

## Introduction

### Government and recent political history

The Republic of Cyprus was established by the 1960 Constitution that marked the end of the Cypriots' fight for independence from British colonial rule. Cyprus has an elected president and a House of Representatives; voting is mandatory. The country is divided into six administrative districts: Ammochostos, Kyrenia, Larnaca, Limassol, Nicosia and Paphos. Cyprus became a full member of the European Union on 1 May 2004.

### Population

At the end of 2002 the population of Cyprus was 715 100 (350 600 males, 364 500 females), with a population density of 82 people per km<sup>2</sup>. The population is ageing, although the young population remains quite large (20.9%) compared to the over 65 population (11.8%).

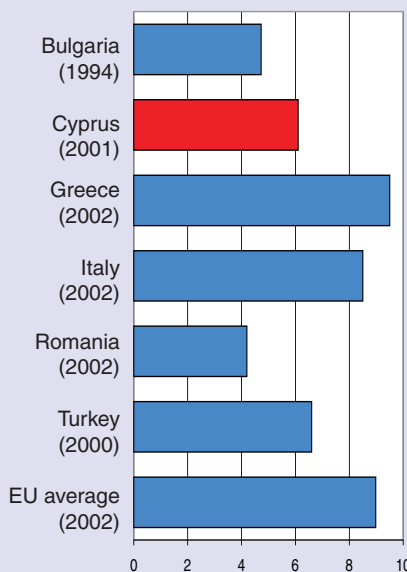
### Average life expectancy

In 2001 Cypriots had a life expectancy at birth approximately equal to the EU average for Member States prior to May 2004 for both males (76.1 years) and females (81 years).

### Leading causes of death

The main causes of death in 2001 were heart disease (34.8%), cancer (10%), diseases of the respiratory system (5.9%), cerebrovascular diseases (4.5%) and deaths from external causes (2.8%). Infant mortality has declined gradually from 17.2 infant deaths per 1000 live births in 1980 to 4.9 in 2001.

**Fig. 1. Total health care expenditure as % of GDP, comparing Cyprus, selected countries and EU average**



Source: WHO Regional Office for Europe health for all database, June 2004.

### Recent history of the health care system

The first social insurance scheme was established in 1957 when Cyprus was still a British colony. In 1964 social insurance was extended to cover the employed population and in 1980 it was transformed from a flat rate to an earnings-related scheme. Since then, social security has been developed and pension coverage universalized. The extensive use of tripartite agreements

**European Observatory**  
on Health Systems and Policies  
WHO Regional Office for Europe  
Scherfigsvej 8  
DK-2100 Copenhagen  
Denmark  
Telephone: +45 39 17 17 17  
Fax: +45 39 17 18 18  
E-mail: [info@obs.euro.who.int](mailto:info@obs.euro.who.int)  
[www.observatory.dk](http://www.observatory.dk)

between the government, employers and workers contributed to the development and successful implementation of social insurance in Cyprus.

## Health expenditure

Total expenditure on health care in Cyprus was estimated at 5.8% in 2002, increasing from 4.1% in 1990. Cyprus spent 360 million Cyprus pounds (£C) ( 622.8 million) on health care or £C 500 ( 865) per person. Public expenditure constituted 33% of total expenditure in 2002.

## Overview

The Cyprus health system is characterized by outdated and inefficient organization and management and an extensive private health sector. As a result, a major reform is planned: the introduction of a National Health Insurance System (NHIS) within the next five years. The aims of the NHIS are to provide adequate and equitable access to a comprehensive health care system for all citizens and to improve the efficiency of health provision. However, the current health system in Cyprus faces many challenges including limited monitoring and regulation of the private sector, payment methods with few incentives to improve productivity, no comprehensive health data collection and an ageing population.

## Organizational structure and management

The Council of Ministers has overall responsibility for the state's role in the health system, exercising this authority through the Ministries of Health, Labour and Social Insurance, and Finance.

The Ministry of Health is responsible for the organization of the health system and the provision

of state-financed health services, with the ultimate aim of promoting and protecting people's health. The Ministry of Health formulates national health policies, coordinates the activities of both the private and the public sector and promotes the enactment of relevant legislation. It is divided into separate, specialized departments including: Pharmaceutical Services, Medical and Public Health Services, Dental Services and Mental Health Services.

The Ministry of Labour and Social Insurance implements government policies on employment, social insurance, social welfare and industrial relations. It is divided into three important departments: social insurance, social welfare services and labour. The Ministry of Finance is responsible for the administration of specific allowances and grants e.g. mobility allowance, child benefits and mothers' allowance.

## Planning, regulation and management

The Council of Ministers supervises and coordinates the social protection system in Cyprus. A top-heavy bureaucratic hierarchy exists within the public hospitals, with considerable civil service and ministerial control of management and decision-making. This centralized, rule-bound state of public hospitals constitutes a serious hurdle to improving hospitals' efficiency and competitiveness. In 1998 the Nuffield Institute for Health conducted an important review of the management and organization of Ministry of Health hospitals. This review identified serious regulation and management problems such as the lack of formal organized contact and competition between the public and private sectors. As a result, a new law is being developed that aims to improve communication between the sectors. The report described Cypriot hospitals as "inappropriate to modern systems of management" and emphasized the need for reform of the organizational and managerial structures of the public health system.

## **Decentralization of the health care system**

Cyprus has a highly centralized public administration system, with most administrative and regulatory functions taking place at state level. However, health reform is under way, focusing on functional decentralization in order to integrate central government and the peripheries.

## **Health care financing and expenditure**

### **Health care financing and coverage**

Government provision of health care services mostly is funded through general taxation with a small amount financed from charges imposed on some services. Private health insurance provides some financing but at a relatively low level. There is no evidence of informal payments but it is likely that physicians, dentists and other medical practitioners in the private sector do not declare their full income. The financing scheme is expected to change with the implementation of the comprehensive NHIS, when financing of the health care services will be based largely on compulsory health insurance contributions. With this reform, the public health system will be funded equally from compulsory health insurance contributions and taxation. The NHIS will provide comprehensive medical care to the entire resident population at all levels of health care.

Coverage is not yet universal. There are five types of health care coverage: public health provision, private health provision, funds for medical care by employers and trade unions, a scheme for sponsored patients abroad, private health insurance. Individuals who are not entitled to either free medical care or publicly provided medical care at reduced cost purchase private health services. However, it is common for those entitled to public health services to seek medical care in the private sector and pay out-of-pocket.

## **Health care benefits and rationing**

The health care benefits provided are means tested and include general outpatient care, specialist outpatient and inpatient care, diagnostic and paramedical examinations, hospitalization, dental care, medical rehabilitation and provision of prostheses, domiciliary visits, ambulance services.

Also, the Ministry of Health provides public health, mental health and preventive services and sponsors treatment abroad for patients who cannot be treated in Cyprus.

Approximately 85% to 90% of the population (low-income households and civil servants) has access to free at the point of use or reduced rate public health services, while the remainder pay according to specified fee schedules or access the private health sector.

In 2000, 1397 Cypriots (0.2% of the population) sought treatment abroad with the costs covered by the Cypriot health system. The majority of patients were treated in the United Kingdom of Great Britain and Northern Ireland, Greece and Israel.

### **Complementary sources of finance**

The government currently funds less than half of total health expenditure. The remainder is funded by out-of-pocket payments, private health insurance and international donors in the form of capital investments.

### **Out-of-pocket payments**

Median income households are reported to spend nearly 4% of their annual income on health care services. Lowest income households spend 6.4% and highest income households spend 2.6%. Out-of-pocket expenditures have increased since 1996, with the burden of payment increasing more for lower income households. Furthermore, individuals with chronic or severe acute illnesses may face catastrophic levels of health expenditure.

## Private health insurance

Although the development of local insurance companies began in the 1980s, the private medical insurance sector in Cyprus remains limited. Most companies tend to offer minimal health care coverage alongside other insurance, however, a small number of specialized health insurance companies have entered the private insurance market (e.g. BUPA, UK).

## Health care expenditure

Total health care expenditure was 5.8% of GDP in 2002. Most of this expenditure on health care services was realized in the private sector: 3% of GDP from the private sector compared to 2.8% in the public sector. The planned NHIS is likely to lead to an increase in public health care expenditure.

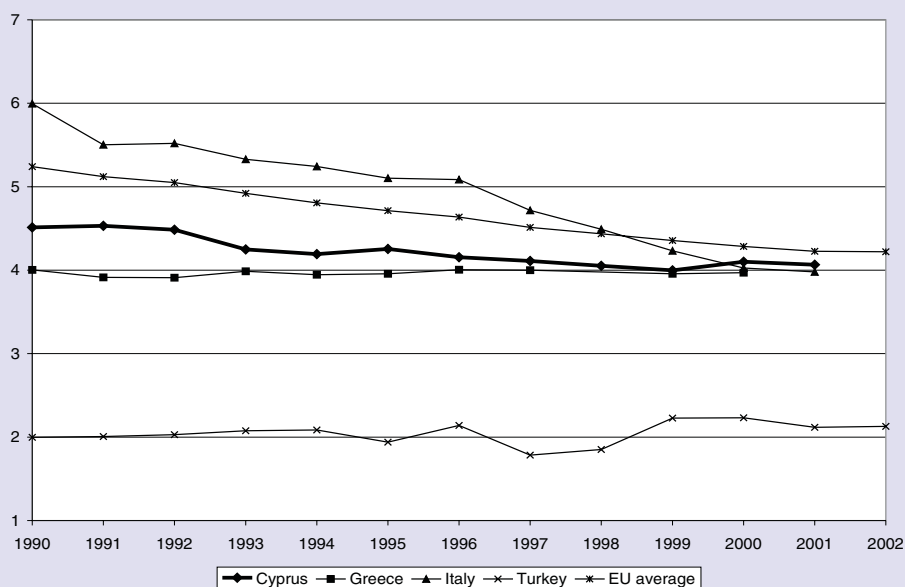
## Health delivery system

### Public health services

The responsibility for public health services lies with doctors specializing in community medicine and hygiene, the Ministry's Department for Medical and Public Health Services and the Agency for the Protection of Mother and Child. The Ministry of Agriculture also plays a role in public health in Cyprus e.g. regulating pesticides, food safety and other environmental health issues.

The child immunization policy was developed in line with WHO guidelines (Expanded Programme on Immunization). About 25% of the immunizations are given by public health physicians and paediatricians in the maternal and child health centres, the remainder are performed by paediatricians working in the private sector. Cyprus has achieved high immunization coverage that has led to the eradication of neonatal tetanus and diphtheria.

Fig. 2. Hospital beds in acute hospitals per 1000 population, Cyprus, selected countries and EU average, 1990–2002



Source: WHO Regional Office for Europe health for all database, June 2004.

In response to high rates of obesity, the Ministry of Health established the National Committee for Nutrition in November 1992. Its main tasks are to determine the nutritional state of the average Cypriot, educate the population on nutritional matters, safeguard the production and distribution of food products and monitor compliance with state legislation on food safety and quality.

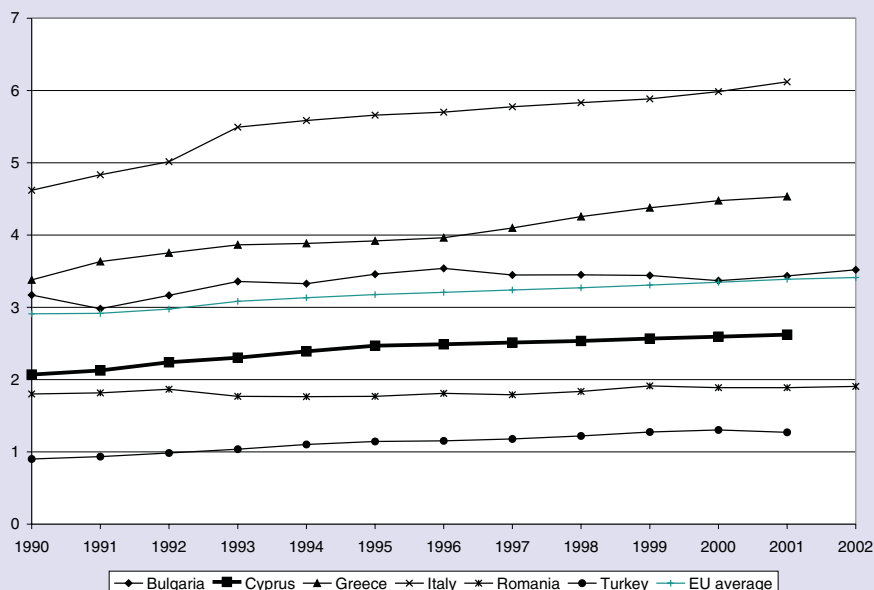
Following WHO recommendations, there have been improvements in the treatment of individuals with HIV/AIDS. All HIV/AIDS patients are treated free at the point of use in the public sector and, in some cases, in the private sector. Furthermore, there is an array of health education projects in place including seminars, presentations and pilot educational and promotional programmes. Additional public health programmes in Cyprus include the Educational Programme Against Smoking and the European Network of Health Promoting Schools.

Finally, the General Laboratory is responsible for performing controls on food and water samples; pharmaceuticals and illegal drugs; industrial supplies; and environmental pollution samples. It works closely with most ministries, municipalities and organizations and offers services to individuals on a fee-for-service basis.

### Primary and secondary ambulatory care

Health care delivery is twofold – the government-run public system and the private system provided by the private hospitals and physicians. Cyprus has no gatekeeping system at the moment, thus patients are free to select the physician or specialist of their choice. Public primary health care is provided at 4 hospital outpatient departments, 7 suburban outpatient departments, 5 urban and 23 rural health centres and 274 sub-centres. All Cypriots are offered maternal

Fig. 3. Physicians per 1000 population, Cyprus, selected countries and EU average, 1990–2002



Source: WHO Regional Office for Europe health for all database, June 2004.

and child health services free at the point of use through a network of maternal and child health centres that operate via primary health centres and hospital outpatient departments. The public sector provides dental care in 56 dental health clinics and 4 mobile dental units.

General hospitals (with the exception of Nicosia General Hospital) offer only specialist outpatient primary care. The outpatient system has recently been expanded to include community mental health care services: providing basic outpatient medical, diagnostic and pharmaceutical services. A recent analysis of user satisfaction with outpatient care revealed greater satisfaction with private than public care and a decline in overall satisfaction in both sectors between 1996 and 2002 (with a more significant decline in the public sector).

Most private health services are provided by practising physicians and dentists who offer all types of outpatient services in their own surgeries, mainly in towns or large villages.

## **Secondary and tertiary inpatient care**

Secondary and tertiary health care is provided by the district hospitals and specialist centres (e.g. Cyprus Institute of Neurology and Genetics). Nicosia General Hospital acts as the overall referral hospital for certain specialties that are not provided elsewhere in the country. Also, three small rural hospitals in relatively isolated areas provide a comprehensive set of services including specialist inpatient services. There are two specialized public hospitals: a psychiatric hospital (Athalassa Hospital) and a hospital for children and women (Archbishop Makarios III, Nicosia).

During the last ten years, new hospitals have been built in Larnaca, Paphos, Limassol, Ammochostos and Nicosia. In 1995 public hospital beds accounted for 43% of total beds. In 2001 the average length of stay in public hospitals was 6 days. The Emergency Care Unit offers emergency pre-hospital care, free at the point

of use, to all citizens. The Ministry's Medical Services Department owns 50 ambulances.

A recent study found that general impressions and satisfaction were slightly more positive in the private than the public sector hospitals, with an observed decline in satisfaction in both sectors between 1996 and 2002.

## **Social care**

Social welfare policy was introduced in Cyprus in 1946, initially to regulate the supervision of juvenile offenders, after-care of reform school boys and protection of deprived children. By the 1970s social welfare had evolved into a wide spectrum of activities designed to enable the population to cope with social problems.

The Ministry of Labour and Social Insurance supervises the official state agencies for the provision and promotion of social welfare services. These consist of a central office, six district welfare offices and a sub-office through which services are provided to every community in Cyprus. Voluntary organizations also play an important role in social welfare, working with the Council of Ministers and focusing on specific areas such as ageing, special needs, disability, family violence and drug abuse.

The government offers many social services. Public assistance covers the basic and social needs of low-income individuals. Employment incentives are in place to encourage social inclusion and gradual independence from public assistance. District welfare officers provide advice, counselling and support to individuals receiving public assistance. A family support service was introduced in 1991 to provide home help for families on public assistance. Finally, community involvement initiatives such as day-care centres for children are in place.

The government also operates a variety of housing schemes for vulnerable people (e.g. refugees and low-income households) and for the revival of disadvantaged areas. Other schemes are in place to facilitate employment, lifelong (adult) learning, employment of people with disabilities,



and to help individuals to reconcile family life and employment. Social rights for people with disabilities are guaranteed under the laws for The Rights of Persons with a Mental Handicap (1989), Providing for Persons with Disabilities (2000) and Special Education (1999).

In response to the ageing population, the Government Strategic Plan 1999–2003 (Goals of the Department for Social Welfare Services) was developed to improve support for families providing informal care for older family members and to expand formal home care for older people.

## **Mental health**

Mental health services are offered by both public and private sectors, the latter mainly on an outpatient basis. Following WHO regulations, new legislation referring to the admission, treatment and care of those with mental illness was enacted in 1997. The new Mental Health Act emphasizes the rights of those with mental illness and creates multidisciplinary teams of lawyers, psychiatrists, psychologists and social workers dedicated to ensuring the protection of patient rights and high quality services, primarily in a community setting.

In 1998 a five-year plan was developed to decentralize mental health services into five administrative sectors and expand prevention-oriented services in the community. This has contributed to continued reductions in institutionalization, as evidenced by the decline in the number of psychiatric hospital beds. The government also planned some structural and functional changes to Athalassa Psychiatric Hospital. Of the total mental health costs in 2001, 57.5% were the functional costs of the Athalassa Hospital, the remainder was directed to all other mental health services.

## **Human resources and training**

There were 2.6 physicians and 4.2 nurses per 1000 population in 2001, both much lower than the EU averages of 3.5 and 6.8 respectively for

Member States prior to May 2004. The number of doctors employed in the private sector has grown disproportionately to those employed in the public sector: in 2001, more than 70% of physicians worked in the private sector. In contrast, the large majority of nursing staff is employed in public sector hospitals although there has been a significant increase in the number in private sector nursing since 1980. Cyprus has no medical school, therefore health care professionals' training is undertaken primarily in Greek and British universities.

## **Pharmaceuticals and health care technology assessment**

Cyprus's pharmaceutical market is divided into two independently operating sectors: public and private. Both sectors supply prescription and over-the-counter (OTC) products. The public sector is funded by the Government Medical Services through budgets approved by parliament and included in the national budget every financial year. The public sector purchases pharmaceuticals through the public procurement system. The Ministry of Health determines pricing, in consultation with the Medicinal Products Price Control Committee appointed by the Ministerial Council. The drug price in the exporting country is the basis for pricing in the private sector, thereby providing incentives to import drugs from the most expensive countries. The government is currently considering reforming this process because of these perverse incentives.

Pharmaceutical products are provided to different groups of patients at different costs. Individuals entitled to free medical care by the government medical services also are entitled to free medicines. Patients entitled to reduced-fee services receive reimbursements of 50%, private patients are not reimbursed.

A pharmaceutical product can be reimbursed only if it is included in the list prepared by the Drugs Committee of the Department of Pharmaceutical Services. A group of clinical pharmacologists evaluates the products, according to the current

literature, based on three main evaluation criteria: efficacy, safety/toxicity and cost. Pharmacies are the exclusive distributors of medicinal products to the population including all prescription and non-prescription/OTC products.

A ten-stage procedure is in place for the government to purchase high technology medical equipment. The Department of Medical and Public Health Services starts the process by appointing a project team to prepare specifications for the equipment required. The Permanent Technical Committee of the Main Tender Board evaluates the applications and, usually, a minimum of four providers competes for the project. In the private sector, medical equipment is purchased by direct negotiation between the purchaser and the equipment provider.

## **Financial resource allocation**

Health care budgets are largely a replication of the previous year's budget adjusted for inflation and identified pressure areas. Budgetary control revolves around a centralized and bureaucratic system and focuses on identifying cost pressures at the macro level.

### **Payment of hospitals**

The annual hospital budget is included in the Ministry of Health annual budget and allocated to each hospital according to need, primarily on a historical basis adjusted for inflation. All public hospitals' expenditure is included in this annual budget. Normally a hospital is not the budget-holder and therefore there is little or no information on spending, this results in little awareness of cost and no incentive for control or economy.

### **Payment of physicians**

Public sector physicians are Ministry of Health employees who belong to a centralized civil

service staffing system that allocates them to posts according to defined needs. Doctors cannot move from their post unless a vacancy becomes available. In the public sector, primary care and hospital doctors are salaried employees; in the private sector, physicians are paid on a fee-for-service basis, with unregulated fees.

Under the proposed NHIS, every family will be registered with a general practitioner (GP) who is contracted by the Ministry on a capitation basis. There will be a uniform pricing policy for both public and private sectors.

## **Health care reforms**

The main health care reforms in Cyprus are centered on the organizational and financial infrastructure as proposed by the Nuffield Institute, the introduction of the NHIS, the health for all strategy and EU accession.

The Strategic Plan 1999–2003 aimed, among other things, to improve public health and preventive activities, coordinate the public and private sectors, create a medical school, encourage medical research and create a district level authority for decentralization. Some progress has been observed in these areas.

The NHIS will address the rising costs of health care and inequitable access to health care services, and aims to improve the quality and financing of the health care system. It will provide general and specialized medical services, inpatient care (except chronic mental health care), diagnostic tests, drugs, rehabilitation services, dental care for children aged up to 15 and medical treatment abroad without co-payments (except for drugs in some cases). Primary care physicians will be paid a risk-adjusted capitation rate and specialists will be paid on a negotiated fee schedule. It will also introduce elements of competition between private and public sectors. In order to achieve the goals of improving access and efficiency there will need to be greater decentralization of managerial responsibilities



from the Ministry of Health to public hospitals, the introduction of modern cost accounting systems, establishment of quality assurance mechanisms and development of a GP system.

The design of health reform in Cyprus has been shaped by WHO health-for-all strategies. Specifically by recognizing the need to direct policies to reducing inequalities in health, improving the efficiency and effectiveness of the health care system, enhancing the recognized interrelation between socioeconomic status and health status and shifting the focus of health care to those in need. Actions based on the new public health priority areas are being developed in cooperation with WHO.

Cyprus was the first among the candidate countries successfully to harmonize its legislation with EU law, with significant impact on health care reform plans. For example, Cyprus is participating in the Public Health Programme 2003–2008 and is in the process of implementing a national health monitoring system. Also, direct communication with the European Monitoring Centre for Drugs and Drug Addiction has commenced.

## Conclusions

Cyprus ranks fairly high in international comparisons of population health and health care standards. However, there are some emerging health threats and rising rates of tobacco consumption and obesity. The health care system is facing some serious challenges as its organization and management is outdated and inefficient. Also, there is significant and largely unregulated private sector involvement in the funding and delivery of health services, much higher than in any other EU country.

The planned NHIS will address some of the main structural weaknesses of the public health system by reforming the purchasing systems and provider payment mechanisms to improve efficiency and quality of care. Furthermore, the Ministry of Health will lose its managerial and control powers over individual public sector providers and assume a regulatory role over public and private providers.

**Table 1. Inpatient utilization and performance in acute hospitals in the WHO European Region, 2002 or latest available year**

	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Cyprus	4.1 <sup>a</sup>	8.1 <sup>a</sup>	5.5 <sup>a</sup>	80.1 <sup>a</sup>
Greece	4.0 <sup>b</sup>	15.2 <sup>d</sup>	–	–
Italy	4.0	15.7 <sup>a</sup>	6.9 <sup>a</sup>	76.0 <sup>a</sup>
Turkey	2.1	7.7	5.4	53.7
EU average	4.2	18.1 <sup>a</sup>	7.0 <sup>a</sup>	77.1 <sup>a</sup>

Source: WHO Regional Office for Europe health for all database, June 2004.

Notes: <sup>a</sup> 2001, <sup>b</sup> 2000, <sup>c</sup> 1999, <sup>d</sup> 1998, <sup>e</sup> 1997, <sup>f</sup> 1996.

The Health Care System in Transition (HiT) profile on Cyprus was written by Christina Golna (European Observatory on Health Systems and Policies), Panos Pashardes (University of Cyprus), Sara Allin (European Observatory on Health Systems and Policies), Mamas Theodorou (Open University, Athens), Sherry Merkur (LSE Health and Social Care) and Elias Mossialos (European Observatory on Health Systems and Policies). The HiT was edited by Sara Allin and Elias Mossialos.

We are particularly grateful to Annita Anastasiadou for coordinating the Cyprus HiT and providing useful advice and support. In addition, we are grateful to the Ministry of Health of the Republic of Cyprus, Andreas Polynikis and Panayotis Yiallourous for their support, data collection, input on recent developments and extensive reviewing. The editors are thankful to Symeon Matsis, former Permanent Secretary to the Ministry of Health, for his encouragement and for initiating the process and commissioning this HiT on Cyprus. We would also like to thank Andreas Trifonides, former Permanent Secretary to the Ministry of Health, for his support and comments. The editors are grateful to the staff of the mental health and pharmaceutical services, particularly Panagiota Kokinou, for their useful comments.

The Health Care Systems in Transition (HiT) profiles are country-based reports that provide an analytical description of each health care system and of reform initiatives in progress or under development. The HiTs are a key element that underpins the work of the European Observatory on Health Systems and Policies.

The Observatory is a unique undertaking that brings together the WHO Regional Office for Europe, the governments of Belgium, Finland, Greece, Norway, Spain and Sweden, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine. This partnership supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of health care systems in Europe.