by EOPYY). The intention was to replace the current Committee

with one that would rely on health technology assessment principles in some aspects of its functioning. A draft law regarding the creation of a new body with 11 members and based in the EOF has been under public consultation since November 2017 and is expected to be submitted to Parliament in 2018.

Depth: how much of benefit cost is covered?

In general, user charges in the public health care system are considered to be relatively low and patients can access many services at no charge (Box 3.1). A user charge of €5 imposed in 2014 for publicly provided outpatient services and the €25 charge for admission to public hospitals were abolished in 2015. The largest source of funding from user charges is derived from co-payments for pharmaceuticals, which vary from 0% to 25% depending on the severity of the disease and the patient's income. However, OOP payments still represent a high percentage of health expenditure in Greece. As shown in Table 3.2, these payments represent approximately 35% of total health expenditure; they consist of direct payments and cost-sharing arrangements. Coverage does not exist (or is limited) for a wide range of services outside the core package (e.g. dental care or home care). The lack of funds for primary care, which in practice fails to cover the needs of the population for timely access to high-quality health services, coupled with an oversupply of physicians who induce demand (Goranitis, Siskou & Liaropoulos, 2014) contributes to the high levels of direct payments (section 3.4). In 2011, increases in co-payments for medicines for specific diseases were introduced, transferring more costs to patients (section 3.4.1). Informal payments continue to characterize the system, imposing barriers to access even for services that are supposed to be free of charge. For example, although there are no user charges for outpatient visits to

Box 3.1

Assessing coverage

Access to most health services in Greece is largely free of charge for most people, at least in theory. However, in practice, high levels of direct OOP payments (both formal and informal), which have been a feature of the Greek health system for decades, undermine the principle of equity and impose significant barriers to access and use of health services. This issue was exacerbated in the wake of the economic crisis.

As a result of the crisis, a large share of the cost of care was transferred to patients, impacting on accessibility of services and equity of the system (Mladovsky et al., 2012). Some measures to mitigate the impact of the crisis were introduced late and did not manage to adequately cover needs. In 2016 legislation was introduced to provide comprehensive coverage to the growing number of uninsured citizens, migrants and other vulnerable groups. There is also a growing health inequality gap, which jeopardizes the principle of universal health coverage (Karanikolos & Kentikelenis, 2016).

contracted physicians for prescription of drugs or for GP visits, findings from recent studies suggest that an informal payment per visit for a prescription is being established (section 3.4.3; Kyriklidis et al., 2016).

3.3.2 Collection

SHI

In Greece, SHI covered approximately 40% of current health expenditure until the start of the economic crisis, when this proportion declined to reach 29% in 2015 (Eurostat, 2018c). SHI revenues were severely affected by the economic crisis, as a result of GDP contraction, severe unemployment and a decrease in the population of working age (Liaropoulos & Goranitis, 2015). Indicatively, between 2008 and 2012, the number of active contributors eligible for health insurance in the two largest SHI funds declined by around one third, affecting revenues and increasing the number of people no longer eligible for health insurance (Matsaganis 2013).

The main source of financing for the SHI is compulsory contributions by employees, employers and the retired, as well as annual subsidies from the state budget and rebate inflows from pharmacies and pharmaceutical companies. In comparison, other sources of funding (e.g. property revenues, return on capital and reserves, donations, legacies, income from fines and other penalties, and revenues from services provided to those who are privately insured and residents of other countries) represent a small proportion. In 2011, the health branches of all SHI funds came together under EOPYY (Chapter 2), unifying the contributions from salaried employees. For those who were already in a fund prior to 2011 (when EOPYY was established) the size of contributions remained different as for the separate funds (Table 3.3) and these existing members were also able to choose between several levels of coverage. Those who began making social security and SHI contributions from 2011 onwards are formally members of EOPYY and their contribution rates are set by EFKA.

Only a few health insurance funds have remained outside the EOPYY pooling framework and these cover a very small percentage of the population, not exceeding 130 000 members. They are mainly mutual self-administered funds covering bank employees; some have their own medical facilities while others sign contacts with existing health providers. In recent years, efforts have been made to curb the state's contribution to SHI as it is an employer of public sector employees. Consequently, the size of contributions by public sector employees and retirees has increased substantially (sometimes by more than 60%), while the state's share has decreased.

Until the end of 2016, the pension branches of the SHI funds collected the majority of SHI contributions and then the health insurance components were transferred to EOPYY. From 2017 (Law 4387/2016), the new body EFKA began to collect these contributions and then transfers the health insurance portion of contributions to EOPYY (Chapter 2 and Fig. 3.5).

Taxes

In 2015, taxation constituted 30% of current health expenditure and just over half of public health expenditure (Eurostat, 2018b). Tax revenues in Greece are derived from direct taxes, mainly on income, and indirect taxes on goods and services. There are three main categories of taxes: taxes on income (e.g. income of individuals or corporations), taxes on property/capital taxes (e.g. inheritance tax, tax on real estate property ownership) and taxes on transactions or consumption (e.g. value added tax (VAT), tax on the transfer of real property, import duties, duties on the consumption of luxury goods, special duties on alcohol and tobacco, or duty on subscribers of mobile communication providers). In 2016, taxes on goods and services represented the largest proportion of GDP (15.8%), followed by tax on income, profits and capital gains (9.1%) and tax on property (2.6%) (Box 3.2). In 2016, social security contributions accounted for 11% of GDP (OECD, 2018b). Earmarked taxes have increased during the last few years, with taxation on alcohol rising to 23% and on cigarettes and cigars to 20% and 34% of the retail price, respectively. The body responsible for tax collection is the Ministry of Finance through a network of local tax offices, which receive, process and clear taxes. A tax return for income received in the previous year is submitted annually by all taxpayers. A tax return is also filled for VAT, either monthly or every trimester, for taxes withheld by businesses on salaries and payments to subcontractors and so on.

Box 3.2

Assessing the progressivity of health financing

A feature of the Greek tax system is that indirect taxes represent approximately 40% of total tax revenue. The reliance on indirect taxes, which are regressive, undermines horizontal and vertical equity (Bronchi, 2001). Tax evasion, social security contribution evasion and tax fraud are also acknowledged as key problems in Greece, with significant amounts of taxes remaining uncollected. Additionally, high levels of OOP payments coupled with informal payments cause major inequalities in access, apart from the issue of their regressive nature. Informal payments represent one of the worst options for health sector financing, as no protective mechanisms exist and they exacerbate inequalities, particularly affecting poor and vulnerable groups (Kaitelidou et al., 2013). As a result, the funding of the health sector remains regressive and inequitable, disproportionately burdening the lower socioeconomic groups of society.

Tax evasion and fraud have been quite widespread in Greece. According to a Transparency International report on Greece in 2012, the problem of corruption stems from the confluence of many factors, including weak enforcement of the law, a lack of audits, the absence of codes of conduct, lack of transparency in government activities, an inefficient bureaucracy, government impunity and broad discretionary powers, and a lack of public awareness (Transparency International, 2012). In an attempt to combat tax evasion and fraud, the Ministry of Finance set up the Financial and Economic Crime Unit and imposed some administrative procedures. However, currently the government's anticorruption efforts have not been evaluated as effective, and this has been attributed to lax enforcement of anticorruption legislation and the ineffectiveness of anticorruption agencies (Artavanis, Morse & Tsoutsoura, 2015).

3.3.3 Pooling and allocation of funds

The financial resources for publicly provided health care that come from the state budget are transferred from the Ministry of Finance to the Ministry of Health through the annual budget, which is based mainly on the previous year's allocation, adjusted for inflation and overall budget growth. The budget is then confirmed with the Ministry of Finance, followed by Parliament's approval. The Ministry of Health is then responsible for setting priorities at the national level, determining the funding for proposed activities and further allocating relevant resources.

From 2017, EFKA became responsible for pooling funding from insurance funds and allocating the health insurance contributions to EOPYY, which itself acts as a single pooling mechanism for health contributions (section 3.3.2). A state subsidy for SHI is currently 0.4% of GDP annually and is used to cover EOPYY's operational costs.

YPEs, in theory, are responsible for the coordination of regional activities, including the financial accounting system; however, most functions are still under central control of the Ministry of Health.

3.3.4 Purchasing and purchaser-provider relations

EOPYY is the main purchaser of health care in Greece as it funds service provision for almost the entire insured population as well as for the unemployed (section 3.3.1). EOPYY purchases services on a contractual basis, negotiating with providers on the volume, cost and quality of services and in theory takes into account the demographic, epidemiological and social characteristics of the local population. As the single purchaser of publicly provided health care

services, EOPYY has substantial bargaining power with suppliers, although because of heavy regulation of collective bargaining in the Greek public sector, this power can be somewhat limited.

Under EOPYY, procurement of health supplies is planned at the regional level via the development of regional programmes for goods and services. These programmes have to be adopted by the Coordination Committee for Procurement, which is responsible for assigning a contracting authority and the tender mechanism for each type of procurement. The Committee is able to select either a company or a private agency as a contracting authority, in line with its objective of achieving economies of scale and overall efficiency. The adoption of more effective procurement policies, e-auctions, tendering and renegotiation of contracts with suppliers, as well as the establishment of a Pricing Observatory for Medical Supplies in 2009, have led to a substantial reduction in hospital spending.

Until recently, expenditure by public hospitals has not been transparent, and allocations were based on a fixed per diem cost, which excluded, among other things, the cost of salaries (Box 3.3). Seeking to reduce input costs and rationalize the hospital payment system, a DRG payment system was launched in 2013 (section 3.7).

Box 3.3

Assessing allocative efficiency

Over recent years, measures have been introduced in an attempt to enhance allocative efficiency through structural reforms, including the establishment of EOPYY and the provision of primary health care through regionally governed PEDYs (Chapter 2). To some extent, the implementation of a single-payer system managed to contain expenditure growth and helped to allocate resources more rationally (Karakolias & Polyzos, 2014)

However, despite these efforts, Greece has not developed a systematic procedure for setting priorities in resource allocation according to specific health needs and health targets. A needs assessment procedure or a systematic risk-adjusted resource allocation formula has never been established. As a result, regional disparities in resource allocation persist. The allocation of central resources to the regions follows the practice of an ad hoc estimate based on the previous budget and adjusted within the limitations imposed by the EAP. It also remains, to a large extent, subject to political pressure and lobbying in each region (Mitropoulos & Sissouras, 2004). YPEs have no real power in formulating their own policies based on local needs. Their role is limited in executing a prefixed budget as set by the Ministry of Health. The suboptimal manner of allocating resources is further exacerbated by the absence of mechanisms for setting priorities and evaluating their effectiveness. When assessments have been performed, there are no mechanisms for using this evidence in the decision-making process.

3.4 OOP payments

Greece's health system has always relied on a large share of private financing, with high OOP payments particularly because of public health sector's underfunding. OOP payments form the bulk of private health financing and in 2015 amounted to 35% of current health expenditure, increasing from 28% in 2010.

3.4.1 Cost sharing (user charges)

The largest share of user fees is for co-insurance charges on pharmaceuticals. The increases in co-insurance for medicines treating specific diseases have resulted in increased average monthly household pharmaceutical expenditure, despite price reductions in pharmaceuticals. Cost-sharing for services provided in the public health care sector is considered to be low. In 2011, an increase in user charges from €3 to €5 was imposed on outpatient services provided in public hospitals and health centres; however, the charge was abolished altogether in 2015. In addition, a €25 patient fee for admission to a state hospital was introduced in 2014 together with an extra €1 for each prescription issued under the ESY (both in primary/ambulatory care and inpatient settings; Law 4093/2012). The hospital admission fee was also revoked in 2015 as major concerns regarding the impact on access to care were raised by health professionals and other stakeholders; instead, an extra tax on cigarettes was imposed. In 2016, exemptions were introduced regarding the €1 prescription charge to relieve former welfare beneficiaries, the uninsured on low income and those belonging to vulnerable groups.

The most common cost-sharing arrangements are outlined here and in Table 3.4.

Primary/ambulatory care. All visits to physicians in primary care (GPs) are free of charge. Patients may visit the outpatient departments of hospitals or health centres (located mostly in rural areas) or an EOPYY-contracted physician (a GP or a specialist) free of charge. The ceiling imposed on the number of consultations provided by the contracted physicians is 200 consultations per month (50 consultations per week) and not more than 20 visits of insured patients per day. This means that once the ceiling for consultations is reached, patients may need to seek care in private settings. EOPYY allows insured patients to visit a non-contracted physician, pay them the fee for service directly and later receive reimbursement of a fixed amount ranging between €10 and €20, which is below the market price of about €50 on average. Additionally, a minimum time limit of 15 minutes per patient has been set.

Outpatient specialist visits. Since 2002, doctors working in public hospitals are able to run private outpatient clinics in the afternoons, with payments distributed between the hospital (40%) and the physician (60%). The rationale behind the introduction of private clinics in public hospitals was to reduce informal payments and tax evasion as well as to enhance patient choice. This came at the cost, however, of increasing inequalities in access. In 2013, the Ministry of Health established a 20% reduction rate on physicians' fees, with flat rates moving to €36–72 for professors in university-affiliated hospitals, €24–64 for physicians in Athens and Thessaloniki and €16–44 for the rest of the country, while in arid areas the price is set at €24. Fee reductions were implemented in an effort to make services more affordable for citizens. Demand for afternoon outpatient clinics has fallen substantially since 2009, reflecting the deterioration in household incomes.

Outpatient pharmaceuticals. User charges on pharmaceuticals constitute the highest share of cost-sharing revenue. The rate of co-insurance for an outpatient drug prescription varies between 0% (exemptions) and 25% (typical charge), depending on the health condition and population group. There is no user charge for medications for cancer, psychosis, haemophilia, renal deficiency, multiple sclerosis, paraplegia, quadriplegia, immune system deficiency and some other conditions; an exemption is also applied to individuals or families with low income (below €2400 and €3600 per year, respectively, increasing by €600 for each dependent); for those with low income (below €6 000 per year) and suffering from a chronic disease; for children under 18 years hosted in social care; and some other population groups. A co-insurance charge of 10% applies for pensioners on low income and for medication for Alzheimer's and Parkinson's diseases, dementia, diabetes, epilepsy, chronic pulmonary heart disease, osteoporosis, tuberculosis, asthma and some other conditions.

Co-insurance rates for some medicines were introduced or increased in 2011 (Economou et al., 2015), increasing the average proportion of patients' cost-sharing for pharmaceuticals from 13% in 2012 to 18% in 2013. At the same time, the proportion of prescribed medication packages that did not require a patient co-payment fell from 13% to 8% (Siskou et al., 2014b). In addition to the co-insurance charges outlined above, there is an additional user charge for the difference between the retail price and the reference price reimbursed by health insurance, currently set with an upper limit of €20 (Law B64/16-01-2014 & amendment Γ5/41797/3-6-2015), as well as an extra fee of €1 per prescription issued under the ESY. The uninsured, the poor and some other vulnerable groups are exempted from the co-payment.

Inpatient stay. Although there are no user charges for hospital treatment in the public sector for those who are insured (section 3.3.1), there are some OOP payments in public hospitals, which include hospital charges for services not reimbursed by EOPYY (e.g. an extra charge for hospitalization in rooms with advanced hotel facilities, payments for some pharmaceuticals, direct payments and co-payments for some laboratory or diagnostic tests). User charges for hospitalization in contracted private clinics are set at 30% of the cost of the services (except for members of the Agricultural Insurance Organization, whose contribution is set at 50%).

Dental care. A fixed low fee (much lower than the market prices) exists for a limited set of dental services provided by contracted dentists. However, to date, no private sector dentists have actually been assigned contracts. Within the ESY, there is limited capacity to provide dental services in health centres, which are usually understaffed (section 5.12); dental services are also provided in dental outpatient departments of public hospitals. Recently many services (e.g. dental prosthetics) have been removed from the reimbursement list, and OOP payments for dental treatment have increased markedly. The lack of full coverage, either by EOPYY or by private insurance, makes dental care one of the predominant fields for direct payments, with over 15% of total OOP expenditure financing dental treatment in 2014 (OECD, 2018a).

Diagnostic and laboratory tests. These are covered with co-insurance, which ranges from 0% (in public hospitals) to 15% (in contracted centres). No reimbursement is provided to the insured visiting non-contracted diagnostic laboratories.

3.4.2 Direct payments

Direct payments form the highest share of private expenditure on health (more than 90%), with the majority representing OOP payments at the point of use for services not covered by the state. However, existing data do not allow a distinction between cost-shared and entirely OOP expenditure.

A notable increase in OOP payments for hospital services has occurred, doubling from 5.2% of current health expenditure in 2009 to 11.2% in 2015. Possible reasons for this rise include increased user charges, the high number who were uninsured and had to pay for hospitalization costs and direct payments for expensive tests not covered by SHI. Direct payments for medical goods (e.g. pharmaceuticals and devices) also increased, from 6.7% of current health expenditure in 2009 to 13.0% in 2015 through the tightened exemptions and an increase in co-insurance for certain medications. In contrast, payments

Table 3.4
User charges for publicly provided health services

Health service	Type of user charge in place	Exemptions and/or reduced rates	Cap on OOP spending
Primary care/GPs	<ul style="list-style-type: none"> No user charge (limit on service volume of 20 consultations per day, 50 consultations per week and 200 consultations per month) Fee for service (for afternoon outpatient visits, i.e. private clinics) from €16 to €72, depending on physician's location and qualification 	–	–
Outpatient specialist visit	<ul style="list-style-type: none"> No user charge Fee for service (for afternoon outpatient visits, i.e. private clinics) from €16 to €72, depending on physician's location and qualification 	–	–
Outpatient prescription drugs	<ul style="list-style-type: none"> Co-insurance, typically 25% of cost-participation rate Co-payment, €1 per prescription Extra OOP to cover difference between retail price and reference price for reimbursed medicine 	Reduced rate of 10% and exemption from cost-sharing for specific conditions and population groups (sections 3.3.1 and 3.4.1)	€20 cap on difference between RSP and reference price
Medical devices	<ul style="list-style-type: none"> Co-insurance, typically 25% of cost-participation rate (if the amount of the statutory purchase receipt is below the predetermined, the insured is compensated up to the amount paid) 	Para- and quadriplegic patients exempt from charges	–
In patient stay	<ul style="list-style-type: none"> No user charge Co-insurance of 30% of total cost in contracted private clinics (except from members of the SHI fund OGA, whose contribution is set to 50%) 	–	–
Dental care	<ul style="list-style-type: none"> Co-payment (difference between the reimbursed price by SHI to contracted dentist and the actual market price) 	–	–
Diagnostic and laboratory tests	<ul style="list-style-type: none"> Co-insurance rate of 15% in contracted centres 	–	–

Source: Authors.

for ambulatory services decreased from 15.5% of current health expenditure in 2009 to 9.3% in 2015, possibly due to the limited capacity of households to pay for non-emergency consultations and preventive services (Eurostat, 2018c).

3.4.3 Informal payments

Informal payments, which are included in the calculations of private expenditure, represent more than a quarter of OOP payments in Greece, raising serious concerns about access barriers to health care services (section 7.3). One of the main reasons for their scale and existence is the lack of a rational pricing and remuneration policy within the health care system. Studies have shown that almost one in three patients reported making at least one informal payment; these were mainly for the provision of hospital services or payments to physicians, primarily surgeons, so that patients can bypass waiting lists or ensure better quality of service and more attention from doctors (Liaropoulos et al., 2008; Souliotis et al., 2016).

According to the estimations of a recent study, hidden payments in the Greek health sector in 2012 amounted to almost €1.5 billion, representing 28% of private OOP expenditure on health (Souliotis et al., 2016). Additionally, new types of informal payments have emerged recently, as patients seeking medication prescriptions have to pay an additional fee under the table for a service that is supposed to be free of user charges. In a study conducted in 2015, more than 47% of patients reported making informal payment ranging from €10 to €20 to EOPYY-contracted doctors in order to obtain a prescription (Kyriklidis et al., 2016) (Box 3.4).

Box 3.4

Assessing OOP payments

The considerable OOP household expenditure on health can be explained by a number of reasons, including the inability of the public sector to meet the changing needs of the population and the large difference between the official reimbursement rates and the actual fees paid to providers. The lack of a functioning referral system between primary and higher level care, the fragmented primary/ambulatory health care and problematic pricing and provider-reimbursement mechanisms have resulted in large OOP payments and a sizable black economy, impeding the system's ability to deliver equitable financing and access to services even before the economic crisis (Liaropoulos et al., 2008). Additionally, the country's high number of physicians (Greece has the highest concentration of physicians among EU Member States) and a lack of control over private doctors, who were not required to implement any form of gatekeeping for hospital care or for referral to diagnostic or other specialized services, also fuelled private expenditure.

3.5 VHI

VHI mainly plays a supplementary role, with private companies providing cover for faster access, better quality of services and increased choice. VHI usually covers expenses in private inpatient and outpatient care and provides managed care programmes covering an integrated package of services. Until 2010, the law forbade the use of private beds in public hospitals and VHI funds purchased services from private hospitals and clinics. However, since 2011, private insurers have been allowed to use up to 10% of public hospital beds, with the aim of giving public hospitals an additional source of income.

In 2015 VHI constituted 3.9% of current health expenditure (Table 3.2), covering 12% of the population (1.25 million people). There has been an increase in the role of VHI since the mid 2000s; however, a decrease in the number of people covered by VHI has been noticed during the crisis. According to data from the Hellenic Association of Private Companies, which includes 80% of companies offering private health coverage in Greece, the percentage of cancelled health insurance contracts increased from 13% in 2010 to 15% in 2012, as a result of loss of workplace policies or replacement of contracts with cheaper options. Tax incentives to obtain private health insurance were abolished in 2013 (Law 4110/2013) (Economou, 2016).

3.6 Other financing

Apart from the Ministry of Health, the Ministry of Defence owns and runs a number of military hospitals that are funded by central government through the Ministry of Defence. These hospitals cover the needs of military personnel although some also provide services to civilians, subject to certain criteria. Additionally, the Ministry of Education owns and funds two teaching hospitals, which provide services to the general population; these are outside ESY, under the authority of the National Kapodistrian University of Athens.

Despite the establishment of EOPYY and EFKA, some health insurance funds remained apart. Among those are the mutual self-administered funds covering bank employees, with some of these funds owning health facilities and others contracting health providers.

Funding from external sources is low and was estimated at €234 million for 2015, compared with €125 million in 2013 and €24.5 million in 2012 (Eurostat, 2018b). Greece also receives EU structural funds, with part invested in the health system; however, exact figures are not available.

3.7 Payment mechanisms

Table 3.5 presents the payment methods for health care services and health care personnel. It is clear that the payment of providers is complex because of the public–private mix of provision and funding. Until 2012, the Ministry of Health defined the prices of hospital care and the per diem according to which ESY hospitals were reimbursed by social security funds on an annual basis. Since 2012, DRGs have been introduced and despite the problems encountered with their implementation (section 3.7.1), this was a positive step towards more efficient financing. However, delays in reimbursements from EOPYY often create the need for the state budget to subsidize providers' deficits.

3.7.1 Paying for health services

Ambulatory services are financed by central government through the health budget, reimbursed by EOPYY for contracted providers or obtained for OOP payment (section 3.4).

For hospitals, the EAP impelled Greece to replace the per diem financing system with a DRG-based one in a very short time period (one year) in order to increase efficiency and rationalize allocation of resources. As a result, DRG pricing (based on a German version of DRGs) is based not on actual costs and clinical protocols but on a combination of activity-based costing with data from selected public hospitals, and so-called imported cost weights. Furthermore, the salary cost of those employed in hospitals is not included as they are paid directly through the state budget.

EOPYY reimburses providers retrospectively. However, many still face deficits for a number of reasons, including delays in reimbursement by EOPYY and the fact that prices are below market value. These deficits are addressed periodically through state subsidies derived from taxation revenues.

A DRG data analysis showed that 8–21% of overall hospital revenue, depending on the health region considered, resulted from outlier payments, mostly covering per diem fees (i.e. cases in which inpatient treatment exceeded the average length of stay for the specific DRG). This implies that the current system requires corrective amendments and indeed four revisions have been made so far (Polyzos et al., 2013), with a fifth likely at time of writing.

OOP payments in public hospitals are another source of revenue. They usually include extra charges for hospitalization in a room with upgraded hotel facilities, direct payments for pharmaceuticals, direct payments and co-payments for other health care services (e.g. laboratory or diagnostic tests

Table 3.5
Provider payment mechanisms

Payers/providers	Central government/ Ministry of Health	Other ministries	Regional health authorities	Local health authorities (health centres)	SHI (for contracted specialists)	Private health insurance/VHI	Cost-sharing	Direct payments
GPs	Salary, FFS (for contracted GPs)	–	–	Salary (health centres)	FFS	FFS	–	FFS
Ambulatory specialists	Salary, annual budget	Annual budget	–	–	FFS (for contracted specialists)	FFS	–	FFS
Other ambulatory provision	Salary, annual budget	–	Annual budget (health centres)	–	–	FFS	–	–
Acute hospitals	Salary and subsidies (public hospitals)	Annual budget	–	–	DRG, per diem ^a	DRG, FFS	–	FFS
Other hospitals	Salary and subsidies	–	–	–	DRG, per diem	DRG, per diem	–	–
Hospital outpatient	Salary, annual budget	–	–	–	–	FFS	–	–
Dentists	Salary ^b	–	–	–	–	–	Price difference	–
Pharmacies	Salary ^b	–	–	–	FFS	–	Co-insurance & co-payment	–
Public health services	Salary	–	–	–	–	–	–	–
Social care	Salary, annual budget	–	–	–	–	–	–	–

Notes: FFS: fee for service; ^aWhere inpatient treatment exceeded the average length of stay for the specific DRG; ^bOnly for dentists and pharmacists employed in public hospitals and health centres and EOPYY pharmacies.

that are not covered by EOPYY), private payments for afternoon outpatient clinics and direct payments for hospitalization from the uninsured population (section 3.3.1).

Non-profit-making and profit-making private hospitals contracted with EOPYY are compensated on a DRG basis. Diagnostic tests, outpatient services and rehabilitation services are paid on a fee-for-service basis.

Private profit-making hospitals, diagnostic centres and independent practices are financed mainly from OOP payments or, to a lesser extent, by private health insurance. Private insurance pays private providers according to fixed payments per case-mix group and fee-for-service payments for hospital services as well as for diagnostic and primary health care services. Private diagnostic centres charge patients and EOPYY on a fee-for-service basis at rates set by EOPYY.

3.7.2 Paying health professionals

Health care professionals working in the public sector (e.g. hospitals, health centres, rural surgeries) are civil servants and are paid a salary. Indicatively, the average annual salary of specialists decreased from €58 000 in 2009 to €42 000 in 2015, while the average nurse's salary decreased from €29 000 to €21 000 in the same period (OECD, 2018a). Although paying providers on a salary basis is supposed to contribute to cost control, it does not offer incentives for improving productivity and effectiveness. Doctors working in public hospitals are paid a monthly salary and are not allowed to practise private medicine, but they are permitted to offer care to private patients visiting afternoon outpatient clinics of public hospitals on a fee-for-service basis.

Doctors contacted by EOPYY are paid on a fee-for-service basis, which theoretically may encourage unnecessary demand for health care services. Some physicians charge for additional visits or prescribe more diagnostic tests and drugs than are medically required in order to boost their income. In order to limit such practices, ceilings were imposed on the number of consultations and the expenditure on services prescribed (section 3.4). However, a number of doctors have been excluded from these limits (e.g. hospital doctors).

Low wages and fees, coupled with a lack of effective control mechanisms and patients seeking faster access or better quality of services, may contribute to persisting high levels of informal payments (Liaropoulos et al., 2008; Kaitelidou et al., 2013; Souliotis et al., 2016; Kyriklidis et al., 2016).

Private GPs, specialists and dentists practise in their own surgeries and are compensated by patients on a fee-for-service basis. These fees are

usually determined at a minimum permitted level by the medical associations, depending on the physician's qualifications; for practising specialists, fees usually vary from €40 to €120 per visit. This rate depends on supply and demand factors and per capita income in different regions. It should be noted, however, that in most cases these rates slightly decreased during the economic crisis. Private hospitals, apart from salaried physicians, employ affiliated doctors who are mainly reimbursed on a fee-for-service basis directly by the patient. The affiliated doctors also receive a proportion of the patient's bill as a bonus.

Nurses in all health settings are mainly salaried personnel. However, in a few private nursing services (e.g. home care), nurses are remunerated on a fee-for-service basis.

Pharmacists are paid on a fee-for-service basis, collecting a percentage of the value of the prescription from patients and the rest from SHI. In accordance with EAP requirements, since 2014 pharmacists' profit for prescribed reimbursed pharmaceuticals ranges from 2.25% to 30%, depending on the ex-factory price of the drug (Ministerial Decision 1805/2014). The profit margin is set at 35% for over-the-counter drugs and prescribed pharmaceuticals that are not compensated by EOPYY.

Physiotherapists, speech therapists and occupational therapists are mainly private practitioners reimbursed on a fee-for-service basis paid directly by patients. Depending on the diagnosis, EOPYY compensates patients with a fixed fee for service. However, the low fees set by the state promote additional payments made directly by patients.

Generally, the salaries of health care personnel in Greece were among the lowest in the EU even before the crisis. However, in the drive to reduce health system input costs, salary cuts totalling 20% were applied in 2010 to all health professionals working in the public sector, including administrative personnel, doctors, nurses, pharmacists and paramedical staff. Moreover, planned performance-based productivity bonuses were not implemented (Economou et al., 2014, 2015).

4. Physical and human resources

Chapter summary

- There are few mechanisms that allow adequate planning and allocation of physical and human resources in Greece, including an absence of priority-setting processes, proper needs assessment or investment strategies.
- Physical resources are unevenly distributed across the country, with much higher concentration of health services and medical equipment in large cities than in rural areas. Private facilities are also largely located in the urban centres.
- Greece has substantial imbalances in the distribution of human resources. While the doctor-to-patient ratio is the highest in the EU, the nurse-to-patient ratio is the lowest. In addition, there are imbalances between various specialties, and shortages of both doctors working in public hospitals and GPs working in rural areas.

4.1 Physical resources

4.1.1 Capital stock and investments

Current capital stock

Physical resources are split between public hospitals and health care centres and private hospitals, clinics and diagnostic centres. In 2014, there were 124 public hospitals under the ESY, out of which 106 were general hospitals and 18 specialized hospitals, with a total capacity of about 30 000 beds (65% of all hospital beds) (Hellenic Statistical Authority, 2018). Studies on the condition of public hospital buildings for both inpatient and outpatient departments suggest many health facilities are outdated (Dimitriadou et al., 2009; Matis, Birbilis & Chrysou, 2009; Pierakos et al., 2015). Most ESY hospitals have 100–200 beds and offer mainly secondary health care, while approximately

30 of them have more than 400 beds. The latter are equipped with advanced technology and are staffed with specialized personnel.

In addition, there are 18 public hospitals operating outside ESY: 14 are funded by the Ministry of Defence and provide health services to military personnel and their families; two are university hospitals under the supervision of the University of Athens, which receive extra funds from the Ministry of Education and provide highly specialized care to all insured citizens; and two are under the supervision of the Ministry of Justice, serving the needs of prisoners.

There are also four private non-profit-making hospitals connected with the ESY network, with a total capacity of 884 beds; these provide highly specialized services to the insured population. In 2014, there were 155 private profit-making hospitals, possessing 35% of the total bed capacity and located mostly in large cities.

In urban areas, ambulatory care is mostly provided through outpatient hospital departments. A network of 193 health centres staffed with GPs and specialists delivers ambulatory care in rural and semi-urban areas. Additionally, approximately 1650 health surgeries, linked with the health centres, are staffed with publicly employed doctors. In addition to public services, ambulatory care is provided through private medical practices (over 22 000), private dental practices (more than 13 000) and more than 3500 private diagnostic centres. Most are equipped with high-quality medical technology. The majority of private ambulatory care settings are also located in large urban areas such as Athens and Thessaloniki (Economou, 2015).

Regulation of capital investment

The Ministry of Health is responsible for controlling capital investments in health. Nevertheless, there is no formal process for setting priorities and allocating resources. There have been a number of attempts to formulate and implement an instrument to match health care resources with the needs of the population. However, to date, the aim of matching the demand and supply side has not been completed. For example the Health Atlas is currently limited to providing information only on available health care services.

Investment in advanced diagnostic imaging equipment has been subject to a feasibility study since 2008, but only for private investors. Demographic criteria were also introduced in 2010, only to be revoked in 2013. At present, a nine-member committee appointed by the Ministry of Health is responsible for assessing private investment on loosely set criteria, taking into consideration technical and feasibility studies submitted by the investor.

Investment funding

Investment expenditure for health-related projects (e.g. the purchase of hospital equipment, operation of hospitals, development of health care facilities) is funded by the Ministry of Health and amounted to €99 million in 2015. Of this, €96 million was related to projects co-funded by the EU (Ministry of Economy, 2016).

Since 2005, the Government has approved a number of health projects involving public–private partnerships, despite serious inefficiencies within the Greek public administration and mixed evidence from international experience (McKee, Edwards & Atun, 2006). The projects involve the design, construction, financing, maintenance and security of four new hospitals, along with provision and maintenance of all necessary clinical and support equipment. The aim is to achieve better facility and infrastructure management through setting high-quality standards that are directly linked to private partner reimbursement levels. However as yet there are no clear results on the performance of these entities.

4.1.2 Infrastructure

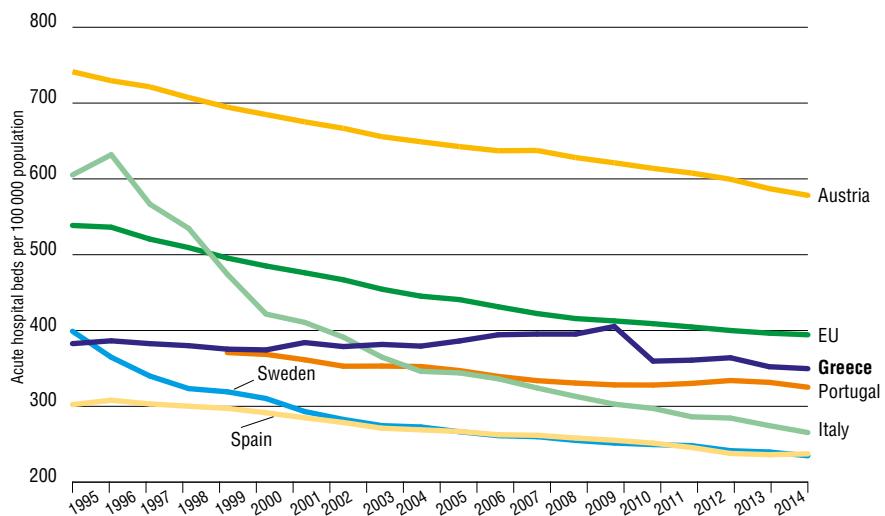
The public hospital sector has been targeted as part of major restructuring efforts under the country's EAP. In July 2011 the government announced a plan to cut the current number of public hospital beds and reduce the number of clinics and specialist units (Ministry of Health and Social Solidarity, 2011a). However, it was only in the autumn of 2013 that limited restructuring took place, with the integration of hospitals belonging to major SHI funds within ESY, and the merger of 133 public hospitals into 83 groups with common management (Kaitelidou et al., 2016b).

Unlike many other EU countries, the number of acute hospital beds in Greece remained stable and even increased during the earlier part of the 2000s (Fig. 4.1). In 2009 the number exceeded 400 per 100 000 population but by 2014 had dropped to 346, which is below the EU average of 394, through reductions in acute and psychiatric care beds (section 5.4). Beds are unevenly distributed across the country's regions, with a three-fold difference between the number of beds in metropolitan Attica and rural central Greece (Box 4.1).

The number of psychiatric beds in Greece is similar to the EU average (71 and 73 per 100 000 in 2014, respectively). In contrast, the number of nursing and elderly care beds is markedly lower: 15 per 100 000 in 2014, compared with 750 in the EU on average, and almost 85 times less than in Sweden (1277 per 100 000), mainly a consequence of very underdeveloped long-term care, which is largely provided at home (section 5.8).

Fig. 4.1

Trends in acute care hospital beds in Greece and selected other countries, 1995–2014



Source: WHO Regional Office for Europe, 2018.

Box 4.1**Assessing the distribution of health resources**

The Greek health care system has suffered from lack of planning and, as a result, unequal and inefficient allocation of economic resources, uneven regional distribution of health infrastructure and underdevelopment of needs assessment and priority-setting mechanisms (Davaki & Mossialos, 2005). Currently, a transparent process for setting priorities and allocating resources in health care is not in place and there is no system to ensure equitable distribution of health resources. There are large disparities geographically in terms of availability of hospital beds and medical equipment, in both public and private services. Most resources, including medical equipment and advanced diagnostic imaging equipment, are concentrated in metropolitan areas. Private services are also mainly concentrated in large cities.

4.1.3 Medical equipment

There is no planning in the purchasing of biomedical equipment in Greece, and technologies often are introduced without needs assessment. Nor is there any systematic monitoring of the utilization or performance of such equipment. The problem is further aggravated by adverse incentives for doctors, who often have a financial interest in promoting expensive medical technology and, as a consequence, overprescribe tests and procedures (Tsiantou et al., 2009; Lionis et al., 2014). In an effort to limit prescription and extensive use of medical equipment, ceilings were imposed in 2014 on the activities of

doctors contracted with EOPYY, including a monthly limit to diagnostic and laboratory tests (section 3.3.1).

Greece is among the EU countries with the highest number of CT (3.5 per 100 000 population) and MRI (2.4 per 100 000 population) scanners, being the second and third highest, respectively, in 2013. Most of them are installed in the private sector (Vozikis & Kaskareli, 2012) and owned by the providers of ambulatory health care. Despite the oversupply of advanced imaging equipment such as MRI scanners, there is an unequal distribution, with a high concentration in large urban areas (Vozikis & Kaskareli, 2012). Also, under 40% of CT and MRI scanners were less than five years old in 2013, while one out of four pieces of medical equipment was more than 10 years old. This contrasts with the standards set by the European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry (2014), suggesting that at least 60% of equipment should be newer than five years.

4.1.4 Information technology

Information systems in the Greek health care sector have only been introduced recently following pressure to organize hospital operations better. Progress on the development of the electronic health records has been slow. By comparison, progress in e-prescribing has been remarkable as the prescription and dispensing of medicines is performed electronically nationwide (Law 3892/2010). The e-prescription system was introduced in 2010 and today covers more than 98% of the country, with six million e-prescriptions per month (98.5%) and 1.5 million e-referrals per month (92%) (Pangalos, Sfyroeras & Pagkalos, 2014).

Telemedicine systems are not established nationwide and have been developed mainly from universities, research institutes or other public institutions. Deployment varies substantially at regional level (Chouvarda & Maglaveras, 2015). The actual development of information technologies and telemedicine started in Greece in 2000–2006 within the framework of the EU Operational Programme Information Society (Economou, 2012a). The telemedicine programme ASPASIA, which supports GPs in the performance of basic health checks and is co-funded by private investors such as Vodafone, started in 2006 and covered about 100 remote areas in 2013.

A major development has been the completion in 2016 of the National Telemedicine Network project, co-financed by the EU and national sources, with the cooperation of the Second Regional Health Authority of Piraeus and the Aegean and the national telecommunication network. It established 43 telemedicine units that connected 30 health centres in the Aegean Islands with 12 hospitals in the capital region. Each telemedicine unit consists of a specially

designed booth, equipped with a high-definition camera, screen and special medical instruments that stream live the results of the examinations. Through the booth, doctors and patients in the remote locations can communicate with consultant doctors in hospitals in Piraeus, watching each other work to scale and in real time. Telemedicine and teleconsulting services offer access to specialties including cardiologists, dermatologists, oncologists, internal medicine specialists, breast surgeons, psychiatrists, child psychiatrists and psychologists. The National Telemedicine Network also offers e-learning services, enabling the training of medical, nursing and administrative personnel in real time and administrative support.

Overall, despite the progress that has been made, the European Hospital Survey (European Commission, 2014a) indicated that Greece was behind the European average in terms of e-health development, along with Poland and some other eastern European countries. For some benchmarks, such as “exchange of clinical care information with external providers” (-37%), “exchange of laboratory results with external providers” (-32%) and “exchange of radiology reports with external providers” (-38%), Greece’s scores were among the lowest. Greece had higher scores than the EU average in “ePrescribing” (47%) and “integrated system for eReferral” (33%) (Chouvarda & Maglaveras, 2015).

4.2 Human resources

4.2.1 Planning and registration of human resources

The Ministry of Health determines the number of doctors who can practise in publicly funded health facilities but does not regulate their distribution across the country. The Ministry of Education determines the number of places available in medical schools but these are not matched to the needs of population or health system at either central or regional levels. Since the mid 2000s, the Ministry of Education has stabilized the number of new entrants into medical schools (in response to increasing entrant numbers) but this has been the only available measure in terms of planning of human resources. There has also been no planning in terms of the balance between specialties, or between medical and nursing personnel. As a result, Greece now has major imbalances in distribution and availability of human resources.

After completing specialization training for doctors, or professional training for nurses, health professionals must apply for a licence to practise from the health department of the prefecture where they reside. Doctors must also enrol in a medical association according to their specialty. There is a legal

requirement for further continuous professional development in order to renew licences to practise, which includes 100 hours of training over a five-year period (section 4.2.4).

4.2.2 Health workforce trends

In 2014, 210 000 people were employed in health and social services in Greece (OECD, 2018a). There was a substantial increase in the health workforce from 1995 until the late 2000s. Subsequently during the economic crisis, there was a 15% decrease between 2009 and 2014 in staff employed in hospitals.

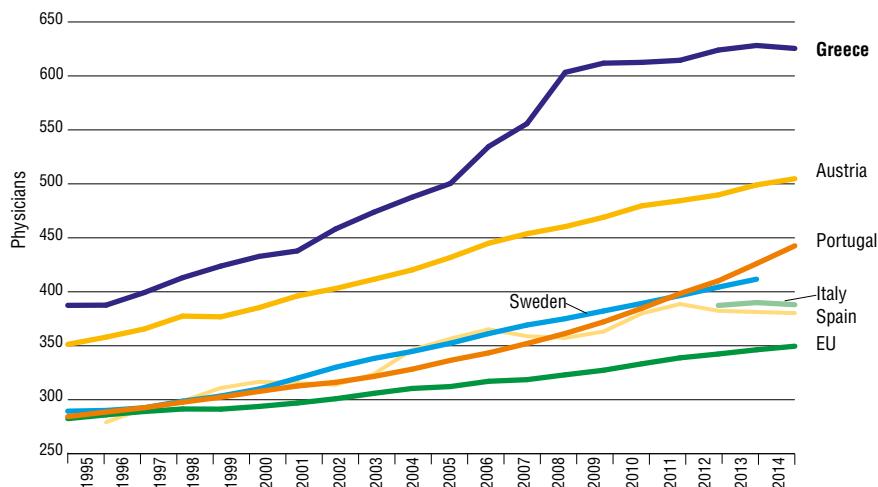
Greece consistently has the highest ratio of physicians among EU countries, a rapid increase only slowing after 2008. In 2014, the number of practising physicians reached 625 per 100 000 population, compared with the EU average of 350 (Fig. 4.2). In contrast to the ratio of specialist physicians, which also was the highest in the EU, the number of GPs was one of the lowest, at 39 per 100 000, compared with the EU average of 80. The are several reasons for such a striking imbalance between the numbers of GPs and specialists, including historically undeveloped primary care, lack of quality training (Mariolis et al., 2007) and the higher social status attached to being a specialist physician (Kaitelidou et al., 2012). In terms of policy impact, it has been argued that the high number of doctors, combined with providers' reimbursement methods, can lead to supplier-induced demand, regardless of the real health needs of the population, and also fuel informal payments (Kaitelidou et al., 2012; Souliotis et al., 2016). In addition, Greece faces serious geographical inequities regarding the distribution of doctors. The density of physicians in 2014 varied from about 300 per 100 000 population in Western Macedonia and Central Greece to 874 per 100 000 in Attica (Hellenic Statistical Authority, 2018). Although some incentives (e.g. financial support) have been offered by the Ministry of Health for doctors practising in rural parts of Greece, they have not been enough to recruit and retain staff in these areas.

Greece has the lowest ratio of practising nurses in the EU (344 vs 864 per 100 000 population) and, notably, this number has not changed since the mid 2000s (Fig. 4.3).

In 2014, Greece had the highest ratio of practising dentists in the EU (125 vs 68 per 100 000 population), although this has reduced slightly in recent years (Fig. 4.4). The ratio of practising pharmacists was higher than the EU average (105 vs 85 per 100 000 population), with their number steadily increasing since the mid 2000s (Fig. 4.5).

Fig. 4.2

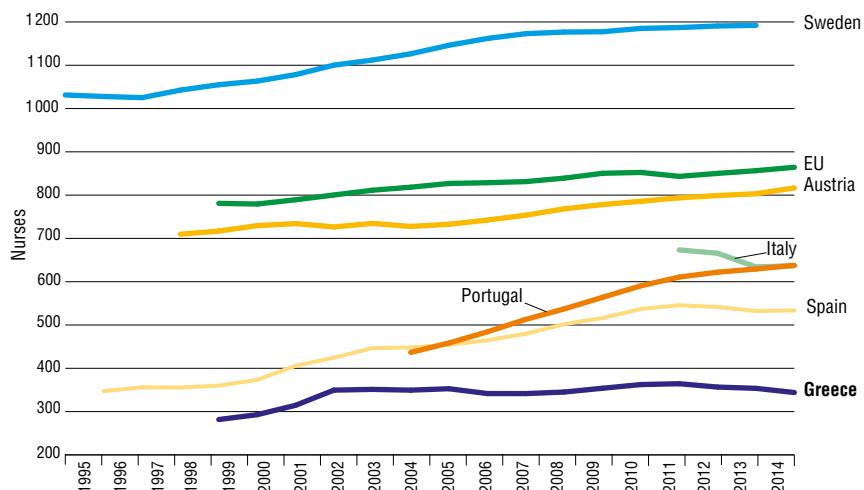
Number of physicians per 100 000 population in Greece and selected countries, 1995 to latest available year



Source: WHO Regional Office for Europe, 2018.

Fig. 4.3

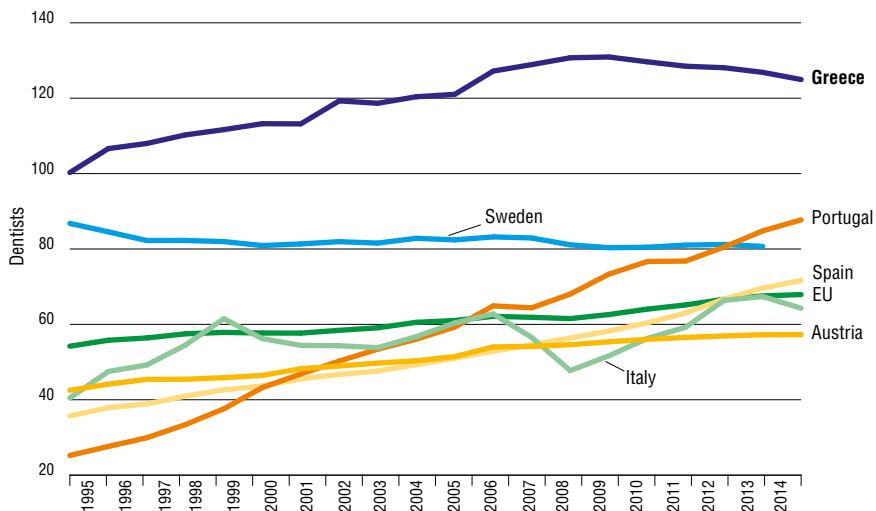
Number of nurses per 100 000 population in Greece and selected countries, 1995 to latest available year



Source: WHO Regional Office for Europe, 2018.

Fig. 4.4

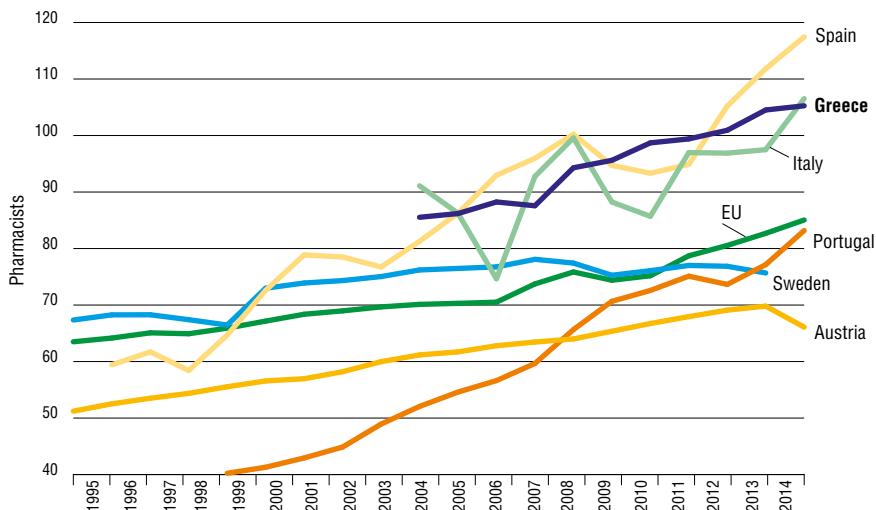
Number of dentists per 100 000 population in Greece and selected countries, 1995 to latest available year



Source: WHO Regional Office for Europe, 2018.

Fig. 4.5

Number of pharmacists per 100 000 population in Greece and selected countries, 1995 to latest available year



Source: WHO Regional Office for Europe, 2018.

Despite the oversupply of doctors, Greek public hospitals and certain services are often heavily understaffed (Sakellaropoulos et al., 2012; Ifanti et al., 2014). The problem is even more pressing with regard to nursing personnel. The hiring freeze imposed with the economic constraints resulted in a large number of intensive care units being shut down and many ESY hospital clinics were, at the time of writing, functioning below their operational capacity. As a consequence, long waiting lists have started to emerge for some services (Clarke et al., 2016).

4.2.3 Professional mobility of health workers

Training of doctors and nurses in Greece conforms to EU standards for mutual recognition according to the Community directives regulating the free movement of health professionals. However, no reliable data are available concerning the international mobility of Greek doctors and nurses.

The impact of the economic crisis generally and within the health sector is one of the main factors contributing to the migration abroad of a large number of health professionals, particularly doctors and nurses. According to the Medical Association of Athens, more than 7340 doctors left Greece between the onset of the economic crisis and 2015. The number of doctors leaving Greece has tripled since 2009, which was prior to the start of the economic crisis, and the trend is continually increasing. The most popular destinations in Europe are Germany, the Scandinavian countries and the United Kingdom (Ifanti et al., 2014). The situation for nursing professionals is similar.

Unemployment and austerity measures imposed on education and the labour market are considered as some of the main factors generating this exodus in Greece. In addition, the limited public funding for research and reduced salaries have discouraged scientists working abroad from returning (Ifanti et al., 2013). Indeed, according to available data, health professionals from other European countries do not seem to come to Greece to practise. According to the Greek Medical Association, under 1% of practising doctors in Greece are citizens of other EU Member States. This can be attributed to cultural and language factors as well as the less attractive conditions prevailing in the Greek labour market (e.g. low salaries).

4.2.4 Training of health personnel

There are currently seven public university medical schools in Greece offering a basic six-year medical course leading to a medical degree. After university, all medical graduates are required to complete a specialization course in a

public or university-affiliated hospital, the duration of which ranges from four years for general practice to seven years for vascular and neurosurgery. Before acquiring full medical specialization status, doctors are also obliged to carry out a mandatory one-year placement in a rural area, after which doctors are free to practise medicine anywhere.

Currently, there are two universities and seven higher technical education institutes that offer a four-year nursing course. Three higher technical education institutes currently provide midwifery courses, which last four years.

There are three types of nursing personnel working in both the public and the private sectors, depending on their education:

- registered nurses are graduates of either a university or a higher technical education institute and are granted their professional licences by the health department of the region in which they reside;
- assistant nurses are typically required to have one or two years of hospital-based training prior to their employment and do not hold a graduate nursing degree; and
- midwives are graduates of higher technical education institutes.

Law 1397/83 Article 41 requires 100 hours of continuous education every five years for medical and dental professionals to renew their licence. Additionally, according to Law 2257/94 Article 2, further training is mandatory for ESY doctors, dentists, pharmacists and other health professions. Under the Code of Medical Ethics, doctors have an obligation to pursue lifelong education and knowledge regarding the developments of medical science and of their specialty. However, in practice, there is no further obligation for health professionals to train beyond the requirements for obtaining their licence to practise, as there is no specific framework that lays down rules for implementing continuing medical education. Consequently, continuous medical education essentially remains an ethical imperative and includes voluntary participation in seminars, symposia, scientific meetings and postgraduate courses, which are usually organized by the medical schools and medical associations. Although doctors are legally required to submit documentation of participation in continuing education activities, there is no substantive monitoring or further action for noncompliance. It should be noted, however, that continuing education activities are taken into account as part of promotion procedures within ESY.

The Panhellenic Medical Association is the authorized coordinating body of continuous medical education in Greece and is also the contact point with the European Union of Medical Specialists.

4.2.5 Physicians' career paths

Law 2889/2001 imposed restrictions on tenure for ESY hospital doctors through the introduction of performance-based contracts. A permanent contract is granted to new recruits after 10 years of service on condition that they have successfully passed three consecutive evaluations.

There are three grades of specialists: junior registrar, senior registrar and consultant. Evaluations of junior and senior registrars are performed by councils composed of three members of the hospital where they work (hospital director, head of the medical service and the head of department), a consultant of the same or similar specialty appointed by KESY and a senior registrar of the same or a similar specialty appointed by the Greek Medical Association. As a result, representatives of the hospital, the Ministry of Health and the Medical Association participate in the process, with larger weight placed on the hospital where the candidate works.

The council for evaluating consultants consists of a director of the YPE, three consultants of the same or similar specialty appointed by KESY and a professor or associate professor of a medical university with the same or similar specialty. In these cases the promotion decision is made at the national level.

4.2.6 Other health workers' career paths

Nursing staff working in hospitals, like all employees of public services, have a two-year trial period and after satisfactory completion of this a permanent contract is granted. The grade category of registered nurses varies from D (the most junior) to A (the most senior), depending on their qualifications. In terms of career development, established criteria include professional qualifications, work and management experience, skills and abilities as well as an overall assessment based on an interview.

The departmental board in each public organization is responsible for the decisions regarding promotions. For the higher-ranked positions (e.g. head of a directorate), a committee consisting of two senior representatives from the Ministry of Health, a state legal councillor and two members of the Supreme Council for Civil Personnel Selection is assembled. Indicatively, heads of the directorates are expected to have at least 20 years of work experience.

5. Provision of services

Chapter summary

- Public health services have taken a back seat in favour of the development of secondary care services. The services delivered rarely engage in prevention, health promotion, social care and rehabilitation.
- The primary care system has not been developed fully and patients face problems with access, continuity of care and coordination as well as comprehensiveness of services. Currently there is no gatekeeping mechanism that manages the referral system, but a new Primary Care Plan announced in 2017 aims to establish first-contact, decentralized local primary care units staffed by multidisciplinary teams, which also will take on a gatekeeping role.
- Specialized ambulatory care is characterized by unequal geographical distribution of contracted EOPYY physicians and by a lack of some specialties across the country.
- The Greek health care system is strongly centred in hospitals. Substitution policies to replace inpatient care with less expensive outpatient, home care and day care largely do not exist and the degree of integration between primary and secondary care providers is low.
- The provision of physical rehabilitation, long-term and palliative care by the private (profit-making) sector and voluntary and NGOs has increased because of the gaps in ESY services and staff as well as equipment shortages in public facilities.
- Dental services are de facto fully privatized and not covered under the EOPYY benefits package due to lack of contractual arrangements with dentists.

5.1 Public health

The public health system in Greece carries out epidemiological monitoring and infectious disease control as well as environmental health control, health promotion and disease prevention at community level. The system consists of a centralized service within the Ministry of Health, a grid of services at the regional and local levels and a number of public health organizations under the auspices of the Ministry of Health that operate as autonomous bodies and provide laboratory, research, educational and statistical support.

Responsibility for public health services nationally lies with the Directorate for Public Health within the Directorate General for Public Health and Health Services in the Ministry of Health. It is responsible for monitoring, prevention and combating communicable and noncommunicable diseases; sourcing and quality control of vaccines; public health risk management; child and mother health; environmental health and sanitation; hygienic control of water and waste, air pollution, radioactivity and radiation; health and safety at work; school health; dealing with illicit drug abuse; and the supervision of various public health organizations (e.g. KEELPNO, the National Centre for Diabetes Mellitus, the Organization Against Drugs and the Hellenic Pasteur Institute) and a network of laboratories and services. In addition, the independent ESYDY is responsible for coordinating public health organizations concerned with monitoring and promoting population health, controlling communicable diseases and overseeing pharmaceuticals, medical devices and transplants.

Furthermore, the Ministry produces health promotion and health education leaflets and relevant radio and television advertisements, particularly against tobacco and alcohol consumption. Smoke-free legislation for most indoor public places and public transport was passed in 2010 (Law 3868/2010) but enforcement is weak, particularly in bars and restaurants.

Operational responsibility for public health services falls on a grid of actors at the regional and local level. At the regional level, public health directorates within the regional authorities include health prevention and promotion departments, with competences such as the implementation of programmes for immunization and preventive medicine, mother and child care, chronic ailments, illnesses not easily susceptible to treatment and health education activities. At the local level, municipalities are responsible for running several prevention and promotion programmes within primary care through municipal health clinics, open care centres for the elderly and public infant and child care centres; they also provide care for vulnerable population groups.

Box 5.1**Assessing the effectiveness of public health interventions**

Apart from information campaigns on the dangers of tobacco use and alcohol consumption, there are no specific national strategies to address risk factors for disease. There are no national population-based or systematic screening programmes for treatable cancers.

Greece does have a national immunization programme. Overall, immunization coverage with traditional vaccines is satisfactory (over 95%), but administration of booster doses is delayed in many cases (Pavlopoulou et al., 2013). Studies reveal that adolescent vaccination coverage is not satisfactory, mainly because of noncompliance with the final booster dose (Bitsori et al., 2005; Sakou et al., 2011). There are also problems with coverage for specific groups: generally good or moderate for children in migrant families but generally moderate or low for children in Greek Roma families (Panagiotopoulos et al., 2013).

A Central Laboratory for Public Health, a number of regional laboratories for public health (part of PEDYs) and the public health and hygiene laboratories that operate in medical schools and in a number of selected public hospitals are designated as reference centres for various diseases, such as HIV, hepatitis, salmonella, parasitic diseases and tropical diseases. Greece also participates in several European networks for public health, including the Epidemiological Surveillance Network, the European Legionnaires' disease Surveillance Network, a surveillance network for meningococcal disease, the European Tuberculosis Surveillance Network and Euro-HIV.

Starting in May 2016, the Ministry of Health and KEELPNO developed a system for epidemiological surveillance in first reception centres hosting refugees coming from Asia, with daily collection of epidemiological data for selected conditions. In addition, contracted NGOs offering services to first reception centres now collect migrant health data through individual health information, organization of patient files and registration of the provided medical services (WHO Regional Office for Europe, 2015).

Traditionally, public health services in Greece have taken a back seat in favour of the development of secondary health care services (Box 5.1). Public health doctors have a low status within ESY and there have always been problems with their recruitment. Therefore, all levels of public health services are severely understaffed. Underscoring this situation, the first National Action Plan for Public Health (2008–2012), which was developed by ESYDY, was never implemented. The Plan emphasized 15 major health hazards (substance abuse, cancer, sexual health, diet and nutrition, alcohol consumption, cardiovascular

diseases, environmental health, smoking, vehicle accidents, oral health, infectious diseases, travel health, rare diseases, HIV/AIDS, and antimicrobial resistance and nosocomial infections) (Ministry of Health and Social Solidarity, 2008). In addition, the lack of an official national prevention and screening programme has had negative effects on the population's health (Chapter 7) (Panagoulopoulou et al., 2010; Trigoni et al., 2011).

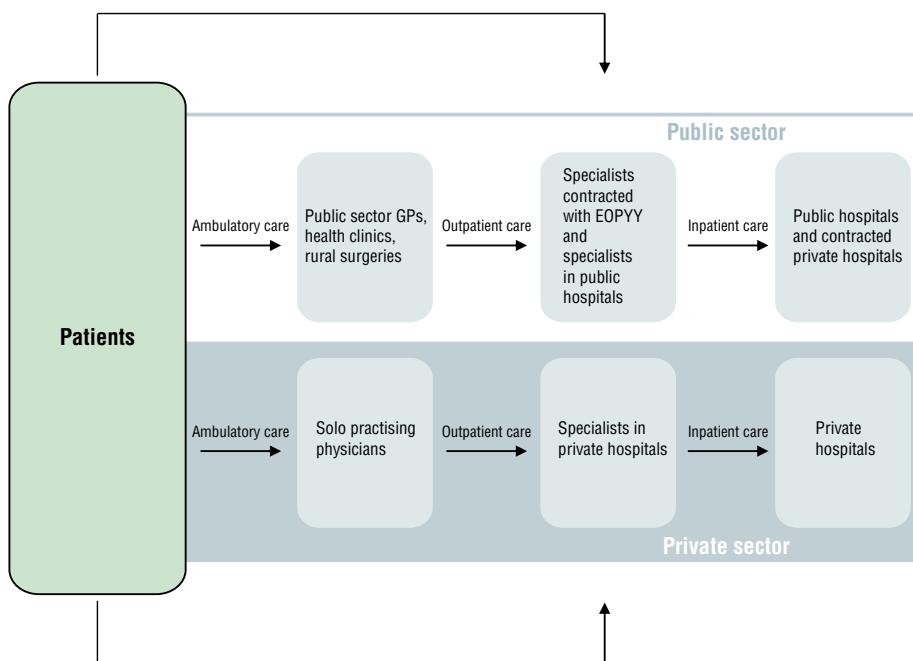
5.2 Patient pathways

Patients access health services through different pathways depending on whether public or private facilities are used (Fig. 5.1). While high use of private health services has been a feature of the Greek health system, the economic crisis has impacted on patients' ability to outlay OOP payments and there has been a significant rise in the utilization of public sector services in recent years.

Currently, there is no gatekeeping mechanism or referral system and patients can directly access ambulatory care by visiting a physician in ESY urban facilities, rural health centres or hospital outpatient departments.¹ The physician may prescribe necessary medications or tests or refer the patient to a specialist contracted with EOPYY or a specialist at a public or privately contracted hospital for care. Due to this direct method of access, long waiting lists occur for some specialties. Similarly, overly long waiting lists for screening tests may lead some patients to visit specialists and diagnostic centres in the private sector, paying OOP for these services. Hospital care may be provided in public and private hospitals; costs largely must be paid by the patient or by their VHI for the latter (section 3.4.1). Patients often prefer to visit hospitals in Athens or the large university hospitals offering expensive and high-technology services because district hospitals often are understaffed and in some cases have poor infrastructure. As a consequence, many hospitals in Athens have to source extra beds to meet excess demand. Many patients also visit the free-of-charge emergency departments of public or private contracted hospitals, bypassing primary care contact points. Many of these visits are not justified and put unnecessary pressure on these departments.

¹ Paradoxically, patients covered by private health insurance contracts based on preferred provider networks or integrated insurer and provider schemes are obliged to visit a first-contact service that will subsequently refer them to specialist or hospital care.

Fig. 5.1
Patient pathways



5.3 Primary/ambulatory care

Ambulatory care in Greece is delivered by a mix of public and private health service providers. There are three main modes of delivery:

- provision through the ESY, including the National Centre for Emergency Care (EKAV; section 5.5), rural health centres and their health surgeries and public hospital outpatient departments (section 5.4.1);
- provision through local authorities and NGOs, including clinics and welfare services offered free of charge by municipalities and civil society organizations, which are limited in scope, covering only a narrow range of care and are used primarily by uninsured people and (particularly) by refugees and migrants; and
- provision by the private sector, including medical offices, laboratories, diagnostic centres and outpatient medical consultations at private sector hospitals, which is financed by direct payments or private insurance but may be contracted by EOPYY.

The transfer of all ambulatory care networks operated by the sickness funds to EOPYY in 2011 constituted a major restructuring of ambulatory care (e.g. the large network of approximately 350 polyclinics belonging to IKA ATHINON (IKA), the largest fund and covering white and blue collar workers, were transferred to the ESY). In addition to being the sole purchaser of health services, EOPYY became an ambulatory care provider. A subsequent reorganization of primary care in 2014 (Law 4238/2014) placed all EOPYY ambulatory-care facilities, rural health centres and their surgeries under the jurisdiction of YPEs and their PEDYs (Chapter 2). The aim was for these facilities to function 24 hours a day, seven days a week. In addition, the Law provides for the establishment of a referral system based on family GPs, although it has not yet been implemented. A gatekeeping system does not exist as yet and almost all primary care providers are specialists: according to data from the Hellenic Statistics Authority, in 2014, out of a total of 68 807 doctors, only 2626 (3.8%) were GPs.

Ambulatory care in rural and semi-urban areas is mostly delivered by a network of 205 health centres staffed with GPs and specialists (paediatricians, gynaecologists, orthopaedists, ophthalmologists, urologists, dentists, general surgeons, psychologists, radiologists, physiotherapists, microbiologists, nurses, midwives and social workers). In addition, approximately 1700 rural health surgeries that are administratively linked to health centres are staffed with publicly employed doctors and medical graduates. The latter are required to spend at least one year in a rural area upon graduation and prior to enrolling for medical specialization. The number of available doctors in each health centre depends on the characteristics of the catchment area (e.g. size, economic growth, epidemiological profile and access to hospital).

Each health centre covers the health needs of approximately 10 000 to 30 000 people, operating on a 24-hour basis and includes consultation rooms, rooms for one-day medical treatment, basic diagnostic equipment, radiological and microbiological laboratory, septic surgeries, dental clinics and an ambulance. This infrastructure contributes to the provision of a wide range of services, which include prevention (mainly immunization) and health promotion, emergency services, first aid and transportation, diagnosis, cure, dental treatment, pharmacy services and prescribing, rehabilitation and social care; as well as epidemiological research and training of medical personnel. Health centres are also involved in school hygiene services, occupational health services, family planning and prenatal care. In addition, centres provide short-stay hospitalization and follow up care for recovering patients. Visits to health centres are now free of charge (although a €5 user charge was imposed

between 2011 and 2015). Table 5.1 presents the regional allocation of health centres as well as their staffing and equipment.

Table 5.1

Number of health centres, beds, staff and medical equipment by region, 2014

Region	Health centres	Beds	Physicians	Nurses	Nonmedical staff ^a	Medical equipment ^b
Attica	17	57	206	251	165	216
North Aegean Islands	7	42	53	65	79	87
South Aegean Islands	12	90	91	77	105	151
Crete	14	82	119	102	137	176
Eastern Macedonia and Thrace	15	61	124	170	120	209
Central Macedonia	33	111	288	396	304	391
Western Macedonia	6	29	39	72	57	65
Epirus	16	73	96	147	123	159
Thessaly	17	91	145	224	192	207
Ionian Islands	8	36	49	51	53	99
Western Greece	21	93	155	134	146	177
Central Greece	16	84	111	134	158	168
Peloponnese	23	118	140	145	156	248
Total	205	967	1616	1968	1795	2353

Source: Hellenic Statistical Authority, 2016a.

Notes: ^aIncludes administrative staff, paramedical staff, social care staff, information technology staff, technical staff, nutritional staff; ^bIncludes ultrasound equipment, electroencephalographs, cardiac scanners, dental equipment, microscopes, photometers, defibrillators and spectrometers.

In addition to public ambulatory care services, there are more than 22 000 private practices, over 13 000 private dental practices and approximately 3527 private diagnostic centres. Most are equipped with high-quality and expensive medical technology. The majority of private facilities are located in Athens and Thessaloniki. EOPYY contracts private practices, laboratories and diagnostic centres to provide health care services to those insured. It also provides services directly to patients on a fee-for-service basis, paid directly by patients or through private insurance. Rehabilitation services and services for elderly people are predominantly offered by the private sector (Economou, 2015).

With demand increasing in the public health system, there is a growing role for municipalities, NGOs (through community clinics and pharmacies) and other unofficial networks of health professionals and volunteers designed to help poor and uninsured patients. These services contribute significantly to securing access to a basic set of medical services among poor and unemployed people. A network of around 40 community clinics operates across Greece, offering mostly medications and primary health services free of charge to people unable or ineligible to use public services and provided mainly by GPs, cardiologists, paediatricians, gynaecologists, dentists and opticians (section 2.1).

Since 2014, a system of monthly caps has operated on physician activity. Every doctor contracted with EOPYY has a limit of 200 visits per month (Ministerial Decision No. Y9a/oik.37139 of 9 May 2014) and there are also a monthly ceiling on the value of pharmaceutical prescriptions (Ministerial Decision No.Y9/oik.70521 of 18 August 2014). The latter varies according to specialization, number of patients prescribed for, the prefecture and the month of the year (seasonality). This means that those insured with EOPYY who are in need of a doctor's visit or a prescription must either find a physician who has not reached the his or her ceiling or they will have to pay OOP.

The need to establish an integrated primary care system was not on the health reform agenda during the 2000s and of the many proposals submitted by the scientific community, none was ever implemented (Box 5.2).

Box 5.2

Assessing primary/ambulatory care

A study evaluating primary health care conducted for the EU Task Force for Greece highlighted the following weaknesses: fragmented governance, absence of a national quality management infrastructure or routinely used indicators to monitor primary health care services, lack of incentives for care providers to improve the quality of care, absence of a gatekeeping system and patient lists, services not family and community oriented, increased private formal and informal payments, and very small number and uneven regional allocation of GPs and nurses. As a consequence, the study pointed out the problems of access, continuity, coordination and comprehensiveness of primary care (Groenewegen & Jurgutis, 2013). In addition, there was very little coordination between primary health care providers and hospital doctors with no clearly defined referral procedures.

At the time of writing (2017), a new Primary Care Plan had been formulated by the Ministry of Health, with implementation envisaged over three years. The first axis of the new system will be the establishment of a national, decentralized, community-oriented, network of local primary care units, staffed with multidisciplinary teams (e.g. doctors, nurses, social workers) that will be the first contact point within the health system. The second axis will consist of health centres functioning as reference points for required specialized and diagnostic ambulatory services, thus integrating care (Box 5.3 and Chapter 6). A project aimed at providing integrated health and social services and funded by the joint European Commission and WHO Regional Office for Europe grant is currently being piloted in the city of Ioannina with a population of 120 000 and two general hospitals (WHO Regional Office for Europe, 2017).

Box 5.3**Assessing the integration of care**

Integrated primary health care has not received prompt attention in Greece. Until recently, continuity, integration, coordination and patient/family-focused care were absent from the health policy agenda. The draft new Primary Care law puts emphasis on the establishment of multidisciplinary teams working at the local level, the introduction of a referral system and the management and processing of information through the use of a common electronic medical record system. The aims are to better manage health problems by having the same physician in the primary health care team acting as a coordinator of care, thus ensuring continuity; to manage the most common diseases and health problems at the patient's local level; to prevent diseases and promote health; to establish an appropriate referral system and patient pathway through the health system; and to develop an e-health care network.

5.4 Specialized ambulatory care/inpatient care

5.4.1 Specialized ambulatory/outpatient care

Specialized ambulatory care is provided through private solo or group practices and outpatient departments of public hospitals. Many of the specialists working in their private offices or within diagnostic centres are contracted with EOPYY, providing services on a fee-for-service basis (€10 per visit), with an upper limit of 200 visits per month for each specialist. The uneven geographical distribution of contracted EOPYY physicians is a major problem; most are concentrated in large cities, particularly Athens and Thessaloniki, while other areas of the country lack some specialties (Karakolias & Polyzos, 2014). The highest numbers of specialists are in internal medicine, cardiology, obstetrics/gynaecology and orthopaedics.

The 124 outpatient departments of public hospitals provide specialized outpatient care within the ESY. They cover all specialties and are the major providers of ambulatory care services in urban areas. They provide free services during morning hours and visits are scheduled by appointment. Law 2889/2001 established afternoon services in hospital outpatient departments in which the same publicly employed doctors working in the hospital could provide private consultations on an appointment basis. They are paid directly by patients on a fee-for-service basis with the fee shared between the hospital (40%) and the physician (60%). This used to apply only to hospitals with the necessary infrastructure to support all-day clinics, but in 2010 mandatory all-day functioning was extended to all public hospitals in order to increase access to health services, to cope with extra demand and to increase revenues. The afternoon private consultation fees vary from €16 to €72, depending on physicians' grades.

5.4.2 Inpatient care

The Greek health care system is strongly centred around hospitals (see Box 5.4). In 2014, there were 283 hospitals, of which 124 were public, four were private non-profit-making and 155 were private profit-making. This excludes hospitals with special status (e.g. military or prison hospitals). All have outpatient departments, operating on a rotational basis. Private hospitals are profit-making organizations, usually formed as limited liability companies. According to the type of services they offer, Greek hospitals are categorized as either general or specialized. The former include departments of medicine, surgery, paediatrics and obstetrics/gynaecology, supported by imaging and pathology services. They range from big general hospitals in large urban areas, district hospitals located in the main administrative district to small hospitals in semi-urban areas and towns. Specialized hospitals are referral centres for a single specialty (e.g. obstetrics, paediatric care, cardiology or psychiatry). Hospitals linked to the country's medical schools offer the most complex and technologically sophisticated services (section 4.1.1). Table 5.2 presents the hospital configuration in Greece by legal form of ownership and geographical region.

Table 5.2

Hospitals^a by legal type, form of ownership and region, 2014

Regions	Total		Legal entities of public law		Legal entities of private law		Private clinics	
	No. hospitals and clinics	No. inpatient beds	No. hospitals	No. inpatient beds	No. hospitals	No. inpatient beds	No. clinics	No. inpatient beds
Total	283	46 160	124	30 157	4	884	155	15 119
Eastern Macedonia and Thrace	17	2 466	6	1 591	0	0	11	875
Central Macedonia	42	8 198	17	4 800	1	654	24	2 744
Western Macedonia	11	1 173	5	696	0	0	6	477
Epirus	7	1 420	5	1 390	0	0	2	30
Thessaly	33	3 812	5	1 598	0	0	28	2 214
Ionian Islands	5	558	5	558	0	0	0	0
Western Greece	16	2 012	11	1 623	0	0	5	389
Central Greece	11	953	8	869	0	0	3	84
Peloponnese	11	1 403	8	1 338	0	0	3	65
Attica	101	19 991	35	12 058	3	230	63	7 703
North Aegean Islands	7	623	5	574	0	0	2	49
South Aegean Islands	7	1 075	6	976	0	0	1	99
Crete	15	2 476	8	2 086	0	0	7	390

Source: Hellenic Statistical Authority, 2014.

Note: ^aMilitary and prison hospitals are excluded.

Approximately 65% of beds are in the public sector and 35% in the private sector. The majority of private beds are in small or medium-sized general, obstetric/gynaecological or psychiatric clinics with fewer than 100 beds, low patient occupancy and low staffing rates for all types of personnel. They are mainly contracted with EOPYY, offering services of moderate quality to insured people. A second category of private beds is found in a small number of prestigious high-cost hospitals with 150–400 beds, located mainly in Athens and Thessaloniki and offering high-quality services to private patients and patients with private insurance (Kondilis et al., 2011). One characteristic of the private sector is its high degree of concentration, with fewer private hospitals holding more and more of the market share (Boutsoli, 2007). It is also remarkable that about 43% of the total number of hospital beds in the country are located in Attica, containing 35% of the Greek population and the capital city Athens. Central Macedonia (which contains Thessaloniki, the second largest city in Greece) has the second-highest proportion: 17.8% of total beds.

Box 5.4

Assessing the appropriateness of care

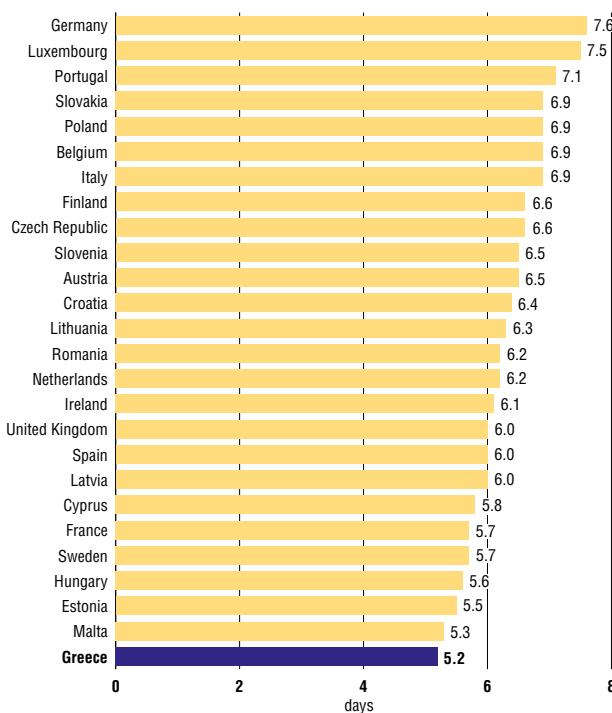
Greece has the lowest average length of stay for curative care (5.2 days) in the EU, and the bed occupancy rate (74%) is similar to the EU average (Figs 5.2 and 5.3). However, hospitals face several management problems (Minogiannis, 2012), among which are a lack of clinical guidelines and the occurrence of subjective medical decision-making by doctors, which sometimes leads to overconsumption of services, elevated costs and inefficiencies. There is also evidence that around one third of the emergency admissions to a general hospital for surgical, ears, nose and throat, ophthalmology and gynaecology issues, as well 40% of orthopaedic needs, could have been treated by primary care services (Marinos et al., 2009; Vasileiou et al., 2009).

Operationally, hospitals face a number of problems. The management model is outdated and political interference is widespread, particularly in selecting hospital managers and members of governing boards. Human resources management is also problematic, including delayed recruitment processes, lack of substantive staff evaluation and a culture of no accountability for staff underperformance. Lastly, financing and cash flow is still problematic given that the DRG system has not yet been fully developed because of a number of technical problems (Chapters 6 and 7). The quality of services in Greek hospitals is not rated highly by citizens (Box 5.5).

In 2011, a number of proposals for hospital restructuring were submitted by an expert committee appointed by the Minister of Health (Liaropoulos et al., 2012) as well as other sources (National School of Public Health, 2011), aiming

Fig. 5.2

Average length of stay in curative care, 2015



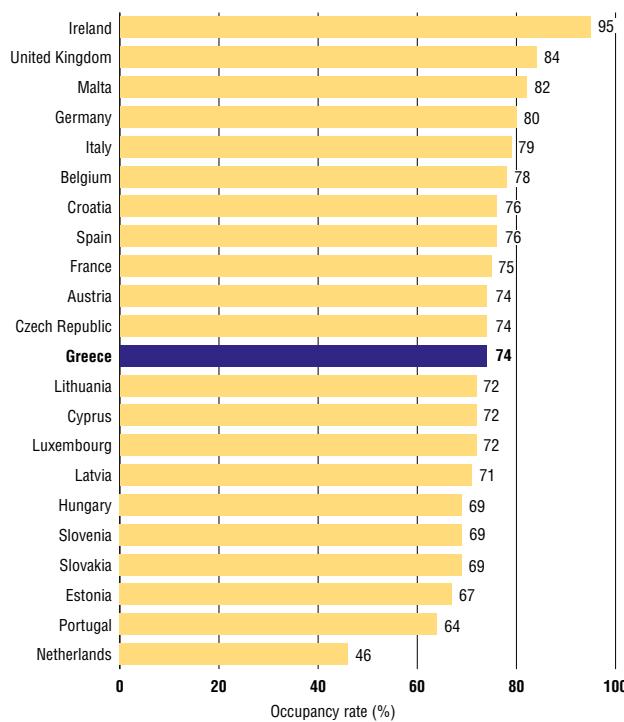
Source: Eurostat, 2017.

Note: Data from 2014 for Belgium and France and from 2012 for Greece.

to achieve economies of scale, optimal allocation of inputs, efficient operation and lower total costs. After public hearings and consultations in the various regional health administrations, which included health managers and other health professional bodies, the final plan was announced in July 2011 (Ministry of Health and Social Solidarity, 2011a). Public hospital management boards were replaced by a total of 82 councils responsible for the administration of all hospitals. In addition, five hospitals that belonged to IKA were transferred to ESY and became branches of five main public hospitals. The total number of beds in ESY hospitals decreased to 30 157; the number of medical departments and units declined by 600 and 15 000 hospital personnel were cut. Additionally, changes were made to the use of eight small hospitals, which were turned into urban health centres, support and palliative care units and hospitals for short-term hospitalization and rehabilitation (Nikolentzos et al., 2015).

Fig. 5.3

Hospital services (curative care) occupancy rate, 2015



Source: Eurostat, 2017.

Note: Data from 2014 for Belgium and France, from 2012 for Greece and the Netherlands and from 2010 for the United Kingdom.

Box 5.5**Patient evaluations of the care they receive**

A Eurobarometer survey conducted in 2010 recorded that 83% of respondents thought it likely that patients could be harmed by hospital care, the highest rate in the EU (European Commission, 2010). Four years later, the figure for Greece had decreased to 78% but was still the second highest in the EU (European Commission, 2014b). The negative attitudes are related to problems with clinical effectiveness, as reflected in medical errors and hospital-acquired infections (See Chapter 7).

5.4.3 Day care

Day care units have been slow to develop in Greece. Attempts in the past were fragmented and did not engender the organizational culture required for this type of health care practice. Legislation in 2011 (Law 4025/2011) stalled through a failure to issue a presidential edict defining various operational and technical criteria. Three years later, Law 4254/2014 permitted the establishment of public and private day care units providing diagnosis, curative services and surgical procedures as long as these did not require general, spinal or epidural anaesthesia or hospitalization for more than one day. Public hospitals, PEDYs, health centres, private clinics and private ambulatory care enterprises can establish day care units. A subsequent ministerial decision (No A6/G.P.oik.103516) defined the technical and equipment specifications for day care units to obtain authorization as well as their specialties, including internal medicine, surgery and dentistry. At the time of writing, a number of public and private day care units have been established. However, there are no available data on their exact number or the proportion of care they provide.

5.5 Emergency care

Emergency care is provided free of charge at the point of use through the emergency departments of public hospitals and the facilities of EKAV (Papaspyrou et al., 2004). A person with a life-threatening problem can choose either to go directly to an emergency department of a public hospital or to call EKAV.

EKAV was established in 1985 and is responsible for the provision of first aid and emergency medical care to all citizens, as well as transportation to health care units, free of charge at the time of use. It also provides training to doctors, nurses and other health care personnel in all aspects of emergency medicine and health care. Its central service centre is located in Athens, with 11 regional stations in major cities and substations in smaller cities, serving about 600 000 patients annually. Box 5.6 outlines the method by which patients access emergency care.

Although the Athens Olympic Games in 2004 was a major factor contributing to the modernization of EKAV (Zygoura, Syndos & Kekeris, 2007), the economic crisis and austerity measures implemented after 2010 have had a negative impact on the adequacy and quality of its services. Horizontal cuts in health expenditures, nonrenewal of fixed-term contracts for temporary staff and a reduction in the replacement of retiring staff have resulted in

Box 5.6**Patient access to emergency care**

EKAV's Command and Coordination Centre is the first contact point for emergency care. It receives all calls for emergency medical assistance through two nationwide call numbers (166 or 112) and classifies them according to severity based on medical dispatch protocols. It also selects and mobilizes the most appropriate response, guides the ambulance crews in providing specialized life support and coordinates with hospital emergency departments. In addition, it activates ambulances and other units in major disasters. Hospital emergency departments provide emergency care. They cooperate closely with the EKAV dispatch centre and receive about 5 million visits annually of which 80% are patients who go directly to emergency departments, 10% are patients referred by a doctor and 10% are patients transported by EKAV.

approximately one fifth of the nationwide ambulance fleet being off the road through shortages in ambulance crews, as well as repair requirements and delays in the procurement of new ambulances.

In addition to EKAV, all public hospitals with a capacity of more than 300 beds operate 24-hour independent emergency departments staffed with physicians from the following specialties: surgery, anaesthesia, internal medicine, cardiology, pulmonology, orthopaedics and general practice with proven experience and knowledge of emergency medicine or specialization in intensive care medicine. Emergency departments undertake admission, triage and immediate treatment in life-threatening situations.

The proper functioning of emergency departments is impeded by several factors. First, emergency medicine has not yet been institutionalized as a specialty in Greece. Second, the absence of gatekeeping results in a large number of unnecessary visits to these departments, increasing their workload. Third, budget cuts have resulted in a lack of personnel to triage patients. Shortages of paramedic personnel in emergency departments often results in ambulance crews having to take on the role of paramedic personnel by transferring patients from one hospital department to another, delaying them from performing their core duties.

5.6 Pharmaceutical care

The regulation of pharmaceuticals, including planning and implementation of pharmaceutical policy, pricing of medicinal products and profit margins, is covered in section 2.4.4. Demand-side issues, insurance coverage and pharmaceutical expenditure are analysed in Chapter 3. This section examines

the supply side: the production, distribution and provision of pharmaceuticals. The pharmaceutical sector has undergone significant reforms since the mid 2000s (Chapter 6).

Table 5.3 gives an overview of the pharmaceutical market in Greece. The supply chain for pharmaceutical products comprises pharmaceutical companies (both manufacturers and importers), wholesalers (both storage and distribution) and pharmacies. All medicinal products are distributed through wholesalers to pharmacies, except products that are only for hospital use, which are sold directly to hospitals. The wholesale segment of the market comprises private wholesalers and pharmacist cooperatives. The majority of high-cost drugs are provided exclusively by EOPYY pharmacies or hospital pharmacies.

Table 5.3
The Greek pharmaceutical market, 2015–2016

	Types	Market size
Companies	Manufacturers and importers (2016)	106
	Wholesalers (2015)	100
	Pharmacists associations (2015)	26
	Pharmacies (2015)	10380
	EOPYY pharmacies (2016)	29
Production	Domestic production at ex-factory prices (2015)	€929 million
	Value added (2015)	€687 million
	Share of value added/total of manufacturing (2015)	3.9%
Employment in pharmaceutical production	Number of employees (2015)	13 100
	Share of employment/total of manufacturing (2015)	4%
External trade	Export value (2015)	€1025 million
	Import value (2015)	€2800 million
Parallel exports	Value terms (2015)	€401.6 million
Pharmaceutical sales	To wholesalers/pharmacies (at retail prices) (2015)	€4119 million
	To hospitals (at hospital prices) (2015)	€1484 million
Public pharmaceutical expenditure	Expenditure (2016)	€1945 million
	Clawback (2016)	€432 million
	Rebate (2016)	€304 million
	Change expenditure 2009 to 2016	-61.9%
	Per capita public pharmaceutical expenditure (2016)	€180
Price change	Public pharmaceutical expenditure/sales of medicinal products (2015)	35.7%
	Medicines price index 2009/2015	-15%
Generics	Percentage of total sales (in value terms PPP) (2016)	22.2%
	Percentag of total sales (in volume terms) (2016)	31.5%
Generics and off-patent	Percentag of total sales (in volume terms) (2016)	65.4%
Over-the-counter products	Value (2015)	€172.2 million
Investment (research and development)	Estimations (2015)	€100 million

Source: Hellenic Association of Pharmaceutical Companies, 2016.

Approximately 73.5% of total sales in value in 2015 (84.5% in volume) was supplied to wholesalers and private pharmacies, while the remaining 26.5% (15.5% in volume) was sold to hospitals and EOPYY pharmacies.

In 2015, sales of medicinal products (by value) to pharmacies/wholesalers recorded an overall decrease of 39.7% (9% in volume) compared with 2009 (Table 5.4). Comparing sales in volume with sales in value makes clear that the decrease of sales during the period 2009–2015 mainly reflected decreases in prices (by 32.5%; see Table 5.3) in response to pricing reforms introduced from 2009 onwards; to a lesser extent there was a decrease in volume of sales (11%). This raises concerns about the effectiveness of the e-prescription system and the prevailing prescription behaviour of physicians (see Chapter 7).

Table 5.4

Pharmaceutical sales in value and volume in Greece, 2009–2015

	2009		2010		2011		2012		2013		2014		2015	
	Value	Volume												
Pharmacies/ wholesalers	6.8	466	6.03	434	5.6	391	4.6	395	4.3	405	4.2	418	4.1	424
Hospitals/ EOPYY	1.5	96.8	1.31	86.9	1.2	88.1	1.4	84.5	1.4	80.1	1.4	80.1	1.5	77.9
Total	8.3	562.8	7.3	520.9	6.8	479.1	6.0	479.5	5.7	485.1	5.6	498.1	5.6	501.9

Source: Hellenic Association of Pharmaceutical Companies, 2016.

Notes: Values (€ billions) and volumes (millions of packages).

As discussed in Chapter 3, high pharmaceutical spending is one of the main targets for cost containment under Greece's EAP, resulting in significant reductions in expenditure. Apart from the establishment of positive and negative lists for reimbursement purposes and the introduction of reference pricing (which has resulted in price reductions for some medicines), an e-prescription system for doctors became compulsory in 2012, enabling monitoring of their prescribing behaviour as well as the dispensing patterns of pharmacists. At the same time, prescription guidelines following international standards were issued in 2012, and prescribing budgets for individual physicians have been set since 2014. The use of generic drugs has been promoted by a number of measures: physicians are required to prescribe drugs by the international nonproprietary name, allowing the use of brand names only in specific circumstances; there is a policy that 50% of medicines prescribed/used in public hospitals should be generics; and there is a policy of mandatory generic substitution in pharmacies.

A large range of pharmaceuticals is covered as part of the benefits basket, with varying degrees of co-payments. Measures have also been introduced to liberalize the pharmaceutical market to increase access and enhance efficiency, including a reduction in the population density threshold for setting up a pharmacy and allowing more than one pharmacist to work in the same pharmacy. In addition, to lower outpatient pharmaceutical expenses for some groups, such as chronically ill patients requiring expensive medicines, distribution is now possible through EOPYY public pharmacies, where prices are lower than in private pharmacies (Box 5.7 and Chapter 6).

Box 5.7

Evaluating efficiency in pharmaceutical care

A basic characteristic of the Greek pharmaceutical market is the high penetration rate of patent-protected medicines (10.5% by volume) compared with the EU average (6.8%). The market share by volume of non-protected pharmaceutical products in 2015 amounted to 65.9% (33.5% off-patent and 32.4% generics) compared with 81.1% (22% off-patent and 59.1% generics) in the EU. In addition, an increase in the market for over-the-counter medicines was recorded during 2013–2015, from €156.1 million (or 67.6 million packages) to €172.2 million (or 73.7 million packages) (Hellenic Association of Pharmaceutical Companies, 2016). These data illustrate the low use of generic drugs in Greece and an increase in over-the-counter pharmaceuticals.

5.7 Rehabilitation/intermediate care

As intermediate care in Greece remains largely underdeveloped and few services are provided by ESY or by municipalities, in 2015 the Ministry of Health launched a pilot project for the development of homecare/intermediate services nationwide. In the initial phase, a network of 11 hospitals and four health centres provided health care at home to patients who had been hospitalized and needed post-hospital care and to people with chronic and noncommunicable diseases, injuries and disabilities requiring short- or long-term health care. The health teams consisted of a specialist doctor (internist, anaesthesiologist, surgeon or GP), two nurses and a community nurse.

There are also rehabilitation services for people with disabilities that provide a variety of support including diagnostic services, psychosocial support, education and training for disabled people to attain independence and self-determination; in addition, there are services for children with physical disabilities, autism and learning difficulties. Following a restructuring in 2010, these services are provided through centres for physical medicine and rehabilitation within public hospitals and forming part of the ESY.

A significant role is also played by the Hellenic Society for the Protection and Rehabilitation of Disabled Persons, a non-profit-making NGO that provides support, diagnosis, health care, therapeutic and educational services to physically disabled infants, children, adolescents and adults with any type or severity of motor disability. The Society offers its services in six rehabilitation centres nationwide: Agrinio, Athens, Chania, Ioannina, Thessaloniki and Volos. Finally, since the early 2000s, private, profit-making provision of physical rehabilitation centres has increased rapidly as a result of both gaps in ESY services and the suboptimal operation of public facilities owing to staff and equipment shortages. These profit-making centres enter into contracts with EOPYY to provide services.

5.8 Long-term care

This section focuses on long-term care provision for people with chronic diseases and for older people. For people suffering from chronic and incurable diseases and those who are not self-sufficient, long-term inpatient care services in Greece are provided mainly by a network of 25 public chronic diseases infirmaries nationwide. Anecdotal evidence also suggests that some smaller private clinics provide long-term care to older patients with incapacitating conditions, such as stroke or respiratory disease, and for patients with cancer receiving terminal care. In 2013, these independent public entities became decentralized units of the newly established social welfare centres (section 5.11), financed by the state budget and by per diem fees paid by SHI.

Church organizations also offer a variety of services, including facilities for people with incurable diseases, infirmaries for chronic diseases, institutions for the disabled and physiotherapy centres. There are also private clinics under contract with EOPYY that provide long-term care, mostly to the terminally ill.

In 2013, legislation stipulated that each regional administration should set up a social welfare centre and transform a broad range of previously residential-oriented rehabilitation centres into decentralized units of these social welfare centres. While potentially the centres could play an important role in developing and improving services, an assessment has not been conducted of the restructuring in relation to effectiveness, efficiency, quality and access to services. One issue is that the centres for physical medicine and rehabilitation are under the jurisdiction of the YPEs, given that they are units of public hospitals, while social welfare centres are under the jurisdiction of the regional authorities, raising the question of integration and the interconnection between the two networks.

Long-term care for the elderly includes both community and residential care. More precisely, there are four types of community care services (Mastroyiannakis & Kagialaris, 2010).

Open care centres for the elderly. These are public law entities, financed by the Ministry of Health and run by municipalities. They provide psychosocial support, health education (on diet, accident prevention and personal hygiene), preventive medical services for older people (e.g. blood pressure measurement, blood sugar tests and physiotherapy) and recreational services, thus improving patients' well-being while they continue to live in their own personal and social settings. There are more than 900 centres around the country that are staffed by teams of social workers, community nurses, occupational and physical therapists and family assistants.

Friendship clubs. The clubs operate at the neighbourhood level and offer services to senior citizens, including creative pursuits, occupational therapy, physiotherapy, cultural venue visits, artistic endeavours, day trips, walking tours and assistance with adapting to age-related conditions in later life. They also provide a supportive environment, particularly for those who have insufficient financial means or family members to take care of them. They are created in areas and neighbourhoods that do not have open care centres for the elderly, where health care is partly provided through municipal health centres.

Home Help for the Retired programme. This replaced the Home Help for the Elderly programme in 2012 and aims to provide home care to retired elderly people, mainly the frail and those who live alone, in order to improve their quality of life, to ensure that they maintain their independence and to keep them active in their family and social environment, thus reducing the need for institutional hospital care. A social worker, a nurse and a home-helper pay regular visits (on a scheduled basis) to service users in their home, providing help and care, counselling and psychological services and assistance with everyday tasks. Eligibility criteria became stricter under the new programme, including age, income, marital status, health status and disability. Sources of finance for the programme are now exclusively national (financing previously was split between the EU (75%) and national (25%) funds). IKA is responsible for the running and management of the Programme. Competition is encouraged for service providers, as apart from the schemes operated by municipal enterprises, other non-profit-making (NGOs, social cooperatives) as well as profit-making units can submit bids for inclusion in the registry of certified schemes, from which beneficiaries can choose a provider.

Day care centres for the elderly. This alternative form of public support and protection is offered to the elderly with the aim of keeping them within

their family environment. This service is provided to people aged over 65 years suffering from chronic or acute physical or mental disorders who depend on others for care, have economic problems and face social and family problems. Services include daily care and coverage of basic needs, psychological and emotional support, plus assured delivery of pharmaceutical care.

A number of public residential homes for the elderly operate under the supervision of the Ministry of Health and provide shelter, food, psychological support, counselling and medical care. There are also private profit-making homes for the elderly as well as a number of church organizations offering last-resort residential care for frail elderly people. In total, residential care homes serve an estimated 2% of the population aged over 65 years. The Greek Care Homes Association represents all legal residential care units for older people in Greece, estimated at around 120, with a total capacity of 10 000 beds. However, a considerable number of residential homes are not registered, functioning illegally, and are licensed as hotels, thus avoiding state inspections and the need to supply regular data.

A review of the scientific research published in the 2000s aimed at assessing community services for the elderly raised serious concerns about the adequacy of financing, the effectiveness and quality of services provided and equity of access. Furthermore residential care, particularly in the private sector, suffered from low-quality services, old buildings, lack of staff and lack of affordability (Economou, 2010). Although more recent evaluation efforts have not been undertaken, improvements since 2010 are unlikely given the limited resources available under austerity policies.

Gaps in public services and economic access barriers to private services are compensated for, to a certain degree, by NGOs. For example, the non-profit-making Athens Association of Alzheimer Disease and Related Disorders provides public information campaigns; easy access to neuropsychological assessment for early diagnosis and treatment; education and training programmes for health professionals, professional formal caregivers, volunteers and informal family carers; community-based and residential care centres; informal carer support groups; participation in research programmes; lobbying for improved public services and free drug treatment; and financial support benefits for patients and/or family carers. The budget is to a large extent covered by the state and the rest usually by donations or other volunteer contributions.

In March 2016, the National Dementia Strategy was approved by the Parliamentary Standing Committee of Social Affairs. It includes three basic actions: the creation of a national dementia registry, the development of a rating system to measure the impact of dementia on families and the establishment of

day care centres for people with dementia, scheduled to operate in collaboration with municipalities throughout the country, by the end of 2016. However, at the time of writing, the strategy has not been fully implemented.

Existing services cover only a limited part of needs. The long-term care sector has developed slowly and in a fragmented way. There is no integrated supply of services to vulnerable groups of the population, particularly the elderly. There is no systematic needs assessment, nor assessment based on special needs regarding gender, age, health status, ethnicity and other relevant characteristics. Therefore, informal care within the family, provided by either informal or privately hired caregivers, plays a major role in meeting the needs of the population (Petmesidou et al., 2015).

5.9 Services for informal carers

Support for family carers in Greece still remains a low priority in the social policy agenda and measures to recognize the value of informal care, protect informal carers and provide them with access to support services are almost non-existent. There are no legal benefits for carers; they are viewed primarily as a resource and not considered to have their own needs for support. In addition, there is no extensive research or information on the dimensions of family care or the needs of carers. National data on family carers are not available, including the number, age, gender, income, hours and caring tasks, educational and employment status. However, a good picture of the prevailing situation concerning carers' profiles and the support services available to them is provided in two national reports submitted under EUROPACARE (2003–2005; Triantafillou, Mestheneos & Prouskas, 2006) and INTERLINKS (2009–2011; Kagialaris, Mastroyiannakis & Triantafillou, 2010), two international projects aimed at supporting family carers for elderly people in Europe. The results of the EUROPACARE project, based on a sample of 1014 family carers, highlight that:

- the overwhelming majority of carers were women (80.9%);
- over three quarters (76.4%) of family carers were married or cohabitants;
- 17.1% of the carers cared for their spouses, 55.4% cared for an elderly parent and 13.9% were daughters- or sons-in-law;
- carers' educational level was relatively low: 37.4% had a low level of education; 40.6% an intermediate level (finished high school) and 22.1% had a high level of education;
- just over 50% of family carers shared the same household as the dependent person;

- 47.2% of carers reported that they still worked for a mean of 40 hours in a job outside of caring duties (with a maximum of 140 hours a week); the mean number of care hours provided was 51 hours per week, indicating the high burden of care;
- income was low, not exceeding €1100 per month for 55.1% of survey respondents, underlining the fact that carers often provide support with inadequate resources; and
- the majority of family carers (80.9%) cared for just one dependent older person, 16.8% were caring for two older dependent persons and 2.3% were caring for three or more dependent older people.

The report also highlights that there were no pension and insurance rights or allowances for carers. It is common practice for family carers to use the incapacity pensions and disability allowances provided by SHI funds and welfare services to the individuals being cared for in order to help them in their caring activities. Sometimes, family carers use private residential homes for short-term respite care, even though these may be of questionable quality. In addition, few service providers were aware of the needs of family carers and what forms of support could best help them. Psychosocial services were available in community mental health centres, but they were not specifically geared to providing counselling to family carers and there are no data on their use by carers.

The INTERLINKS project confirmed these findings and also raised another important issue concerning the increased use of privately employed, lived-in migrant care workers (Kagialaris, Mastroyiannakis & Triantafillou, 2010). The majority are women, many of them working without work permits and social insurance and in many cases without residence permits or good knowledge of the Greek language. Their exact number is not known as no data are available.

The lack of formal support has resulted in the setting up of self-help groups and volunteer organizations for the support of family carers and the provision of counselling, information, guidance and training on disease and pharmaceutical management, and respite care services (Courtin, Jemai & Mossialos, 2014). One issue of major concern is that informal carers in Greece have low educational levels and limited access to training programmes. Despite this lack of qualifications, they undertake a range of duties (from shopping to disease management) because of gaps in the official system of home care services. Under these circumstances, the quality of care and safety, of both patients and carers, are questionable.

The findings of the i-CARE EU project (Kaitelidou et al., 2016a) brought to light a variety of educational and support needs that would improve the competences of carers. Specifically, informal carers need information about diseases, training for drug administration and knowledge of hygiene and safety for both the people being cared for and themselves. Additionally, both formal and informal carers would benefit from using information and communication technologies and having access to psychological and emotional support to combat depression and burnout, and to carve out a balance between caring duties and their own personal well-being. Consequently, a specific recommendation for Greece is that the development of an open access, user-friendly e-learning programme for carers should be considered a high priority for both policy-makers and the scientific community.

5.10 Palliative care

Greece is among the group of countries characterized by the sparsity of their hospice/palliative care services, which are often home based in nature and limited in relation to the size of the population (Lynch, Connor & Clark, 2013). There is limited availability of morphine, promotion of palliative care is patchy in scope and not well-supported, and funding sources are often heavily dependent on donors. The underdevelopment of palliative care can be attributed to a number of barriers including the lack of awareness and recognition of palliative care, the limited availability and choice of opioid analgesics, limited palliative care education and training programmes, the lack of recognition of palliative care as a medical or nursing specialty, limited funding, and lack of coordination between state and voluntary services (Lynch et al., 2010).

Palliative services for patients are provided mainly on a voluntary basis by anaesthesiologists, oncologists, psychologists, nurses and other relevant health care personnel in pain centres located within anaesthesia departments and in oncology departments of public hospitals. They offer pain relief and counselling to patients suffering from long-term diseases, including cancer, HIV/AIDS and multiple sclerosis. Data from the Atlas for Palliative Care in Europe (Centeno et al., 2013) revealed that there were no official national palliative care units in 2013 in Greece, but 72% of the unofficial services provided were part of the pain centres of anaesthesia departments and a 24-hour service was offered by pain and palliative care specialists on a voluntary basis. In addition, there were 80 volunteer pain services, 57 hospital pain services, 15 home-based pain services, four mixed pain services, two pain services in a tertiary hospital and eight pain services in day care centres. Palliative care services for children are

provided through six volunteer paediatric pain teams, two paediatric hospital pain teams, four paediatric home pain teams, two paediatric mixed pain teams, two paediatric pain units in tertiary hospitals, two paediatric pain services in day care centres and one paediatric inpatient pain service.

Beds specifically allocated to inpatients for palliative care do not exist officially. However, dated information from a European Association for Palliative Care study conducted in 2005 estimated that, on average, there were two or three beds available for palliative care within public hospital oncology departments and anaesthesia department pain centres.

Hospices are not well developed since it was only in 2003 (Law 3106/2003 on the reorganization of the national social care system) that the legislative framework for their establishment was set and in 2007 that a ministerial degree (DY8/B/oik.89126) determined the prerequisites for building and organizing hospices. In 2011, the Ministry of Health and Social Solidarity announced the restructuring of the public hospital sector, including a plan to transform certain small inefficient hospitals into hospices (Liaropoulos et al., 2012). However, at the time of writing (2017), the plan to establish such public hospices had not yet been implemented and the process was incomplete.

Gaps in the official government policy are partially filled by the voluntary sector and scientific non-profit-making organizations, including the Greek Society for Paediatric Palliative Care, the Hellenic Association for Pain Control and Palliative Care and the Hellenic Society of Palliative and Symptomatic Care of Cancer and Non Cancer Patients. Their objectives include raising awareness; providing training for health professionals in palliative care and palliative regimens for patients suffering from chronic diseases in advanced stages, such as cancer or HIV/AIDS; developing activities to improve the quality of patients' lives through pain relief; and providing psychological support to the terminally ill, their relatives and carers. In addition, self-help groups have been established, along with charitable foundations that give donations to create and operate facilities for relatives. For example, the Jenny Karezi Foundation for Cancer Pain Relief and Palliative Care financially supports the operation of the Pain Relief and Palliative Care Unit at the Athens University Medical School. The unit is established in a separate building with a day care unit, an outpatient unit and a research room. It also has a seminar/education area for the organization of palliative care seminars for nurses and social workers within the municipality of Athens. Initiatives by the Church of Greece should also be mentioned, including the development of the Galilee Palliative Care Project in 2010 by the Holy Metropolitan Diocese of Mesogaia and Lavreotiki in Attica, which provides home care services, the creation of a centre for day care and occupational therapy and the establishment of a hospice unit.

5.11 Mental health care

Since the establishment of ESY in 1983, four milestones stand out in mental health care (Chondros & Stylianidis, 2016; Giannakopoulos & Anagnostopoulos, 2016). The first period from 1984 to 1990, in accordance with European Regulations 815/84 and 4130/88, saw the training of mental health professionals; the creation of a decentralized community network of preventive, specialized treatment and rehabilitation services; the deinstitutionalization of patients in psychiatric hospitals and a reduction in admissions to psychiatric hospitals. The second milestone revolved around the reform projects Leros I and II (1990–1994), which introduced interventions to improve conditions in the Leros Mental Hospital and discharge patients to placements in community hostels. The third milestone was the introduction of progressive legislation on the development and modernization of mental health services (Law 2716/1999). The legislation established sectoral mental health committees and created infrastructure in the community, including psychiatric departments in hospitals, mental health centres, child guidance centres, day care centres, home care services, vocational training workshops, mobile units, social cooperatives as a tool for increasing working opportunities for people with mental illness and crisis management units.

The fourth and most significant milestone for the deinstitutionalization of mental health services and the development of community-based services were the Psychargos I (1997–2001) and II (2001–2010) programmes. Priority was given to social inclusion, social cohesion and destigmatization. The main objective was the development of services within the community that would enable patients to be supported within their own family environment, maintaining their social activities through every possible means. Particular policies focused on prevention and rehabilitation, the restructuring and strengthening of primary health care, ambulatory care, deinstitutionalization and closure of mental hospitals, psychosocial rehabilitation and housing services, continuity of care and harnessing voluntary assistance from the community for the promotion of mental health.

An ex-post evaluation of the Psychargos programme using qualitative methods reported a number of positive as well as negative elements of the reform (Loukidou et al., 2013a). The positive aspects were:

- the reduction of hospital-based long-stay accommodation;
- the vast increase in the number of new mental health services across the country, including day centres, community mental health centres, psychiatric units in general hospitals and children's mental health centres;

- positive changes in public attitudes towards mental illness and patients as well as in the attitudes of mental health staff towards person-centred care;
- the empowerment of service users to express themselves and to defend their rights by participating in mental health organizations and institutions; and
- increased opportunities for vocational training of service users through the establishment of social enterprises and paid work.

The negative aspects include:

- the significant shortages of staff and services in several parts of the country, particularly in rural areas, resulting in inequities in the development of services between different areas and inadequate provision on the ground;
- incomplete sectoral framework and the lack of coordination between mental health services and central government, local authorities, social services and other relevant public sector organizations;
- absence of evaluation and monitoring of provided services, quality assurance and clinical governance systems;
- deinstitutionalized patients resettled in community services representing only a small proportion of people suffering from mental ill health, with a larger number of people still living with their families, homeless, in poverty or ending up in private clinics where the quality standards are questionable;
- gaps in specialist mental health services, such as those for children, adolescents, autistic spectrum disorders, intellectual disabilities, eating disorders and forensic psychiatric services;
- lack of information about locally available services and poor information flow between different services;
- lack of thoughtful planning and implementation;
- only partially achieving the aim to introduce psychiatric services in general hospitals; and
- lack of a population-based approach to the mental health system, without clear evidence for assessing the needs of local populations and no clear understanding at the local level of what components are necessary for a comprehensive system of care.

Furthermore, a quantitative evaluation of the achievement rate of the targets set in the Psychargos programme revealed its strengths and weaknesses (Loukidou et al., 2013b). Positive developments were the closure of five mental hospitals and exceeding the target number of sheltered apartments by 211%, Alzheimer's centres by 180% and day centres by 95%. In contrast, negative developments were the limited capacity of the over 60 NGOs providing mostly residential and day care, and the fact that boarding houses achieved 89% of the target, sociovocational rehabilitation units reached 69% of the target, outreach teams achieved 68% of the target, general hospital psychiatric and child psychiatric units reached 55% of the target, guest houses achieved 52% of the target, community mental health centres reached 43% of the target, and social enterprises reached only 33% of the target. None of the projected drug and alcohol abuse centres was established.

In view of the findings of the external evaluation of Psychargos I and II, in November 2011 the Greek Government launched the Psychargos III programme, to continue strengthening mental health care reforms until 2020 (Ministry of Health and Social Solidarity, 2011b). The new plan is based on three pillars:

- actions for the further development of mental health structures in the community at the sectoral level (territorial sectors based on geographical and population characteristics) with allocation of available mental facilities to provide mental health services to a defined catchment area;
- actions for the prevention and promotion of the mental health among the general population; and
- actions that would organize the psychiatric care system, including sectoral allocation of services, monitoring, evaluation, research activities and training of staff.

A recent law on the administrative reform of mental health services passed in March 2017 provides for the establishment of a number of scientific and administrative committees, councils at both regional and sectoral levels and coordination bodies in order to achieve better coordination of mental health services, greater participation of citizens in mental health policy decision-making, and the protection of the rights of the users of mental health services.

Table 5.5 gives an overview of the mental health workforce, availability of services and uptake for 2014.

Funding difficulties and staff shortages during the current financial situation and austerity measures raise serious concerns over the continuation of mental health policy reform and the risk that the positive improvement achieved so far

may be halted or even reversed (Ploumpidis, 2015). In addition, the persistent recession in Greece has had negative socioeconomic consequences, which, in turn, have impinged on the mental health of the population. The growing mental health needs of the population in tandem with the limited available resources raise the key question of whether existing mental health services are capable of addressing the increasing demand for mental care (Economou et al., 2016c).

Table 5.5

Mental health workforce, availability of services and uptake in Greece 2014

Mental health services	Availability
Mental health services availability	
Mental health outpatient facilities	58
Mental health day treatment facilities	98
Mental hospitals	3
Psychiatric units in general hospitals	46
Residential care facilities	508
Mental health services uptake (per 100 000 population)	
Mental health outpatient visits	21
Mental health day treatment sessions	141
Mental hospital beds/annual admissions	4.9/69.0
General hospital psychiatric units beds	7.4/131.8
Residential care beds/annual admissions	38.7/15.6
Mental health workforce (per 100 000 population)	
Psychiatrists	14.1
Other medical doctors	1.4
Nurses	50.6
Psychologists	12.1
Social workers	7.0
Occupational therapists	5.1
Other mental health workers	45.9

Source: WHO, 2014.

5.12 Dental care

Dental health care is provided by two structures. The first consists of publicly funded ESY services provided through the outpatient departments of public hospitals and PEDY units, including rural health centres and urban primary health care units. The second is the private sector, where providers are remunerated by direct OOP payments.

In theory, the EOPYY scheme for publicly provided dental services should have begun in January 2014. This scheme required EOPYY to define what dental services would be covered and their reimbursement rates, as well as entering into contracts with a range of dental services providers. Insured people were to be eligible to receive treatment and compensation for both preventive and clinical treatment, plus prosthetics, with the freedom to choose a dentist from the network of contracted providers. However, because of budgetary constraints and cuts in public health expenditure, this scheme has yet to start (Damaskinos et al., 2016). This represents a deterioration of dental health insured provision as, prior to the establishment of the EOPYY, those insured under individual health funds had access to salaried and/or contracted dentists, albeit for a limited range of services (Damaskinos & Economou, 2012).

In practice, EOPYY members who are unable to pay OOP for private dental services can visit ESY units. Dentists working in public hospitals provide mainly secondary dental treatment for patients with medically complex conditions. Dentists working in health centres provide dental treatment for children up to 18 years of age, and emergency treatment for all ages. Data show a decreased number of dentists working in the public sector, because of the economic crisis, the merging of hospitals and the large-scale retirement of dental professionals in hospitals and health centres (Table 5.6). Therefore, in addition to the limited range of dental services provided, there is also understaffing of public hospitals and health centres.

Table 5.6

Employment of dentists in Greece, 2014

Place of work	Number of practices
Public hospitals	187
Health centres	212
Urban primary health care units (ex SHI funds polyclinics)	692
Universities	178
Army dentists	68
Private practice	11 902
Only salaried ^a	534
Salaried and private dentists	881
Dentists with no private dental office ^b	917
TOTAL^c	15 571

Source: Damaskinos et al., 2016.

Notes: ^aDentists in public hospitals, health centres, some dentists employed in private insurance companies and mutual self-administered funds; ^bDentists in public hospitals and health centres who are prohibited from having private offices, dentists who work in the office of another dentist (e.g. those who have just obtained their degree and lack experience, dentists lacking funds to open their own office), dentists who are enrolled in the Dental Professional Association but work in another country; ^cThis figure is higher than the 13 737 registered dentists in Greece as some have more than one type of employment.

In the private sector patients pay OOP for services. The large-scale use of such services means that, in effect, this acts as a substitute for the gaps in public insurance coverage for dental treatment and dissatisfaction with the quality of public services. It is indicative that according to latest available data in 2014 only 0.25% of public expenditure for ambulatory care was devoted to dental care (€2.23 million out of €907.28 million). In contrast, household OOP payments for dental care (€802.07 million) absorbed 54% of OOP payments for ambulatory care (€1 483.89 million) (Hellenic Statistical Authority, 2016b). Consequently, it is not surprising that the vast majority of the registered dentists in Greece practise privately (Table 5.6).

In terms of dental health policy, a five-year Plan of Action for Oral Health 2008–2012 was published in 2008. Its main goal was to establish a policy targeted at oral disease prevention, oral health promotion, effective treatment and the improvement of dental services (both in efficiency and quality) in the private and public sectors. It also aimed to implement effective policies for the promotion of oral health in children, in adults at work and in older people, using special training programmes for disabled people, refugees, the homeless and Roma. However, the Action Plan coincided with the economic crisis and was never implemented due to lack of funding; in fact, dental care was one of the areas to have its budget reduced (Damaskinos & Economou, 2012; Damaskinos et al., 2016). By the end of 2017 no new plan for oral health had been published.

6. Principal health reforms

Chapter summary

- The creation of EOPYY in 2011 has been a major shift towards a single-payer health insurance system. EOPYY now acts as the sole purchaser of medicines and all health care services for all those insured.
- The reform of primary care started in 2014 with the establishment of PEDYs, coordinated by the YPEs. This was followed by a plan to create a two-tiered primary care system with a gatekeeping function, which is to be implemented over three years (by 2020).
- Substantial changes in procurement and monitoring, as well as changes to hospital structure and payments, took place in 2012–2013.
- Pharmaceutical expenditure has been tackled and has resulted in major reductions, mainly through cuts in drug prices, increased rebates and control of the volume of consumption.
- The rapid increase in unemployment during the economic crisis resulted in a large number of people (approximately 2.5 million, or a quarter of the population) lacking comprehensive health coverage. Meaningful action was taken in 2016 that allowed the unemployed and underinsured vulnerable groups to access health care services.
- While some of these reforms were long sought after, most of the actual changes were driven by the consequences of the economic crisis and implemented in line with conditions of the EAPs for Greece.

6.1 Analysis of recent reforms

This chapter focuses on reform measures that have emerged since the start of Greece's EAP. The previous edition of the Health in Transition profile on Greece (Economou, 2010) provides information on reforms that were attempted prior to 2010.

Greece's health system has been facing long-standing challenges including serious inefficiencies, fragmentation and a lack of continuity, planning and strategic direction. The economic crisis, particularly during the period 2010–2013, resulted in an international financial bailout and adoption of three consecutive EAPs, which affected multiple sectors including health care. Therefore, the health policy process from 2010 onwards needs to be seen in the context of both the pre-existing condition of the health system and the wider economic circumstances of the country, which was influenced by the international lenders. Table 6.1 lists the major reforms that have been tackled since 2010.

Reforms in financing, health insurance and health service planning

In 2010, under the provisions of the EAP and creditors' pressure for rapid changes, the Government introduced a new SHI system, with subsequent changes to SHI contribution rates (financing) and standardization of the benefits package. The reform focused on separating the SHI branches of social security funds from the administration of pensions and merging the health funds, bringing all health-related activities under the Ministry of Health. The Health Benefit Coordination Council, created to oversee this process, aimed to simplify the overly fragmented system by establishing criteria and terms under which social security funds could contract with health care providers in order to reduce spending and achieve savings in purchasing medical goods and services through price–volume agreements (Economou, 2012b).

This major restructuring of the health system was introduced by legislation in March 2011. EOPYY formally began operations in June 2011 (see Chapter 2). Initially, EOPYY was also tasked with managing primary care – a role that previously did not exist – which involved coordination of primary/ambulatory care, contracting providers of primary care services and setting quality and efficiency standards, with the broader goal of alleviating pressures on ambulatory and emergency care in public hospitals. These responsibilities were transferred to YPEs in 2014.

Under the 2011 legislation, the health branches of four major SHI funds (IKA, the Agricultural Insurance Organization, the Social Insurance Organization for the Self-employed and the Civil Servants Health Insurance Fund) were combined into EOPYY, which would act as a single purchaser of health services and pharmaceuticals for all those insured. Subsequently, EOPYY expanded to include the health branches of other social security funds. The benefit packages of these funds were standardized and unified to provide the same

Table 6.1
Key reforms since 2010

Year(s)	Content
Administration	
2010	Change in administrative structure, creating 13 regions to replace 76 prefectures, and reducing the number of municipalities to 325 from over a thousand [N]
Financing	
2010	Ceiling on public expenditure on health set at 6% of GDP, which translated into extensive cuts in pharmaceutical expenditure, as well as health care services, staff salaries, etc. [EAP]
2011–2015	Introduction of user fees for outpatient and emergency visits, which were later abolished [EAP]
Health insurance	
2011	Establishment of EOPYY (single-payer health insurance system) and standardized benefits package [EAP]
2016	Legislation to provide comprehensive health insurance coverage to the unemployed and vulnerable groups [N]
2017	Establishment of EFKA [EAP]
Health services management and delivery	
2010–2012	Reforms to hospital accounting: the introduction of a double-entry accounting system, regular publication of audited balance sheets, revising pricing and costing mechanisms, use of uniform coding system for medical supplies [EAP]
2011–ongoing	Hospital restructuring [N and EAP]
2013	Introduction and roll-out of hospital payments via DRG system [EAP]
2014	Establishment of PEDYs and transfer of responsibility for primary care provision to YPEs [EAP]
2015–ongoing	Creation of two-tiered primary care with gatekeeping function [N]
Pharmaceutical policy	
2010	Ceiling on pharmaceutical spending where expenditure should not exceed €2.44 billion in 2013, €2 billion in 2014, and €1.94 billion in 2015–2017 [EAP]
2010–2012	Key measures aimed at reducing pharmaceutical expenditure include: <ul style="list-style-type: none"> • cap on public expenditure for outpatient drugs at 1% of GDP by 2014 • rollout of compulsory e-prescribing system for doctors and pharmacists and monitoring of doctors' prescription behaviour • compulsory prescription by active substance (international nonproprietary name) • new reference pricing system to reduce the prices of medicines • promotion of the use of generics, mandatory generic substitution by pharmacies • introduction of new positive and negative lists of medicines • reduction of pharmacists' and wholesalers trade margins • implementation of claw-back mechanisms Increased cost-sharing for pharmaceuticals set at 25% of the value of the drug; set between 10% and 0% for chronic diseases and life-threatening diseases

Notes: N: Nationally initiated reform; EAP: Reforms required under the EAPs.

reimbursable services based on the EKPY, although there were still differences in conditions, such as variations in the size of contributions. Furthermore, a few health insurance funds remained outside EOPYY, mainly mutual self-administered funds covering bank employees (section 3.3.2).

Another significant development was the effort to achieve a greater decentralization of health care authorities (section 2.2). In June 2010, the Government enacted a law establishing a new architecture for municipalities and regions (known as the Kallikratis Plan): 13 regions (YPEs) were created to replace 76 prefectures, while 1034 municipalities were reduced to 325. Under the reorganization, YPEs were expected to play a much greater role in managing and organizing human resources in the ESY and in the provision of primary care services; however, to date, this strengthening of their powers has not yet materialized.

Health insurance coverage

As sharp rises in unemployment led to a large number of people (approximately 2.5 million, or a quarter of the population) losing comprehensive health coverage (section 3.3.1), there were several attempts to address the problem. Initially, a Health Voucher programme was launched in September 2013 and targeted people who had lost their coverage, allowing them to access primary care only, and only a set number of times over the duration of four months. The measure was abandoned as ineffective because of the very low uptake rates and the limited coverage that it offered.

Additional measures (two joint ministerial decisions: Y4a/GP/oik.48985 and GP/OIK.56432) came into force in 2014 that were aimed at allowing people who were not insured with any public or private fund and ineligible for the poverty health booklet to access primary care and inpatient services, as well as pharmaceutical care. However, prescribed medicines were still subject to the same reimbursement conditions and charges as for patients ensured by EOPYY, leaving in place cost-related obstacles to accessing drugs (Economou, 2015). Moreover, access to hospital services was subject to means-testing procedures that were overly bureaucratic, were implemented differently among providers and which many perceived to be stigmatizing.

Therefore, new legislation came into effect in August 2016 that provided access to care for the uninsured and vulnerable, including those without health coverage, migrants who are legally resident in Greece, children, pregnant women and people with chronic conditions, irrespective of their insurance status (section 3.3.1). These groups are now all entitled to the same level of access as those insured by EOPYY, subject to having a social insurance number or a health care migrant card.

Conflicts in the Middle East resulted in large numbers of refugees (peaking at 1 million in 2015) coming to Greece (sections 1.1 and 3.3.1). While most irregular migrants are still entitled to access emergency services for the treatment of

life-threatening conditions, access to services for some groups considered as high priority (e.g. those suffering from chronic, mental or rare diseases, people with disabilities hosted in social care units, people with a disability rate of 67% or higher irrespective of their legal status) has been expanded. Furthermore, emergency and inpatient services, laboratory and diagnostic tests and pharmaceuticals from hospital pharmacies are provided free of charge for people living in refugee shelters and so-called hotspots, as long as patients are referred by doctors providing care in these settings.

Although these measures were introduced after considerable delays, they are of major importance given their potential to remove barriers to access health care services for vulnerable populations. There remain some reservations regarding equity issues, given that the uninsured can only access services supplied by public facilities and not those provided by privately-contracted providers (e.g. diagnostic imaging laboratories). In particular, problems are encountered in regions where public health care services are understaffed or where there is a shortage of imaging scanners (e.g. CT and MRI) in public facilities.

Changes in the provision of primary care

Persisting issues in primary care include fragmentation in the provision of services, lack of gatekeeping mechanism, mismatch between funding allocations, issues with regard to geographical availability of resources and the actual health needs of the population, and fragmentation in funding mechanisms. In 2014, the Greek Parliament passed new legislation that established the PEDYs, coordinated by the YPEs (Law 4238 of 17 February 2014). All primary care facilities under EOPYY, health centres and rural surgeries were transferred to the jurisdiction of the YPEs. Further changes in primary care, including the creation of a more integrated, two-tier system with a gatekeeping role, are expected to be implemented between 2018 and 2020, with the new Primary Care Law (section 6.2). Moreover, the new position of Deputy Secretary General for Primary Care was introduced in early 2016 to oversee the preparation and implementation of the primary health care reform.

Changes in procurement, monitoring and evaluation

Since the creation of the EOPYY, the procurement of health care supplies has been planned at the regional level. Coordination committees for procurement, under the Ministry of Health, are responsible for assigning a contracting authority and the tender mechanism for each type of procurement. The committees can choose public or private contractors in line with its objective of achieving economies of scale and overall efficiency.

A number of specific monitoring and accounting reforms also have been introduced or are under consideration. For example, double-entry accrual accounting was introduced in all public hospitals in January 2012. A cost accounting system was expected to be rolled out in 2013; however, to date, this has not been implemented in all hospitals. A uniform product coding system was introduced in 2012 along with the establishment of a common registry for medical supplies for procurement purposes. However, computerization, integration and consolidation of information technology systems and centralization of information have not yet been achieved for all hospitals.

Other key measures adopted for financing and monitoring within the health care system include:

- greater budgetary and operational oversight of health care spending by the Finance Minister, with publication of audited accounts;
- monthly reporting of public expenditure, tax refunds and arrears to be provided by the Ministry of Finance;
- introduction and rollout of e-referrals and e-prescription for medicines, covering 92% and 98% of the total, respectively, by 2015 (Chouvarda & Maglaveras, 2015);
- establishment of web-based platforms, including ESYnet, by the Ministry of Health (2012) to gather and analyse monthly data from ESY hospitals and the Health Atlas, designed and managed by the Ministry of Health and EOPYY's information technology department (2014) to monitor health care resources nationally;
- development of the Price Monitoring Tool for the collection and analysis of tenders and technical specifications published by hospitals;
- establishment of EKAPTY in 2011 (section 3.6.3°) with functions including International Organization for Standardization certification and certification of Conformité Européene marking on medical devices, inspection and testing of devices and development of digital infrastructures for supporting public health procurement (registry of technical specifications and registry of medical devices); and
- establishment of the e-disbursement initiative (e-DAPY) in 2011, covering services, costs and administrative functions of private providers, and the e-diagnosis platform by EOPYY in 2012 for doctors contracted with EOPYY to request diagnostic medical services (Vassilakopoulou & Marmaras, 2013).

Reforms in hospital sector efficiency

Several measures have been introduced or are being attempted in the hospital sector, involving structural reforms, changes to the hospital payment system and reductions in the cost of hospital supplies.

Major restructuring of the public hospital sector was announced in July 2011 as part of efforts to improve efficiency, and included a plan to cut the number of public hospital beds and reduce the number of clinics and specialist units (section 4.1.2). Furthermore, 500 public hospital beds were set aside for priority use by private insurance companies for their clients as a revenue-raising measure. So far progress in implementing this major restructuring has been limited, and the actual impact of these measures and their expected cost savings remain to be verified. On the one hand, the planned mergers between hospitals owned by IKA and those owned by ESY have been implemented, putting them all under state ownership. On the other hand, implementation of the other major elements has been limited to the administrative merging of adjacent hospitals and the consolidation of similar departments within the same hospital.

In terms of rationalizing the hospital payment system, the former reimbursement method based on a fixed per diem charge was replaced by a Greek DRG system in 2013. The new system has encountered a number of problems and is still being fully developed (section 3.7.1), but nevertheless it has contributed to a more efficient and rational allocation of resources (Polyzos et al., 2013; Siskou et al., 2014a).

Reducing input costs, including the overall cost of hospital supplies (pharmaceuticals, medical supplies, orthopaedic materials and chemical reagents) has been a major objective. High levels of waste in inpatient expenditure was mostly attributed to the fragmented and outdated procurement system (Tountas et al., 2010). Therefore, emphasis was placed on containing hospital budgets and on more rational allocation of resources (Goranitis, Siskou, & Liaropoulos, 2014). In May 2017, Law 4472 established the National Central Procurement Authority.

Pharmaceutical sector reforms

The pharmaceutical sector has seen a number of measures aimed at containing costs and enhancing efficiency. Overall, reductions in pharmaceutical expenditure are being pursued through price reductions, increased rebates (clawbacks imposed on private pharmacies and pharmaceutical companies for both inpatient and outpatient drugs) and, to some extent, control of the volume of consumption via methods such as prescription control mechanisms and e-prescribing. The key changes are outlined below.

Responsibility for the pricing of medicines were transferred to the EOF and all other aspects of pharmaceutical policy to the Ministry of Health in January 2013. Previously, prices were set by the General Secretariat of Commerce. This change was designed to stimulate more efficient decision-making and administration.

A positive list for medicines was reintroduced in 2011, after being abolished in 2006. Rather than restricting access, the reintroduction of the list was motivated by the intention of raising additional revenue as it contained a requirement for a special fee to be paid by pharmaceutical companies whenever a new drug was added. In 2012, a new negative list of nonreimbursable medicines was introduced, containing many pharmaceuticals that previously were eligible for reimbursement. Under the terms of the EAP, this negative list should be updated twice a year. In parallel, an over-the-counter drug list has been in place since 2012 and contains many medicines that until then had been reimbursed (e.g. some pain relief medicines) but now require OOP payment. Both positive and negative lists have been successfully used in other EU countries, such as Italy and Sweden, as a measure to contain pharmaceutical expenditure (Panteli et al., 2016).

In November 2012, a new reference pricing system for the reimbursable drugs on the positive list was introduced, resulting in the reduction of the reimbursable price of drugs by up to 70%. This strategy followed the reduction in VAT for medicines (from 11% to 6.5%) implemented in 2011, which also reduced medicine prices. In parallel, a mechanism of quarterly rebates (automatic clawback) from the pharmaceutical industry has been implemented should pharmaceutical expenditure exceed pre-agreed ceilings.

The Government has promoted wider use of generic medicines and prescribing by active substance. A policy is now in place stipulating that the maximum price of generics cannot be set at more than 60% of branded drugs. Another important measure is prescribing based on the international nonproprietary name, along with a policy that 50% of medicines prescribed/used in public hospitals should be generics. This has increased the proportion of the value of generics prescribed in hospitals for inpatients from 26% of the total hospital pharmaceutical expenditure in 2012 to 31% in 2014 (OECD, 2018a).

Pharmaceutical expenditure has also been tackled in ESY hospitals through more efficient purchasing strategies, including the reduction of drug procurement prices through the implementation of price caps for approved drugs, the establishment of tenders to supply medicines based on the active substance and the development of an (extended) list of medicines for which the Coordination Committee for Procurement issues unified tenders for supply contracts.

As a demand-side measure, prescription guidelines for physicians have been developed on the basis of international prescription guidelines and are awaiting approval.

The implementation of a nationwide e-prescribing system is largely aimed at reducing costs related to overprescribing, as it monitors the prescribing patterns of physicians and the dispensing patterns of pharmacies. The use of e-prescribing is also expected to serve as a tool to promote alignment with prescribing guidelines, monitor medication use, support the process of applying clawbacks and enhance transparency by facilitating the prescription claims procedure. However, problems associated with e-prescription system are still imposing barriers in accessing benefits in kind, for example consumables for patients with diabetes.

In January 2014, a ceiling of 80% of the previous year's prescription budget was imposed on the monthly amount that a doctor can prescribe (Chapter 3). In 2015, this rule was amended and the pharmaceutical expenditure allowance would depend on the physician's specialty, the number of patients, the region and the season. The limits have been calculated on the basis of statistical analysis of historical data on pharmaceutical consumption across the country.

Some innovative measures have been introduced to lower outpatient pharmaceutical expenses; for example, expensive medicines for chronically ill patients are distributed through state pharmacies as prices are lower than in private pharmacies.

Finally, measures have also been introduced to liberalize the pharmacy market to increase access and enhance efficiency: more than one pharmacist can now work at the same pharmacy; new pharmacists can form partnerships with incumbents; pharmacies can be established in closer proximity to each other; hours of business have been extended; a decrease in the population threshold for setting up a pharmacy has been implemented; and rebates can be imposed on pharmacies, effectively reducing their profit margins.

Improving quality of care

During the past few years there has been a much needed focus and systematic effort from the Ministry of Health and the medical associations to strengthen disease management through the adoption of clinical guidelines in routine medical practice. For example, the Hellenic Society of Obstetrics and Gynaecology in 2013 and 2014 implemented 25 new guidelines (Vrachnis, Loufopoulos & Tarlatzis, 2015). Some nursing protocols, mainly regarding primary care, have been developed by the nursing faculties of Greek universities

in collaboration with YPEs and are in the process of being approved by the National Council of Nurses (Patiraki et al., 2017).

Other reforms

Another major reform was the establishment of the EFKA (Law 4387/2016), responsible for providing key state benefits, including sickness and disability benefits, and pensions. This new body replaces most of the previous social security funds and is now the single organization responsible for collecting social security contributions, including health insurance contributions (the latter on behalf of EOPYY to which it transfers the pooled funds; Chapter 3). EFKA started operations in January 2017.

Box 6.1

Implementation of the current reforms

To some extent the implementation of a single-payer system has managed to constrain expenditure growth and to allocate resources more rationally. However, the creation of EOPYY has not been adequately supported at the operational level, as it has remained understaffed and underfunded, leading to delays in paying providers. New reform plans to restructure the delivery of primary care services have been launched again with the first operational units starting in the summer of 2017 (section 6.2).

Efforts to reform the primary care system have taken some years to develop and to solidify into a strategic framework. In 2011, responsibility for its coordination was transferred to EOPYY but it became evident that this arrangement was not viable. Consequently, in 2014, responsibility for primary care provision was again transferred, this time to YPEs, but implementation has been slow.

Until now, measures to create more empowered decentralized regional authorities capable of steering primary care either have not been implemented or have been substantially weakened. Existing YPEs have weak coordinating functions, while the health care system still remains very centralized. Possible explanations for this lack of progress are limited administrative capacity, restricted funding and the absence, until 2017, of a clear plan for reforming primary care. Other factors that may have played a part are a lack of political will, little policy continuity between governments and opposition from key interest groups (Athanasiadis, Kostopoulou & Philalithis, 2015). As a result, implementation has been slow with major challenges, such as lack of funding and appropriate staffing levels.

All the changes related to hospital and pharmaceutical sectors described in section 6.1.6 were part of a major cost-saving exercise and efforts to increase efficiency (Kastanioti et al., 2013). Nevertheless, the reforms had some adverse effects on the quality of services, as shortages of medicines and disruptions in the provision of health care have been reported (Karidis, Dimitroulis & Kouraklis, 2011; Karamanolis, 2012).

6.2 Future developments

It has been well documented that reforms to the Greek health care system should focus on certain areas of high priority, including restructuring of primary health care, pooling of financial resources, introducing new managerial and administrative methods, adopting cost-effectiveness assessments and monitoring mechanisms and developing policies for better allocation of resources (Mossialos, Allin & Davaki 2005; Economou & Giorno, 2009). Most of these areas are expected to see further strengthening in the near future, given the ongoing changes (section 6.1).

Primary care is currently one of the major areas of focus. A plan for further development of primary care was first approved by the Government Council for Social Policy in 2015 and suggested delivering primary care through two-tiered local primary health care networks operating in small communities in an integrated way (Benos et al., 2015). In August 2017, the Government passed a new law for the reform of primary health care (Law 4486/2017). Under the proposals, primary care should be free of charge, with equitable access, and it should operate on a 12 hour a day basis in areas where there is adequate hospital coverage and on a 24 hour a day basis where such hospital services are lacking.

Primary health care services will be provided at the first level by local health units and by health professionals who have private practices and contract with EOPYY. At the second level, primary health care services will be provided by health centres. In addition, central diagnostic laboratories will be established in each YPE providing laboratory tests and imaging diagnostic services to the population. Specialized care centres should also be established in each YPE to provide specialized care, special education, physiotherapy and rehabilitation services.

Local health units will operate as family medicine units, providing to their registered patients services including health education and promotion, prevention, assessment and risk management for communicable and noncommunicable diseases, systematic monitoring and screening, addressing acute health problems and referring to health centres or hospitals, monitoring and managing chronic diseases, home care, counselling and support to individuals and families, detection of mental illnesses, and collection and utilization of epidemiological surveillance data. They will be staffed by health teams consisting of GPs, internal medicine specialists, paediatricians, nurses, community nurses, social workers and administrative staff.

As the second tier of the new system, the purpose of health centres is to provide specialized ambulatory care for all patients who are referred by the local health units: emergency services; laboratory tests and imaging diagnostic

services; dental care for adults and children; maternal and child care; care for adolescents; specialized prevention; physiotherapy, ergotherapy and logotherapy; occupational medicine; social medicine; and public health. Health centres will be staffed by medical and other personnel:

- medical specialists in general/internal medicine, paediatrics, dentistry, occupational medicine, social medicine and public health, radiodiagnostics, cardiology, gynaecology, general surgery, orthopaedics, ophthalmology, pulmonology, urology, otolaryngology, dermatology, neurology, gastroenterology, endocrinology and rheumatology;
- scientific and other health personnel in nursing and midwifery; public and community health (health visitors/community nurses); physiotherapy, ergotherapy and logotherapy; psychology; social work; radiology and medical device operators; medical laboratory technicians; and nursing assistants; and
- administrative staff.

Patient registration with a local health unit, gatekeeping mechanisms and a referral system will form part of the new delivery framework. An e-health record is also expected to be developed. Systematic monitoring to ensure quality and improve outcomes is expected to be achieved through the introduction of clinical protocols, clinical audit and electronic clinical information systems.

Staffing of units will be determined on the basis of the population. For example, one GP or internal medicine specialist per 2000–2500 adults, one paediatrician per 1000–1500 children, one dentist per 10 000 inhabitants and two specialists in radiodiagnostics, one pathologist and one cardiologist per 25 000–30 000 inhabitants. Under the primary care reform legislation, the aim is to establish 239 local health units throughout the country. To staff these facilities, a recruitment call for 3000 vacancies was published in August 2017. However to date, only half of the physicians invited (600 out of 1200) have applied. Such shortages risk delaying the strengthening of primary care, particularly in remote areas. The medical associations attribute physicians' unwillingness to staff local health units to the working regulations in place (as staff are required to work exclusively within their unit and not participate in private practice), while the Ministry of Health links the situation with brain drain and the emigration of doctors.

7. Assessment of the health system

Chapter summary

- A number of important steps have been taken since 2010 to improve health system performance monitoring, including the implementation of the OECD System of Health Accounts and the development of web-based platforms for collecting and reporting data.
- Although amenable mortality in Greece has reduced overall, it has shown signs of stagnation in recent few years. Furthermore, disease management is far from effective, particularly in addressing specific diseases such as treatable types of cancer and circulatory diseases.
- A weak public health system and underdeveloped health promotion and preventive services make it difficult to address risk factors in the population's health behaviour. A lack of national screening programmes for different types of cancer contribute to mortality rates.
- Access to health services deteriorated markedly between 2009 and 2016, particularly with the loss of health coverage by the unemployed and the increase in people with unmet medical need due to cost among the poorest population. There is evidence that patients with chronic diseases have reduced their adherence to medications and even face increased risk of catastrophic health expenditure. Informal payments are widespread in both inpatient and outpatient care, in the public and private sectors.
- The Greek health care system suffers from unequal and inefficient allocation of financial, human and material resources. Initiatives to develop a Health and Welfare Map of the country and to calculate a formula for allocating health resources, both started in 2010, have not yet been implemented.

7.1 Monitoring health system performance

Information systems

Until recently, the Greek health system was characterized by an absence of monitoring tools and adequate information about its performance, which impeded evidence-based decision-making and sound health policies. The situation was best described as “health policy making under information constraints” (Goranitis, Siskou & Liaropoulos, 2014). However, a number of positive steps have been taken during the last five years, including:

- implementation of the OECD’s System of Health Accounts, managed by the Hellenic Statistical Authority (ELSTAT), in 2012; until then, limited data were available on health expenditure by financing scheme, provider or type of service (Goranitis, Siskou & Liaropoulos, 2014);
- establishment of a web-based platform (ESY.net) in 2010 that collects financial, administrative and activity data from public providers on a monthly basis, which are then analysed by the Ministry of Health;
- establishment of a Health Atlas, a platform collating information on demography, health status, health care resource availability and utilization, by geographical area across the country;
- introduction of the national e-prescription system in 2010 to monitor pharmaceutical consumption and referrals for clinical examinations and tests;
- establishment of the e-disbursement initiative (e-DAPY) in 2011, covering services, costs and administrative functions of private providers, and the e-diagnosis platform in 2012 for doctors contracted with EOPYY to request diagnostic medical service (Vassilakopoulou & Marmaras, 2013); and
- establishment in 2010 of the Price List Observatory for the collection and analysis of tenders and technical specifications published by hospitals; prices of common products and services are compared among hospitals, with the aim of achieving greater price transparency, control costs and influence coverage decisions by setting the maximum price ceiling for tenders (Kastanioti et al., 2013).

Stated objectives of the health system

The ESY was founded on the principle that health is a social good and it should be provided by the state equitably for everyone, regardless of social and economic status (Law 1397/1983). Therefore, the key objectives of the health system are comprehensiveness, equity, universal coverage and lack of charges at the point of use. The extent to which these objectives are currently met has to be viewed in the context of the pre-existing state of the health system (Economou, 2010) as well as the continuing economic crisis (section 1.3).

The memoranda of understanding, which are the key drivers shaping the health system at present, have not officially been assessed in terms of their health impacts, with the exception of a study on access to health services conducted within the framework of the Contribution Agreement between the Ministry of Health and the WHO Regional Office for Europe (section 7.3). Neither Health in All Policies nor health impact assessment procedures have been implemented. Monitoring of the effects of the measures on health and the health system is largely documented in academic literature and does not timely translate to a policy response.

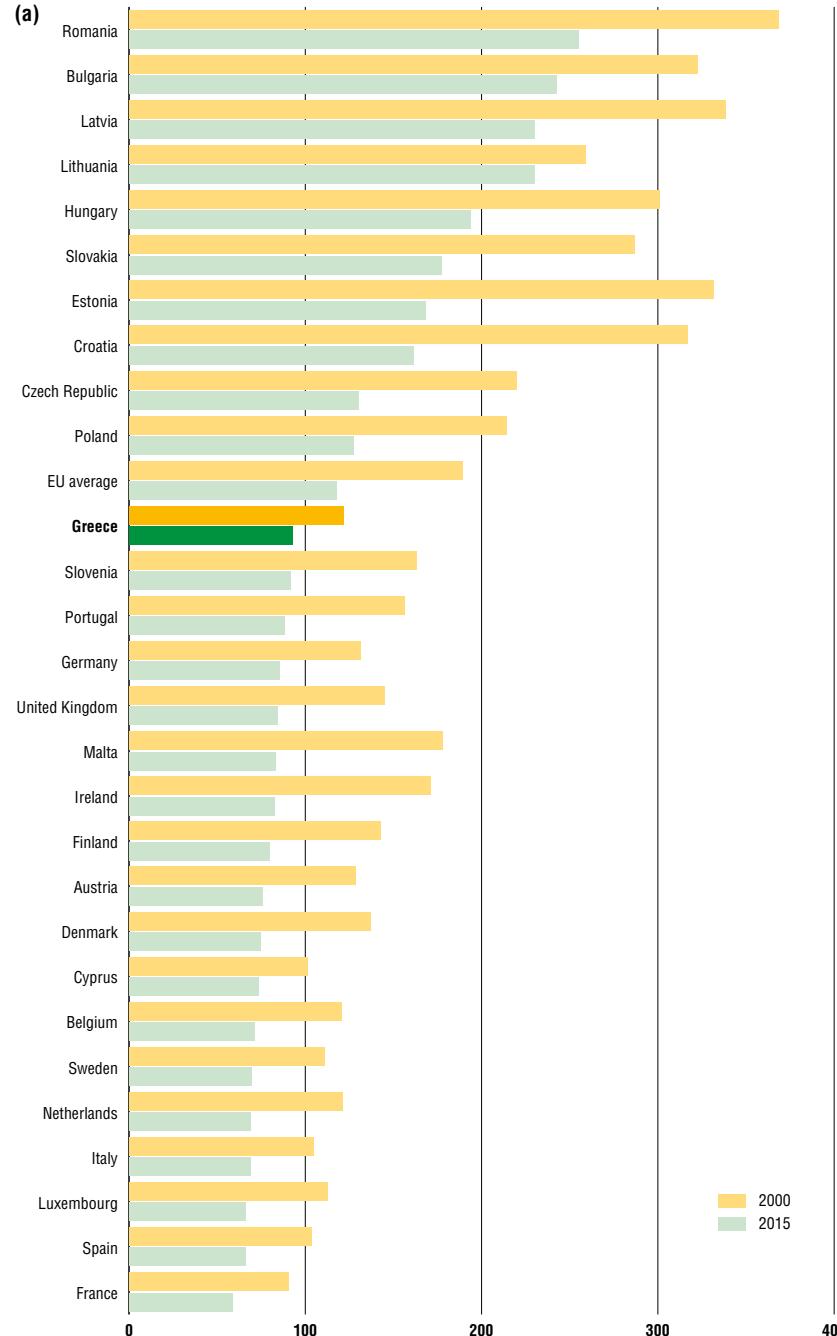
7.2 Health system impact on population health

The health status of the Greek population in terms of mortality and morbidity is outlined in section 1.4. The impact of the health system and wider policies on population health can be quantified using amenable and preventable mortality. The former reflects quality and timeliness of medical care, whereas the latter reflects intersectoral measures affecting health, such as tobacco and alcohol consumption policies or road traffic safety. In 2014, amenable mortality in Greece was lower than the EU average (93 and 118 per 100 000 population, respectively) (Fig. 7.1). Since 2000 it has declined by about a quarter, but is still higher than in the 15 EU Member States before 2004. Preventable mortality was similar to that of the EU (58 per 100 000), with little progress made since 2000. Concerns have been raised regarding deteriorating standards of medical care because of the severe cuts, and the impact this could have on population health. A study by Karanikolos et al. (in press) has shown that amenable mortality in Greece experienced a small but significant increase in the years after the economic crisis. Another major study found a significant increase in mortality from adverse events during medical treatment and estimated that there was an increase of more than 200 deaths per month after the onset of the crisis (Laliotis, Ioannidis & Stavropoulou, 2016).

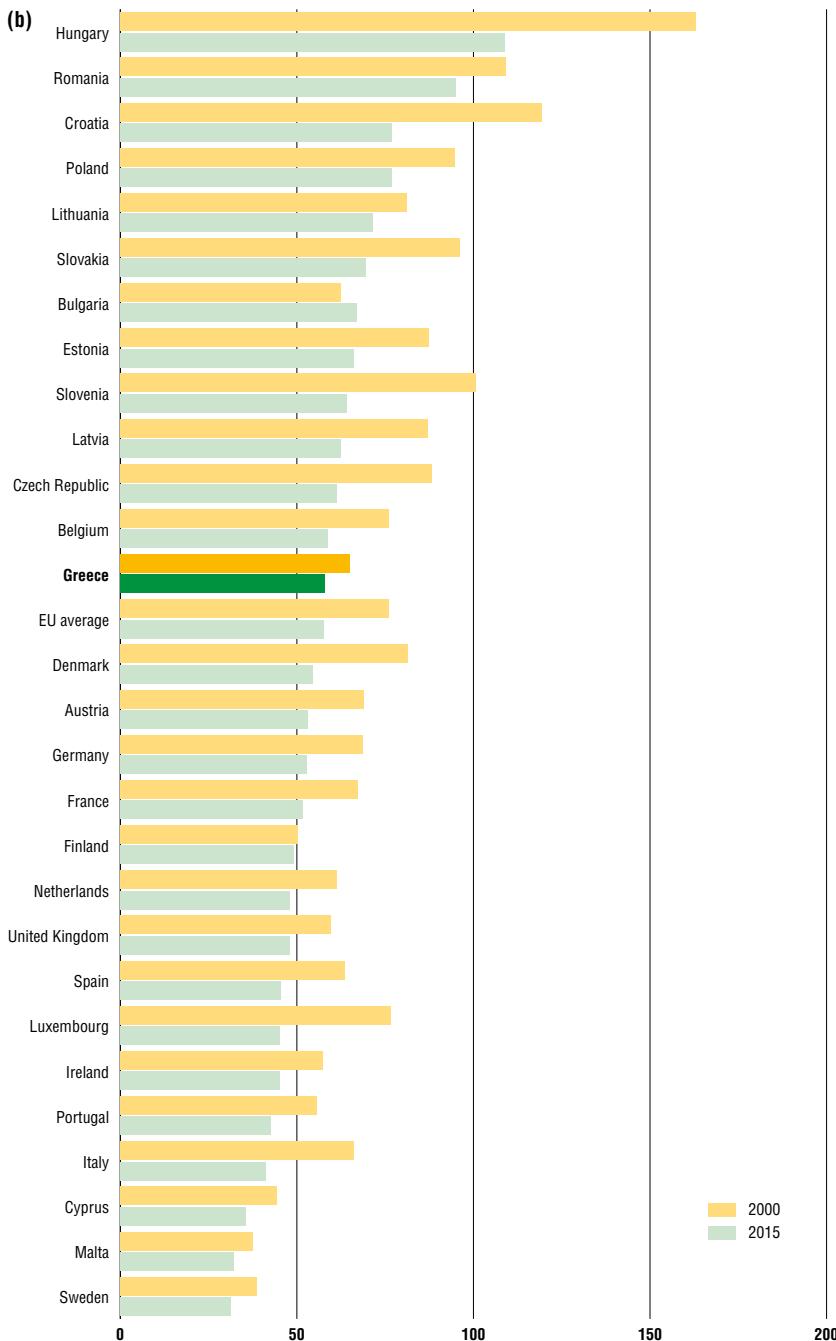
Fig. 7.1

Amenable (a) and preventable (b) mortality (for all people aged 0–75 years),
2000 and 2015 or latest available year, directly age-standardized rates per 100 000

(a)



(b)



Source: Internal calculations from the European Observatory on Health Systems and Policies.

Note: Amenable mortality rates are based on list by Nolte and McKee (2011), standardized to European Standard Population 2013.

A common finding of several national studies concerning specific diseases and procedures is that disease management is far from effective; primary care is neither well developed nor well organized and only a small percentage of the population receives screening services (Copanitsanou, 2015). For example, the services delivered by rural primary care services are unilaterally oriented towards acute health problems, and rarely engage in prevention, health promotion, long-term care and rehabilitation. Moreover, chronic disease management is usually fragmented, with the main focus on prescribing (Oikonomou & Tountas, 2011a). Duplication of tests and prescriptions is common because of poor information transfer between providers, while integration and continuity of care is largely absent (Oikonomou & Tountas, 2011b).

The effectiveness of the Greek health care system could be improved, given that its performance lags considerably behind other EU countries in addressing specific diseases such as treatable types of cancer (breast, cervical, prostate). There are no population-based or systematic cancer screening programmes in Greece (OECD, 2013); therefore, uptake of preventive screening is quite low, for example less than 60% for cervical smear test compared with 80% in Finland or the United Kingdom and less than 50% for mammography compared with 75% recommended by international guidelines (Tsounis, Sarafis & Alexopoulos, 2014). Moreover, there are concerns that the introduction of limits on the number of uterus, breast and prostate cancer tests per physician, without increasing the uptake of national screening programmes, would result in adverse health outcomes (Tsounis, Sarafis & Alexopoulos, 2014).

Although a number of new guidelines are being developed, current post-treatment surveillance guidelines for high-risk patients are very limited and depend solely on health providers' decisions (Geitona & Kanavos, 2010). Furthermore, physicians show varying levels of knowledge of cancer screening. One study showed that primary care physicians in rural Crete demonstrated limited awareness of international recommendations and guidelines for breast cancer screening and exhibited marked variation in their approaches to early detection and screening practises for breast cancer (Trigoni et al., 2011). Another study indicated that the failure of cervical cancer screening in Crete was due not only to the lack of infrastructure and limited staff but also to the lack of referrals by physicians. GPs' main training in hospital clinics during residency has little emphasis on the acquisition of skills regarding prevention in the community, leading to a poor understanding of primary care's role in health promotion (Panagoulopoulou et al., 2010). Data from 2012 show that breast cancer incidence in Greece was well below the EU average (56 vs 106 per 100 000 women), while mortality was just as high (21 vs 22 per 100 000 women); similarly, incidence of prostate cancer was three

times lower than the EU average (34 vs 106 per 100 000 men) but mortality was the same (18 vs 19 per 100 000 men) (European Commission, 2018), with little change in the death rate occurring since the mid 2000s.

Problems with prevention and treatment of other diseases are also apparent. For example, patients with heart failure have higher mortality and rehospitalization rates than their European counterparts, which is linked to several factors, including lack of proper management of ischaemic heart disease in primary care (Stafylas et al., 2017). Peripheral arterial disease remains underdiagnosed and undertreated in primary care in some regions; physicians rarely investigate their patients for the disease despite the presence of atherosclerotic risk factors (Argyriou et al., 2013).

Greece does have a national immunization programme. While reported childhood vaccination coverage is above the 95% threshold, administration of booster doses is delayed in many cases (Pavlopoulou et al., 2013). In addition, adolescent vaccination coverage is not satisfactory, mainly through noncompliance with the final booster dose (Sakou et al., 2011). Studies have shown that incomplete and delayed immunization in Greece is associated with long distance of travel to the place of vaccination, lower maternal age, belonging to Roma or a migrant group, belonging to families with many children, and low education level of fathers (Danis et al., 2010a,b). There are also gaps in specific population groups: coverage was shown to be good or moderate for children in migrant families but moderate or low for children in Greek Roma families (Panagiotopoulos et al., 2013). A measles outbreak was reported in 2010, affecting mostly unvaccinated children from the Roma community (Pervanidou et al., 2010).

Intersectoral health policies and public health

Intersectorality is not well developed in Greece as its two crucial dimensions – Health in All Policies and health impact assessment – are to a large degree neglected (section 2.3).

Furthermore, public health overall has not been a priority, given that the first National Action Plan for Public Health (2008–2012), putting emphasis on 15 major health hazards (substance abuse, cancer, sexual health, diet and nutrition, alcohol consumption, cardiovascular diseases, environmental health, smoking, vehicle accidents, oral health, infectious diseases, travel health, rare diseases, HIV/AIDS, and antimicrobial resistance and nosocomial infections) was never implemented (Ministry of Health and Social Solidarity, 2008). Another example is Law 3868/2010 prohibiting smoking in all workplaces,

transport stations, taxis, passenger ships and all enclosed public places, including restaurant, caf  s and night clubs. Despite the fact that smoking rates in Greece are very high (section 1.4), this law is not properly enforced and smoking occurs in most public places. The antismoking law is only respected on public transport, within medical facilities and in a small number of restaurants. The ban appears to be completely ignored in the country's tavernas, cafes and bars. Inspections by state authorities have eased dramatically. In September 2016, new legislation was passed (Law 4419/2016), enforcing the existing restrictions and extending them to also include electronic cigarettes and incorporating Directive 2014/40/EU on the manufacture, marketing and sale of tobacco and tobacco-related products in the Greek legal system.

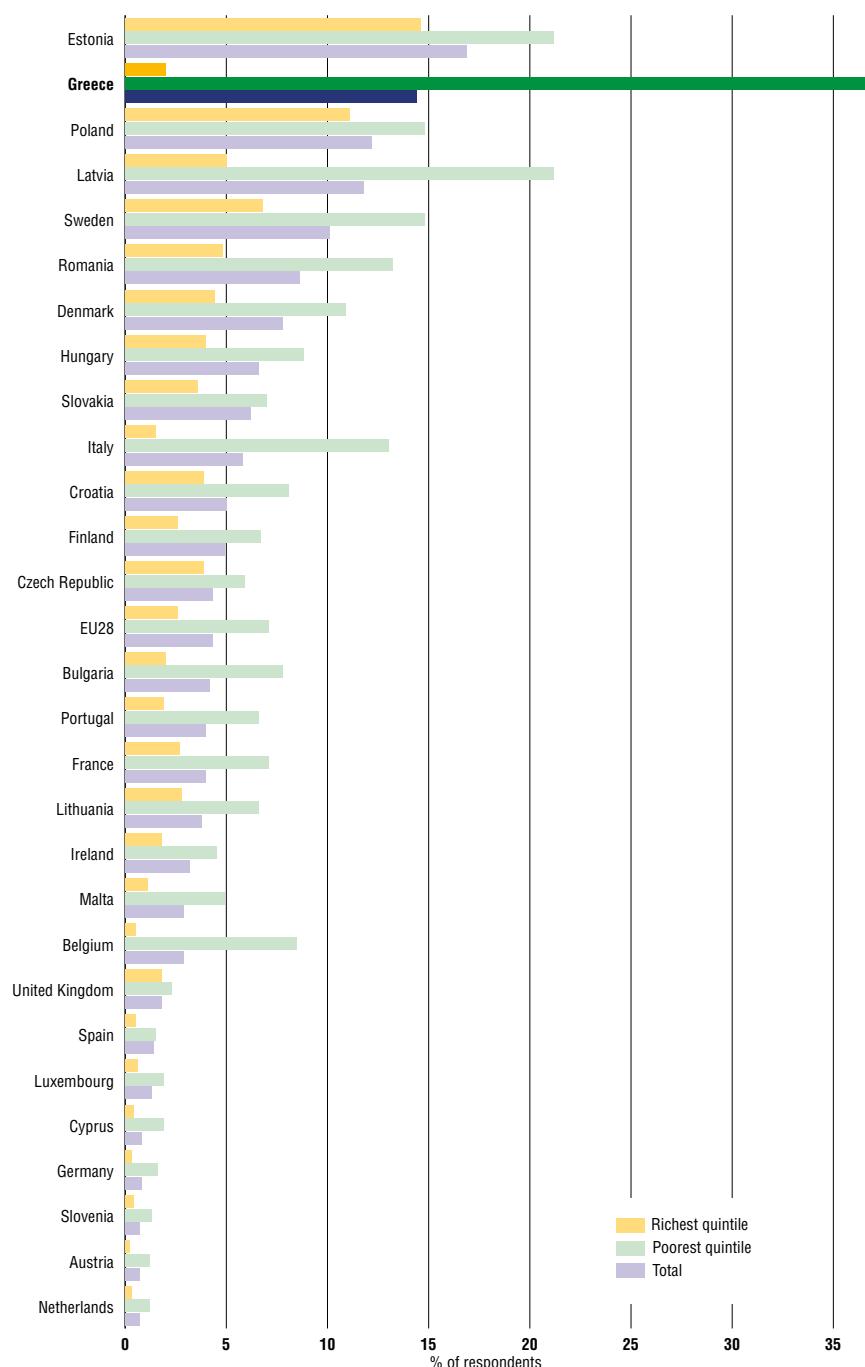
7.3 Access

The Greek health care system has been characterized in the past as inequitable in terms of access and coverage (Economou & Giorno, 2009; Economou, 2010). It is now clear that the economic crisis has exacerbated existing problems. One study found serious gaps in the availability, accessibility and acceptability of existing services (Economou, 2015). Across-the-board health budget cuts and increased user charges led to a marked increase in the economic burden on patients (Chapter 3). This was coupled with unemployment-related loss of coverage, affecting approximately 2.5 million people or a quarter of the population (Chapter 3), and reduced household incomes. As a result, there was a substantial rise in unmet need for medical examination according to the EU-SILC survey (Eurostat, 2018a,c). In 2016, Greece was shown to have the second highest level of unmet need in the EU, with 14% of survey respondents unable to access services when needed (Fig. 7.2). Furthermore, considerable inequality exists between the ability of the poorest population groups to access services in comparison with the richest, as financial protection, particularly of vulnerable groups, is extremely weak (section 7.4).

In terms of resource availability, there is uneven regional distribution and a shortage of all categories of health professionals outside the major cities as well as shortages in materials and supplies in public hospitals alongside undersupply of medical technology in the public sector (Chapter 4). Rationing in terms of waiting times and limits on doctors' activities also causes delays in accessing care. The limited data available indicate that patients with cancer face extended delays in accessing treatment; unofficial sources suggest that waiting times are six to eight months for an operation, and two to three months for radiotherapy.

Fig. 7.2

Unmet need for a medical examination in the EU28, by income quintile, 2016



Barriers also exist in terms of acceptability of services for patients. High dissatisfaction in relation to quality and responsiveness of health care is related to long-term structural, organizational and administrative issues, including the regressive nature of ESY financing, with high OOP payments and widespread unofficial payments, weak primary care and the absence of a referral system, long waiting lists and the impact of austerity measures. A qualitative study supports these findings: representatives of patients with chronic illnesses (type two diabetes, hypertension, chronic obstructive pulmonary disease, Alzheimer's disease) and medical associations reported that existing problems with the management of chronic diseases, such as poor-quality services, fragmented primary care and lack of specialized centres, were magnified by the recession (Tsiantou et al., 2014a). Box 7.1 outlines the difficulties in achieving universal health coverage in Greece.

Box 7.1

Universal health coverage

The regressive nature of health care financing in Greece, with heavy reliance on indirect taxes and high OOP and informal payments, plus the very unequal distribution of resources, has meant that the concept of universal health coverage was weak even before the crisis.

The advent of the economic crisis had an enormous additional adverse impact, with almost a quarter of the country's population losing health coverage by 2015. Initial steps to extend coverage to all population groups were made in 2014 and a more comprehensive effort was launched through legislation in 2016; the impact is yet to be evaluated but is expected to be positive. Although it restores coverage, the new legislation effectively bypasses the requirement to be up to date with personal health insurance contributions, which has the adverse effect of undercutting the basis of the SHI system.

7.4 Financial protection

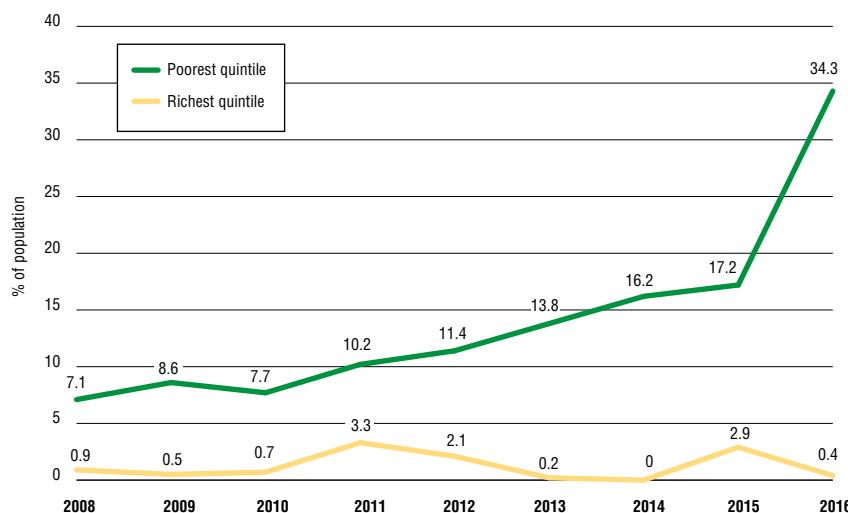
Cost was the most frequently quoted cause for unmet need, and the proportion of survey respondents unable to access services for financial reasons in the poorest income quintile increased progressively in the period from 2011 to 2016 (Fig. 7.3). The percentage of the population reporting unmet health care needs because of high costs increased from 4% in 2009 to 12% in 2016 (Eurostat, 2018c), while among the poorest quintile it reached 17% in 2015 and further doubled to 34% in 2016. The highest proportion of respondents reporting unmet need because of cost in 2016 was among the unemployed (21%) and those over the age of 65 years (14%). The legislation passed in 2016

to provide comprehensive health coverage for the unemployed is expected to have a positive impact on financial protection.

Patients with chronic illnesses have been particularly vulnerable as they are adversely affected by a lack of adherence to prescribed medication, reduced access to diagnostic services, poor monitoring of complications and increased risks of catastrophic expenditure. Studies show that many patients with diabetes refuse more expensive treatments or decrease the frequency of taking prescribed medication (Polyzos & Kountouras, 2012; Aloumanis & Papanas, 2014). Among the 288 patients participating in a study conducted in Crete, the majority lowered the doses of several medications as they were unable to afford the cost; all patients using insulin had lowered their dosages; nearly half of patients with chronic obstructive pulmonary disease or asthma had stopped all medications, decreased dosages or used cheaper alternatives; only half of patients with dyslipidaemia took their medications as required; and a quarter of patients with cardiovascular disease stopped medication or skipped dosages (Tsilianni et al., 2013, 2014). These findings are supported by surveys of health care personnel: physicians reported that almost a quarter of their patients with type two diabetes had to stop or modify their treatment plan, while a similar proportion switched to poorer diets during the previous year because of higher co-payments, loss of coverage and inability to access a doctor to obtain a prescription (Tsiantou et al., 2014b).

Fig. 7.3

Growing inequality gap in unmet need due to cost in Greece



Patients with cancer are another group that have faced serious problems in accessing appropriate medicines (Apostolidis, 2013). Patient organizations have reported delays and disruption with drug supplies. All expensive cancer medicines are, in theory, available through hospital and EOPYY pharmacies, but in practice public hospitals are indebted to pharmaceutical companies and these, in turn, have discontinued supplies. Patients can order medicines through their local pharmacy, paying cash that they may then reclaim from EOPYY. However, this is not a common choice as many cancer medicines are very expensive and EOPYY reimbursement can take many months. Previously this issue was even more critical for patients with cancer who had no health insurance as, if they did not pay for treatment, the cost of medication provided through hospital pharmacies was recovered through their income tax liabilities. However, after the implementation of legislation which provided coverage to the uninsured in 2016 those barriers were removed. In addition, unequal distribution of oncological resources created two tiers of patients, based on their ability to pay for travel/accommodation (Athanasakis et al., 2012).

The risk of catastrophic health expenditure among patients with chronic conditions has increased since the implementation of austerity measures. One survey indicates that the proportion of households with at least one person with a chronic disease and subject to catastrophic expenditure has more than doubled, from 3.2% in 2010 to 7.8% in 2013, with the key reasons being high OOP payments followed by the cost of medicines (Skroumpelos et al., 2014).

Corruption in health care is another issue impeding access, and under-the-table (informal) payments are widespread. A survey of 2 741 people conducted in 2012 found that informal payments were made by almost two thirds of respondents who consumed health services over the past 12 months, and for one in every three public hospital admissions (Souliotis et al., 2016). The payments were most frequently made upon request prior to service provision, in order to bypass waiting times or receive better quality care; a much lower proportion was paid after treatment or out of gratitude. The vast majority of respondents recognized that under-the-table payments had a substantial impact on household budgets. Informal payments exist also in the private sector, mostly in cases where receipts for treatment are not issued. In an effort to estimate the scale of informal payments in health care, the survey researchers extrapolated the main findings nationwide, based on the Household Budget Survey 2012 (section 3.4.3), which indicated an annual cost of almost €1.5 billion, or 28% of total household expenditure, on health (Souliotis et al., 2016).

7.5 Health system efficiency

7.5.1 Allocative efficiency

Allocation of health resources across Greece has traditionally been based on historical and political criteria, such as ad hoc estimations, guided by political pressures and client-based politics. It is now also determined by restrictions imposed by the country's EAP. An effort to create a fully fledged Health and Welfare Map (section 4.1.1) as an instrument for the rational allocation of health resources was planned from the early 2000s but failed to be implemented. As a consequence, the Greek health care system suffered from unequal and inefficient allocation of financial, human and material resources (Economou, 2010). A fresh initiative to develop the Health and Welfare Map along with a formula for allocating health resources, which would account for demographic and epidemiological profile as well as existing services, was launched in 2010 (Ministry of Health and Social Solidarity, 2011c). In January 2017, the Ministry of Health and EOPYY did produce a Health Atlas, which maps the available resources in the health sector across Greece (Ministry of Health, 2018) but at the time of writing this was not fully functional and only maps existing resources. In addition, research suggests that there is a mismatch between the existing allocation of public financing in health and people's expectations (Xesfingi, Vozikis & Pollalis, 2015), resulting from limited citizen participation in health policy-making and priority setting (sections 2.7 and 7.6).

It should also be noted that SHI as a source of financing currently lacks stability because of the high number of unemployed people and the declining number of people of working age.

7.5.2 Technical efficiency

In the early 2000s, Greece suffered from serious inefficiencies in the hospital sector, such as low bed occupancy rates, long length of hospital stay, high number of readmissions and an unbalanced distribution of resources (Mitropoulos, Mitropoulos & Sissouras, 2013; Fragkiadakis et al., 2013; Kounetas & Papathanassopoulos, 2013; Xenos et al., 2016). Since 2010, several response measures have been introduced or are being attempted, including mergers of hospitals, reducing the number of beds, clinics and specialist units; changes to the hospital payment system, with the introduction of DRGs; and reductions in the cost of hospital supplies such as pharmaceuticals, medical supplies, orthopaedic supplies and chemical reagents (Chapter 6).

Available evidence shows that while public hospitals in Greece succeeded in reducing their budgets this was not consistent with demonstrating efficiency gains. Assessing the performance of 117 public hospitals during 2009–2011, Polyzos (2012) found that only around one fifth utilized resources in the best possible way, with technical efficiency increasing in small and medium hospitals and falling in large hospitals over the three-year period. Another study examining the performance of 90 general public hospitals in 2010 and 2011 found that the number of efficient hospitals increased by 15–20%, although two models estimated contrasting results in terms of the change in average efficiency scores (Kaitelidou et al., 2016b). Expenditure was indeed reduced by approximately €680 million in 2011 compared with 2009, but mostly as a result of cuts to easily identified supplies such as pharmaceutical, orthopaedic or medical supplies, rather than through policies promoting better resource allocation, such as control of overheads and administrative services, rational distribution of human resources, medical audit and adherence to clinical guidelines. A third study examined public hospital mergers for potential efficiency gains and showed that, in addition to structural changes, there was still substantial room for efficiency improvement because of persisting technical inefficiencies within individual hospitals (Flokokou, Aletras & Niakas, 2017).

Despite the initial difficulties in implementation, the introduction of a DRG payment system put pressure on providers to reduce costs. However, several other factors impede the aim of rationalizing resources. These include the lack of performance measurement and hospital benchmarking in terms of clinical efficacy and patients' satisfaction; the lack of incentives to optimize the utilization of the available human and technical resources; and the failure to link quality of service to hospital budgets,

Inefficiencies are also observed within primary/ambulatory care. Oikonomou et al. (2016) measured the efficiency of rural health centres and their regional surgeries in southern and western Greece, finding that 16 out of 42 facilities were efficient, while the mean technical efficiency level was under 60%. The authors suggested that the health centres could theoretically produce 33% more output, on average, using their current production factors. The most technically efficient units were those that had large catchment populations, were situated near big cities and were oriented towards prevention and chronic disease management. Similarly, Mitropoulos, Kounetas and Mitropoulos (2015) found inefficiencies in primary care centres were attributed mainly to size, density and the mortality rate of the catchment population; the location of the health centre; and the number of competing health care facilities in the area (e.g. outpatients departments of hospitals or private clinics). Thanassoulis, Silva Portela and

Graveney (2014), in their attempt to identify benchmark cost-efficient GP units and to estimate potential cost savings, suggested that the largest efficiency gains (more than 80%) could be made through control and use of drugs, followed by appropriateness of referrals.

In this context, it is noteworthy that reductions in government health spending between 2010 and 2014 show that budget cuts (as a share of the total expenditure on health) have occurred across the board in both inpatient and outpatient care as well as pharmaceuticals. While focused on short-term goals of budget retrenchment, such strategies also affect the areas that need long-term investment (e.g. ambulatory care), particularly in such a hospital-centred health system as in Greece.

Table 7.1 outlines the key reasons for inefficiencies in the Greek health system, which persist despite the measures introduced over the past few years.

Table 7.1

Sources of technical inefficiency in the Greek health system

Source of inefficiency	Possible reasons for inefficiency
Health care workers: inappropriate staff mix	Understaffing of health units; low number of nurses and inadequate training; unbalanced distribution of specialties and lack of GPs
Medicines: under-use and overpricing of generic drugs	Lower perceived efficacy/safety of generic drugs; historical prescribing patterns
Medicines: irrational use of drugs	Consumer demand/expectation; inadequate regulatory frameworks
Health care products: over-use of procedures, investigations and equipment	Supplier-induced demand; fear of litigation (defensive medicine); inadequate guidelines/review
Health care services: suboptimal quality of care and medical error	Insufficient guidelines, standards or protocols; fragmentation and poor coordination; inadequate supervision; absence of medical records
Health care services: shortcomings of primary health care services	Absence of a referral system; low emphasis on promotion and prevention
Health care services: inappropriate hospital size	Uneven historical development of hospitals; inadequate planning, coordination and control
Health care services: inappropriate hospital admissions or length of stay	Lack of alternative care arrangements; insufficient incentives to discharge; not fully implemented DRGs
Health system leakages: corruption and fraud	Corruption and informal payments; unclear resource allocation guidance; poor accountability mechanisms
Administrative complexity: inefficient or misguided rules	Bureaucracy, lack of standardized forms, hidden administrative costs

Source: Based on framework by Chisholm and Evans (2010) and Berwick and Hackbart (2012).

7.6 Health care quality and safety

Multiple Eurobarometer surveys show high levels of patient dissatisfaction with the quality of health care in Greece. In the 2014 survey, only 26% of respondents in Greece assessed the quality of hospital care in the country to be good, while 73% thought that it was worse than in other EU Member States. Moreover, 78% believed that patients could deteriorate in health while under hospital care. These responses put Greece in second-last place among the EU28 (European Commission, 2010, 2014b).

Furthermore, 71% of respondents assessed the quality of care outside hospitals as bad (the second worst behind Cyprus, where 75% of respondents felt that way). Surveys on quality of life in more than 75 European cities showed that respondents living in Athens and Heraklion (the capital of Crete) expressed some of the highest levels of dissatisfaction with health care services, hospitals and doctors, with inhabitants of Athens being the most dissatisfied (69%) and inhabitants of Heraklion showing the sixth highest level of dissatisfaction (63%) (European Commission, 2013). Greek respondents also show the lowest levels of satisfaction with health care among the EU Member States in a series of other Eurobarometer surveys studying the social climate. Within the 13 countries with negative perceptions of their health care system, Greece has the lowest satisfaction index, followed by Bulgaria, Poland, Romania, Latvia and Hungary. In addition, Greece shows the largest overall deterioration in assessment of the health care system between 2009 and 2014 (European Commission, 2014c).

Many barriers to the provision of high-quality primary care services have been identified, including staff and equipment shortages, inadequate GP and paramedic training and absence of clear job descriptions for GPs and other personnel (Sbarouni et al., 2012). Moreover, there are no mechanisms to supervise and evaluate medical practices, measure the use of health resources or assess the outcomes of care. Primary care in Greece has been weak in preventing avoidable hospitalization: studies have shown that a third of admissions to a general hospital for surgery, ophthalmology and gynaecology, and ear, nose and throat could have been managed by a GP, as could 40% of orthopaedic emergency admissions (Marinos et al., 2009; Vasileiou et al., 2009).

In relation to the clinical effectiveness of hospital care, Greece shows high rates of hospital-acquired infections. A study of Greek intensive care units showed that in 2009–2010, during 6004 combined days in intensive care, 152 of 294 patients acquired 205 device-associated infections, which was an overall rate of 52% of patients or 34 device-associated infections per 1000 days (Apostolopoulou et al., 2013). Data from 64 hospitals collected over six months

in 2011 showed that cases of hospital infections ranged from 230 to 450 per month, with an overall crude case fatality rate within a 28-day period after the first positive culture being 36% (Dedoukou et al., 2011).

Over the past few years, an effort has been made by the Ministry of Health in collaboration with the medical societies to introduce and disseminate clinical guidelines. For example, in 2013 and 2014, 25 new guidelines on obstetrics and gynaecology were produced, endorsed and presented by the Hellenic Society of Obstetrics and Gynaecology, in collaboration with government agencies and other medical societies (Vrachnis, Loufopoulos & Tarlatzis, 2015). Nevertheless, awareness and use of guidelines and protocols remains weak, as demonstrated by a survey aimed at investigating knowledge and application of protocols and criteria according to WHO's definition of quality care in the operating room: of the 153 nurses participating in the survey, 55% were unaware of the safety checklist as defined by WHO, and of those who knew it, only 43% used it (Karathanasi, Malliarou & Zyga, 2013).

Medical errors pose another challenge to the effectiveness of the health care system. Greece has no central national authority to which medical errors can be reported; most adverse events are detected using ad hoc reporting, which identifies only a small number of adverse events. However, research confirms that medical malpractice is present in the Greek health system and that the invasive medical specialties show the highest rates of adverse events (Pollalis, Vozikis & Riga, 2012). An attempt to estimate the economic burden of medical errors in Greece based on the review of 128 compensation cases awarded by civil courts between 2000 and 2009 found that the mean compensation amounted to €292 613, representing 35% of claimed compensation (Riga, Vozikis & Pollalis, 2014). The debate raised among health policy-makers as to the appropriate response to the problem resulted in proposals ranging from implementation of nationwide mandatory reporting, with public release of performance data, to voluntary reporting and quality-assurance efforts that protect the confidentiality of error-related data.

7.7 Transparency and accountability

A number of institutions are tasked with combating corruption and ensuring transparency and accountability in public administration and the health care sector. These include the General Inspector of Public Administration, the Body of Inspectors for Health and Welfare Services and the Ombudsman for Health and Welfare, as well as the agency that monitors SHI funds expenditure (YPEDY FKA). Although these institutions are striving to fulfil their

mandates, their effectiveness is limited. As the Transparency International survey on petty corruption in Greece, conducted in 2012, indicates, health care is at the top of the petty corruption list in both the public and private sectors (Transparency International, 2013). Among the key causes are lack of information for patients, long waiting lists, ineffective managerial structures, weak information management systems, limited administrative capacity, lack of monitoring processes and supervision mechanisms, and low salaries for health professionals that are unrelated to their performance (Avgoustatos & Economou, 2013).

Some of the reforms introduced after 2010 are expected to have a direct effect on transparency and accountability. These includes mandatory e-prescribing and e-referrals systems for ESY- and EOPYY-contracted doctors. Moreover, a comprehensive range of effective measures have been implemented to increase monitoring and make financial transactions within the health system more transparent, such as the development of the Price Monitoring Tool for the collection and analysis of tenders and technical specifications published by hospitals. Another initiative is the Clarity Programme, introduced in 2010, which promotes transparency and openness of the Greek Government and its policies (Diavgeia, <https://www.diavgeia.gov.gr>). It requires all ministries, public institutions, regulatory authorities and local governments to publish their decisions online.

Although the initiatives highlighted above increase transparency of public administration, few steps have been taken to empower citizens and to strengthen their participation in health policy-making and priority setting. Regional health boards, which require participation from members of the public, were never established and the representation of various groups of citizens within KESY is not relevant since KESY has never functioned as a consultative body in health policy planning. In addition, the inclusion of one representative on behalf of those insured and one for pensioners on EOPYY's Administrative Board cannot be considered adequate representation of members of all the health insurance funds that merged into EOPYY.

It would also be true to say that consultation through the Greek open government website (www.opengov.gr) is more a way for people to express their opinions, rather than a formal process of effective public participation. It is also indicative that the various public satisfaction surveys concerning health services have never been taken into account in health policy-making. As a consequence, decision-making on the public financing of various health sector functions does not take into account citizens' views. Instead, currently

decisions are largely based on the requirements determined by the EAP and austerity policies. Interestingly, a clear preference for active public involvement in the process of priority setting and resource allocation was expressed in a survey where 240 out of 300 participants (83%) stated that their opinions should inform decisions regarding prevention and specific programmes, while 210 (70%) believed that their views should be taken into account in clinical practice (Theodorou et al., 2010).

In the past, serious concerns have also been raised regarding ESY's responsiveness to the legitimate expectations of patients. Historically, Greece has been among the OECD countries with the lowest levels of overall responsiveness for both inpatient and outpatient services (Valentine et al., 2003), with experience of confidentiality rated among the better aspects, and choice and autonomy among the worst (National School of Public Health, 2006). However, there is no recent evidence that would take into account changes implemented after the onset of the crisis and growing issues with accessing health care.

8. Conclusions

Key findings

- The reforms that have been taking place in the Greek health care system since 2010 have mainly focused on financial and organizational dimensions, partially tackling long-term structural health system issues. However, carrying out major changes coupled with extensive financial cuts has proved to be very challenging in terms of both the ability to conduct meaningful reforms and the consequences for service delivery. Overall, the content and the process of reforms have been mainly technocratic/managerial in nature, with insufficient consideration for the broader functioning of the health system and the health needs of the population.
- By far, the most substantial structural reform has been the administrative merging of the health care branches of the main SHI funds into a single health insurance fund, EOPYY. This was accompanied by unifying the benefits package for EOPYY members, regulation of contracting with service providers and setting some quality and efficiency standards. The recent introduction of EFKA as a single collector of SHI contributions also reinforces the streamlining and rationalization of the administrative framework that underpins the health system.
- Cost-containment measures have taken the form of horizontal cuts rather than a more sophisticated and strategic approach targeting resource allocation, partially because of the pressure exerted by the EAP to achieve immediate results in health expenditure cuts. Tellingly, after budget reductions were made, the shares of government spending by health care function (inpatient services, outpatient services, pharmaceuticals, etc.) remained largely unchanged with the exception of pharmaceuticals, indicating that cuts were made across the board in order to achieve targets rather than to increase efficiency in the long term. Even within the hospital sector, cuts to supplies have not been accompanied by either containment of expenditure on overheads and other supportive

services or efforts to rationalize the distribution of existing resources. However, the implementation of a DRG payment system, the efforts to develop a more transparent and efficient procurement system and the introduction of e-governance tools are important steps leading towards increased efficiency.

- The high level of private health expenditure, including widespread informal payments, places an increasing financial burden on patients, widens inequities and undermines the constitutional commitment to free access to health services.
- The government has made persistent attempts to address the gaps in population coverage for health services resulting from unemployment. After two unsuccessful policy attempts, important steps were taken in 2016 to grant equal access to health services for both the unemployed and residents without health coverage.
- Greece faces substantial problems in planning and rational allocation of health care resources. There is a large imbalance in the distribution of physical resources between urban centres and rural areas, as well as between the public and private sectors. Similarly, there are serious imbalances in the distribution of medical personnel, where a general oversupply of doctors coexists with medical understaffing in ESY services. There is inadequate supply of nurses in public hospitals despite sufficient number of nursing graduates. The problem is further exacerbated by the current restrictions on hiring new personnel in the public sector.
- Efforts have been made over the past few years to improve the quality of care, including the development of new protocols for major chronic conditions. Furthermore, an e-prescription system, which improves the monitoring of both the appropriateness and the cost of prescribing, has been widely implemented. Despite these important steps, disease management is still far from effective in Greece, as the main focus is on prescribing, while only a fraction of the newly developed protocols have been routinely implemented in practice.
- A GP-based comprehensive, integrated primary health care system with gatekeeping functions is lacking, particularly in urban areas. Existing primary care is neither well developed nor well organized, while health services are unilaterally oriented towards acute health problems, rarely engaging in health promotion or disease prevention. Furthermore, integration of health and social services and the development of long-term

care have not been explicitly included in the reform agenda. The newly announced primary care reforms, which began implementation in 2017, are an evidence-based response to these challenges.

- Mechanisms for supervising and evaluating health care services are scarce; currently there are few effective systems for measuring the use of health resources, assessing and monitoring outcomes of care or collecting patient information. The performance of the Greek health system lags considerably behind other EU countries in addressing specific diseases, such as frequent types of treatable cancer (breast, cervical, prostate, colon) or circulatory diseases.
- At the same time, population surveys show high levels of dissatisfaction with structural, organizational and administrative issues within the health system as well as with the service itself.

Lessons learned from the health system changes

- Greece serves as a potent example that top-down, big-bang approaches to reforming the health system may not be the optimal way forward. Although many of the reforms attempted since 2010 were necessary goals, in Greece's case, they were too much and too fast.
- Prior to 2009, lack of political will and consistency led to delays in much-needed and important reforms. Once the implementation of changes began as part of the requirements of the EAP, the context was much more unfavourable in terms of lack of funding, time and other resources, and this has adversely affected both process and outcomes. Consequently, timely responses to persistent health system problems, under strong government stewardship, are the optimal strategy for tackling reform.
- Reform processes may trigger unintended consequences. Examples in Greece included worsening access to care and pharmaceuticals; weakening of key programmes, such as mental health, cancer prevention and infectious disease control; and lack of focus on areas that are key building blocks of the health care system, such as strengthening primary care.
- Managing change in the context of economic crisis requires a steady commitment to key health system goals, such as sustaining universal population coverage, a focus on population needs, a goal to improve the quality of care and a strategic reliance on evidence-informed policy-making to find appropriate responses.

Remaining challenges and future prospects

Despite the major efforts made so far, a number of key sources of health system inefficiencies are still to be addressed: in particular primary care, lack of planning and coordination and lack of funding. Another challenge is the lack of administrative capacity to introduce managerial reforms and follow them through. The gaps in information flows between various state actors, variation in technical skills and a lack of meaningful performance evaluation further encourage resistance to change. The inability to bring about change has always been a major characteristic of the Greek health care system, caused by political conditions, lack of transparency and substantial resistance from medical stakeholders. Even in 2017, political actors, decision-makers and stakeholders appear to disagree fundamentally over health system values and the direction of health care reforms, which further complicates their implementation.

The economic crisis has highlighted the need for radical restructuring of the Greek health care system towards its stated aim of providing high-quality services equitably, universally and free at the point of delivery. In this context, health policy-makers should reconsider six priorities:

- ensuring equitable access to services;
- improving empowerment of citizens in decision-making about the services they need and their treatment options;
- restructuring the health system towards a patient-centred, primary care system;
- improving preventive services and tackling risk factors in population health;
- increasing decentralization and regionalization of decision-making and provision; and
- increasing the accountability of the health sector.

There is also a need to rethink and to promote a public debate on the health budget, which must be viewed not as a financial burden but as a developmental tool, with a focus on addressing not only economic dimensions but also the welfare of citizens. In other words, resetting the social values underlying the health care system is a prerequisite for establishing a new paradigm for its sustainable development.

9. Appendices

9.1 References

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9.2 Useful websites

Association of Hospital Doctors of Athens and Piraeus
<http://www.enap.gr>

Centre for Mental Health and Research
<http://www.ekepsy.gr/>

Electronic Governance of Social Insurance
<http://www.idika.gr/>

Federation of Hospital Doctors' Unions
<http://www.oengegr.com>

General Secretariat of Social Security
<http://www.ggka.gr>

Health Atlas

<https://healthatlas.gov.gr/#!/>

Hellenic Accreditation System

<http://www.esyd.gr/portal/p/esyd/en/index.jsp>

Hellenic Centre for Disease Control and Prevention

<http://www.keelpno.gr/en-us/home.aspx>

Hellenic Nurses' Association

<http://www.esne.gr>

Hellenic Organization for Standardization

http://www.elot.gr/default_en.aspx

Hellenic Society of General Medicine

<http://www.elegeia.gr>

Ministry of Health

<http://www.moh.gov.gr/>

National Evaluation Centre of Quality and Technology in Health

<http://www.ekappy.gr/?lang=en>

National Organization for the Provision of Health Services

<http://www.eopyy.gov.gr>

National School of Public Health

<http://www.esdy.edu.gr>

Pan-Hellenic Federation of Public Hospital Workers

<http://www.poedhn.gr/>

Pan-Hellenic Medical Association

<http://www.pis.gr>

Pan-Hellenic Pharmaceutical Association

<http://www.pfs.gr>

Unified Social Security Fund

<http://www.efka.gov.gr/>

9.3 HiT methodology and production process

HiTs are produced by country experts in collaboration with the Observatory's research directors and staff. They are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions,

suggestions for data sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. This HiT has used a revised version of the template that is being piloted during 2016–2017 and will be available on the Observatory web site once it has been finalized. The previous (2010) version of the template is available online at: [http://www.euro.who.int/en/home/projects/observatory/publications/health-system-profiles-hits\(hit-template-2010](http://www.euro.who.int/en/home/projects/observatory/publications/health-system-profiles-hits(hit-template-2010).

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 1 200 indicators for the 34 OECD countries. Data are drawn from information collected by national statistical bureaux and health ministries. The World Bank provides World Development Indicators, which also rely on official sources.

In addition to the information and data provided by the country experts, the Observatory supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the European Health for All database. The Health for All database contains more than 600 indicators defined by the WHO Regional Office for Europe for the purpose of monitoring Health in All Policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments.

HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

A typical HiT consists of nine chapters.

- 1 Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.
- 2 Organization and governance: provides an overview of how the health system in the country is organized, governed, planned and regulated, as well as the historical background of the system; outlines the main actors and their decision-making powers; and describes the level of patient empowerment in the areas of information, choice, rights and cross-border health care.

- 3 Financing: provides information on the level of expenditure and the distribution of health spending across different service areas, sources of revenue, how resources are pooled and allocated, who is covered, what benefits are covered, the extent of user charges and other out-of-pocket payments, voluntary health insurance and how providers and health workers are paid.
- 4 Physical and human resources: deals with the planning and distribution of capital stock and investments, infrastructure and medical equipment; the context in which information technology systems operate; and human resource input into the health system, including information on workforce trends, professional mobility, training and career paths.
- 5 Provision of services: concentrates on the organization and delivery of services and patient flows, addressing public health, primary care, secondary and tertiary care, day care, emergency care, pharmaceutical care, rehabilitation, long-term care, services for informal carers, palliative care, mental health care and dental care.
- 6 Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.
- 7 Assessment of the health system: provides an assessment of systems for monitoring health system performance, the impact of the health system on population health, access to health services, financial protection, health system efficiency, health care quality and safety, and transparency and accountability.
- 8 Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
- 9 Appendices: includes references and useful web sites.

The quality of HiTs is of real importance since they inform policy-making and meta-analysis. HiTs are the subject of wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to the following:

- A rigorous review process.
- There are further efforts to ensure quality while the report is finalized that focus on copy-editing and proofreading.

- HiTs are disseminated (hard copies, electronic publication, translations and launches).

The editor supports the authors throughout the production process and in close consultation with the authors ensures that all stages of the process are taken forward as effectively as possible. One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely with each other to ensure that all stages of the process are as effective as possible and that HiTs meet the series standard and can support both national decision-making and comparisons across countries.

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- to highlight common challenges and areas that require more in-depth analysis; and
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