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# Can people afford to pay for health care?

New evidence  
on financial protection  
in Cyprus

Antonis Kontemeniotis  
Mamas Theodorou



Cyprus

# WHO Barcelona Office for Health Systems Financing

The WHO Barcelona Office is a centre of excellence in health financing for universal health coverage. It works with Member States across WHO's European Region to promote evidence-informed policy making.

A key part of the work of the Office is to assess country and regional progress towards universal health coverage by monitoring financial protection – the impact of out-of-pocket payments for health on living standards and poverty. Financial protection is a core dimension of health system performance and an indicator for the Sustainable Development Goals.

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Established in 1999, the Office is supported by the Government of the Autonomous Community of Catalonia, Spain. It is part of the Division of Country Health Policies and Systems of the WHO Regional Office for Europe.





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## Abstract & keywords

This review is part of a series of country-based studies generating new evidence on financial protection in European health systems. Financial protection is central to universal health coverage and a core dimension of health system performance.

CYPRUS  
HEALTHCARE FINANCING  
HEALTH EXPENDITURES  
HEALTH SERVICES ACCESSIBILITY  
FINANCING, PERSONAL  
POVERTY  
UNIVERSAL COVERAGE

# About the series

This series of country-based reviews monitors financial protection in European health systems by assessing the impact of out-of-pocket payments on household living standards. Financial protection is central to universal health coverage and a core dimension of health system performance.

**What is the policy issue?** People experience financial hardship when out-of-pocket payments – formal and informal payments made at the point of using any health care good or service – are large in relation to a household's ability to pay. Out-of-pocket payments may not be a problem if they are small or paid by people who can afford them, but even small out-of-pocket payments can cause financial hardship for poor people and those who have to pay for long-term treatment such as medicines for chronic illness. Where health systems fail to provide adequate financial protection, people may not have enough money to pay for health care or to meet other basic needs. As a result, lack of financial protection may reduce access to health care, undermine health status, deepen poverty and exacerbate health and socioeconomic inequalities. Because all health systems involve a degree of out-of-pocket payment, financial hardship can be a problem in any country.

**How do country reviews assess financial protection?** Each review is based on analysis of data from household budget surveys. Using household consumption as a proxy for living standards, it is possible to assess:

- how much households spend on health out of pocket in relation to their capacity to pay; out-of-pocket payments that exceed a threshold of a household's capacity to pay are considered to be *catastrophic*;
- household ability to meet basic needs after paying out of pocket for health; out-of-pocket payments that push households below a poverty line or basic needs line are considered to be *impoverishing*;
- how many households are affected, which households are most likely to be affected and the types of health care that result in financial hardship; and
- changes in any of the above over time.

**Why is monitoring financial protection useful?** The reviews identify the factors that strengthen and undermine financial protection; highlight implications for policy; and draw attention to areas that require further analysis. The overall aim of the series is to provide policy-makers and

others with robust, context-specific and actionable evidence that they can use to move towards universal health coverage. A limitation common to all analysis of financial protection is that it measures financial hardship among households who are using health services, and does not capture financial barriers to access that result in unmet need for health care. For this reason, the reviews systematically draw on evidence of unmet need, where available, to complement analysis of financial protection.

**How are the reviews produced?** Each review is produced by one or more country experts in collaboration with the WHO Barcelona Office for Health Systems Financing, part of the Division of Country Health Policies and Systems of the WHO Regional Office for Europe. To facilitate comparison across countries, the reviews follow a standard template, draw on similar sources of data (see Annex 1) and use the same methods (see Annex 2). Every review is subject to external peer review. Results are also shared with countries through a consultation process held jointly by WHO/Europe and WHO headquarters. The country consultation includes regional and global financial protection indicators (see Annex 3).

**What is the basis for WHO's work on financial protection in Europe?**

The Sustainable Development Goals adopted by the United Nations in 2015 call for monitoring of, and reporting on, financial protection as one of two indicators of universal health coverage. WHO support to Member States for monitoring financial protection in Europe is also underpinned by the European Programme of Work, 2020–2025 (United Action for Better Health in Europe), which includes moving towards universal health coverage as the first of three core priorities for the WHO European Region. Through the European Programme of Work, the WHO Regional Office for Europe will work to support national authorities to reduce financial hardship and unmet need for health services (including medicines) by identifying gaps in health coverage and redesigning coverage policy to address these gaps. The Tallinn Charter: Health Systems for Health and Wealth and resolution EUR/RC65/R5 on priorities for health systems strengthening in the WHO European Region include a commitment to work towards a Europe free of impoverishing out-of-pocket payments for health. A number of other regional and global resolutions call on WHO to provide Member States with tools and support for monitoring financial protection, including policy analysis and recommendations.

Comments and suggestions for improving the series are most welcome and can be sent to [euhsf@who.int](mailto:euhsf@who.int).





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# Abbreviations

<b>COICOP</b>	Classification of Individual Consumption According to Purpose
<b>CYSTAT</b>	Statistical Service of Cyprus
<b>EHIS</b>	European Health Interview Survey
<b>EU</b>	European Union
<b>EU-SILC</b>	European Union Statistics on Income and Living Conditions
<b>EURIPID</b>	European Integrated Price Information Database
<b>GDP</b>	gross domestic product
<b>GP</b>	general practitioner
<b>HIO</b>	Health Insurance Organization
<b>MRI</b>	magnetic resonance imaging
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>SDGs</b>	Sustainable Development Goals
<b>VHI</b>	voluntary health insurance

## Executive summary

This review is the first comprehensive analysis of financial protection in the health system in Cyprus. Drawing on microdata from household budget surveys carried out by the Statistical Service of Cyprus in 2003, 2009 and 2015 (the latest data available at the time of publication), it finds that:

- 3.6% of households were impoverished, further impoverished or at risk of impoverishment after out-of-pocket payments in 2015, a substantial increase from 1.3% in 2009;
- 5% of households experienced catastrophic out-of-pocket payments in 2015, up from 3.5% of households in 2009 – an increase from 20 000 to 40 000 households;
- catastrophic health spending is heavily concentrated among the poorest households (in the lowest quintile); it also disproportionately affects older people and people who are publicly covered and do not have voluntary health insurance; and
- for poorer households, catastrophic spending is mainly driven by outpatient medicines, followed by outpatient care; among richer households, it is mainly driven by spending on inpatient care and diagnostic tests.

The health system in Cyprus has always relied heavily on out-of-pocket payments, reflecting:

- a complex system of health coverage with significant gaps in the share of the population covered;
- persistently low levels of public spending on health, well below what would be expected given the size of the economy;
- long-standing budget and capacity constraints in public facilities pushing many people to pay for privately provided medicines, diagnostic tests, consultations and inpatient treatment; and
- a large market for privately provided health services, including medicines, which draws human resources away from the publicly financed part of the health system and exacerbates health system inequalities and inefficiencies.

Although the incidence of catastrophic spending is higher in Cyprus than in many other European Union countries, it is low when compared to countries with similarly high levels of out-of-pocket payments – probably due to the near total absence of user charges for publicly financed health services before 2013. There were no user charges at all for covered people aged over 65 years and some covered low-income people. For all other people covered by publicly financed health services, the only user charge in place was a low, fixed co-payment for outpatient visits (€2 per visit).

Policy responses to the 2008 economic crisis in Cyprus led to a lasting decline in public spending on health per person, which is likely to have contributed to rising unmet need for health care and dental care, as well as to the increase in catastrophic health spending between 2009 and 2015. These policy responses included:

- restricting the basis for population entitlement to publicly financed health care in 2013, reducing the share of the population covered from 85% to 75%;
- simultaneously introducing new user charges for outpatient prescriptions, laboratory tests and emergency services and increasing existing user charges for outpatient visits; and
- cutting budgets, which increased waiting times for publicly financed treatment and encouraged public-sector health staff to move to the private sector.

The General Health System launched in 2019 is a major step towards universal health coverage in Cyprus. It is expected to reduce unmet need and financial hardship by:

- changing the basis for entitlement from citizenship, income and payment of contributions to residence, which extends publicly financed coverage to the 25% of the population that was previously not covered;
- simplifying user charges and improving protection mechanisms – for example, exemptions now apply to almost all co-payments and there is an annual cap covering all co-payments, with a more protective cap for children and people with a low income;

- introducing a single-payer system in which the purchasing agency – the Health Insurance Organization – purchases services from public and private providers, with the aim of reducing fragmentation, lowering waiting times, improving quality of care and reducing out-of-pocket payments; and
- increasing public investment in the health system.

In order to achieve these ambitious goals, Cyprus will have to secure continuing political support to keep the reform agenda on track. It will also need to ensure that public spending on health increases at a steady pace and step up efforts to strengthen the purchasing of health services.



# 1. Introduction

This review assesses the extent to which people in Cyprus experience financial hardship when they use health services, including medicines, drawing on data from household budget surveys conducted by the Statistical Service of Cyprus (CYSTAT) in 2003, 2009 and 2015. Research shows that financial hardship is more likely to occur when public spending on health is low relative to gross domestic product (GDP) and out-of-pocket payments account for a relatively high share of total spending on health (Xu et al., 2003; Xu et al., 2007; WHO, 2010; WHO Regional Office for Europe, 2019). Increases in public spending or reductions in out-of-pocket payments are not in themselves guarantees of better financial protection, however. Policy choices are also important.

Cyprus has historically been a country that devotes a very small share of GDP to health and has very high levels of private spending on health, particularly through out-of-pocket payments. Levels of public spending on health as a share of GDP in Cyprus – just under 3% – are the lowest in the European Union (EU) and have not changed in the last 10 years (WHO, 2020). In 2018 the Government spent just 6.6% of its total budget on health (the lowest share in the EU), while out-of-pocket payments have generally accounted for close to half of total spending on health (among the highest in the EU) (WHO, 2020).

Heavy reliance on out-of-pocket payments to finance health care reflects significant gaps in coverage – in 2019 around a quarter of the population was not covered by the publicly financed part of the health system – and the presence of a large number of private health-care providers. Private providers are used not only by people who are not publicly covered (non-beneficiaries) but also by people entitled to publicly financed health care (beneficiaries). Due to budget and capacity constraints in the publicly financed part of the system, resulting in long waiting times for treatment in public facilities, many beneficiaries pay out of pocket for privately provided health care.

Cyprus was hit heavily by the financial crisis that began in 2008. In response to the economic shock that followed the financial crisis, the Government introduced stringent austerity measures, including in the health system, which exacerbated problems with timely access to publicly financed health services.

A major reform was initiated in June 2019 to extend coverage to the whole population and to address fragmentation and other inefficiencies in the health system, including waiting times for treatment in public facilities and very high out-of-pocket payments. The new General Health System involves a single purchasing agency – the Health Insurance Organization (HIO) – contracting both public and private health-care providers and pharmacies under a single-payer system financed through the state budget and contributions from employees, pensioners, employers and self-employed people. A key feature of the new system is that entitlement is no longer linked to citizenship, income and payment of contributions but based on legal residence. It is expected that the new system will increase public spending on health, reduce out-of-pocket payments and enable the health system to make progress towards universal health coverage (OECD & European Observatory on Health Systems and Policies, 2019).

This review is the first comprehensive and up-to-date analysis of financial protection in Cyprus (Yerramilli et al., 2018). The review is structured as follows. Section 2 sets out the analytical approach and sources of data used to measure financial protection. Section 3 provides a brief overview of health coverage and access to health care. Sections 4 and 5 present the results of the statistical analysis, with a focus on out-of-pocket payments in Section 4 and financial protection in Section 5. Section 6 provides a discussion of results of the financial protection analysis and identifies factors that strengthen and undermine financial protection (those that affect people's capacity to pay for health care and health system factors). Section 7 highlights implications for policy. Annex 1 provides information on household budget surveys, Annex 2 the methods used, Annex 3 regional and global financial protection indicators, and Annex 4 presents a glossary of terms.



# 2. Methods

This section summarizes the study's analytical approach and main data sources. More detailed information can be found in Annexes 1–3.

## 2.1 Analytical approach

The analysis of financial protection in this study is based on an approach developed by the WHO Regional Office for Europe (Cylus et al., 2018; WHO Regional Office for Europe, 2019), building on established methods of measuring financial protection (Wagstaff & van Doorslaer, 2003; Xu et al., 2003). Financial protection is measured using two main indicators: catastrophic out-of-pocket payments and impoverishing out-of-pocket payments. Table 1 summarizes the key dimensions of each indicator.

Table 1. Key dimensions of catastrophic and impoverishing spending on health

Impoverishing health spending	
<b>Definition</b>	The share of households <i>impoverished</i> or <i>further impoverished</i> after <i>out-of-pocket payments</i>
<b>Poverty line</b>	A <i>basic needs line</i> , calculated as the average amount spent on food, housing (rent) and <i>utilities</i> (water, electricity and fuel used for cooking and heating) by households between the 25th and 35th percentiles of the household <i>consumption</i> distribution who report any spending on each item, respectively, adjusted for household size and composition using Organisation for Economic Co-operation and Development (OECD) equivalence scales; these households are selected based on the assumption that they are able to meet, but not necessarily exceed, <i>basic needs</i> for food, housing and utilities; this standard amount is also used to define a household's <i>capacity to pay for health care</i> (see below)
<b>Poverty dimensions captured</b>	The share of households further impoverished, impoverished and at <i>risk of impoverishment</i> after <i>out-of-pocket payments</i> and the share of households not at risk of impoverishment after out-of-pocket payments; a household is impoverished if its total consumption falls below the basic needs line after out-of-pocket payments; further impoverished if its total consumption is below the basic needs line before out-of-pocket payments; and at risk of impoverishment if its total consumption after out-of-pocket payments comes within 120% of the basic needs line
<b>Disaggregation</b>	Results can be disaggregated into household <i>quintiles</i> by consumption and by other factors where relevant, as described above
<b>Data source</b>	Microdata from national <i>household budget surveys</i>
Catastrophic health spending	
<b>Definition</b>	The share of households with out-of-pocket payments that are greater than 40% of household <i>capacity to pay for health care</i>
<b>Numerator</b>	Out-of-pocket payments
<b>Denominator</b>	A household's <i>capacity to pay for health care</i> is defined as total household consumption minus a standard amount to cover basic needs; the standard amount is calculated as the average amount spent on food, housing and utilities by households between the 25th and 35th percentiles of the household consumption distribution, as described above; this standard amount is also used as a <i>poverty line</i> (basic needs line) to measure impoverishing health spending
<b>Disaggregation</b>	Results are disaggregated into household quintiles by consumption per person using OECD equivalence scales; disaggregation by place of residence (urban–rural), age of the head of the household, household composition and other factors is included where relevant
<b>Data source</b>	Microdata from national household budget surveys

Note: see Annex 4 for definitions of the words in italics.

Source: WHO Regional Office for Europe (2019).

## 2.2 Data sources

The study analyses anonymized microdata from household budget surveys conducted by CYSTAT in 2003 (February 2003–January 2004), 2009 (November 2008–October 2009) and 2015 (July 2015–June 2016). The data sample consisted of 2990 households in 2003, 2707 in 2009 and 2876 in 2015. The surveys cover urban and rural households residing in the area of the island controlled by the Cypriot Government.

All currency units in the study are presented in euros.





# 3. Coverage and access to health care

This section briefly describes the governance and dimensions of publicly financed health coverage – population entitlement, the benefits package and user charges (co-payments) – in Cyprus and reviews the role played by voluntary health insurance (VHI). It also summarizes some key trends in rates of health service use, levels of unmet need for health and dental care, and inequalities in service use and unmet need.

## 3.1 Coverage

Coverage policy in Cyprus can be discussed in relation to three distinct periods.

**Prior to 2013** the basis for entitlement to publicly financed health care was dependent on citizenship and income; only 85% of the population was covered by the publicly financed system; and beneficiaries were divided into two groups, with low user charges for the largest group and higher user charges for a small group of beneficiaries (Theodorou et al., 2012).

**From 2013 to 2019**, in addition to citizenship and income, entitlement was also dependent on having paid taxes and social security contributions (for pensions and other non-health benefits) and (for civil servants) contributions earmarked for health; the smaller, second group of beneficiaries was abolished; and user charges were increased. As a result of these restrictions, only around 75% of the population was covered (OECD & European Observatory on Health Systems and Policies, 2017).

**In June 2019** the new General Health System came into force for outpatient care (general practitioner (GP) and specialist visits, diagnostic tests and medicines) and was extended to inpatient care in June 2020. Entitlement is now based on legal residence and is no longer linked to citizenship, income or payment of contributions. In principle, all those legally resident in Cyprus are now covered and protection from user charges has been strengthened (OECD & European Observatory on Health Systems and Policies, 2019).

### 3.1.1 Population entitlement

**Prior to 2013** the legal basis for entitlement to publicly financed health services was holding Cypriot or EU citizenship and having an annual income below a defined threshold.

There were two main groups of beneficiaries, known as A and B.

**Beneficiaries A (around 75% of the population) were entitled to publicly provided health services that were largely free at the point of use:** this included Cypriots and EU citizens with a gross annual income below €15 380; two-person families with an annual income below €30 750, increased by €1700 for each dependent child; and families with three or more children.

**Beneficiaries B (less than 2% of the population) were entitled to publicly provided health services but had to pay user charges (co-payments):** this

included Cypriots and EU citizens with a gross annual income of €15 380–€20 500; and two-person families with a gross annual income of €30 750–€37 590, increased by €1700 for each dependent child.

The following groups of people were entitled to publicly financed health services regardless of their income: civil servants, students at Cypriot universities, political officials, diplomats and people with severe chronic conditions (detailed below).

All other people were obliged to pay out of pocket when using publicly financed health services, with prices set by the Ministry of Health. These people – known as **non-beneficiaries**, comprising around 15% of the population – included Cypriots and EU citizens with higher incomes and documented and undocumented migrants from outside the EU (third countries).

In **2013–2019**, following the introduction of the Economic Adjustment Programme for Cyprus – introduced in response to the financial crisis – the group Beneficiaries B was abolished and entitlement to publicly financed health services was dependent on meeting the following criteria<sup>1</sup> (Ministry of Health, Act No 35(I), 2013):

- holding Cypriot or EU citizenship, being permanently resident in Cyprus, *having contributed for a minimum of three cumulative years to the social security scheme (pensions and other non-health benefits) and made a personal tax declaration* and having an annual income below a threshold that varies according to the number of dependants a person has;
- having a severe chronic condition (one of 13, including multiple sclerosis, Alzheimer's disease, sickle cell disease, myopathy, cystic fibrosis, congenital cardiac disease and insulin-dependent diabetes) *and a gross annual family income below €150 000*;
- having certain severe chronic conditions, regardless of income, including dialysis-dependent nephropathy, thalassaemia, haemophilia and other bleeding disorders, transplant patients, paraplegia and quadriplegia and Familial Mediterranean fever;
- belonging to a family with three or more children *and paying a contribution of 1.5% of gross annual family income; and*
- being a civil servant *and paying a contribution of 1.5% of gross annual income.*

Non-beneficiaries – mostly Cypriot and EU citizens with moderate and higher incomes and non-EU migrants – could access publicly provided health services by paying prices set by the Ministry of Health. These prices varied based on estimates of household income (see the subsections that follow for details).

In practice, however, most non-beneficiaries opted to purchase private VHI to cover the costs of privately provided health services, except for conditions such as cancer or for newborn babies in need of serious treatment, which require the use of expensive medical infrastructure only available in public hospitals.

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1. Policy changes are shown in italics.

Migrants from outside the EU – mainly informal carers and home helpers – were obliged by law to purchase private health insurance, the cost of which was shared between employee and employer.

**Since June 2019** entitlement to publicly financed health services is extended to all legal residents, including people from third countries (non-EU countries) and documented asylum seekers, regardless of citizenship, income or payment of contributions.

### 3.1.2 The benefits package

The Ministry of Health is responsible for designing the publicly financed benefits package, as set out in the Medical Foundations and Services (fees and control) Act 40 of 1978 & 89(I) of 2000. The range of services covered is quite comprehensive: primary care and specialist outpatient services, inpatient care, paramedical services, emergency services, medicines, diagnostic tests and therapeutic appliances. Public health and preventive services are also part of the benefits package, including immunization, maternal and child health, school health and occupational health. Coverage is limited for long-term care, rehabilitation care and palliative care; the last two are mainly provided by nongovernmental organizations (Theodorou et al., 2012; Amitsis & Phellas, 2014; Lourenço, 2015). The only explicitly excluded services are some dental services for adults, including fixed prosthetics and orthodontics for those aged over 18 years. There is relatively good coverage of dental care for children.

Although all decisions about benefits are made by the Ministry of Health, the evaluation of health services to be included in the benefits package is split across departments within the Ministry, leading to variation and fragmentation. This fragmentation is further entrenched by the silo-based approach the Ministry uses to estimate the public budget for health (Theodorou et al., 2012).

Services in the benefits package are largely delivered in public facilities owned by the Ministry of Health. Until 2019 a referral system existed for certain specialties, but in practice referral was not enforced. However, the referral role of GPs was strengthened with the introduction of the new system and a €25 fine has been introduced for those visiting a specialist without a GP referral.

The range of benefits offered by the publicly financed part of the health system has not changed substantially over time. However, longstanding budgetary pressures and staff shortages have led to long waiting times for some services. For example, in 2013 waiting times ranged from one to 24 months for some surgical procedures and diagnostic tests, 5–24 months for knee and hip replacements, 14 months for cervical smear tests, 17 months for magnetic resonance imaging (MRI) scans and over a year for cataract surgery (Pashardes et al., 2016; Theodorou et al., 2018).

In the absence of waiting time guarantees, problems with waiting times encourage many beneficiaries to use privately provided health services, for which they pay the full cost out of pocket in return for faster access, more choice of physician, more convenient appointment and treatment times and a private room if hospitalized (Pashardes, 2003). Waiting times

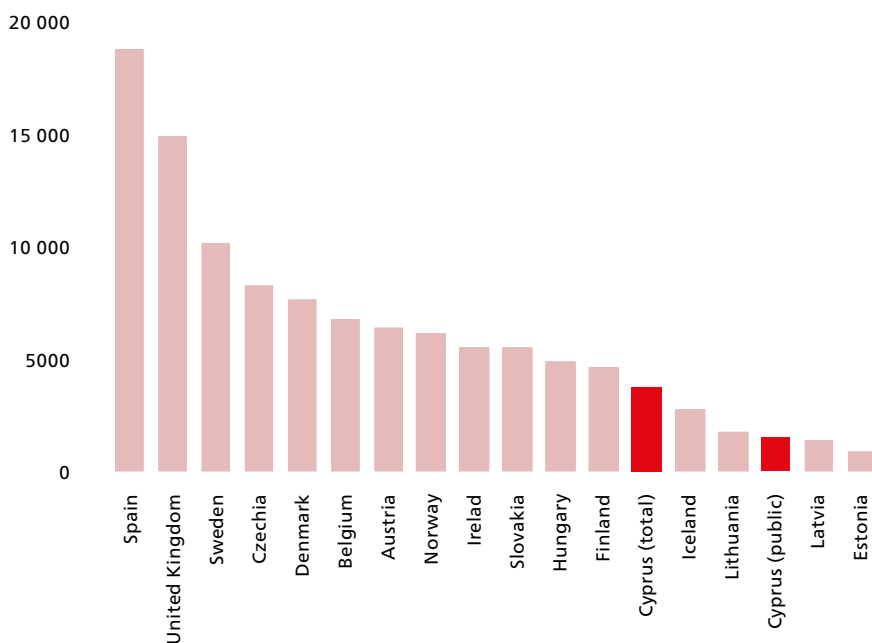
increased during the economic crisis as the health budget was cut, staff salaries were reduced, staff workload was increased and staff moved from public to private facilities (European Parliament, 2015). In response, in 2015 the Ministry of Health introduced subsidies for some treatments in the private sector or abroad. Eligibility for these subsidies is determined by a medical board, with the approval of the Ministry of Health, following an assessment of an individual’s income and medical needs.

The dispensing of publicly financed medicines is based on a positive list of approved medicines, which frequently mandates the use of generics or the cheapest product. Public-sector medicines are procured centrally by the Ministry of Health through international tenders. This results in low prices, although it may also limit the range of therapeutic options available. Fig. 1 shows how the number of products available in Cyprus in 2012 was low compared to other EU countries, especially in public-sector pharmacies (HMA, 2007; European Commission, 2014).

The highly centralized public pharmacy sector (comprising eight hospital pharmacies and 43 community pharmacies in 2012) coexists with a large and unregulated private-sector network (435 pharmacies employing about 500 pharmacists) – the latter characterized by lower volume and higher prices.

Fig. 1. Number of marketed pharmaceutical products in selected countries, 2012

Source: EURIPID Collaboration (2020).



### 3.1.3 User charges (co-payments)

The Ministerial Council is responsible for approving policy on user charges for publicly financed health services provided by the public sector.

**Prior to 2013** user charges for beneficiaries were minimal for Beneficiaries A (Table 2). The main charges were in the form of fixed co-payments for outpatient visits. There were no charges for outpatient prescribed medicines or inpatient care. Beneficiaries B had to pay higher co-payments (often in the form of percentage co-payments) and were not entitled to any publicly financed dental care. Non-beneficiaries had to pay even higher co-payments and were not entitled to any publicly financed dental care or outpatient prescribed medicines.

Table 2. User charges for publicly financed health services prior to 2013, by beneficiary status

Note: NA: not applicable.  
Sources: authors; Theodorou et al. (2012).

Service area	Level of user charge (beneficiary group)	Exemptions	Cap on user charges
Outpatient visits	<b>A:</b> fixed co-payment of €2 per visit <b>B:</b> fixed co-payment of €6.50 for a GP visit, €8.50 for a specialist visit <b>Non-beneficiaries:</b> fixed co-payment of €14.50 for a GP visit, €20.50 for a specialist visit	<b>A:</b> aged over 65 years, social beneficiaries and public-sector health professionals	No
Outpatient prescribed medicines	<b>A:</b> none <b>B:</b> percentage co-payment of 50% of the price if it is included in a positive list <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	NA for <b>A</b> ; no exemptions for anyone else	NA for <b>A</b> ; no cap for anyone else
Diagnostic tests	<b>A:</b> none <b>B:</b> percentage co-payment of 50% of the price <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	NA for <b>A</b> ; no exemptions for anyone else	NA for <b>A</b> ; no cap for anyone else
Dental care	<b>A:</b> fixed co-payment of €154 for dentures <b>B:</b> pay the full price set by the Ministry of Health <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	Social beneficiaries	No
Inpatient care	<b>A:</b> paid by civil servants only at a rate of €6.80 per day for a third-class bed; up to €20.50 per day for a first-class or intensive-care bed <b>B:</b> percentage co-payment of 50% of the full price set by the Ministry of Health <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	No	Set as a share of household income and varies by household income and number of children
Emergency department	None	NA	NA

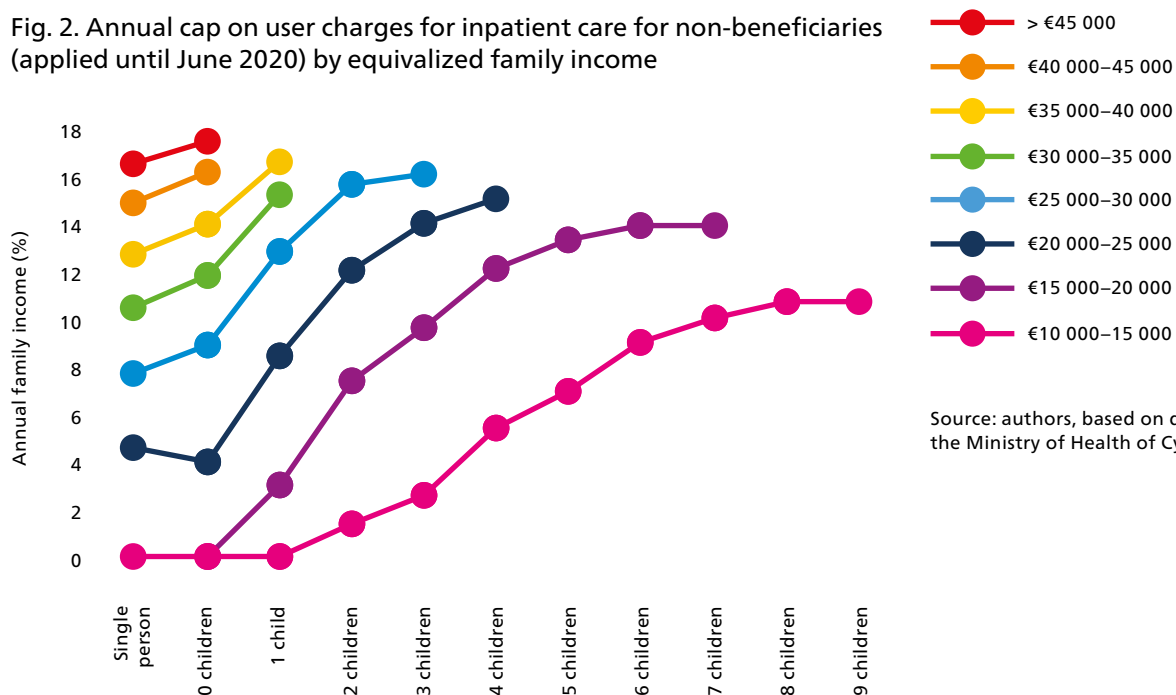
During the period from 2013 to May 2019 the category Beneficiaries B was abolished. New user charges for outpatient prescribed medicines, diagnostic tests and emergency department visits were introduced for beneficiaries and existing user charges were increased (Table 3). Some exemptions from user charges were abolished – for example, social beneficiaries (people receiving social assistance) were no longer exempt from user charges for outpatient visits. There were no exemptions from user charges for outpatient prescribed medicines or diagnostic tests. Until June 2020 there was an annual cap on out-of-pocket payments for publicly financed inpatient care for non-beneficiaries. The cap was set as a maximum share of annual household income based on a formula that appears to have been set arbitrarily. Fig. 2 shows that for households with similar equivalized income, the cap became less generous as family size increased.

Table 3. User charges for publicly financed health services from August 2013 to May 2019, by beneficiary status

Source: authors.

Service area	Level of user charge	Exemptions	Cap on user charges
Outpatient visits	<b>Beneficiaries:</b> fixed co-payment of €3 for a GP visit, €6 for a specialist visit <b>Non-beneficiaries:</b> fixed co-payment of €15 for a GP visit, €30 for a specialist visit	Beneficiaries: military, people with severe mental disorders or mental disabilities, children with special needs living in institutions, etc.	No
Outpatient prescribed medicines	<b>Beneficiaries:</b> fixed co-payment of €0.50 for each prescribed product up to a maximum of €10 per prescription <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	No	No
Diagnostic tests	<b>Beneficiaries:</b> fixed co-payment of €0.50 for each laboratory test prescribed up to a maximum charge of €10 per prescription <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	No	No
Dental care	<b>Beneficiaries:</b> fixed co-payment of €3 per visit, €200 for dentures <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	Beneficiaries: military, people with severe mental disorders or mental disabilities, children with special needs living in institutions, etc.	No
Inpatient care	<b>Beneficiaries:</b> none <b>Non-beneficiaries:</b> pay the full price set by the Ministry of Health	No	<b>Non-beneficiaries (until 2020):</b> the cap was set as a share of income and varies by income and number of children
Emergency department	<b>Beneficiaries and non-beneficiaries:</b> fixed co-payment of €10 per visit	Social beneficiaries, military, people with disabilities, residents of nursing homes and other long-term care institutions	No

Fig. 2. Annual cap on user charges for inpatient care for non-beneficiaries (applied until June 2020) by equivalized family income



Source: authors, based on data shared by the Ministry of Health of Cyprus.

Since June 2019 user charges in the form of fixed co-payments apply to outpatient visits to emergency departments, nurses, midwives, specialists and allied health professionals such as physiotherapists; they also apply to outpatient prescribed medicines, medical devices and diagnostic tests (Table 4). There are no co-payments for inpatient care. Exemptions from co-payments are applied to some groups of people, mainly linked to health status.

There is a new annual cap, which applies to all co-payments for publicly financed health services. The cap is set as a flat amount (€150 per person a year), with a more protective lower cap (€75 per person a year) for children aged under 21 years, people receiving the Guaranteed Minimum Income and low-income pensioners. Because the cap is set at a relatively low rate and applies to all co-payments and all legal residents (not just inpatient care and non-beneficiaries), it is more protective than before.

Table 4. User charges for publicly financed health services under the new system (since June 2019)

Note: NA: not applicable.  
Source: HIO (2020).

Service area	Level of user charge	Exemptions	Cap on user charges
Outpatient visits	GP visit: none	People with severe mental disorders or mental disabilities	€75 per person per year for people receiving the Guaranteed Minimum Income, low-income pensioners and children aged under 21 years
	Nurse or midwife visit: €6		
	Specialist visit with referral (excluding radiology, radiodiagnostics, cytology and pathology): €6	Children with special needs staying in institutions	€150 per person per year for the rest of the population
	Specialist visit without referral: fine of €25, which does not count towards the annual cap	Children under the care and supervision of social welfare services	
	Services provided by doctors specializing in radiology and radiodiagnostics: €10 per service	Prisoners and people under arrest	
	Visit to a physiotherapist or speech therapist, etc.: €10	Uninsured older Greek citizens living in Cyprus	
		Various other smaller groups of people	
Outpatient prescribed medicines	Fixed co-payment of €1 for each prescribed medicine		
Diagnostic tests	Fixed co-payment of €1 per test		
Dental care	€3 per visit		
Emergency department	Fixed co-payment of €10	No	
Inpatient care	None	NA	NA



### 3.1.4 The role of VHI

VHI plays a mainly substitutive role, providing coverage for the significant share of the population that is not entitled to publicly financed health services. It is purchased by:

- non-beneficiaries of the publicly financed health system (individual contracts);
- employees (and their dependants) from public-sector organizations, such as the Electricity Authority of Cyprus, the Cyprus Telecommunication Authority, the HIO and public universities;
- employees of some large private companies (and their dependants), such as banks and auditing firms (mainly through group contracts); and
- a relatively small share of beneficiaries who purchase VHI to finance their use of privately provided health services.

VHI has generally covered around 20% of the population, but spending on VHI as a share of current spending on health grew rapidly over the course of a decade, rising from just over 2% in 2002 to just over 5% in 2007 and just over 6% in 2012 (WHO, 2020). At the same time, VHI only accounts for around 10% of private spending on health, which suggests that it has limited ability to address the issue of high out-of-pocket payments in the health system (Theodorou et al., 2012; Sagan & Thomson, 2015).

Table 5 highlights key issues relating to the governance of coverage, summarizes the main gaps in publicly financed coverage and indicates the role of VHI in filling these gaps.

Table 5. Main gaps in coverage

Source: authors.

	Population entitlement	The benefits package	User charges (co-payments)
<b>Issues relating to governance of publicly financed coverage</b>	<p>Prior to 2013 entitlement was based on citizenship and income; there was no entitlement for migrants from non-EU countries</p> <p>From 2013 to 2019, in addition to citizenship and income, entitlement was also dependent on having paid taxes and social security contributions (for pensions and other non-health benefits) and (for civil servants) contributions earmarked for health</p> <p>These restrictions were abolished in 2019</p>	<p>Budgetary pressures lead to staff shortages and long waiting times in public facilities</p> <p>A limited range of therapeutic options exist for medicines in public pharmacies</p>	<p>User charges have increased since 2013</p> <p>Under the new system there is an annual cap on all co-payments (which is lower for children and people with low incomes), but there are no exemptions from user charges based on income</p>
<b>Main gaps in publicly financed coverage</b>	<p>Prior to 2019 around 25% of the population were not entitled to publicly financed coverage</p>	<p>There are long waiting times for some services, especially for surgical procedures and diagnostic tests</p> <p>Coverage of dental care is limited</p> <p>There is insufficient coverage of long-term nursing care, palliative care and rehabilitation</p>	<p>Prior to 2019 non-beneficiaries paid the full price of services based on prices set by the Ministry of Health</p> <p>Under the current system, user charges are applied to all services (including medicines and emergency department visits) except inpatient care</p>
<b>Are these gaps covered by VHI?</b>	<p>Yes, to a large extent for people who have opted for a VHI contract with generous coverage</p>	<p>Yes, to a large extent for people who have opted for a VHI contract with generous coverage</p>	<p>No</p>

## 3.2 Access, use and unmet need

The health system in Cyprus has many shortcomings in terms of the availability and affordability of health services (Andreou et al., 2010; Theodorou et al., 2018). This is demonstrated through data on unmet need for health care (Box 1).

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### Box 1. Unmet need for health care

Source: WHO Regional Office for Europe (2019).

Financial protection indicators capture financial hardship among people who incur out-of-pocket payments when using health services. They do not, however, indicate whether out-of-pocket payments create a barrier to access, resulting in unmet need for health care. Unmet need is an indicator of access, defined as instances in which people need health care but do not receive it because of access barriers.

Information on health-care use or unmet need is not routinely collected in the household budget surveys used to analyse financial protection. These surveys indicate which households have not made out-of-pocket payments, but not why. Households with no out-of-pocket payments may have no need for health care, be exempt from user charges or face barriers to accessing the health services they need.

Financial protection analysis that does not account for unmet need could be misinterpreted. A country may have a relatively low incidence of catastrophic out-of-pocket payments because many people do not use health care, owing to limited availability of services or other barriers to access. Conversely, reforms that increase the use of services can increase people's out-of-pocket payments – through, for example, user charges – if protective policies are not in place. In such instances, reforms might improve access to health care but at the same time increase financial hardship.

This review uses data on unmet need to complement the analysis of financial protection. It also draws attention to changes in the share and distribution of households without out-of-pocket payments. If increases in the share of households without out-of-pocket payments cannot be explained by changes in the health system – for example, enhanced protection for certain households – they may be driven by increases in unmet need.

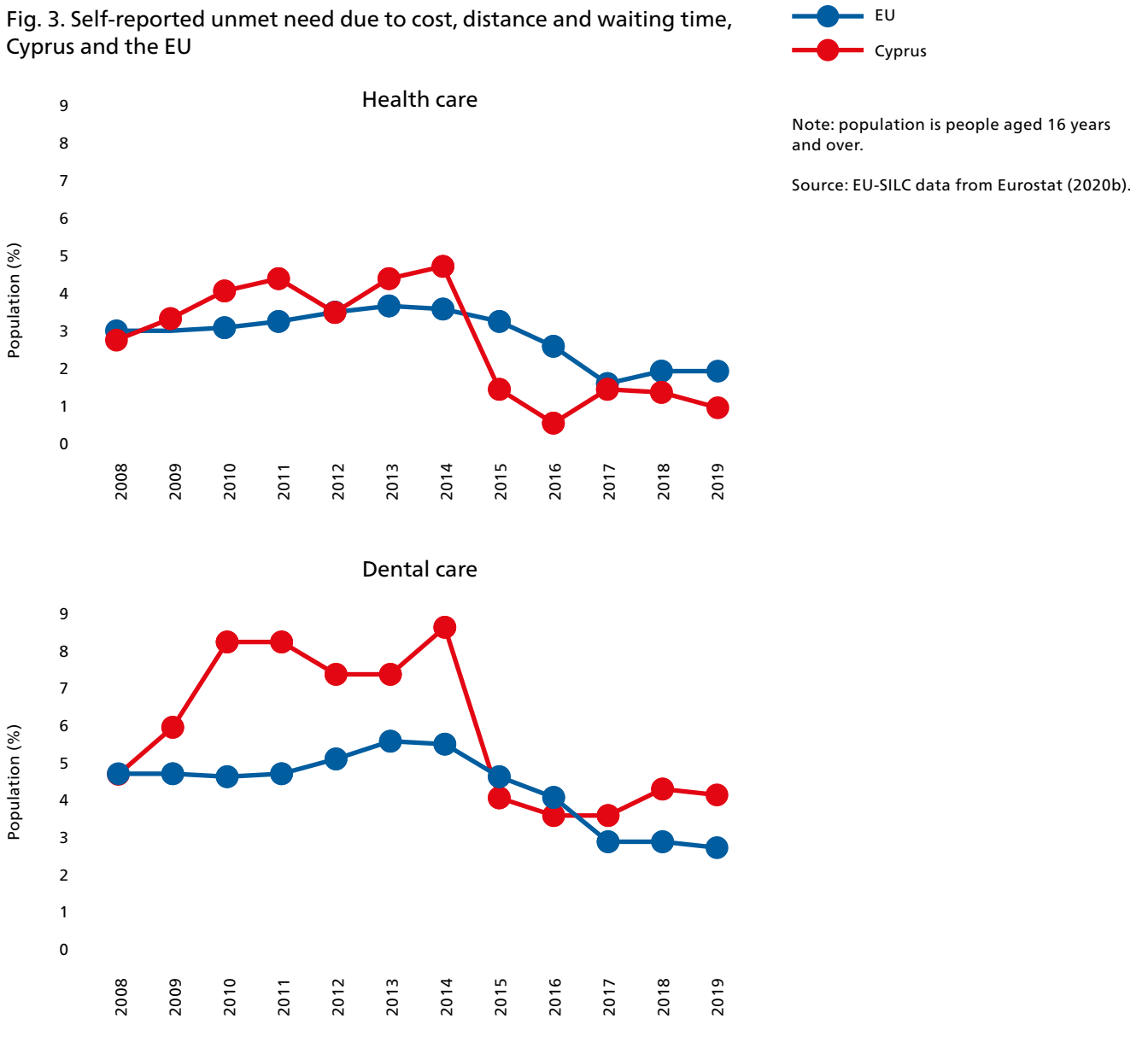
Every year, EU Member States collect data on unmet need for health and dental care through the European Union Statistics on Income and Living Conditions (EU-SILC) project. These data can be disaggregated by age, gender, educational level and income. Although this important source of data lacks explanatory power and is of limited value for comparative purposes because of differences in reporting by countries, it is useful for identifying trends over time within a country (Arora et al., 2015; European Commission EXPH, 2016, 2017).

EU Member States also collect data on unmet need through the European Health Interview Survey (EHIS), carried out every five years or so. The second wave of this survey was conducted in 2014. A third wave was launched in 2019. Whereas the EU-SILC data provide information on unmet need as a share of the population aged over 16 years, the EHIS provides information on unmet need among those reporting a need for care. The EHIS also asks people about unmet need for prescribed medicines.

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Data from the EU-SILC show that self-reported unmet need for health and dental care due to cost, distance and waiting time in Cyprus was on a par with the EU average in 2008 but grew between 2008 and 2014, particularly for dental care (Fig. 3). According to this source of data, cost is the main driver of unmet need.

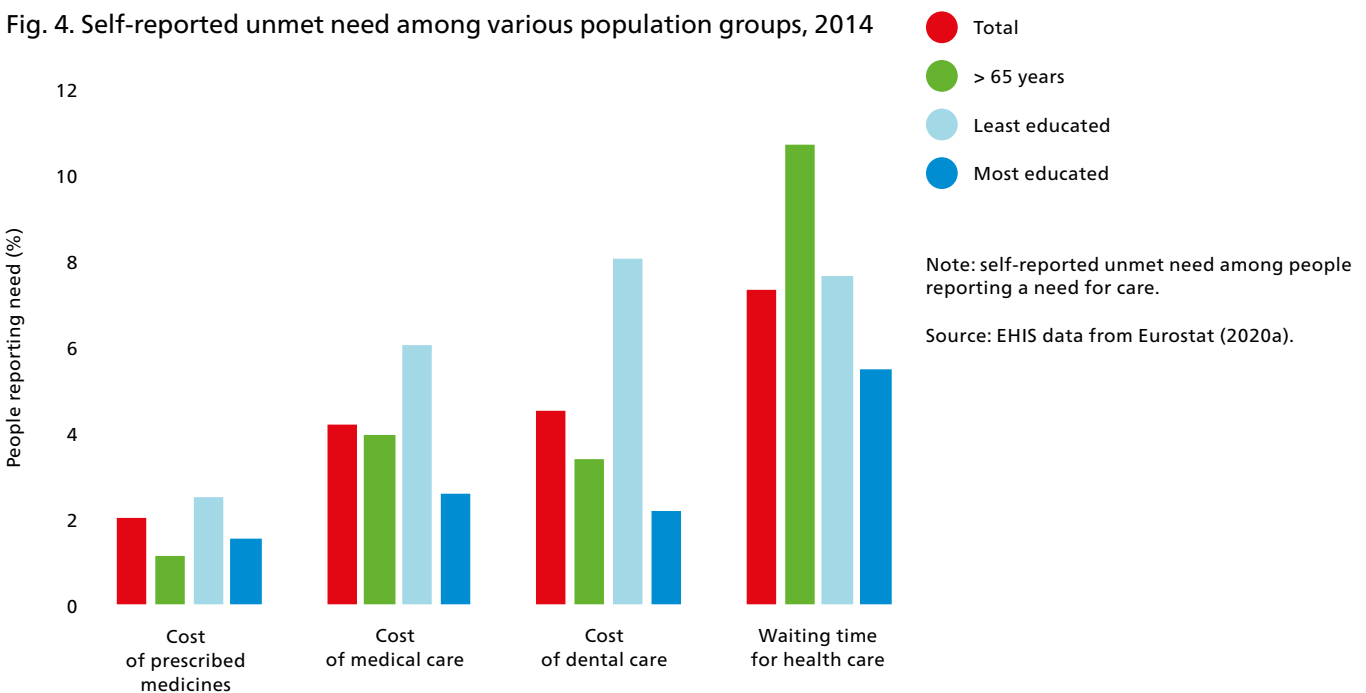
Fig. 3. Self-reported unmet need due to cost, distance and waiting time, Cyprus and the EU



Data from the EHIS indicate that in 2014 the level of unmet need for health care and dental care due to cost is similar, while unmet need for prescribed medicines is lower (Fig. 4). The data suggest that waiting time was a larger driver of unmet need for health care in general than cost in 2014, particularly for older people. This may reflect the fact that older people are more likely to rely on publicly financed access to health care than younger people (Theodorou et al., 2018).

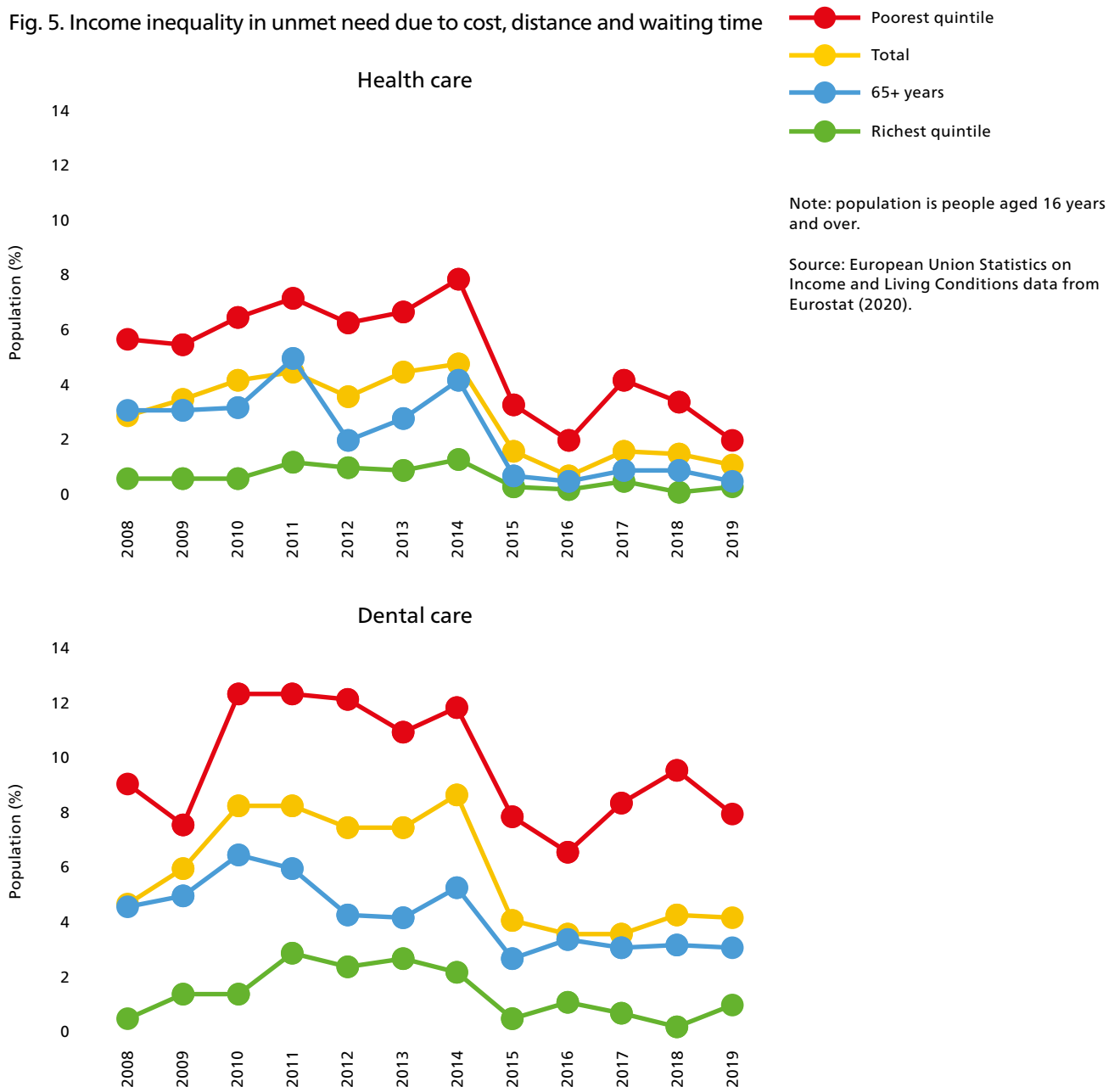
The EHIS data clearly show socioeconomic inequality in all aspects of unmet need (Fig. 4). This form of inequality is especially marked for unmet need for dental care due to cost, followed by unmet need for medical care due to cost.

Fig. 4. Self-reported unmet need among various population groups, 2014



EU-SILC data for Cyprus also show a substantial degree of income inequality in unmet need for health and dental care (Fig. 5). Inequality in unmet need for dental care grew between 2009 and 2014 and between 2016 and 2018.

Fig. 5. Income inequality in unmet need due to cost, distance and waiting time



The increase in unmet need over time is echoed by data on health service use. From 2000 to 2012 there was steady growth in the use of publicly provided outpatient and emergency department visits and inpatient stays (Fig. 6). From 2013, however, the use of outpatient services fell and growth in the use of inpatient care stopped.

These changes in the use of public facilities may reflect various factors.

First, user charges were introduced for outpatient and emergency department visits in August 2013, but remained unchanged for inpatient care, which may explain some of the reduction in the use of outpatient care. Research has shown that although 74% of people considered the level of the new co-payments to be “very low”, “low” or “moderate”, 8% of respondents said that they had not visited the emergency department because of the new charges (Theodorou, 2014).

Second, although staff numbers rose consistently in both sectors during the period analysed, the rates of health professionals per population remained below the EU average, especially for nurses and midwives. Following budget cuts made in response to the economic crisis, plus cuts to staff salaries and an increase in staff workload, some staff (doctors) moved from public to private facilities. This increased capacity constraints and waiting times in public facilities, which have much higher occupancy rates than private facilities, and exacerbated the already significant imbalance between health professionals in the public and private sectors (Theodorou et al., 2012).

The decline in the number of surgical procedures in public facilities (shown in Fig. 6) may indicate that people were pushed to seek health care in the private sector, leading to financial hardship for some and unmet need for those unable to pay the full cost out of pocket (Andreou et al., 2010).

Third, while many non-beneficiaries are people with higher incomes, this is not the case for all of them. Lower-income non-beneficiaries and people whose incomes were affected during the economic crisis may have experienced financial and other barriers to access.

Fig. 6. Trends in the use of publicly provided health services

Source: CYSTAT annual reports on health and hospital statistics, 2003–2018 (CYSTAT, 2020).

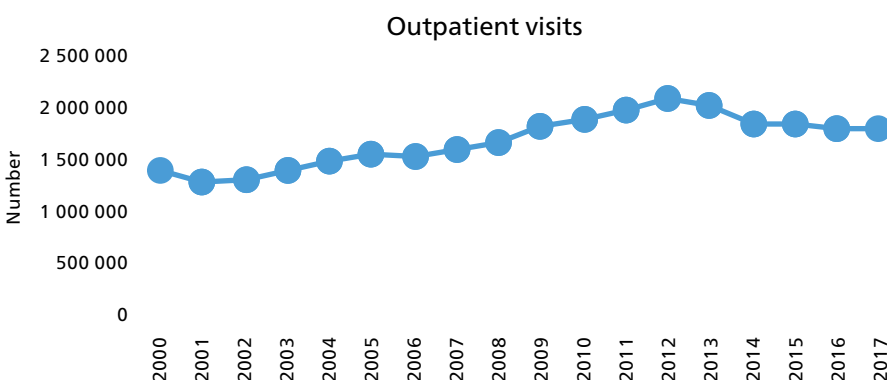
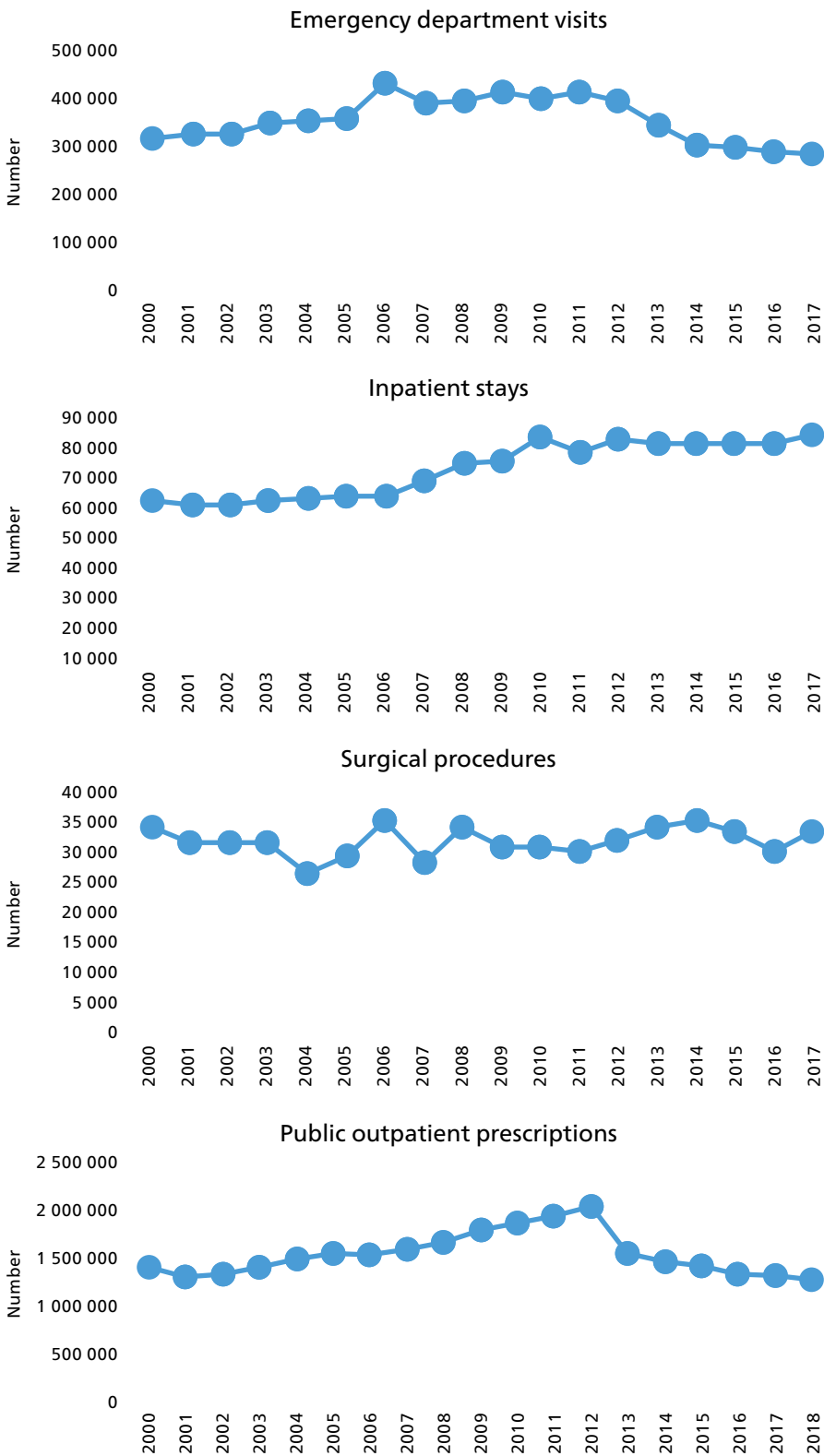


Fig. 6 contd



## 3.3 Summary

During the period analysed, Cyprus had a complex system of coverage with significant gaps in the share of the population covered. Reforms introduced in 2013, following the global financial crisis, increased complexity and shifted costs onto households. The health sector experienced stringent austerity measures, including coverage restrictions and budget cuts, leading to a reduction in staff salaries and an exodus of doctors from public hospitals to private clinics. In 2019 a further reform saw the introduction of the new General Health System, which is being implemented in phases. The new system aims to simplify coverage policy and strengthen access and financial protection.

Until 2013 the basis for entitlement was linked mainly to EU citizenship and income; as a result, only 85% of the population was entitled to publicly financed health care. Migrants from non-EU countries were not covered and were obliged by law to purchase private health insurance. Between 2013 and June 2019 the basis for entitlement was restricted even further and population coverage fell to 75%. In June 2019 the basis for entitlement was changed to residence.

The main gaps in the publicly financed benefits package are found in dental care for adults, long-term care, rehabilitation and palliative care. However, budgetary pressures and staff shortages have led to long waiting times for some services. In the absence of waiting time guarantees, problems with waiting times encourage many beneficiaries to use privately provided health services, for which they pay the full cost out of pocket. The limited range of medicines available in public pharmacies also pushes many people to pay out of pocket in private pharmacies.

Before 2013 there were no user charges (co-payments) for outpatient prescribed medicines, diagnostic tests or inpatient care, while fixed co-payments were relatively low (€2) for outpatient visits, with exemptions for some low-income households and people aged over 65 years. In 2013 user charges were introduced for outpatient prescribed medicines, diagnostic tests and emergency department visits, largely without exemptions, and existing user charges were increased. In 2019 the user charges policy was simplified. Protection against user charges was strengthened; for example, exemptions now apply to almost all co-payments and there is an annual cap covering all co-payments, which is set at a more protective rate for children and people with a low income.

VHI is expensive and does not provide full coverage. Spending through VHI only accounts for around 10% of private spending on health, which suggests VHI has limited ability to address high out-of-pocket payments.

Self-reported unmet need for health and dental care due to cost, distance and waiting time in Cyprus was on a par with the EU average in 2008 but grew between 2008 and 2014, particularly for dental care. Socioeconomic inequality in unmet need is substantial. The increase in unmet need over time is echoed by data on the use of public facilities, which grew steadily until 2012 and then fell (outpatient services) or stagnated (inpatient care), reflecting higher user charges, staff shortages and growing capacity constraints.



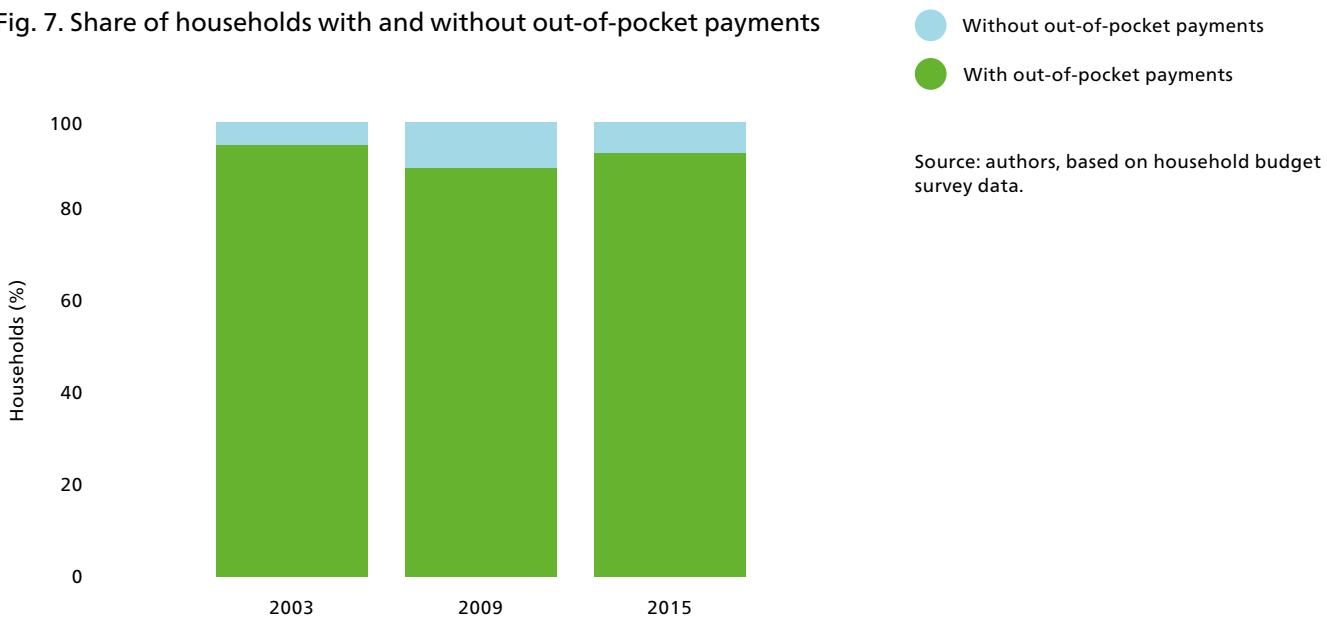
# 4. Household spending on health

In the first part of this section, data from the CYSTAT household budget surveys are used to present trends in household spending on health; that is, out-of-pocket payments – the formal and informal payments made by people at the time of using any good or service delivered in the health system. The section also considers the role of informal payments and discusses trends in public and private spending on health based on data from national health accounts.

## 4.1 Out-of-pocket payments

Over 90% of households pay out of pocket for health care (Fig. 7).

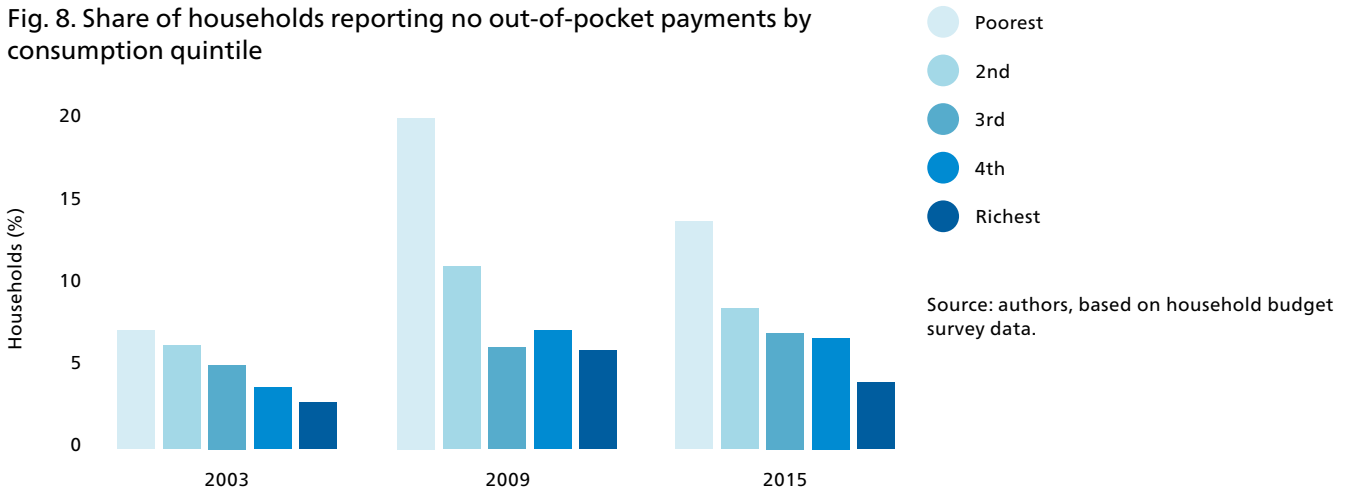
Fig. 7. Share of households with and without out-of-pocket payments



Where survey respondents report no out-of-pocket spending on health, it is difficult to know whether they have no need for health care; whether they need care and are able to use services free of charge; or whether they need care but face barriers to accessing health services.

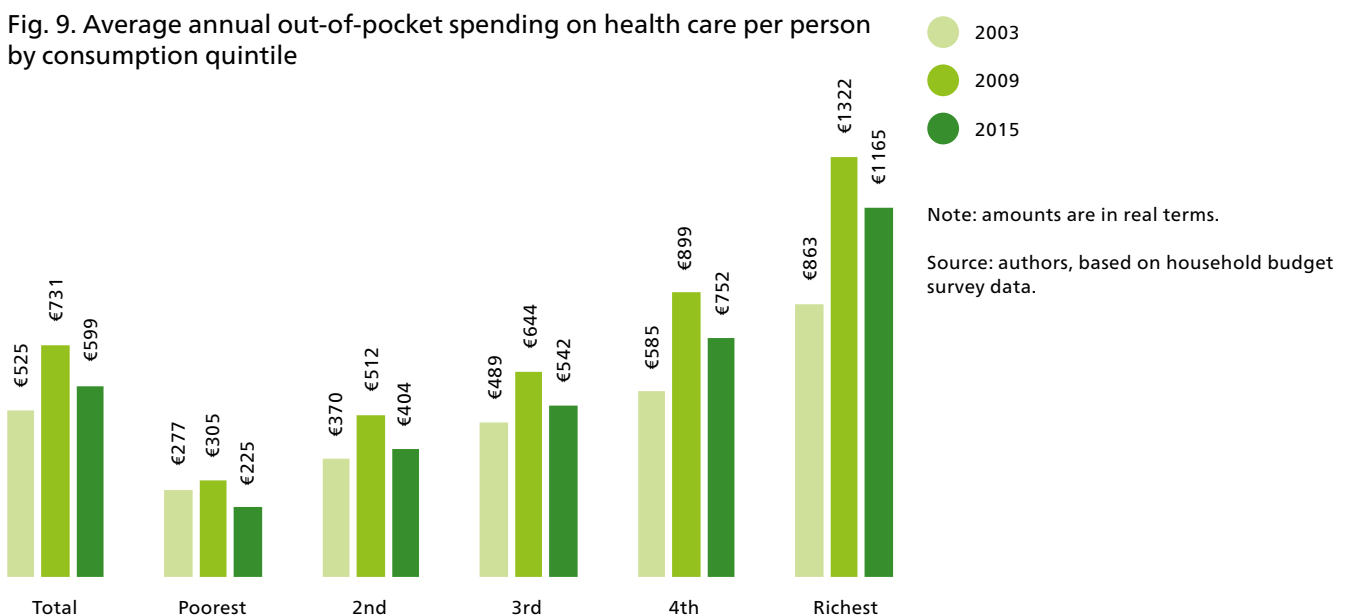
The share of households not paying out of pocket is consistently higher for the poorest quintile than for the richest quintile (Fig. 8). It was particularly high for the poorest quintile in 2009 (20%) before falling in 2015 (to 14%). This decrease in out-of-pocket payments in 2015 may reflect the introduction of user charges for publicly financed outpatient prescribed medicines, diagnostic tests and emergency department visits for all beneficiaries in 2013, as well as the abolition of exemptions from user charges for social beneficiaries.

Fig. 8. Share of households reporting no out-of-pocket payments by consumption quintile



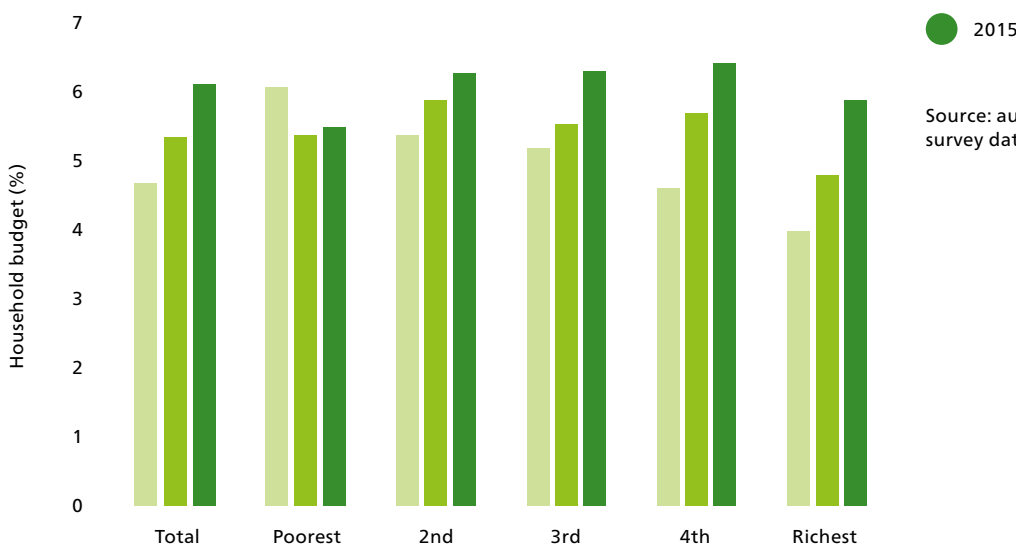
Household spending on health increased substantially from 2003 to 2009 in all quintiles and then decreased in 2015 (Fig. 9). Between 2003 and 2009, the increase in the amount spent was much higher among the richest quintile than the poorest. Between 2009 and 2015, the reduction in the amount spent was smaller for the richest quintile than the poorest. Out-of-pocket payments rose with consumption and were three, four and five times higher in the highest quintile than the lowest in 2003, 2009 and 2015, respectively.

Fig. 9. Average annual out-of-pocket spending on health care per person by consumption quintile



The out-of-pocket payment share of total household spending (consumption) is higher in Cyprus than in many other EU countries (WHO Regional Office for Europe, 2019). On average, it rose in Cyprus from 4.7% in 2003 to 6.1% in 2015, driven largely by increases in the two richest quintiles (Fig. 10). In 2003 the out-of-pocket payment share followed a regressive pattern across quintiles, being highest for the poorest quintile and lowest for the richest. In 2009 and 2015, however, the pattern changed, as the share fell in the poorest quintile and rose in the other quintiles, reflecting a large increase in health spending among richer quintiles in 2009 and a drop in overall household spending in 2015.

Fig. 10. Out-of-pocket payments for health care as a share of household consumption by consumption quintile



Source: authors, based on household budget survey data.

In 2003 and 2009 outpatient medicines and outpatient care accounted for the largest share of out-of-pocket spending; around 50% on average (Fig. 11). The other half was driven mainly by inpatient care and diagnostic tests and, to a much lesser extent, by dental care and medical products. This pattern changed in 2015, when the shares spent on outpatient medicines and diagnostic tests grew, reducing the proportion spent on outpatient and inpatient care.

Fig. 11. Breakdown of out-of-pocket spending by type of health care

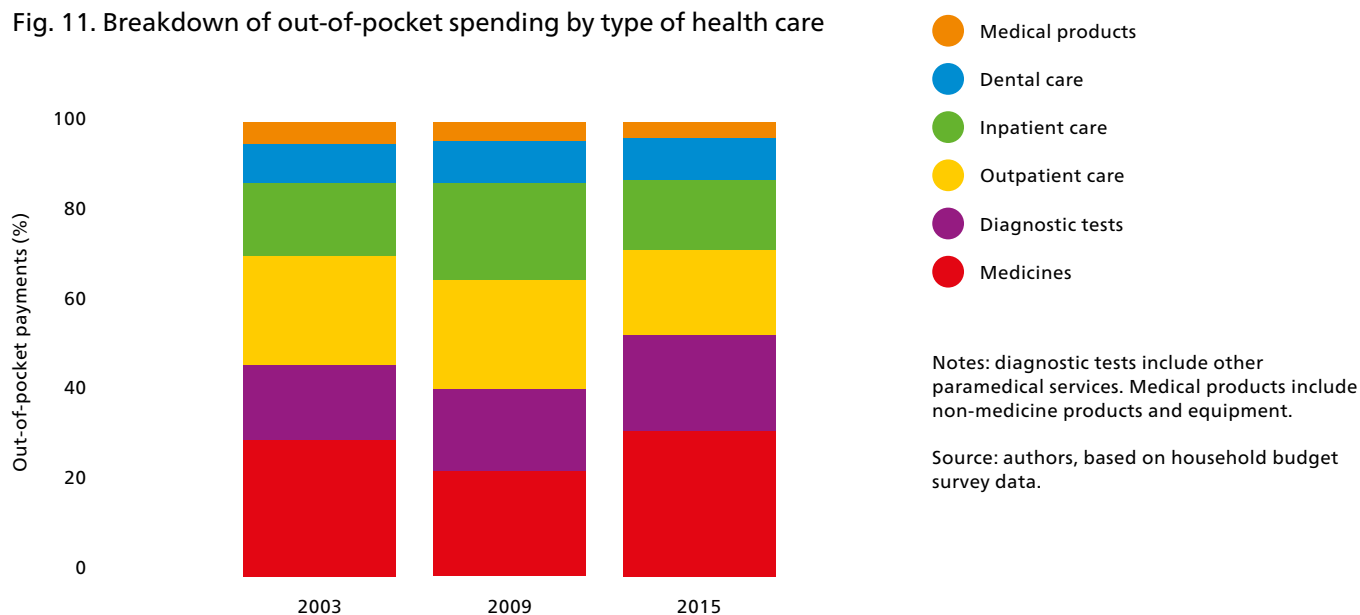


Fig. 12 shows substantial differences in the structure of out-of-pocket spending across quintiles. In 2003 outpatient medicines were the largest driver of out-of-pocket spending in all quintiles, followed by outpatient care. The outpatient medicines share was higher in poorer households, whereas the outpatient care share was similar across quintiles. In 2009 there was a substantial decrease in the share spent on outpatient medicines across all quintiles, but this was reversed in 2015. Across all years, the proportion of out-of-pocket spending on inpatient care was higher in richer households. This was also the case for diagnostic tests in both 2003 and 2015.

Fig. 12. Breakdown of out-of-pocket spending by type of health care and consumption quintile

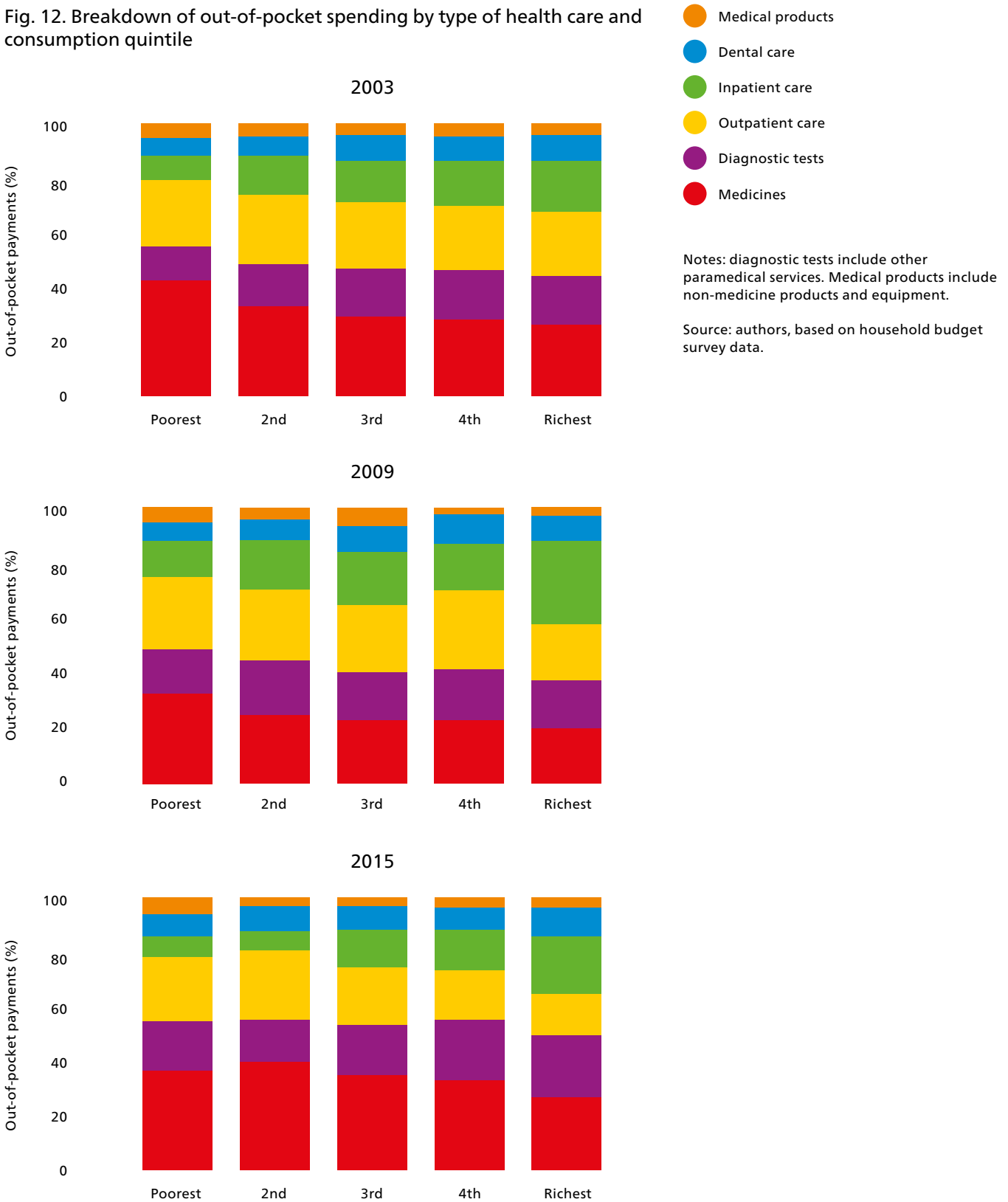
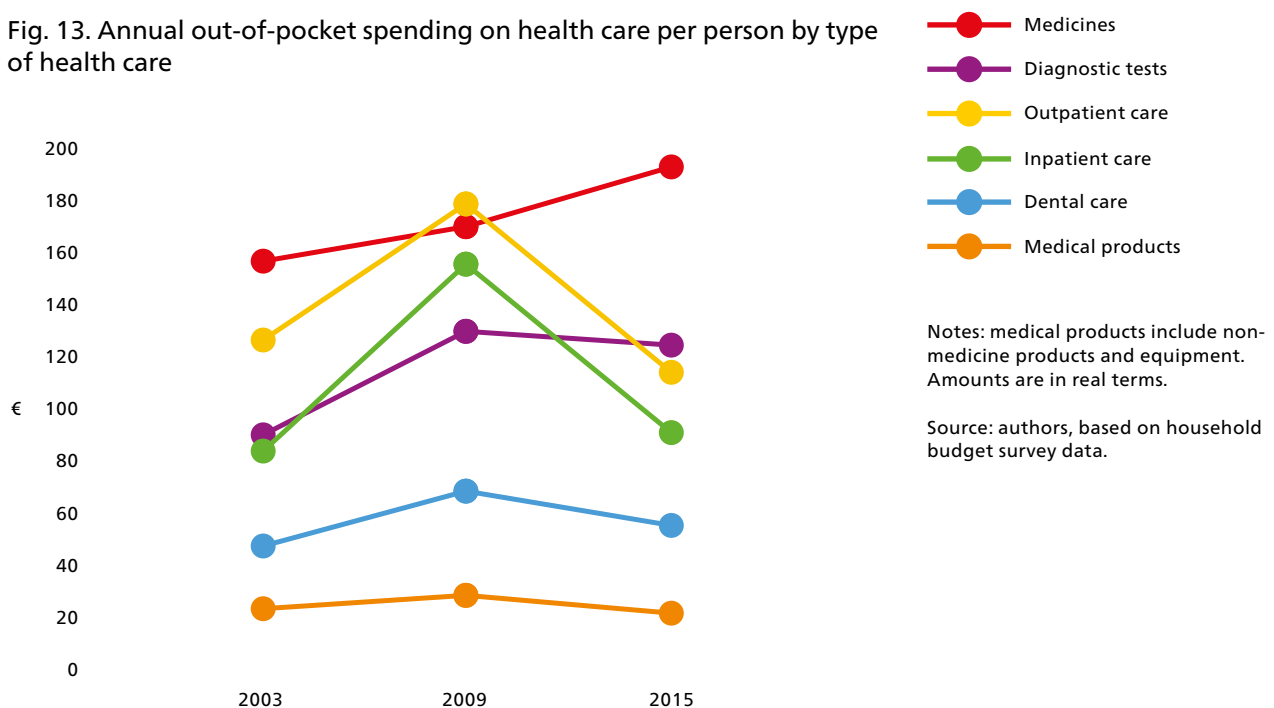


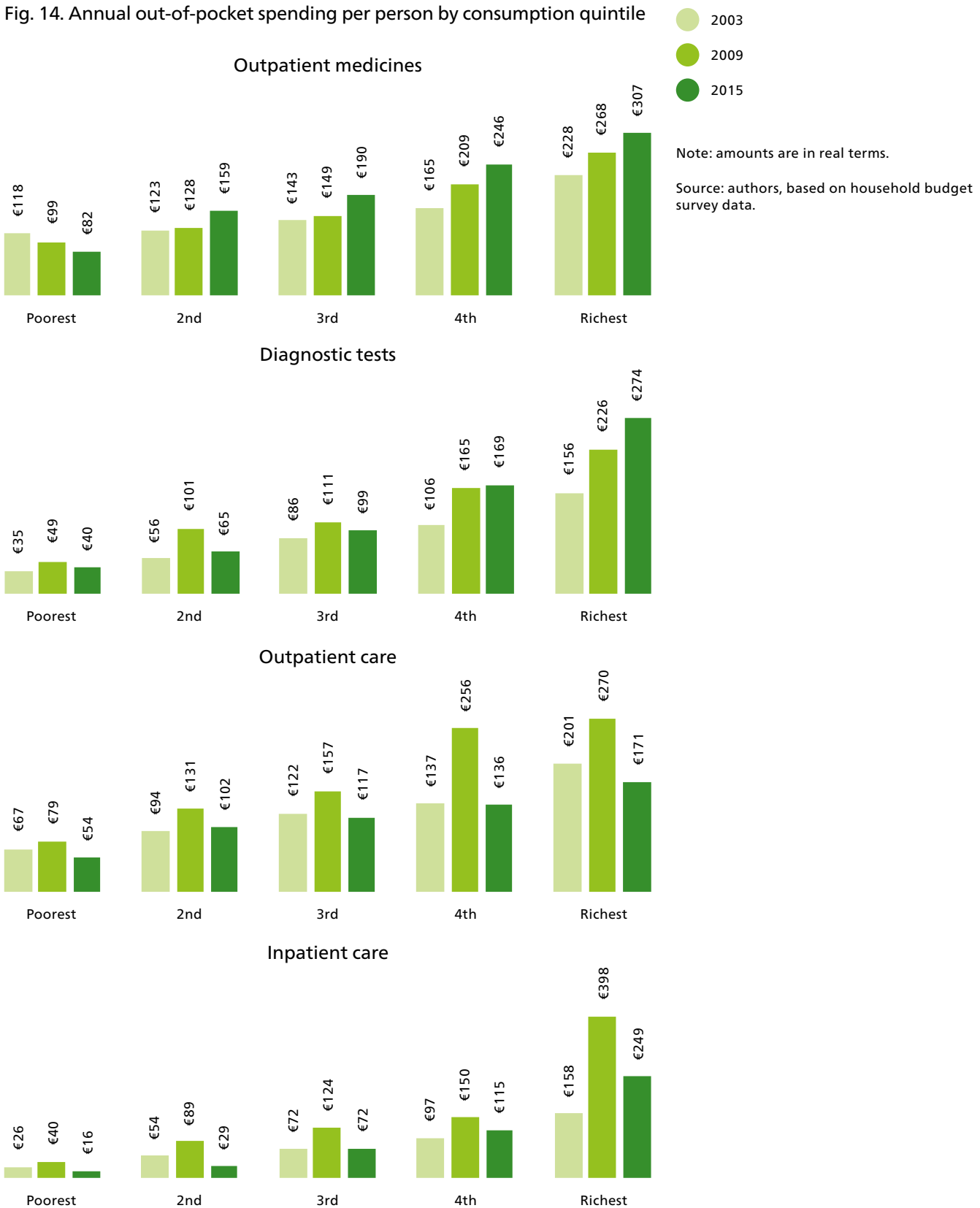
Fig. 13 shows the average annual amount spent out of pocket per person on each type of health care. For both outpatient and inpatient care, there was a sharp increase in the amount spent between 2003 and 2009, followed by a sharp decrease in 2015. For diagnostic tests, dental care and medical products, out-of-pocket spending increased in 2009 and declined in 2015. For outpatient medicines, the amount spent increased steadily over time.

Fig. 13. Annual out-of-pocket spending on health care per person by type of health care



The amount spent on outpatient medicines was higher in richer households and increased over time in all except the poorest quintile (Fig. 14). The richest quintile spent roughly 2, 2.5 and 3 times more than the poorest quintile in 2003, 2009 and 2015, respectively. The amount spent on outpatient care was higher in richer households and increased in all quintiles from 2003 to 2009, with a particularly sharp increase among the richest quintiles. Spending on outpatient care decreased in all quintiles in 2015. For inpatient care, the increase in 2009 and decline in 2015 was seen across all quintiles. Spending on inpatient care was much higher in richer households. The richest quintile spent roughly 6, 10 and 15 times more than the poorest quintile across the years studied.

Fig. 14. Annual out-of-pocket spending per person by consumption quintile





## 4.2 Informal payments

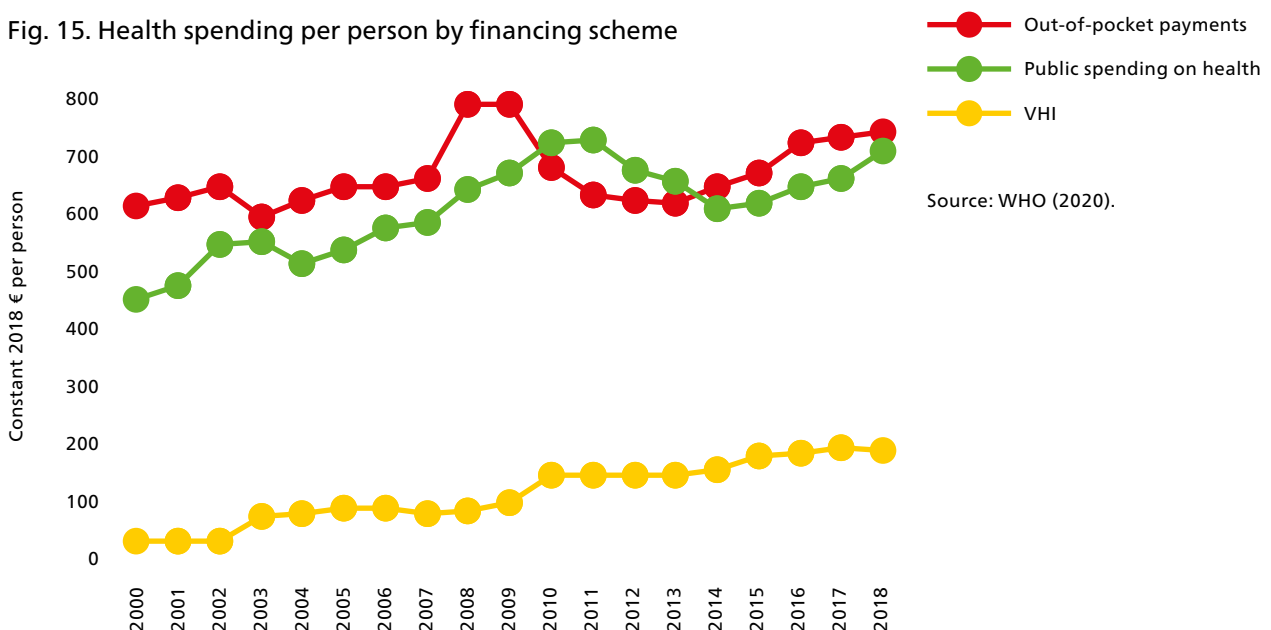
Informal payments do not represent a major problem in Cyprus, thanks to high physician salaries and strict legislation, although there has been occasional anecdotal evidence of them, notably among obstetricians, gynaecologists and surgeons (Theodorou et al., 2012). A 2017 Eurobarometer survey on corruption found only 3% of respondents in Cyprus reporting having made an informal payment for health care, compared to the EU average of 4% (European Commission, 2017).

## 4.3 Trends in public and private spending on health

National health accounts data show a similar trend in out-of-pocket payments to data from the CYSTAT household budget surveys. Out-of-pocket payments per person rose between 2003 and 2008, fell sharply between 2010 and 2013 and have grown since then (Fig. 15). By 2018 they had still not reached the level of the 2008 peak.

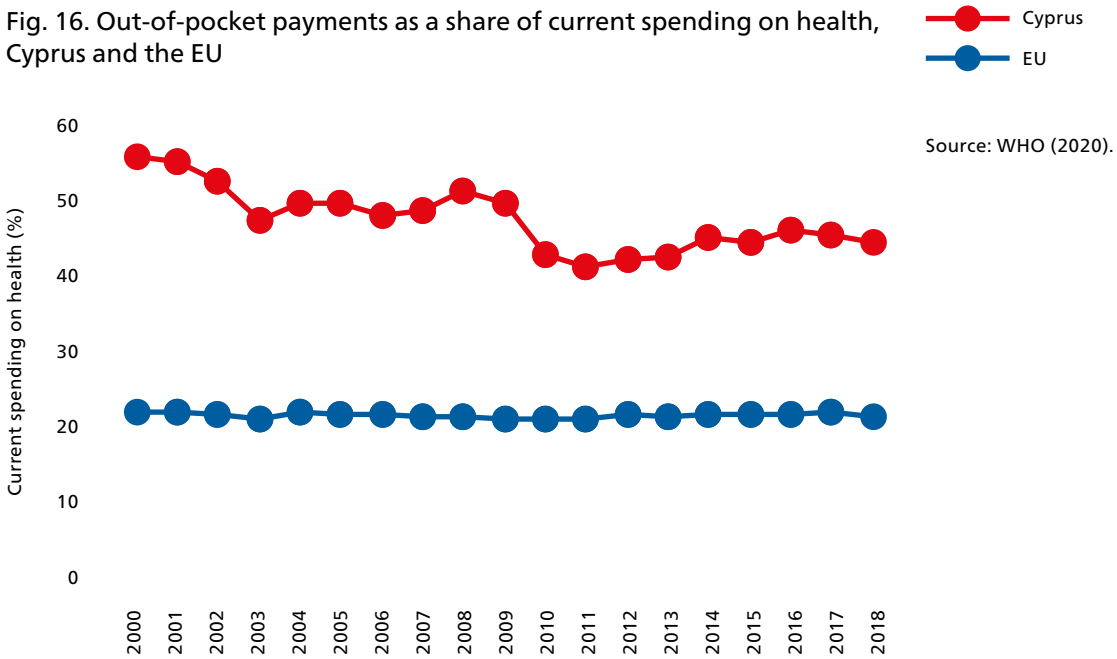
Public spending on health per person was lower than out-of-pocket payments per person until 2010. The slowdown in economic growth following the 2008 financial crisis led to a significant drop in out-of-pocket payments, as people who had previously paid out of pocket for privately provided care returned to using public facilities (European Parliament, 2015). The crisis also impeded growth in public spending on health per person, which fell steadily from a peak of €725 in 2011 to €608 in 2014. By 2018 it still had not reached pre-crisis levels.

Fig. 15. Health spending per person by financing scheme



The out-of-pocket payment share of current spending on health has always been very high in Cyprus – far above the EU average (Fig. 16). The share remained relatively stable between 2003 and 2009, fell sharply from 50% in 2009 to 43% in 2010 and increased to 45% in 2018.

Fig. 16. Out-of-pocket payments as a share of current spending on health, Cyprus and the EU



## 4.4 Summary

Household budget survey data show that household spending on health increased substantially from 2003 to 2009 in all quintiles and then fell in 2015.

The out-of-pocket payment share of total household spending (consumption) is higher in Cyprus than in many other EU countries. On average, it rose from 4.7% in 2003 to 6.1% in 2015, driven largely by increases in the two richest quintiles. This increase in the out-of-pocket payment share at a time when the amount paid out of pocket was falling reflects a decline in total household consumption.

In 2003 and 2009 outpatient medicines and outpatient care accounted for the largest share of out-of-pocket spending – around 50% on average – followed by inpatient care and diagnostic tests. In 2015 the shares spent on outpatient medicines and diagnostic tests grew, reducing the proportion spent on outpatient and inpatient care.

There are large differences in the structure of out-of-pocket spending across quintiles. The share of out-of-pocket spending on outpatient medicines is higher for poorer households, while the outpatient care share is similar across quintiles and the shares spent on diagnostic tests and inpatient care are higher for richer households. In 2009 there was a substantial decrease in out-of-pocket spending on medicines across all quintiles, which was reversed in 2015.

National health accounts data show that the out-of-pocket payment share of current spending on health has always been very high in Cyprus – far above the EU average – reflecting low levels of public spending on health; this type of spending was lower than out-of-pocket payments per person until 2010. The slowdown in economic growth following the financial crisis led to a significant drop in out-of-pocket payments, while the crisis also led to a sustained drop in public spending on health between 2011 and 2014. This indicated a procyclical pattern that shifted costs on to households. By 2018, public spending on health per person still had not reached pre-crisis levels.



# 5. Financial protection

This section uses data from the CYSTAT household budget surveys to assess the extent to which out-of-pocket payments result in financial hardship for households that use health services. It shows the relationship between out-of-pocket spending on health and risk of impoverishment, and then estimates the incidence, distribution and drivers of catastrophic out-of-pocket payments.

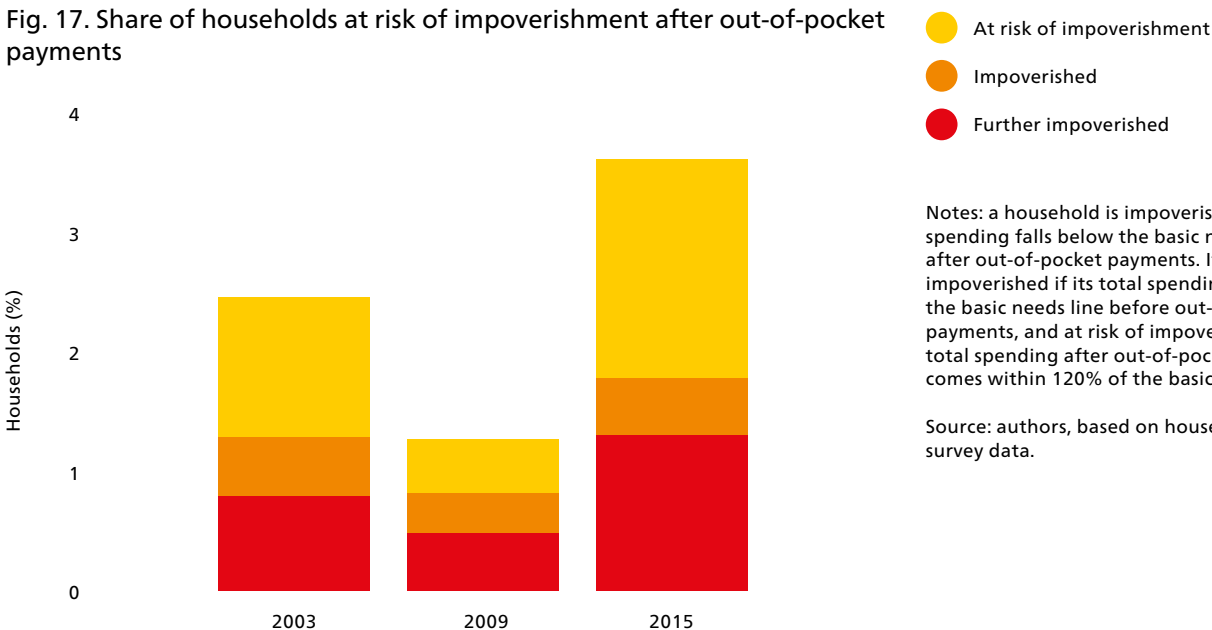
## 5.1 How many households experience financial hardship?

### 5.1.1 Out-of-pocket payments and risk of impoverishment

Fig. 17 shows the share of households at risk of impoverishment after out-of-pocket spending on health care. The poverty line reflects the cost of spending on basic needs (food, rent and utilities) among a relatively poor part of the Cypriot population (households between the 25th and 35th percentiles of the consumption distribution, adjusted for household size). The monthly cost of meeting these basic needs – the basic needs line – was (in real terms) €599 in 2015, €617 in 2009 and €579 in 2003.

In 2015, 3.6% of households were impoverished, further impoverished or at risk of impoverishment after out-of-pocket payments, a substantial increase from 1.3% in 2009 and 2.5% in 2003 (Fig. 17). The sharp increase between 2009 and 2015 was mainly driven by the share of further impoverished households, which tripled from around 4000 people in 2009 to over 13 000 in 2015, and the share of households at risk of impoverishment, which rose from around 3400 people in 2009 to nearly 17 000 in 2015.

Fig. 17. Share of households at risk of impoverishment after out-of-pocket payments



Notes: a household is impoverished if its total spending falls below the basic needs line after out-of-pocket payments. It is further impoverished if its total spending is below the basic needs line before out-of-pocket payments, and at risk of impoverishment if its total spending after out-of-pocket payments comes within 120% of the basic needs line.

Source: authors, based on household budget survey data.

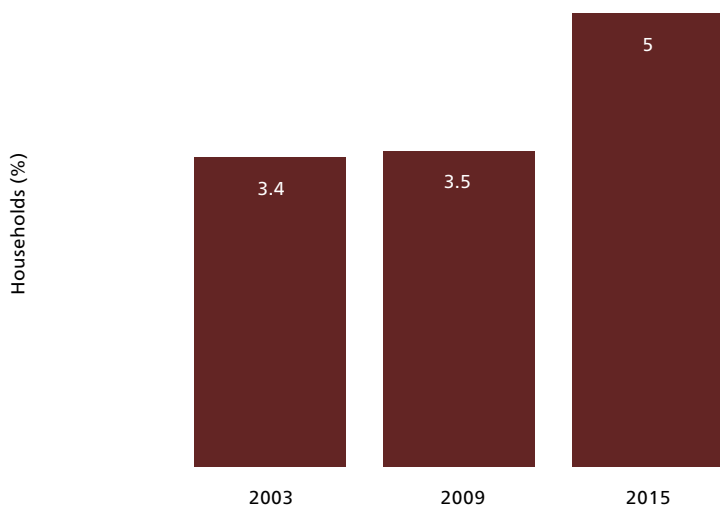
### 5.1.2 Catastrophic out-of-pocket payments

Households with catastrophic out-of-pocket payments are defined in this review as those that spend more than 40% of their capacity to pay. This includes households that are impoverished after paying out of pocket (because they no longer have any capacity to pay) and further impoverished (because they have no capacity to pay).

In 2015 5% of households – around 40 000 people – experienced catastrophic levels of spending on health care (Fig. 18). Overall, the incidence of catastrophic out-of-pocket payments remained constant between 2003 and 2009 and rose by 1.5% between 2009 and 2015, reflecting a reduction in household capacity to pay for health care (see Section 6). The number of people affected by catastrophic health spending increased significantly from around 15 000 in 2003 to 20 000 in 2009 and 40 000 in 2015, which is greater than the increase in total population across the same time period.

Fig. 18. Share of households with catastrophic out-of-pocket payments

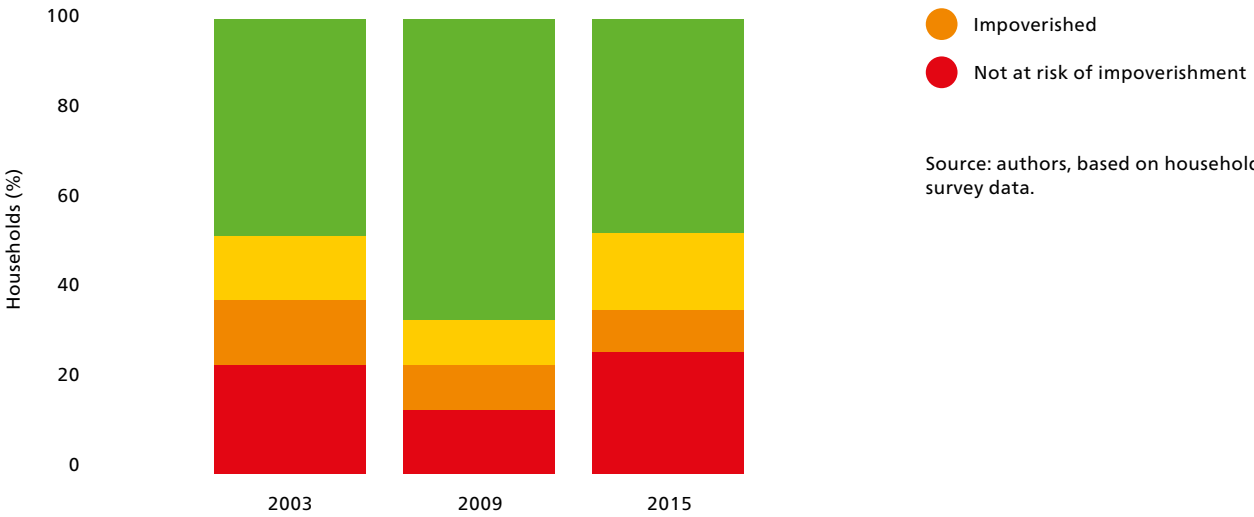
Source: authors, based on household budget survey data.



## 5.2 Who experiences financial hardship?

The increase in the overall incidence of catastrophic spending between 2009 and 2015 was mainly driven by an increase in further impoverished households and those at risk of impoverishment (Fig. 19).

Fig. 19. Breakdown of households with catastrophic spending by risk of impoverishment

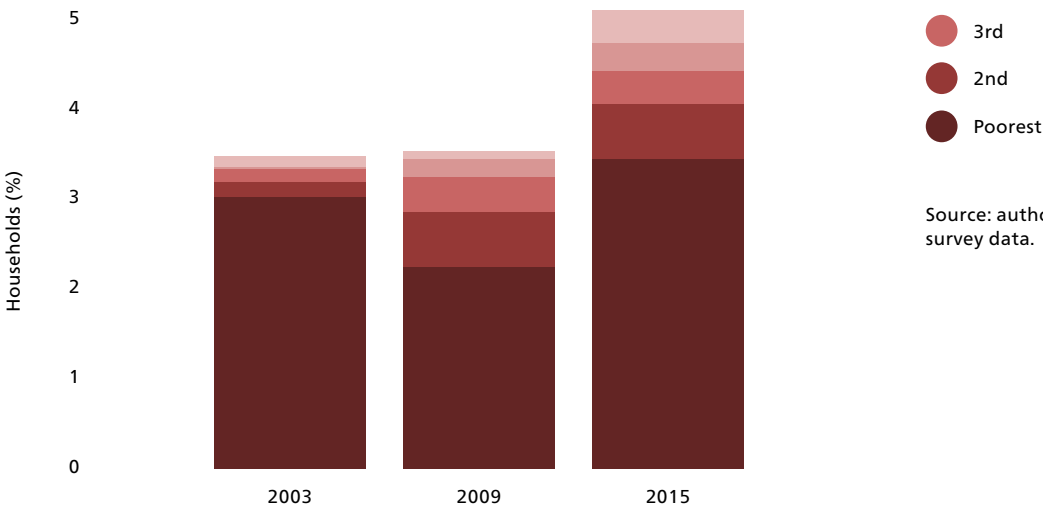


- Further impoverished
- At risk of impoverishment
- Impoverished
- Not at risk of impoverishment

Source: authors, based on household budget survey data.

The incidence of catastrophic spending varies significantly across quintiles; in all years, it is heavily concentrated among the poorest quintile (Fig. 20). The share of households in the poorest quintile among all households with catastrophic spending fell from nearly 90% in 2003 to 65% in 2009 and then increased to 68% in 2015. In 2015 17% of households in the poorest quintile experienced catastrophic health spending, compared to under 2% in the richest quintile.

Fig. 20. Share of households with catastrophic spending by consumption quintile



- Richest
- 4th
- 3rd
- 2nd
- Poorest

Source: authors, based on household budget survey data.

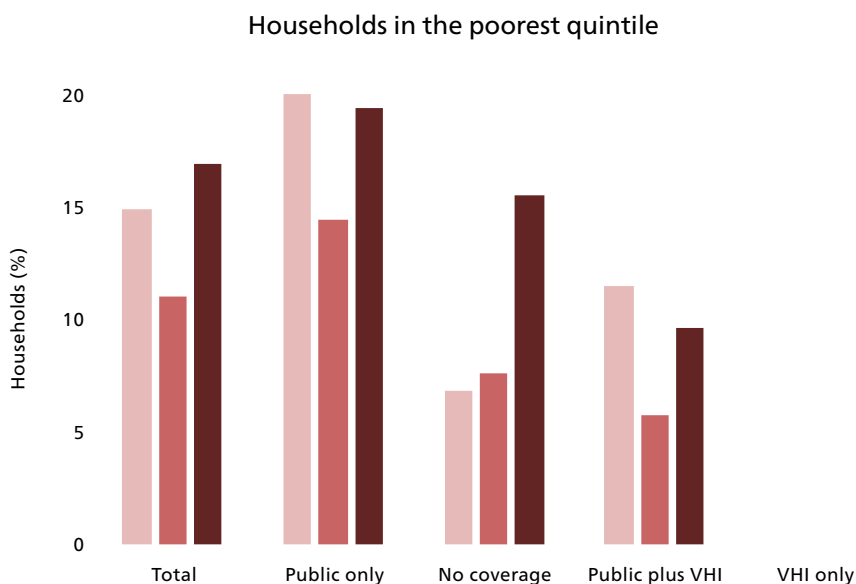
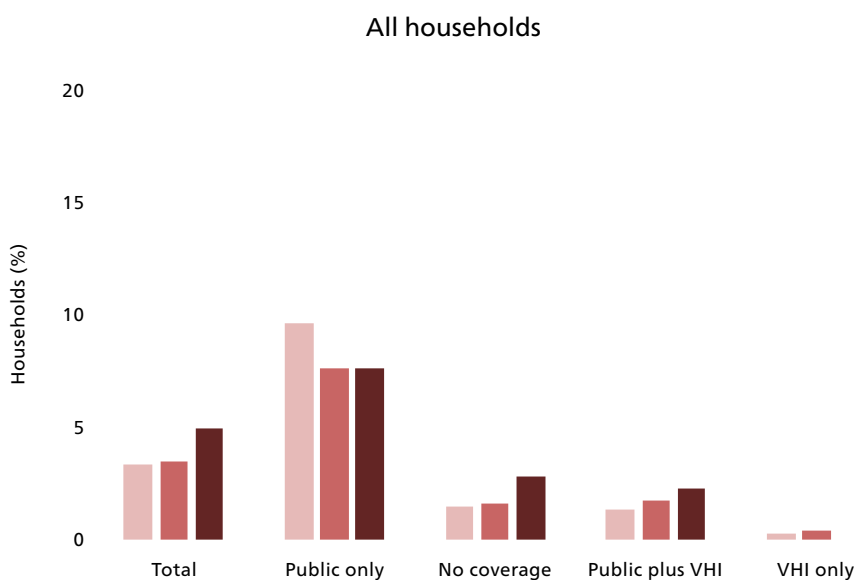


Fig. 21 shows the incidence of catastrophic spending among households by coverage status. Among all households, those who are publicly covered and do not have VHI are most likely to experience catastrophic spending, followed by those with no coverage at all and those who are publicly covered and also purchase VHI. Households who rely exclusively on VHI are least likely to experience catastrophic spending. This pattern also holds true among the poorest quintile.

Fig. 21. Catastrophic spending incidence by coverage status

- 2003
- 2009
- 2015

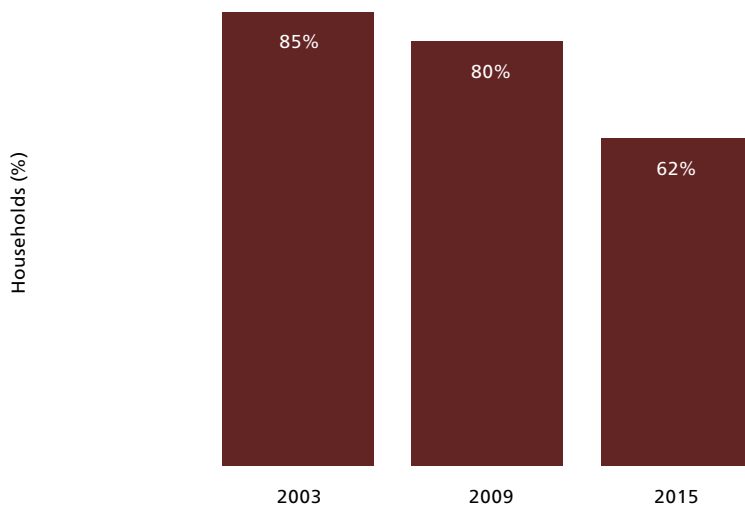
Source: authors, based on household budget survey data.



Small households and households containing people aged over 65 years are more likely to experience catastrophic health spending than larger or younger households. Fig. 22 shows that across all the years studied, catastrophic spending was concentrated among households with at least one person aged over 65 years.

Fig. 22. Share of households with at least one person over 65 years old among households with catastrophic spending

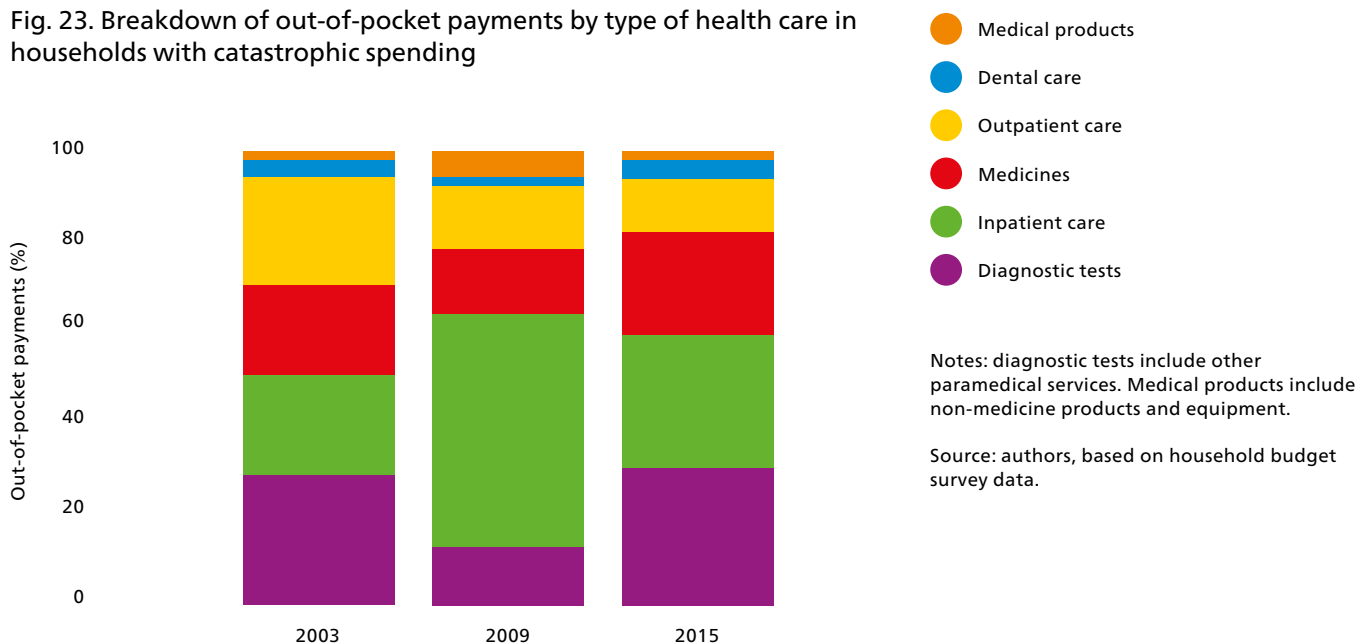
Source: authors, based on household budget survey data.



## 5.3 Which health services are responsible for financial hardship?

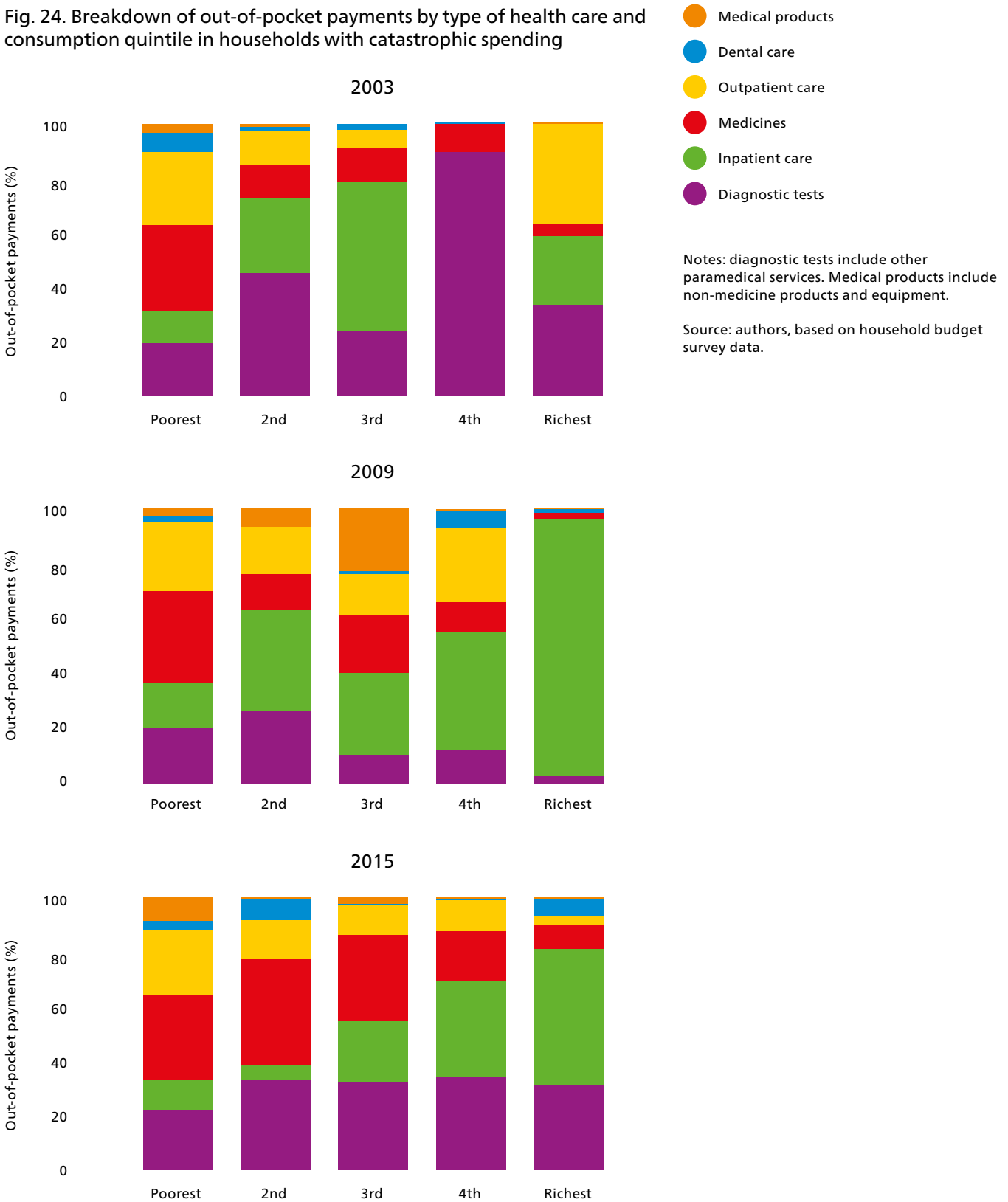
Diagnostic tests and inpatient care were the main drivers of catastrophic spending in 2015, each accounting for around 30% of out-of-pocket payments among households that experienced catastrophic spending, followed by outpatient medicines (Fig. 23). This was a shift from 2009, when catastrophic spending was mainly driven by out-of-pocket payments for inpatient care.

Fig. 23. Breakdown of out-of-pocket payments by type of health care in households with catastrophic spending



Across all years, outpatient medicines and outpatient care were the main drivers of catastrophic spending among households in the poorest quintile (Fig. 24). In 2015 outpatient medicines were also the main driver for the second and third poorest quintiles, along with diagnostic tests, while inpatient care was the main driver for the fourth and richest quintiles. This indicates that spending on outpatient medicines not only represents a significant share of out-of-pocket payments among poorer households but also leads to catastrophic spending.

Fig. 24. Breakdown of out-of-pocket payments by type of health care and consumption quintile in households with catastrophic spending

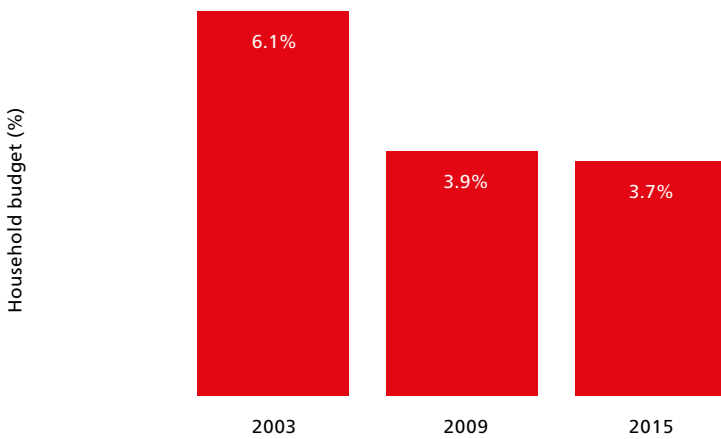


## 5.4 How much financial hardship?

The average amount spent out of pocket as a share of total household spending by the very poorest households – who were already living below the basic needs line and are further impoverished by out-of-pocket payments – was 6% in 2003 and decreased to about 4% in 2009 and 2015 (Fig. 25).

Fig. 25. Out-of-pocket payments as a share of total household spending among further impoverished households

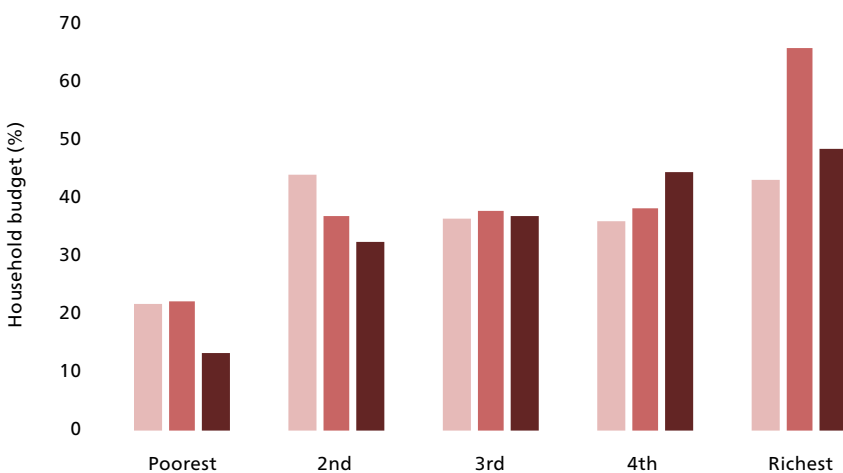
Source: authors, based on household budget survey data.



The out-of-pocket payment share of household budgets rose by quintile for experiencing catastrophic spending. Among the poorest and richest quintiles, this share fell substantially in 2015 (Fig.26).

Fig. 26. Out-of-pocket payments as a share of total household spending among households with catastrophic spending by consumption quintile

● 2003  
● 2009  
● 2015



Source: authors, based on household budget survey data.

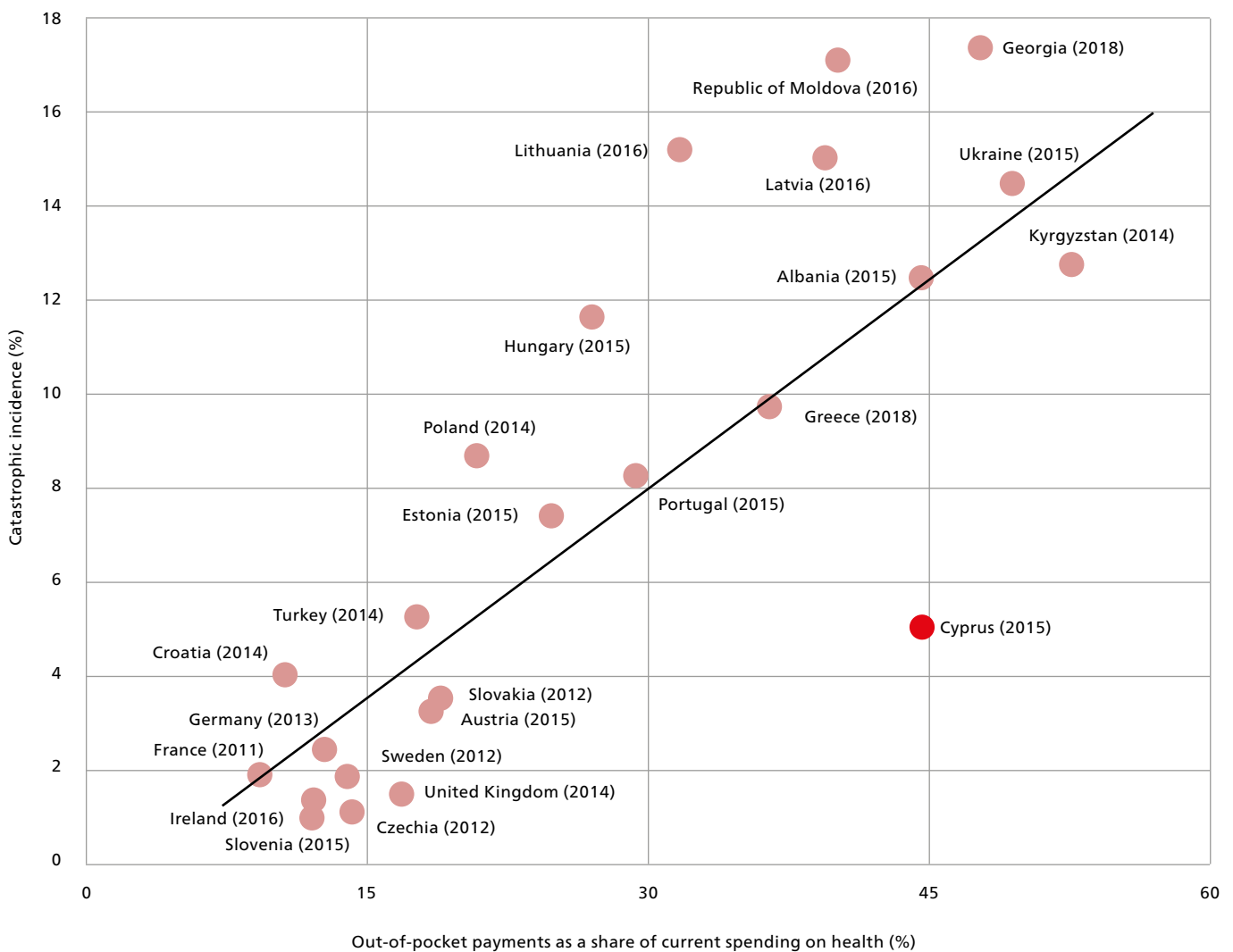
## 5.5 International comparison

The incidence of catastrophic health spending in Cyprus is higher than in many other EU countries (Fig. 27), but low in relation to the very high out-of-pocket payment share of current spending on health in Cyprus.

Fig. 27. Incidence of catastrophic spending on health and the out-of-pocket share of current spending on health in selected European countries

Notes: the out-of-pocket payment data are for the same year as the catastrophic spending data. Cyprus is highlighted in red. Data are provided for the latest available year.

Source: WHO Regional Office for Europe (2019).



## 5.6 Summary

In 2015 1.7% of households experienced impoverishing health spending and 5% (around 40 000 people) experienced catastrophic health spending. This is higher than in many other EU countries, but low in relation to the out-of-pocket payment share of current spending on health in Cyprus.

Between 2009 and 2015 there was a sharp increase in the incidence of impoverishing and catastrophic health spending, up from 0.8% and 3.5%, respectively. This increase was mainly driven by growth in the share of further impoverished households and households at risk of impoverishment.

Across all years analysed, catastrophic spending is heavily concentrated among households in the poorest quintile. In 2015 17% of households in the poorest quintile experienced catastrophic health spending, compared to under 2% in the richest quintile. Small households and households with at least one person aged over 65 years are more likely to experience catastrophic spending than larger or younger households.

The incidence of catastrophic spending also varies by coverage status. Households who are publicly covered and do not have VHI are most likely to experience catastrophic spending, followed by those with no coverage at all and those who are publicly covered and also have VHI. Households who rely exclusively on VHI are least likely to experience catastrophic spending.

In 2015 catastrophic spending was mainly driven by diagnostic tests and inpatient care, followed by outpatient medicines. This was a shift from 2009, when catastrophic spending was mainly driven by inpatient care. Across all years studied, the main drivers of catastrophic spending in the poorest quintile are outpatient medicines and outpatient care.





# 6. Factors that strengthen and undermine financial protection

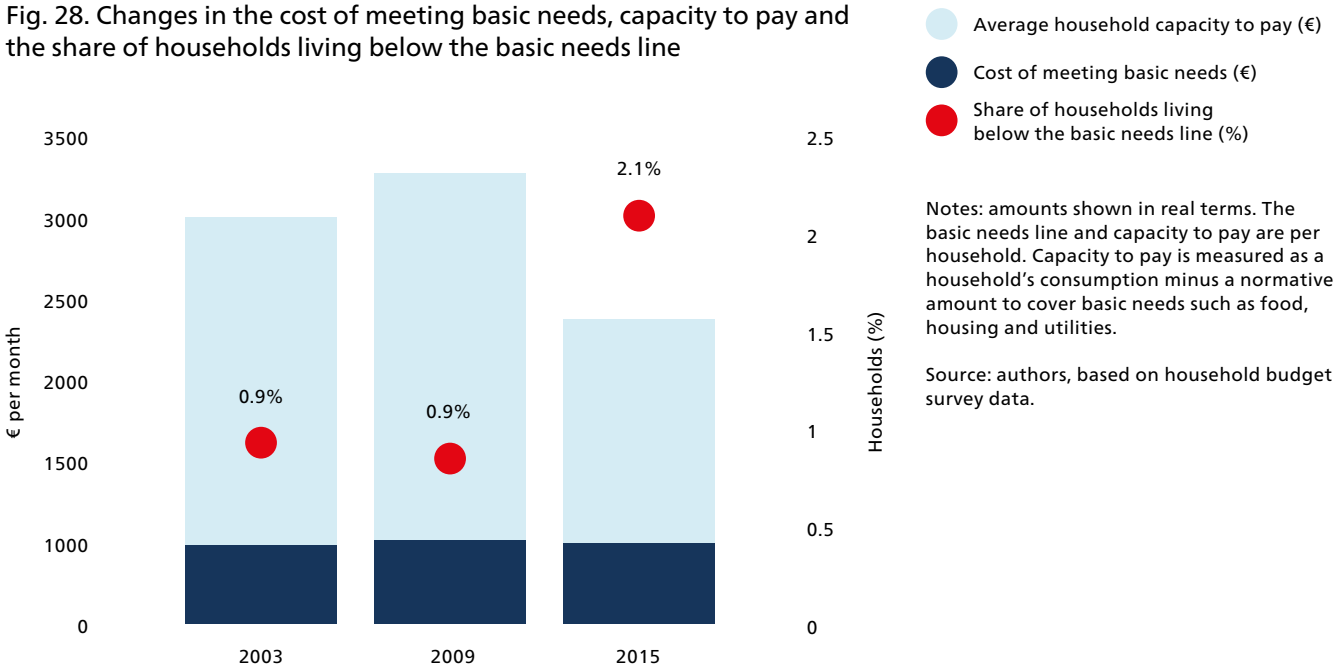
This section considers the factors that may be responsible for financial hardship caused by out-of-pocket payments in Cyprus and which may explain the trend over time. Factors outside the health system that affect people’s capacity to pay for health care – such as changes in living standards and the cost of living – are discussed first, followed by factors within the health system.

## 6.1 Factors affecting people’s capacity to pay for health care

The following paragraphs draw on data from the CYSTAT household budget surveys, among other sources, to assess people’s capacity to pay for health care.

The Cypriot economy grew rapidly from 2003 until the onset of the global financial crisis in 2008. GDP then fell steadily from 2009 to 2014, before resuming growth. This pattern is reflected in household capacity to pay for health care, which also rose in real terms between 2003 and 2009 and then fell sharply between 2009 and 2015 (Fig. 28). In contrast, the average cost of meeting basic needs (food, housing and utilities) remained relatively stable throughout the period analysed. As household capacity to pay fell, the share of households living below the basic needs line rose from 0.9% in 2009 to 2.1% in 2015.

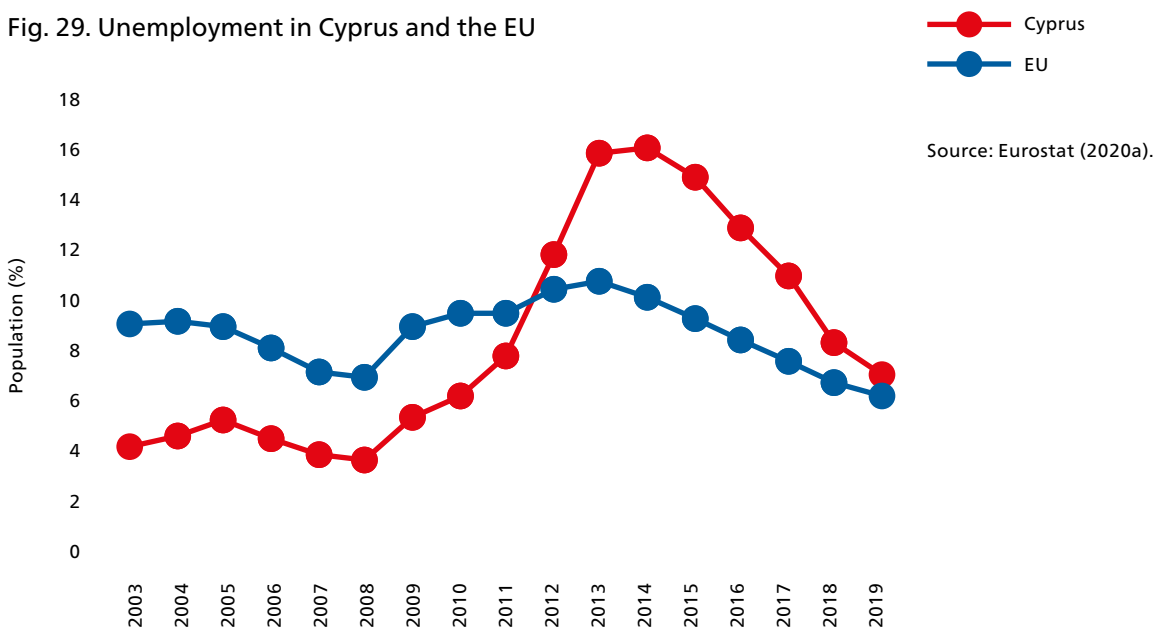
Fig. 28. Changes in the cost of meeting basic needs, capacity to pay and the share of households living below the basic needs line



The sharp fall in household capacity to pay between 2009 and 2015 reflects rising unemployment, poverty and income inequality in the context of low levels of public spending on social protection. Unemployment rose from just under 4% in 2008 to 16% in 2014, passing the EU average in 2011 (Fig. 29). Youth unemployment and long-term unemployment rose particularly sharply, from around 13% in 2009 to around 38% in 2013<sup>3</sup> (Eurostat, 2020a).

3. These latter data are not shown in Fig. 29.

Fig. 29. Unemployment in Cyprus and the EU



The rise in unemployment pushed the share of the working-age population at risk of poverty or social exclusion up from 20% in 2008 to 30% in 2015 (Fig. 30). Previously, poverty among this group of people had been below the EU average, but during the crisis it rose above the EU average. In response, the risk of poverty or social exclusion among people aged over 65 years fell, bringing it down to the EU average in 2015 (Fig. 30).

Income inequality, as measured by the Gini coefficient, grew rapidly during the crisis, rising from 29% in 2008 (when it was just below the EU average of 31%) to a peak of 35% in 2014 (with the EU average still at 31%) (Eurostat, 2020a).

Before the crisis, levels of spending on social protection were very low; well below the EU average (Fig. 31). Although social protection spending per person had been rising before the crisis, it barely grew between 2011 and 2013 and fell sharply in 2014, which further widened the already large gap between Cyprus and the EU average (Fig. 31).

This procyclical decline in public spending on social protection (also reflected in the health sector, as shown in Fig. 15) during a time of rising unemployment weakened the safety net. It is also likely to have

contributed to deteriorating financial protection in the health system. Household budget survey data from CYSTAT show that although the amount households spent out of pocket on health fell in 2015 (Fig. 9), the out-of-pocket payment share of total household spending grew (Fig. 10) and the share of households with catastrophic spending rose from 3.5% in 2009 to 5.0% in 2015 (Fig. 18).

Fig. 30. People at risk of poverty or social exclusion by age, Cyprus and the EU

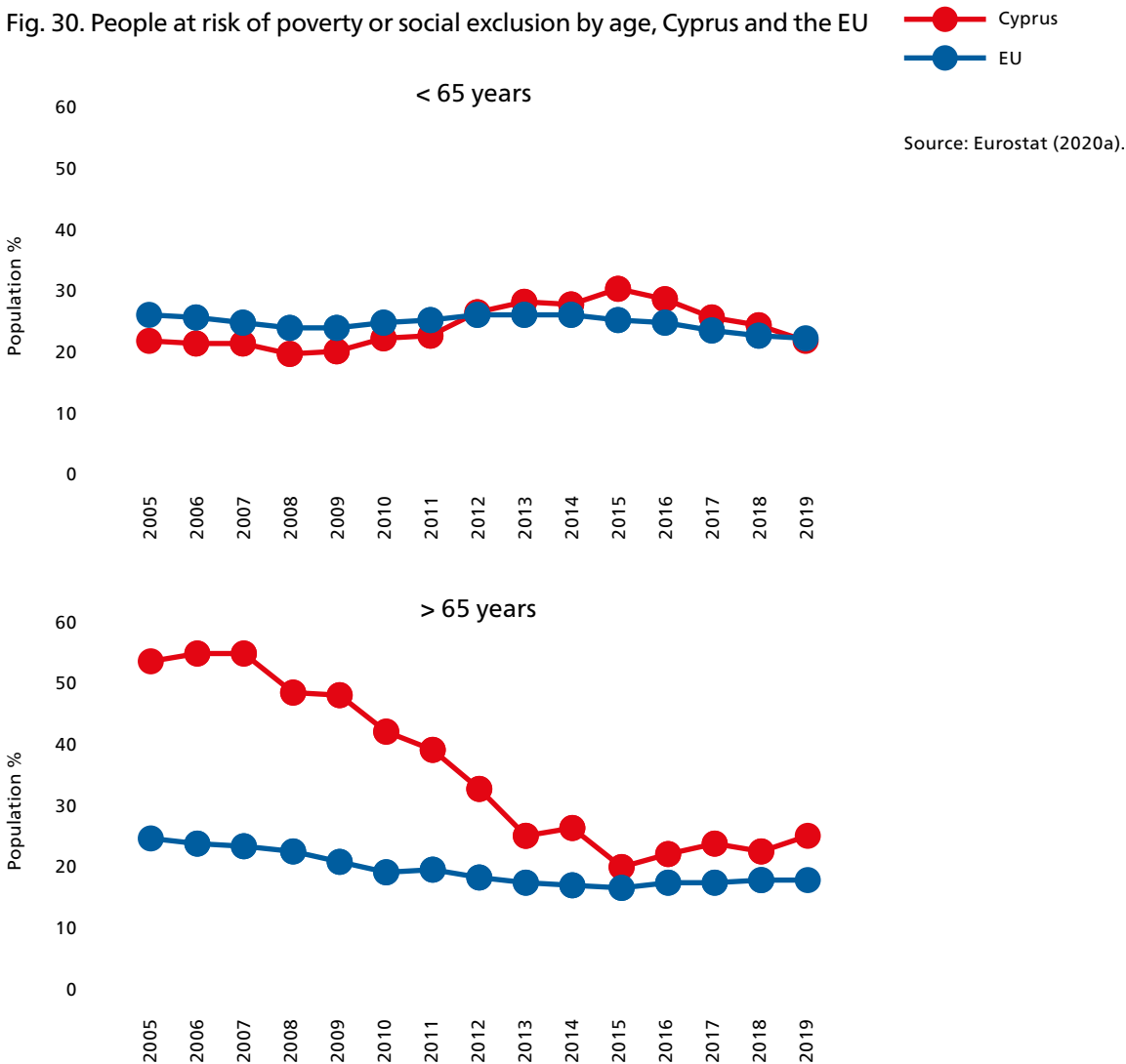
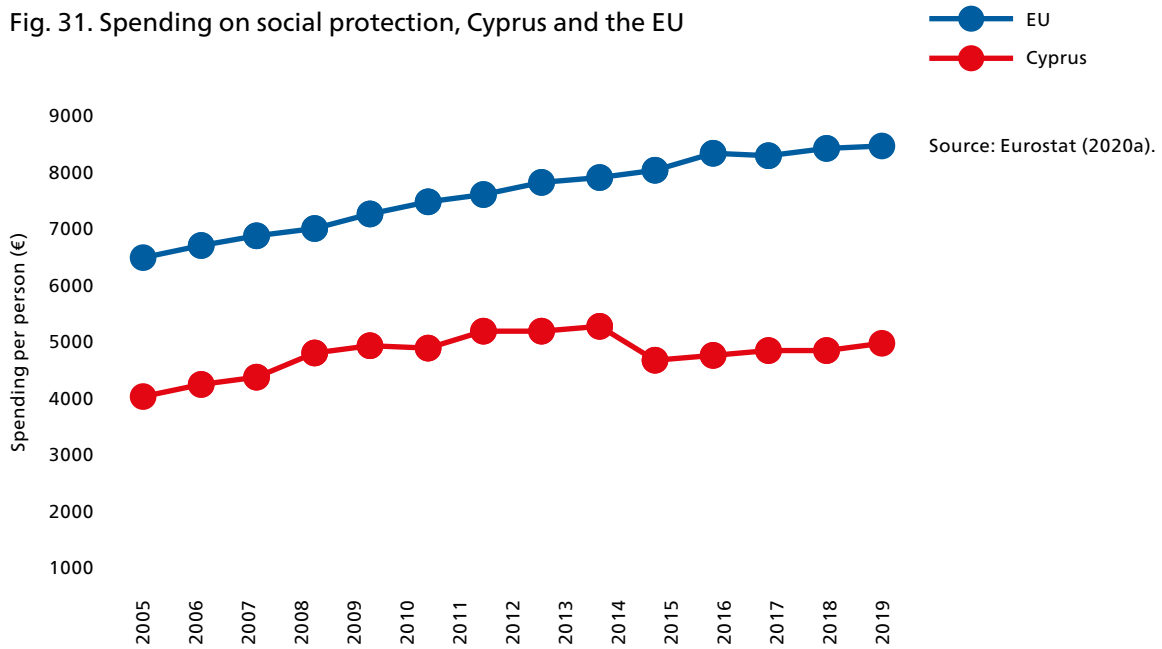


Fig. 31. Spending on social protection, Cyprus and the EU



## 6.2 Health system factors

The following subsections discuss spending on health and coverage, and then focus in more detail on the main drivers of catastrophic spending.

### 6.2.1 Health spending

Public spending on health has always been very low in Cyprus compared to other EU countries. Fig. 32 shows that in 2018 the share of the government budget allocated to health was the lowest in the EU, representing about half of the EU average. Public spending on health as a share of GDP is therefore well below the expected level in Cyprus, given the size of its GDP (Fig. 33).

Fig. 32. Share of government spending allocated to health in the EU, 2018

Source: WHO (2020).

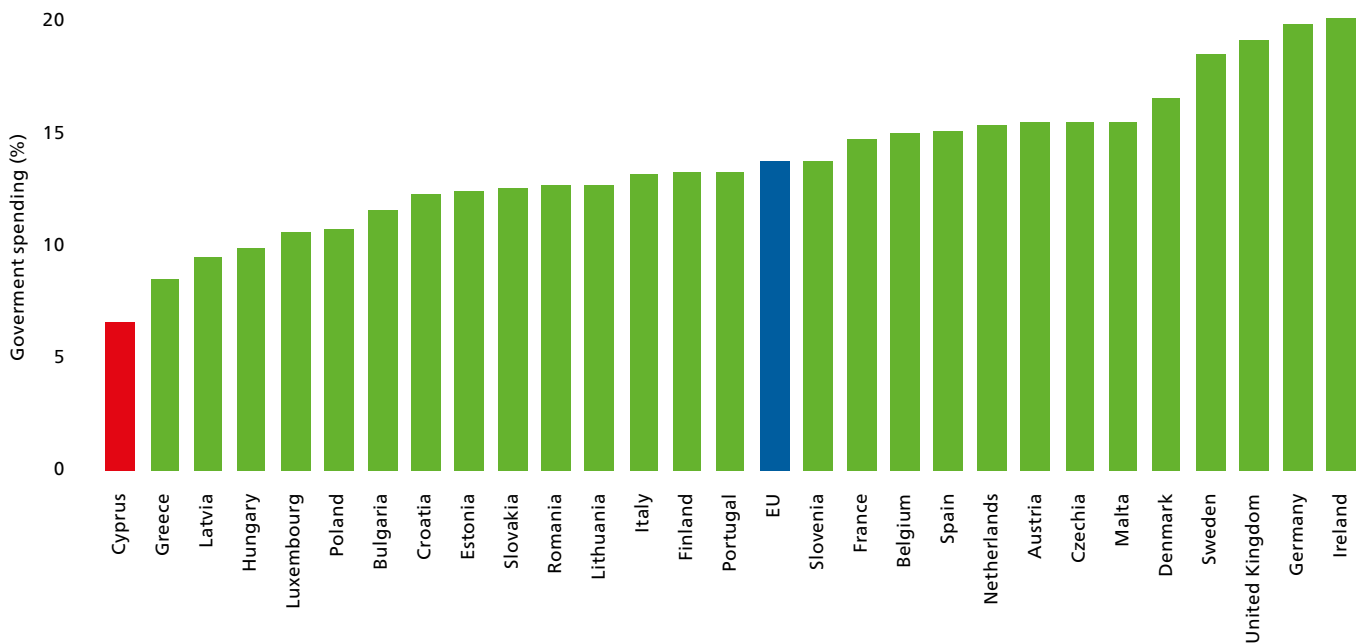
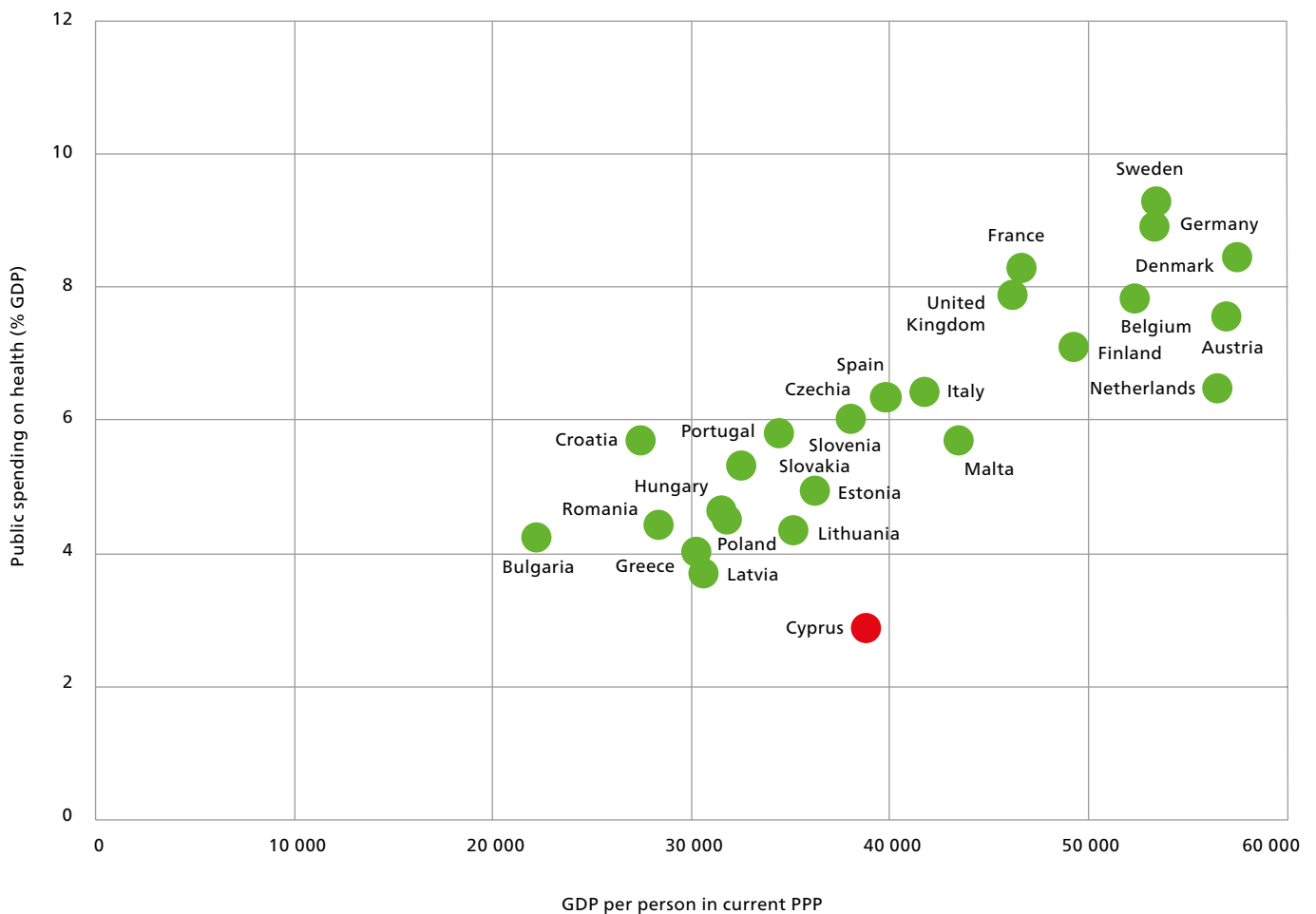


Fig. 33. Public spending on health and GDP per person in the EU, 2018

Notes: PPP: purchasing power parity. Public spending refers to all compulsory financing arrangements. The figure excludes Ireland and Luxembourg.

Source: WHO (2020).



Prior to the 2008 crisis out-of-pocket payments were higher than public spending on health (see Fig. 15). In 2008 out-of-pocket payments accounted for 51% of current spending on health; far above the EU average of 22% (Fig. 16).

During the crisis – particularly in 2010 – out-of-pocket payments fell as household incomes fell, but public spending on health also fell (Fig. 15). In 2018 the out-of-pocket payment share of current spending on health was 45%; still one of the highest shares in the EU (Fig. 16). Public spending on health per person also fell between 2012 and 2014 and, by 2018, it still had not reached pre-crisis levels.

Normally, such heavy reliance on out-of-pocket payments would lead to a high incidence of catastrophic health spending. As Fig. 27 shows, however, the share of households that experienced catastrophic spending is low in Cyprus when compared to countries with similarly high levels of out-of-pocket payments, such as Latvia, the Republic of Moldova or Ukraine. This might reflect a high degree of unmet need for health care, but both EU-SILC and EHIS data indicate that levels of unmet need in Cyprus are close to the EU average. It is therefore very likely that some aspects of the way in which health coverage is designed and implemented in Cyprus are a key factor behind the relatively low incidence of financial hardship.

### 6.2.2 Health coverage

Before 2019 there were large gaps in population coverage. Entitlement to publicly financed care was primarily based on Cypriot or EU citizenship and income, with family size and health status also playing a role in determining who would be able to use publicly financed health services and at what cost in terms of user charges (co-payments).

Following reforms introduced in 2013 as part of the Economic Adjustment Programme for Cyprus agreed with the EU, proof of having paid taxes in Cyprus and payment of contributions for some groups of people were added as conditions for entitlement. The use of income as a criterion for entitlement was extended to families with three or more children and people with severe chronic conditions.

Prior to the 2013 reforms around 15% of the population was excluded from publicly financed coverage – the highest share of uncovered people in the EU. Following the 2013 reforms, this share rose to 24%.

During this period, the incidence of catastrophic health spending among non-covered households nearly doubled, rising on average from 1.6% in 2009 to 2.8% in 2015, and from 7.6% to 9.5% in the poorest quintile (Fig. 21). The incidence of catastrophic spending among non-covered households (2.8%) was lower than the overall incidence of 5%, reflecting the fact that only 16% of non-covered households were in the poorest quintile. It may also reflect unmet need among some non-covered households.

In June 2019 the introduction of the new General Health System changed the basis for entitlement to publicly financed health care from citizenship, income and payment of contributions to legal residence in Cyprus. This means that in principle all people legally resident in the country are now covered.

The publicly financed benefits package for health care is fairly comprehensive. Some aspects of dental care for adults are excluded, but dental care is not a major driver of financial hardship in any quintile (Fig. 24). This may reflect unmet need for dental care, which almost doubled between 2008 and 2014 (Fig. 3). Coverage of long-term care, rehabilitation and palliative care is very limited.

Budgetary pressures and staff shortages have consistently led to long waiting times, particularly for publicly provided services, such as diagnostic tests and surgical procedures, encouraging people to pay out of pocket



for these services in the private sector. Waiting times were exacerbated during the economic crisis due to budget cuts and staff moving from public to private facilities (European Parliament, 2015).

User charges for publicly financed health services have traditionally been very low for the vast majority of beneficiaries. Before 2013, Beneficiaries A – accounting for 75% of the population – only had to pay a relatively low, fixed co-payment of €2 per outpatient visit. All other health services were free at the point of use, including outpatient prescriptions (see Table 2). This helps to explain why catastrophic incidence in Cyprus is low in spite of the health system's heavy reliance on out-of-pocket payments.

New user charges were introduced in 2013 for outpatient prescriptions, laboratory tests and emergency services (see Table 3). Existing user charges for outpatient visits were increased. In addition, the category Beneficiaries B was abolished, representing about 2% of the population who were eligible for publicly financed care in return for reduced co-payments (reduced compared to non-beneficiaries). These reforms led to an increase in co-payments and in the share of the population required to pay co-payments. Coupled with the absence of sufficient mechanisms to protect people from co-payments (for example, exemptions from co-payments for people with a low income), the reforms may have contributed to the increase in catastrophic spending incidence between 2009 and 2015.

Under the new General Health System, the user charges introduced in 2013 remain slightly higher than before. However, protection mechanisms have been strengthened. While exemptions from co-payments explicitly targeting low-income people no longer exist, exemptions do at least apply to almost all co-payments. In addition, there is a new annual cap covering all co-payments, which is set at a much lower (more protective) rate for children and for people with a low income (€75 a year for children aged under 21 years, people receiving the Guaranteed Minimum Income and low-income pensioners; €150 a year for all others) (see Table 4).

### 6.2.3 Health services

In 2003 the main drivers of catastrophic spending were diagnostic tests, outpatient services and inpatient care, closely followed by outpatient medicines (Fig. 23). In 2009 inpatient care was the main driver of catastrophic spending. In 2015 the inpatient care share was much lower and the main drivers were once again diagnostic tests, followed by inpatient care and outpatient medicines. Among the poorest quintile, outpatient medicines were by far the largest driver of financial hardship across all three of the years covered by the study (Fig. 24). In 2015 outpatient medicines grew to be the largest driver of financial hardship among the second and third quintiles as well.

The large increase in the share of catastrophic spending represented by inpatient care between 2003 and 2009 probably reflects growing waiting times in the public sector, pushing people to pay out of pocket for treatment in private facilities. It may also reflect increased household capacity to pay (Fig. 28) following steady GDP growth between 2003 and 2008 (Eurostat, 2020a). In 2015 the sharp decrease in the inpatient

share and the increase in the share of catastrophic spending attributed to diagnostic tests coincides with a major reduction in household capacity to pay (Fig. 28) and government budget cuts in the wake of the economic crisis. Falling incomes may have pushed people back to the public sector for outpatient and inpatient care at a time when the Cypriot Government was introducing stringent austerity measures, leading to longer waiting times and further staff shortages. Also, to reduce waiting times, in 2015 the Ministry of Health announced an initiative to extend working hours in public hospitals and enable beneficiaries to receive subsidized care from the private sector for some surgical procedures and diagnostic tests (Theodorou et al., 2018). This policy change is likely to have reduced out-of-pocket spending on inpatient care and diagnostic tests for some households.

Budget pressures and longer waiting times may also explain the increase in unmet need for health care since 2009 (Fig. 3) and the fact that waiting times were the main driver of unmet need for health care in 2014 (Fig. 4).

The share of out-of-pocket payments spent on outpatient medicines among households with catastrophic spending fell from 20% in 2003 to 14% in 2009 and then rose substantially to reach 23% in 2015. This shift was mainly driven by an increase in the share of households with catastrophic spending resulting from outpatient medicines among the four richer quintiles; there was no change in the outpatient medicines share in the poorest quintile. The pharmacy sector in Cyprus is fragmented, with the public pharmacy sector offering lower prices through central procurement. Prescribing guidelines also encourage the use of generic alternatives. However, the limited number of products available may result in unmet need or encourage people to buy medicines in private pharmacies, where they pay the full price, and prices are higher than in public pharmacies. Those using private outpatient services may also be more likely to be prescribed expensive medicines due to the absence of prescribing guidelines or monitoring of prescribing practices (Theodorou et al., 2012; Kanavos & Wouters, 2014). The abolition of the Beneficiaries B category in 2013 would have increased out-of-pocket payments for medicines in public pharmacies for many households and its effects may be seen in the substantial increase in spending on outpatient medicines in the second and third poorest quintiles between 2009 and 2015 (Fig. 14).

Overall, it is clear that very low levels of public spending on health lead to budget pressures and capacity constraints in the publicly financed part of the health system, which in turn pushes health workers into and patients to access the private sector. The private sector is much less regulated than the public sector, resulting in fragmentation and other health system inefficiencies, including high out-of-pocket payments.

The design of health coverage plays a key role in determining the distribution of out-of-pocket spending across the population. For example, prior to 2019 public resources largely focused on households with incomes below €150 000 a year and user charges for publicly financed health services remained relatively low, particularly for outpatient medicines (no charges for outpatient medicines prior to 2013, €0.50 per prescription item from 2013 to 2019 and €1 per prescription item since 2019). These design aspects help explain why the incidence

of catastrophic health spending in Cyprus is relatively low on average, in spite of the health system's heavy reliance on out-of-pocket payments.

It is important to note, however, that the incidence of catastrophic health spending is highly concentrated among the poorest households, especially among poorer households who are publicly covered and do not have VHI (Fig. 21) and among households with at least one older person (Fig. 22). This indicates that many people have been exposed to financial hardship as a direct result of: severe budget and capacity constraints in the public sector; gaps in publicly financed coverage; long waiting times for publicly financed treatment; and fragmentation and other inefficiencies in the health system.

The new General Health System launched in 2019 is expected to address many of these problems. Having a single purchasing agency – the HIO – responsible for purchasing from public and private health-care providers and pharmacies is intended to minimize fragmentation, lower waiting times, improve quality of care and reduce out-of-pocket payments.

Concerns about the implementation of the new system remain, however, including whether:

- competition between public and private health-care providers will be effective;
- public hospitals will be able to compete with private hospitals on a level playing field;
- the integrated information system will prevent overcharging and fraud, or be capable of detecting informal payments;
- there are sufficient mechanisms in place to enhance efficiency; and
- the wider political and social environment will be supportive of the changes.

Key implementation challenges are to ensure:

- rapid and effective administrative and financial autonomy for public hospitals, to enable them to compete with the private sector (considered by many experts to be the most difficult task);
- coordination of all public and private health-care providers and patient pathways; and
- control of health spending growth through new methods of provider payment (capitation for GPs, global budgets for outpatient specialists and diagnosis-related groups for hospitals).

Despite initial fears about the willingness of private health-care providers to take part in the new system, most private doctors, clinics and hospitals, and all private pharmacies have agreed to be contracted by the HIO. It is estimated that the new system has at its disposal 80% of the available hospital beds in Cyprus. This positive development is expected to relieve pressure on overcrowded public hospitals and reduce waiting times,

especially for surgical procedures. Nevertheless, it will take time for the new system to find its balance, to address the imbalance in income between public hospital doctors and private doctors, as well as to increase staff productivity.

From the perspective of the population, there is a feeling that people have welcomed the new system for its advantages over the previous situation – its universal nature, increased choice of provider, more timely access to doctors and relatively low, fixed co-payments. Theodorou (2020) offers a concise overview of the first months of the new system.

## 6.3 Summary

The factors that undermine financial protection include:

- persistently low levels of public spending on health (well below what would be expected given the size of Cyprus' economy);
- long-standing budget and capacity constraints in public facilities, leading to problems with timely access and pushing many people to pay for privately provided medicines, diagnostic tests, consultations and inpatient treatment;
- the presence of a large market for privately provided health services, including medicines, which draws human resources away from the publicly financed part of the health system and exacerbates health system inequalities and inefficiencies;
- a sharp decline in household capacity to pay for health care between 2009 and 2015, reflecting rising unemployment, poverty and income inequality in the context of the economic crisis; and
- a procyclical pattern of public spending on health and social protection in the years following the 2008 financial crisis, which weakened the safety net, exacerbated budget and capacity constraints in public facilities and shifted health-care costs onto households.

The share of households with catastrophic health spending is low in Cyprus when compared to countries with similarly high levels of out-of-pocket payments. The factor most likely to account for this relatively low incidence is the near total absence of user charges for publicly financed health services before 2013. There were no user charges at all for covered people aged over 65 years and some covered low-income people. For all other people covered by publicly financed health services, the only user charge in place was a fixed co-payment of €2 per outpatient visit.

Policy responses to the 2008 crisis, including a lasting decline in public spending on health per person, are likely to have contributed both to rising unmet need between 2008 and 2014 and to the increase in catastrophic health spending between 2009 and 2015. These policy responses include:

- the further restriction of the basis for entitlement, reducing the share of the population covered from 85% to 75%;
- the introduction of new user charges for outpatient prescriptions, laboratory tests and emergency services, and an increase in existing user charges for outpatient visits; and
- the cutting of budgets and movement of public sector health staff to the private sector, negatively affecting waiting times for publicly financed treatment.

The General Health System launched in 2019 is expected to reduce unmet need and financial hardship by:

- changing the basis for entitlement from citizenship, income and payment of contributions to residence, which extends publicly financed coverage to the 25% of the population that was previously not covered;
- simplifying user charges and improving protection mechanisms – for example, exemptions now apply to almost all co-payments and there is a new annual cap covering all co-payments, with a more protective rate for children and people with a low income;
- introducing a single-payer system in which the purchasing agency (the HIO) purchases services from public and private providers, with the aim of reducing fragmentation, lowering waiting times, improving quality of care and reducing out-of-pocket spending; and
- increasing public investment in the health system.



# 7. Implications for policy

**Financial protection is weaker in Cyprus than in many other EU countries, having deteriorated over time.** The incidence of catastrophic health spending rose from 3.5% of households (20 000 people) in 2009 to 5.0% of households (around 40 000 people) in 2015.

**Access to health care, measured in terms of unmet need, was on a par with the EU average in 2008 but grew between 2008 and 2014, particularly for dental care.** Socioeconomic inequality in unmet need is substantial.

**Catastrophic spending is most likely to affect poor people, older people and people who are publicly covered and do not have VHI.** The increase in catastrophic spending in 2015 was driven mainly by an increase in the poorest quintile.

**Outpatient medicines are the main driver of catastrophic spending among the poorest quintile, followed by outpatient care.** Among richer quintiles, financial hardship is mainly driven by spending on inpatient care and diagnostic tests.

**Catastrophic spending is low in Cyprus in relation to the very high out-of-pocket payment share of current spending on health (45% in 2018; one of the highest shares in the EU), probably due to the near total absence of user charges (co-payments) for publicly financed health services before 2013.** There were no user charges at all for covered people aged over 65 years and some covered low-income people. For all other covered people, the only user charge in place was a fixed co-payment of €2 per outpatient visit.

**Policy responses to the 2008 crisis – sustained cuts to public spending on health and social protection and coverage restrictions – are likely to have contributed to rising unmet need and catastrophic health spending between 2009 and 2015.** Changes to the basis for entitlement introduced in 2013 reduced the share of the population covered from 85% to 75%. New user charges were also applied to outpatient prescriptions, laboratory tests and emergency services in 2013 and existing user charges for outpatient visits were increased. Waiting times for treatment in public facilities grew. By 2018 public spending on health per person had still not reached pre-crisis levels.

**The General Health System launched in 2019 is a major step forward for Cyprus.** It is expected to reduce unmet need and financial hardship through a range of measures. These include: changing the basis for entitlement from citizenship, income and payment of contributions to residence, which extends publicly financed coverage to the 25% of the population that was previously not covered; ensuring enhanced protection from user charges (co-payments); introducing a single-payer system in which the purchasing agency (the HIO) purchases services from public and private providers, with the aim of reducing fragmentation, lowering waiting times, improving quality of care and reducing out-of-pocket payments; and ensuring greater public investment in the health system.

**Key implementation challenges remain, however, including political support to ensure that the reforms stay on track, the purchasing of health services continues to be strengthened and public spending on health continues to increase at a steady pace.**



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## Annex 1. Household budget surveys in Europe

**What is a household budget survey?** Household budget surveys are national sample surveys that aim to measure household consumption of goods and services over a given period of time. In addition to information about consumption expenditure, they include information about household characteristics.

**Why are they carried out?** Household budget surveys provide valuable information on how societies and people use goods and services to meet their needs and preferences. In many countries, the main purpose of a household budget survey is to calculate weights for the Consumer Price Index, which measures the rate of price inflation as experienced and perceived by households (Eurostat, 2015). Household budget surveys are also used by governments, research entities and private firms wanting to understand household living conditions and consumption patterns.

**Who is responsible for them?** Responsibility for household budget surveys usually lies with national statistical offices.

**Are they carried out in all countries?** Almost every country in Europe conducts a household budget survey (Yerramilli et al., 2018).

**How often are they performed?** EU countries conduct a household budget survey at least once every five years, on a voluntary basis, following an informal agreement reached in 1989 (Eurostat, 2015). Many countries in Europe conduct them at more frequent intervals (Yerramilli et al., 2018).

**What health-related information do they contain?** Information on household consumption expenditure is gathered in a structured way, usually using the United Nations Classification of Individual Consumption According to Purpose (COICOP). A new European version of COICOP known as ECOICOP, intended to encourage further harmonization across countries, was introduced in 2016 (Eurostat, 2016).

Information on health-related consumption comes under COICOP code 6, which is further divided into three groups, as shown in Table A1.1. In this study, health-related information from household budget surveys is divided into six groups (with corresponding COICOP codes): medicines (06.1.1), medical products (06.1.2 and 06.1.3), outpatient care (06.2.1), dental care (06.2.2), diagnostic tests (06.2.3) and inpatient care (06.3).

In a very small minority of countries in Europe (Belgium, France, Luxembourg and Switzerland), people entitled to publicly financed health care may pay for treatment themselves, then claim or receive reimbursement from their publicly financed health insurance fund (OECD, 2019). In a wider range of countries, people may also be reimbursed by entities offering voluntary health insurance – for example, private insurance companies or occupational health schemes.

To avoid households reporting payments that are subsequently reimbursed, many household budget surveys in Europe specify that household spending on health should be net of any reimbursement from a third party such as the government, a health insurance fund or a private insurance company (Heijink et al., 2011).

Some surveys ask households about spending on voluntary health insurance. This is reported under a different COICOP code (12.5.3 Insurance connected with health, which covers "Service charges for private sickness and accident insurance") (United Nations Statistics Division, 2018).

#### **Are household budget surveys comparable across countries?**

Classification tools such as COICOP (and ECOICOP in Europe) support standardization, but they do not address variation in the instruments used to capture data (e.g. diaries, questionnaires, interviews, registers), response rates and unobservable differences such as whether the survey sample is truly nationally representative. Cross-national variation in survey instruments can affect levels of spending and the distribution of spending across households. It is important to note, however, that its effect on spending on health in relation to total consumption – which is what financial protection indicators measure – may not be so great.

An important methodological difference in quantitative terms is **owner-occupier imputed rent**. Not all countries impute rent and, among those that do, the methods used to impute rent vary substantially (Eurostat, 2015). In this series, imputed rent is excluded when measuring total household consumption.

Table A1.1. Health-related consumption expenditure in household budget surveys

Source: United Nations Statistics Division (2018).

COICOP codes	Includes	Excludes
<b>06.1 Medical products, appliances and equipment</b> <a href="#">06.1.1 Pharmaceutical products</a> <a href="#">06.1.2 Other medical products</a> <a href="#">06.1.3 Therapeutic appliances and equipment</a>	This covers medicaments, prostheses, medical appliances and equipment and other health-related products purchased by individuals or households, either with or without a prescription, usually from dispensing chemists, pharmacists or medical equipment suppliers. They are intended for consumption or use outside a health facility or institution.	Products supplied directly to outpatients by medical, dental and paramedical practitioners or to inpatients by hospitals and the like are included in outpatient services (06.2) or hospital services (06.3).
<b>06.2 Outpatient services</b> <a href="#">06.2.1 Medical services</a> <a href="#">06.2.2 Dental services</a> <a href="#">06.2.3 Paramedical services</a>	This covers medical, dental and paramedical services delivered to outpatients by medical, dental and paramedical practitioners and auxiliaries. The services may be delivered at home or in individual or group consulting facilities, dispensaries and the outpatient clinics of hospitals and the like. Outpatient services include the medicaments, prostheses, medical appliances and equipment and other health-related products supplied directly to outpatients by medical, dental and paramedical practitioners and auxiliaries.	Medical, dental and paramedical services provided to inpatients by hospitals and the like are included in hospital services (06.3).
<b>06.3 Hospital services</b>	Hospitalization is defined as occurring when a patient is accommodated in a hospital for the duration of the treatment. Hospital day care and home-based hospital treatment are included, as are hospices for terminally ill persons. This group covers the services of general and specialist hospitals; the services of medical centres, maternity centres, nursing homes and convalescent homes that chiefly provide inpatient health care; the services of institutions serving older people in which medical monitoring is an essential component; and the services of rehabilitation centres providing inpatient health care and rehabilitative therapy where the objective is to treat the patient rather than to provide long-term support. Hospitals are defined as institutions that offer inpatient care under the direct supervision of qualified medical doctors. Medical centres, maternity centres, nursing homes and convalescent homes also provide inpatient care, but their services are supervised and frequently delivered by staff of lower qualification than medical doctors.	This group does not cover the services of facilities (such as surgeries, clinics and dispensaries) devoted exclusively to outpatient care (06.2). Nor does it include the services of retirement homes for older people, institutions for disabled people and rehabilitation centres providing primarily long-term support (12.4).

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## Annex 2. Methods used to measure financial protection in Europe

### Background

The indicators used for monitoring financial protection in Europe are adapted from the approach set out in Xu et al. (2003, 2007). They also draw on elements of the approach set out in Wagstaff & Eozenou (2014). For further information on the rationale for developing a refined indicator for Europe, see Thomson et al. (2016) and WHO Regional Office for Europe (2019).

### Data sources and requirements

Preparing country-level estimates for indicators of financial protection requires nationally representative household survey data that includes information on household composition or the number of household members.

The following variables are required at household level:

- total household consumption expenditure;
- food expenditure (excluding tobacco and alcohol if possible);
- housing expenditure, disaggregated by rent and utilities (such as water, gas, electricity and heating); and
- health expenditure (out-of-pocket payments), disaggregated by type of health care good and service.

Information on household consumption expenditure is gathered in a structured way, usually using the United Nations Classification of Individual Consumption According to Purpose (COICOP) (United National Statistics Division, 2018).

If the survey includes a household sampling weight variable, calculations should consider the weight in all instances. Information on household or individual-level characteristics such as age, sex, education and location are useful for additional equity analysis.

### Defining household consumption expenditure variables

Survey data come in various time units, often depending on whether the reporting period is 7 days, 2 weeks, 1 month, 3 months, 6 months or 1 year. It is important to convert all variables related to household consumption expenditure to a common time unit. To facilitate comparison with other national-level indicators, it may be most useful to annualize all survey data. If annualizing survey data, it is important not to report the average level of out-of-pocket payments only among households with out-of-pocket payments, as this will produce inaccurate figures.

### Total household consumption expenditure not including imputed rent

Household consumption expenditure comprises both monetary and in-kind payment for all goods and services (including out-of-pocket payments) and the money value of the consumption of home-made products. Many household budget surveys do not calculate imputed rent. To maintain cross-country comparability with surveys that do not calculate imputed rent, imputed rent (COICOP code 04.2) should be subtracted from total consumption if the survey includes it.

### Food expenditure

Household food expenditure is the amount spent on all foodstuffs by the household plus the value of the family's own food production consumed within the household. It should exclude expenditure on alcoholic beverages and tobacco. Food expenditure corresponds to COICOP code 01.

### Housing expenditure on rent and utilities

Expenditure on rent and utilities is the amount spent by households on rent (only among households who report paying rent) and on utilities (only among households who report paying utilities) including electricity, heating and water. These data should be disaggregated to correspond to COICOP codes 04.1 (for rent) and 04.4 and 04.5 (for utilities). Care should be taken to exclude spending on secondary dwellings. Imputed rent (COICOP code 04.2) is not available in all household budget surveys and should not be used in this analysis.

### Health expenditure (out-of-pocket payments)

Out-of-pocket payments refer to formal and informal payments made by people at the time of using any health service provided by any type of provider (COICOP code 06). Health services are any good or service delivered in the health system. These typically include consultation fees, payment for medications and other medical supplies, payment for diagnostic and laboratory tests and payments occurring during hospitalization. The latter may include a number of distinct payments such as to the hospital, to health workers (doctors, nurses, anaesthesiologists etc.) and for tests. Both cash and in-kind payments should be included if the latter are quantified in monetary value. Both formal and informal payments should also be included. Although out-of-pocket payments include spending on alternative or traditional medicine, they do not include spending on health-related transportation and special nutrition. It is also important to note that out-of-pocket payments are net of any reimbursement to households from the government, health insurance funds or private insurance companies.

### **Estimating spending on basic needs and capacity to pay for health care**

Basic needs expenditure is a socially recognized minimum level of spending considered necessary to ensure sustenance and other basic personal needs. This report calculates household-specific levels of basic needs expenditure to estimate a household's capacity to pay for health care.

Households whose total consumption expenditure is less than the basic needs expenditure level generated by the basic needs line are deemed to be poor.

#### Defining a basic needs line

Basic needs can be defined in different ways. This report considers food, utilities and rent to be basic needs and distinguishes between:

- households that do not report any utilities or rent expenses; their basic needs include food;
- households that do not report rent expenses (households that own their home outright or make mortgage payments, which are not included in consumption expenditure data), but do report utilities expenses; their basic needs include food and utilities;
- households that pay rent, but do not report utilities expenditure (for example, if the reporting period is so short that it does not overlap with billing for utilities and there is no alternative reporting of irregular purchases); their basic needs include food and rent;
- households that report paying both utilities and rent, so that their basic needs include food, utilities and rent.

Adjusting households' capacity to pay for rent (among renters) is important. Household budget surveys consider mortgages to be investments, not consumption expenditure. For this reason most do not collect household spending on mortgages. Without subtracting some measure of rent expenditure from those who rent, renters will appear to be systematically wealthier (and have greater capacity to pay) than identical households with mortgages.

To estimate standard (normative) levels of basic needs expenditure, all households are ranked based on their per (equivalent) person total consumption expenditure. Households between the 25th and 35th percentiles of the total sample are referred to as the representative sample for estimating basic needs expenditure. It is assumed that they are able to meet, but not necessarily exceed, basic needs for food, utilities and rent.

In some countries it is common to finance out-of-pocket payments from savings or borrowing, which might artificially inflate a household's consumption and affect household ranking. Where this is an issue, it may be preferable to rank households by per equivalent person non-out-of-pocket payment consumption expenditure.

#### Calculating the basic needs line

To begin to calculate basic needs, a household equivalence scale should be used to reflect the economy scale of household consumption. The Organisation for Economic Co-operation and Development equivalence scale (the Oxford scale) is used to generate the equivalent household size for each household:

$$\text{equivalent household size} = 1 + 0.7 * (\text{number of adults} - 1) + 0.5 * (\text{number of children under 13 years of age})$$

Each household's total consumption expenditure (less imputed rent), food expenditure, utilities expenditure and rent expenditure is divided by the equivalent household size to obtain respective equivalized expenditure levels.

Households whose equivalized total consumption expenditure is between the 25th and 35th percentile across the whole weighted sample are the representative households used to calculate normative basic needs levels. Using survey weights, the weighted average of spending on food, utilities and rent among representative households that report positive values for food, utilities and rent expenditure, respectively, gives the basic needs expenditure per (equivalent) person for food, utilities and rent.

Note again that households that do not report food expenditure are excluded as this may reflect reporting errors. For households that do not report any rent or utilities expenses, only the sample-weighted food basic needs expenditure is used to represent total basic needs expenditure per (equivalent) person. For households that report utilities expenditures but do not report any rent expenses, the two basic needs expenditure sample-weighted averages for food and utilities are added to calculate total basic needs expenditure per (equivalent) person. For households that report rent expenditures but do not report any utilities expenses, the two basic needs expenditure sample-weighted averages for food and rent are added to calculate total basic needs expenditure per (equivalent) person. For households that report both rent and utilities, the three basic needs expenditure sample-weighted averages for food, utilities and rent are added to calculate total basic needs expenditure per (equivalent) person.

#### Calculating basic needs expenditure levels for each household

Calculate the basic needs expenditure specific to each household by multiplying the total basic needs expenditure per (equivalent) person level calculated above by each household's equivalence scale. Note that a household is regarded as being poor when its total consumption expenditure is less than its basic needs expenditure.

#### Capacity to pay for health care

This is defined as non-basic needs resources used for consumption expenditure. Some households may report total consumption expenditure that is lower than basic needs expenditure, which defines them as being poor. Note that if a household is poor, capacity to pay will be negative after subtracting the basic needs level.

#### **Estimating impoverishing out-of-pocket payments**

Measures of impoverishing health spending aim to quantify the impact of out-of-pocket payments on poverty. For this indicator, households are divided into five categories based on their level of out-of-pocket spending on health in relation to the poverty line (the basic needs line):

- no out-of-pocket payments: households that report no out-of-pocket payments;
- not at risk of impoverishment after out-of-pocket payments: non-poor households (those whose equivalent person total consumption exceeds the poverty line) with out-of-pocket payments that do not push them below 120% of the poverty line (i.e. households whose per equivalent person consumption net of out-of-pocket payments is at or above 120% of the poverty line);
- at risk of impoverishment after out-of-pocket payments: non-poor households with out-of-pocket payments that push them below 120% of the poverty line; this review uses a multiple of 120%, but estimates were also prepared using 105% and 110%;
- impoverished after out-of-pocket payments: households who were non-poor before out-of-pocket payments, but are pushed below the poverty line after out-of-pocket payments; in the exceptional case that capacity to pay is zero and out-of-pocket payments are greater than zero, a household would be considered to be impoverished by out-of-pocket payments; and
- further impoverished after out-of-pocket payments: poor households (those whose equivalent person total consumption is below the poverty line) who incur out-of-pocket payments.

### **Estimating catastrophic out-of-pocket payments**

Catastrophic out-of-pocket payments are measured as out-of-pocket payments that equal or exceed some threshold of a household's capacity to pay for health care. Thresholds are arbitrary. The threshold used most often with capacity to pay measures is 40%. This review uses 40% for reporting purposes, but estimates were also prepared using thresholds of 20%, 25% and 30%.

Households with catastrophic out-of-pocket payments are defined as:

- those with out-of-pocket payments greater than 40% of their capacity to pay; i.e. all households who are impoverished after out-of-pocket payments, because their out-of-pocket payments are greater than their capacity to pay for health care; and
- those with out-of-pocket payments whose ratio of out-of-pocket payments to capacity to pay is less than zero (negative); i.e. all households who are further impoverished after out-of-pocket payments, because they do not have any capacity to pay for health care.

Households with non-catastrophic out-of-pocket payments are defined as those with out-of-pocket payments that are less than the pre-defined catastrophic spending threshold.

For policy purposes it is useful to identify which groups of people are more or less affected by catastrophic out-of-pocket payments (equity) and

which health services are more or less responsible for catastrophic out-of-pocket payments.

### Distribution of catastrophic out-of-pocket payments

The first equity dimension is expenditure quintile. Expenditure quintiles are determined based on equivalized per person household expenditure. Household weights should be used when grouping the population by quintile. Countries may find it relevant to analyse other equity dimensions such as differences between urban and rural populations, regions, men and women, age groups and types of household.

In some countries it is common to finance out-of-pocket payments from savings or borrowing, which might artificially inflate a household's consumption and affect household ranking. Where this is an issue, it may be preferable to calculate quintiles based on non-health equivalized per person household expenditure.

### Structure of catastrophic out-of-pocket payments

For households in each financial protection category, the percentage of out-of-pocket payments on different types of health goods and services should be reported, if the sample size allows, using the following categories, with their corresponding COICOP categorization: medicines (06.1.1), medical products (06.1.2 and 06.1.3), outpatient care (06.2.1), dental care (06.2.2), diagnostic tests (06.2.3) and inpatient care (06.3). Where possible, a distinction should be made between prescription and over-the-counter medicines.

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## Annex 3. Regional and global financial protection indicators

WHO uses regional and global indicators to monitor financial protection in the European Region, as shown in Table A3.1.

Table A3.1. Regional and global financial protection indicators in the European Region

Regional indicators	+	Global indicators
<b>Impoverishing out-of-pocket payments</b>		
Risk of poverty due to out-of-pocket payments: the proportion of households further impoverished, impoverished, at risk of impoverishment or not at risk of impoverishment after out-of-pocket payments using a country-specific line based on household spending to meet basic needs (food, housing and utilities)		Changes in the incidence and severity of poverty due to household expenditure on health using: <ul style="list-style-type: none"> <li>• an extreme poverty line of PPP-adjusted US\$ 1.90 per person per day</li> <li>• a poverty line of PPP-adjusted US\$ 3.10 per person per day</li> <li>• a relative poverty line of 60% of median consumption or income per person per day</li> </ul>
<b>Catastrophic out-of-pocket payments</b>		
The proportion of households with out-of-pocket payments greater than 40% of household capacity to pay for health care		The proportion of the population with large household expenditure on health as a share of total household consumption or income (greater than 10% or 25% of total household consumption or income)

Note: PPP: purchasing power parity.

Sources: WHO headquarters and WHO Regional Office for Europe.

### Regional indicators

The regional indicators reflect a commitment to the needs of European Member States. They were developed by the WHO Barcelona Office for Health Systems Financing (part of the Division of Country Health Policies and Systems in the WHO Regional Office for Europe), at the request of the WHO Regional Director for Europe, to meet demand from Member States for performance measures more suited to high- and middle-income countries and with a stronger focus on pro-poor policies, in line with Regional Committee resolutions (see Annex 2).

At the regional level, WHO's support for monitoring financial protection is underpinned by the Tallinn Charter: Health Systems for Health and Wealth, Health 2020 and resolution EUR/RC65/R5 on priorities for health systems strengthening in the WHO European Region 2015–2020, all of which include the commitment to work towards a Europe free of impoverishing payments for health.

### Global indicators

The global indicators reflect a commitment to global monitoring. They enable the performance of Member States in the European Region to be



easily compared to the performance of Member States in the rest of the world.

At the global level, support by WHO for the monitoring of financial protection is underpinned by World Health Assembly resolution WHA64.9 on sustainable health financing structures and universal coverage, which was adopted by Member States in May 2011. More recently, with the adoption of the 2030 Agenda for Sustainable Development and its concomitant Sustainable Development Goals (SDGs) in 2015, the United Nations has recognized WHO as the custodian agency for SDG3 (Good health and well-being: ensure healthy lives and promote well-being for all at all ages) and specifically for target 3.8 on achieving universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all. Target 3.8 has two indicators: 3.8.1 on coverage of essential health services and 3.8.2 on financial protection when using health services.

### **The choice of global or regional indicator has implications for policy**

Global and regional indicators provide insights into the incidence and magnitude of financial hardship associated with out-of-pocket payments for health, but they do so in different ways. As a result, they may have different implications for policy and suggest different policy responses.

For example, the global indicator defines out-of-pocket payments as catastrophic when they exceed a fixed percentage of a household's consumption or income (its budget). Applying the same fixed percentage threshold to all households, regardless of wealth, implies that very poor households and very rich households spending the same share of their budget on health will experience the same degree of financial hardship.

Global studies find that this approach results in the incidence of catastrophic out-of-pocket payments being more concentrated among richer households (or less concentrated among poorer households) (WHO & World Bank 2015; 2017). With this type of distribution, the implication for policy is that richer households are more likely to experience financial hardship than poorer households. The appropriate policy response to such a finding is not clear.

In contrast, to identify households with catastrophic out-of-pocket payments, the regional indicator deducts a standard amount representing spending on three basic needs – food, housing (rent) and utilities – from each household's consumption expenditure. It then applies the same fixed percentage threshold to the remaining amount (which is referred to as the household's capacity to pay for health care). As a result, although the same threshold is applied to all households, the amount to which it is applied is now significantly less than total household consumption for poorer households but closer to total household consumption for richer households. This implies that very poor households spending small amounts on out-of-pocket payments, which constitute a relatively small share of their total budget, may experience financial hardship, while wealthier households are assumed to not experience hardship until they

have spent a comparatively greater share of their budget on out-of-pocket payments.

The approach used in the European Region results in the incidence of catastrophic out-of-pocket payments being highly concentrated among poor households in all countries (Cylus et al., 2018). For countries seeking to improve financial protection, the appropriate response to this type of distribution is clear: design policies that protect poorer households more than richer households.

Recent global studies most commonly report impoverishing out-of-pocket payments using absolute poverty lines set at US\$ 1.90 or US\$ 3.10 a day in purchasing power parity (WHO & World Bank 2015; 2017). These poverty lines are found to be too low to be useful in Europe, even among middle-income countries. For example, the most recent global monitoring report suggests that in 2010 only 0.1% of the population in the WHO European Region was impoverished after out-of-pocket payments using the US\$ 1.90 a day poverty line (0.2% at the US\$ 3.10 a day poverty line) (WHO & World Bank, 2017).

European studies make greater use of national poverty lines or poverty lines constructed to reflect national patterns of consumption (Yerramilli et al., 2018). While national poverty lines vary across countries, making international comparison difficult, poverty lines constructed to reflect national patterns of consumption – such as that which is used as the poverty line for the regional indicator – facilitate international comparison (Saksena et al., 2014).

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7. All web links were last accessed on 30 October 2020.

## Annex 4. Glossary of terms

**Ability to pay for health care:** Ability to pay refers to all the financial resources at a household's disposal. When monitoring financial protection, an ability to pay approach assumes that all of a household's resources are available to pay for health care, in contrast to a capacity to pay approach (see below), which assumes that some of a household's resources must go towards meeting basic needs. In practice, measures of ability to pay are often derived from household survey data on reported levels of consumption expenditure or income over a given time period. The available data rarely capture all of the financial resources available to a household – for example, resources in the form of savings and investments.

**Basic needs:** The minimum resources needed for sustenance, often understood as the consumption of goods such as food, clothing and shelter.

**Basic needs line:** A measure of the level of personal or household income or consumption required to meet basic needs such as food, housing and utilities. Basic needs lines, like poverty lines, can be defined in different ways. They are used to measure impoverishing out-of-pocket payments. In this study the basic needs line is defined as the average amount spent on food, housing and utilities by households between the 25th and 35th percentiles of the household consumption distribution, adjusted for household size and composition. Basic needs line and poverty line are used interchangeably. See poverty line.

**Budget:** See household budget.

**Cap on benefits:** A mechanism to protect third party payers such as the government, a health insurance fund or a private insurance company. A cap on benefits is a maximum amount a third party payer is required to cover per item or service or in a given period of time. It is usually defined as an absolute amount. After the amount is reached, the user must pay all remaining costs. Sometimes referred to as a benefit maximum or ceiling.

**Cap on user charges (co-payments):** A mechanism to protect people from out-of-pocket payments. A cap on user charges is a maximum amount a person or household is required to pay out of pocket through user charges per item or service or in a given period of time. It can be defined as an absolute amount or as a share of a person's income. Sometimes referred to as an out of pocket maximum or ceiling.

**Capacity to pay for health care:** In this study capacity to pay is measured as a household's consumption minus a normative (standard) amount to cover basic needs such as food, housing and utilities. This amount is deducted consistently for all households. It is referred to as a poverty line or basic needs line.

**Catastrophic out-of-pocket payments:** Also referred to as catastrophic health spending. An indicator of financial protection. Catastrophic out-of-pocket payments can be measured in different ways. This study defines them as out-of-pocket payments that exceed 40% of a household's

capacity to pay for health care. The incidence of catastrophic health spending includes households who are impoverished and households who are further impoverished.

**Consumption:** Also referred to as consumption expenditure. Total household consumption is the monetary value of all items consumed by a household during a given period. It includes the imputed value of items that are not purchased but are procured for consumption in other ways (for example, home-grown produce).

**Co-payments (user charges or user fees):** Money people are required to pay at the point of using health services covered by a third party such as the government, a health insurance fund or a private insurance company. *Fixed co-payments* are a flat amount per good or service; *percentage co-payments* (also referred to as co-insurance) require the user to pay a share of the good or service price; *deductibles* require users to pay up to a fixed amount first, before the third party will cover any costs. Other types of user charges include *balance billing* (a system in which providers are allowed to charge patients more than the price or tariff determined by the third party payer), *extra billing* (billing for services that are not included in the benefits package) and *reference pricing* (a system in which people are required to pay any difference between the price or tariff determined by the third party payer – the reference price – and the retail price).

**Equivalent person:** To ensure comparisons of household spending account for differences in household size and composition, equivalence scales are used to calculate spending levels per equivalent adult in a household. This review uses the Oxford scale (also known as the Organisation for Economic Co-operation and Development equivalence scale), in which the first adult in a household counts as one equivalent adult, subsequent household members aged 13 years or over count as 0.7 equivalent adults and children under 13 count as 0.5 equivalent adults.

**Exemption from user charges (co-payments):** A mechanism to protect people from out-of-pocket payments. Exemptions can apply to groups of people, conditions, diseases, goods or services.

**Financial hardship:** People experience financial hardship when out-of-pocket payments are large in relation to their ability to pay for health care.

**Financial protection:** The absence of financial hardship when using health services. Where health systems fail to provide adequate financial protection, households may not have enough money to pay for health care or to meet other basic needs. Lack of financial protection can lead to a range of negative health and economic consequences, potentially reducing access to health care, undermining health status, deepening poverty and exacerbating health and socioeconomic inequalities.

**Further impoverished households:** Poor households (those whose equivalent person total consumption is below the poverty line or basic needs line) who incur out-of-pocket payments.

**Health services:** Any good or service delivered in the health system, including medicines, medical products, diagnostic tests, dental care, outpatient care and inpatient care. Used interchangeably with health care.

**Household budget:** Also referred to as total household consumption. The sum of the monetary value of all items consumed by the household during a given period and the imputed value of items that are not purchased but are procured for consumption in other ways.

**Household budget survey:** Usually national sample surveys, often carried out by national statistical offices, to measure household consumption over a given period of time. Sometimes referred to as household consumption expenditure or household expenditure surveys. European Union countries are required to carry out a household budget survey at least once every five years.

**Impoverished households:** Households who were non-poor before out-of-pocket payments, but are pushed below the poverty line or basic needs line after out-of-pocket payments.

**Impoverishing out-of-pocket payments:** Also referred to as impoverishing health spending. An indicator of financial protection. Out-of-pocket payments that push people into poverty or deepen their poverty. A household is measured as being impoverished if its total consumption was above the national or international poverty line or basic needs line before out-of-pocket payments and falls below the line after out-of-pocket payments.

**Informal payment:** a direct contribution made in addition to any contribution determined by the terms of entitlement, in cash or in kind, by patients or others acting on their behalf, to health care providers for services to which patients are entitled.

**Out-of-pocket payments:** Also referred to as household expenditure (spending) on health. Any payment made by people at the time of using any health good or service provided by any type of provider. Out-of-pocket payments include: formal co-payments (user charges or user fees) for covered goods and services; formal payments for the private purchase of goods and services; and informal payments for covered or privately purchased goods and services. They exclude pre-payment (for example, taxes, contributions or premiums) and reimbursement of the household by a third party such as the government, a health insurance fund or a private insurance company.

**Poverty line:** A level of personal or household income or consumption below which a person or household is classified as poor. Poverty lines are defined in different ways. This study uses basic needs line and poverty line interchangeably. See basic needs line.

**Quintile:** One of five equal groups (fifths) of a population. This study commonly divides households into quintiles based on per equivalent person household consumption. The first quintile is the fifth of households with the lowest consumption, referred to in the study as the poorest quintile; the fifth quintile has the highest consumption, referred to in the study as the richest quintile.

**Risk of impoverishment after out-of-pocket payments:** After paying out of pocket for health care, a household may be further impoverished, impoverished, at risk of impoverishment or not at risk of impoverishment. A household is at risk of impoverishment (or not at risk of impoverishment) if its total spending after out-of-pocket payments comes close to (or does not come close to) the poverty line or basic needs line.

**Universal health coverage:** Everyone can use the quality health services they need without experiencing financial hardship.

**Unmet need for health care:** An indicator of access to health care. Instances in which people need health care but do not receive it due to access barriers.

**User charges:** Also referred to as user fees. See co-payments.

**Utilities:** Water, electricity and fuels used for cooking and heating.



## The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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