



World Health
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Can people afford to pay for health care?

New evidence
on financial protection
in Estonia

Andres Võrk
Triin Habicht



Estonia

WHO Barcelona Office for Health Systems Strengthening

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

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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.

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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 Strengthening, part of the Division of Health Systems and Public Health 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 the WHO Regional Office for 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? WHO support to Member States for monitoring financial protection in Europe 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 a commitment to work towards a Europe free of impoverishing out-of-pocket payments for health. Resolution EUR/RC65/R5 calls on WHO to provide Member States with tools and support for monitoring financial protection and for policy analysis, development, implementation and evaluation. 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. The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 also call for monitoring of, and reporting on, financial protection as one of two indicators for universal health coverage. Resolution EUR/RC67/R3 – a roadmap to implement the 2030 Agenda for Sustainable Development, building on Health 2020 – calls on WHO to support Member States in moving towards universal health coverage.

Comments and suggestions for improving the series are most welcome and can be sent to euhsf@who.int.

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Abbreviations

EHIF	Estonian Health Insurance Fund
EHIS	European Health Interview Survey
EU	European Union
EU13	European Union Member States joining after 30 April 2004
EU15	European Union Member States from 1 January 1995 to 30 April 2004
EU27	European Union Member States as of 1 January 2007
EU28	European Union Member States as of 1 July 2013
EU-SILC	European Union Statistics on Income and Living Conditions
GDP	gross domestic product
TB	tuberculosis
VHI	voluntary health insurance

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Executive summary

The incidence of catastrophic spending on health is higher in Estonia than in many European Union countries, but lower than in Latvia and Lithuania. In 2015, 7.4% of households in Estonia experienced catastrophic out-of-pocket payments. Just over 5% of households were impoverished, further impoverished or at risk of impoverishment after out-of-pocket payments.

Catastrophic spending affects the poorest households the most. In 2015, one in five households in the poorest consumption quintile experienced catastrophic out-of-pocket payments; together, the two poorest quintiles accounted for 75% of all households with catastrophic spending.

Medicines are the largest single driver of catastrophic spending, accounting for almost all catastrophic spending among people in the poorest quintile. For the richer quintiles, spending on dental care and medical products are the main sources of catastrophic out-of-pocket payments.

Estonia's relatively high incidence of catastrophic spending on health partly reflects a level of public spending on health that is well below the European Union average and slightly lower than Estonia can afford. It also reflects substantial gaps in all three dimensions of health coverage.

- Although health insurance is mandatory, entitlement is based on payment of contributions for most people of working age. As a result, Estonia has one of the lowest levels of **population coverage** in the European Union. In 2017, about 5% of people were uninsured overall, rising to 14% among people aged 20–39 years. Continuity of coverage throughout the year is a further challenge for working-age people.
- Dental care for adults has been a major gap in **service coverage**. While coverage has recently improved, protection specifically targeting poor households is still lacking. Long waiting times for specialist care have increasingly become an issue, especially since the economic crisis, when maximum waiting times were extended.
- The design of **user charges** for outpatient medicines is complex. Attempts to simplify and enhance protection in recent years represent an important step forward. As with dental care, however, protection does not target poor people specifically, or account for the impact on households of user charges for other health services (co-payments for outpatient specialist visits, medical products, inpatient care, etc.). Taken together, these user charges impose a significant financial burden on people with a high level of need. In addition to coverage policy, both relatively high prices for medicines and the relatively high use of non-

prescribed (over-the-counter) medicines may also play a role in causing financial hardship.

Gaps in coverage not only lead to financial hardship but also create barriers to access. Growing unmet need – and rising inequalities in unmet need – are significant problems in Estonia. Income inequality in unmet need is particularly problematic in terms of dental care and prescription medicines.

Addressing high levels of unmet need and at the same time improving financial protection will require additional public investment in the health system. It will also require attention to the design of coverage policy. Planned increases in public spending on health should focus on reducing complexity and strengthening protection for poor households, regular users of health care and working-age people.

1. Introduction

This review assesses the extent to which people in Estonia experience financial hardship when they use health services, including medicines. Research shows that financial hardship is more likely to occur when public spending on health is low in relation 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). Increases in public spending or reductions in out-of-pocket payments are not, in themselves, a guarantee of better financial protection, however. Policy choices are also important.

Since the early 1990s Estonia has established a health system based on mandatory health insurance in which insured people are formally guaranteed equal access to health care. Health insurance covers around 95% of the population, with automatic entitlement for employees paying (what is known as) the social tax and for children and retired people. Uninsured people tend to be long-term unemployed, younger and inactive or working abroad. The health system is financed mainly by the social tax levied on wages. Revenue from the social tax is pooled by the Estonian Health Insurance Fund (EHIF) and used to purchase services from contracted public and private providers. The state transfers funds to the EHIF on behalf of several socioeconomic groups.

Public spending on health – at 4.9% of GDP in 2015 – is close to the average (4.7%) for the European Union (EU) Member States joining the EU after 2004 (EU13) but below the average (6.1%) for the EU Member States as of July 2013 (EU28) (WHO, 2018). Since the early 2000s, out-of-pocket payments have ranged from 20% to 25% of total spending on health. In 2015, the ratio of out-of-pocket payments to total spending on health was very close to the EU28 average (WHO, 2018).

Estonia was hit hard by the global financial crisis, leading to two years of negative GDP growth in 2008 and 2009, a large rise in unemployment and substantial emigration (Eurostat, 2018a). Unemployment peaked at 16.7% in 2010 and mainly affected men; although it fell steadily afterwards, it remains above its pre-crisis level (Eurostat, 2018a). The impact of the crisis on public finances and household living standards resulted in a fall in both public and private spending on health (Habicht & Evetovits, 2015). Policy responses to the crisis also had a significant impact on the health system and its performance: there were cuts in service volumes and prices, a reduction in some benefits and increases in user charges. Waiting time guarantees were also extended (Lai et al., 2013).

Several studies have analysed out-of-pocket payments in Estonia (Kunst et al., 2002; Habicht et al., 2006; Couffinhal & Habicht, 2005; Võrk et al., 2005; Thomson et al., 2010, 2011; Aaviksoo et al., 2011; Habicht & Kunst, 2005; Võrk, Saluse & Habicht, 2009; Võrk et al., 2010; Võrk et al., 2014). These generally show that out-of-pocket payments exacerbate inequalities in the use of health services (if people feel services are discretionary, clearly demonstrated in adult dental care) and increase the risk of pushing people into poverty (if people feel services are essential; for example, prescription medicines). For services with no or minimal co-payments, such as primary care and hospitalization for acute conditions, the objectives of financial protection and equity in use are well met.

This 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 of household budget survey data, with a focus on out-of-pocket payments in section 4 and financial protection in section 5. Section 6 provides a discussion of the 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. Sections 3, 4, 5 and 6 each end with a short summary of the section's main points. Annex 1 provides information on household budget surveys; Annex 2 discusses the methods used. Annex 3 presents regional and global financial protection indicators, and Annex 4 contains a glossary of terms.

2. Methods

This section summarizes the study's analytical approach and its 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, 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

Catastrophic out-of-pocket payments	
Definition	The share of households with <i>out-of-pocket payments</i> that are greater than 40% of household <i>capacity to pay for health care</i>
Numerator	Out-of-pocket payments
Denominator	Total household <i>consumption</i> minus a standard amount to cover basic needs. The standard amount to cover basic needs is calculated as the average amount spent on food, housing and <i>utilities</i> by households between the 25th and 35th percentiles of the household consumption distribution, adjusted for household size and composition
Disaggregation	Results are disaggregated into household <i>quintiles</i> by consumption. Disaggregation by place of residence (urban–rural), age of the head of the household, household composition and other factors is included where relevant
Impoverishing out-of-pocket payments	
Definition	The share of households <i>impoverished</i> or <i>further impoverished</i> after out-of-pocket payments
Poverty line	A <i>basic needs line</i> , calculated 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
Poverty dimensions captured	The share of households further impoverished, impoverished, <i>at risk of impoverishment</i> and <i>not at risk of impoverishment</i> after out-of-pocket payments
Disaggregation	Results can be disaggregated into household quintiles by consumption and other factors where relevant

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

Source: Thomson et al. (2018).

2.2 Data sources

The study analyses anonymized microdata from the Estonian household budget survey conducted by Statistics Estonia from the years 2000–2007, 2010–2012 and 2015. The household budget survey was not carried out in 2008 and 2009 – the years of the economic crisis – or in 2013 and 2014.

During 2000–2007 household consumption (spending) was recorded during a one-month period. Since 2010, household spending has been recorded during a two-week period and items over €100 have been recorded retrospectively for the previous 12 months. This change in method affects out-of-pocket payments for health care. As the recording period was shorter in 2010 than in previous years, the share of households with no out-of-pocket payments is larger; consequently, the share of households with no out-of-pocket spending fell by 16 percentage points, from 64% in 2007 to 48% in 2012. The new method is more likely to capture people making large single purchases.

All currency units are presented in euros. Estonian kroon reported in the household budget survey before 2011 were converted into euros at the standard conversion rate of 15.6466 kroon to 1 euro.

3. Coverage and access to health care

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

3.1 Coverage

Entitlement to protection of health is guaranteed in Article 28 of the Constitution and the right to health care is set out under the Health Services Organisation Act, the Health Insurance Act and decrees issued by the Ministry of Social Affairs. The scope of the publicly financed benefits package and of user charges policy is defined by government decree.

3.1.1 Population entitlement

Health insurance is mandatory, formally guarantees equal access to health care and covers roughly 95% of the population, in the following categories:

- employees and self-employed people (accounting for 45–50% of EHIF members from 2009 to 2016);
- people eligible for coverage without contribution (47–49%), such as pensioners, children and students aged up to 19 and 24 years, respectively;
- people covered by State contributions (3–7%), such as people on parental leave, caregivers for disabled people, unemployed parents raising three or more children aged under 19 years with one child aged under 8 years, conscripts and registered jobseekers;
- people covered under international agreements (0.1–0.3%);
- people paying voluntary contributions (0.02–0.04%), such as foreigners living in Estonia, or Estonians working abroad (this category is negligible and consists of a few hundred people).

Mandatory health insurance offered by the EHIF covers employed people, children and retired people, as well as people insured by the State (for example, people on parental leave). People lacking coverage include unemployed people not officially registered as jobseekers and people working abroad, those not paying taxes or those without income subject to social taxes. Those most likely to be uninsured are long-term unemployed people and inactive young men. Coverage varies by age. In 2017, 14% of adults aged 20–39 years lacked coverage. Continuity of coverage is also a challenge. In 2015, 11% of the population aged 20–64 years were covered for less than 11 months of the year.

The last significant change to health coverage was the inclusion of registered jobseekers in 2007. Since then, coverage has been extended to smaller groups of people, such as the partners of self-employed people active in their family's business (2012) and people receiving creativity grants (2014). Currently, there are more than 50 different entitlement groups, which creates significant administrative complexity.

3.1.2 Service coverage

All permanent residents are entitled to free emergency care, even if uninsured. This is financed by the State. Some municipalities also cover primary care of uninsured people. The State covers treatment and medicines for people with certain conditions, such as HIV/AIDS or tuberculosis (TB).

Health benefits are defined by the EHIF and provided in cash and in kind. Cash benefits provide compensation for temporary health-related incapacity to work for employed individuals, adult dental care (until 2017) and some prescription costs for heavy users of prescribed medicines on the positive list. In-kind benefits cover preventive and curative health services, as well as medicines and medical products. Cosmetic surgery, alternative therapies and opticians' services are excluded from coverage.

Dental care is fully covered for all children aged under 18 years. In 2002, dental care for adults was excluded from the EHIF's in-kind benefits and replaced by cash benefits; these were further cut during the economic crisis in 2009, so that they were only available for some groups, such as pregnant women, women with children aged under 12 months, and pensioners. From mid-2017 in-kind dental care for all adults was once again included in the EHIF benefits package, but with limited scope and depth of coverage (Table 2). The EHIF also introduced fixed tariffs for dental care for EHIF-covered patients.

1. These maximum limits for waiting times are assured by a decision of the EHIF's Supervisory Board from 11 January 2013.

Table 2. Coverage policy changes, 2000-2018

Source: authors.

Year	Change	Health service targeted	Population group targeted
2003	Introduction of reference pricing	Outpatient prescriptions	EHIF-covered people
2007	EHIF coverage extended to specific groups of people	All services	Registered jobseekers
2009	Reduction in cash benefits; cash benefits available for some adults (i.e. pensioners)	Dental care	EHIF-covered adults
2010	Introduction of percentage co-payment (15%)	Inpatient nursing care	EHIF-covered people
2010	Requirement to provide prescribed medicines with the lowest co-payment	Outpatient prescriptions	EHIF-covered people
2012	EHIF coverage extended to specific groups of people	All services	Partners of self-employed people active in family businesses
2012	Abolition of the benefit cap on prescribed medicines with a percentage co-payment of 50%	Outpatient prescriptions	EHIF-covered people
2013	Increase in fixed co-payment per hospital admission	Inpatient care	EHIF-covered people
2013	Increase in fixed co-payment per visit (from €3.20 to €5.00)	Outpatient specialist care	EHIF-covered people
2014	EHIF coverage extended to specific groups of people	All services	People receiving creativity grants
2015	Threshold for enhanced coverage lowered from €384 to €300	Outpatient prescriptions	EHIF-covered people
2017	Cash benefit replaced with in-kind benefit for most essential dental services	Dental care	EHIF-covered people
2018	Harmonization of fixed co-payment per prescription for all reimbursement categories	Outpatient prescriptions	EHIF-covered people
	Threshold for enhanced coverage lowered from €300 to €100		

Visits to specialists require a referral either from a family doctor or another specialist. Direct access is permitted to ophthalmologists, dermatovenereologists, gynaecologists, psychiatrists and dentists, and for certain conditions such as HIV/AIDS, TB and injuries. The EHIF does not cover the use of non-contracted providers.

Waiting times for specialist care are an issue. Although there are maximum waiting time guarantees in place, these were extended in March 2009 to six weeks for outpatient specialist care and eight months for inpatient care and day surgery (with longer waiting time guarantees for some services: for example, 18 months for cataract surgery, large-joint endoprostheses and bariatric surgery).¹ In 2017, 29% of all outpatient visits in Hospital Network Development Plan hospitals had a waiting time of longer than six weeks for outpatient specialist visits, although this included visits where the long waiting time was the result of patient choice (timing and provider preferences). Some people may choose to avoid waiting by seeking care from non-contracted providers or paying privately for access to EHIF's contracted providers, for a faster appointment.

3.1.3 User charges

Details of the user charges in place for EHIF benefits are shown in Table 3. Primary care services are free of charge, except for home visits. People must pay at the point of use for outpatient specialist care and inpatient care. Adults must pay for dental care. There is a complex system of user charges in place for outpatient prescription medicines. The patient pays a fixed co-payment and a percentage co-payment for each prescription and any costs above the reference price. Enhanced coverage is available for children, pensioners and heavy users of prescription medicines (Table 4). Key coverage policy changes are summarized in Table 2.

3.1.4 The role of VHI

VHI plays a very minor role in the health system, accounting for 0.28% of total spending on health in 2016 and covering fewer than 1000 people (National Institute for Health Development, 2017; Sagan & Thomson, 2016). It mainly plays a supplementary role, providing faster access to EHIF services, or cover for services not reimbursed by the EHIF.

Since 2002 the EHIF has provided substitutive VHI coverage. People taking out VHI – 571 people in 2017 – have the same benefits as people covered by mandatory health insurance. The low uptake of VHI and its limited role in improving coverage are mainly explained by the high cost of the premium. In 2017, this cost was €149 a month (equal to 13% of the average salary in the previous year).

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

Table 3. User charges for publicly financed health services, 2018

Note: NA: not applicable.

Source: authors based on information from the EHIF.

Service area	Type and level of user charge	Exemptions	Cap on user charges paid
Outpatient visits			
Visit to a family doctor	None	NA	NA
Home visit by a family doctor	Fixed co-payment of up to €5 per visit	<ul style="list-style-type: none"> • children aged under 2 years • pregnant women 	
Visit to a specialist doctor (including dentists)	Fixed co-payment of up to €5 per visit	<ul style="list-style-type: none"> • children aged under 2 years • pregnant women • patients referred by another specialist working for the same provider • emergency care resulting in inpatient care 	NA
Diagnostic tests	None if part of visit financed by EHIF	NA	NA
Dental care	Percentage co-payment of 50% with a benefit cap of €40 per year, after which users pay the full price	<ul style="list-style-type: none"> • children aged under 19 years: free • pensioners, pregnant women, new mothers, people with an increased need for dental care: lower percentage co-payment of 15% and benefit cap increased to €85 per year (since 1 July 2017) • pensioners and people with partial or no capacity for work: entitled to cover of up to €260 for dentures once every 3 years 	No
Inpatient care			
Inpatient fee in hospital	Fixed co-payment of up to €2.50 per day	<ul style="list-style-type: none"> • children aged under 2 years • intensive care • childbirth 	€25 per hospitalization
Inpatient fee for nursing care	Percentage co-payment of 15% (€9.60 per day up to 1st May 2017, €10.16 per day since 2nd of May 2017)	No	No
Rehabilitation	Percentage co-payment of 20% (€12.22 per day in 2018)	No	No
Surgical termination of pregnancy	Percentage co-payment of 30% (€39.04 in 2018)	No	No
Medical termination of pregnancy	Percentage co-payment of 50% (€17.67 in 2018)	No	No
Inpatient medicines	None	NA	NA

Table 4. User charges for outpatient prescription medicines, 2011, 2015 and 2018

Source: authors based on information from the EHIF and the Ministry of Social Affairs.

	1 January 2011	1 January 2015	1 January 2018
Type and level of user charge	Fixed co-payment of €3.19 + percentage co-payment of 50% + reference pricing; benefit capped at €12.79 per prescription (the benefit cap was abolished in 2012) Fixed co-payment of €1.27 + percentage co-payment of 25% or 0% + reference pricing	Fixed co-payment of €3.19 + percentage co-payment of 50% + reference pricing Fixed co-payment of €1.27 + percentage co-payment of 25% or 0% + reference pricing	Fixed co-payment of €2.50 Percentage co-payment of 50%, 25% or 0% Reference pricing
Exemptions	No percentage co-payment for children aged under 4 years Percentage co-payment of 25% reduced to 10% for children aged 4–16 years, people receiving a state pension, people aged over 63 years, or people with partial or no capacity to work Enhanced coverage for people with out-of-pocket payments for prescribed medicines exceeding €384 a year: <ul style="list-style-type: none"> • €384–€640: users pay 50% • €640–€1300: users pay 25% The fixed co-payment and reference pricing are not included in the calculation of out-of-pocket payments People had to apply for the benefit, which was paid out retrospectively four times a year	No percentage co-payment for children aged under 4 years Percentage co-payment of 25% reduced to 10% for children aged 4–16 years, people receiving a state pension, people aged over 63 years or people with partial or no capacity to work Threshold for enhanced coverage lowered to €300 a year: <ul style="list-style-type: none"> • €300–€500: users pay 50% • >€500: users pay 10% The fixed co-payment and reference pricing are not included in the calculation of out-of-pocket payments People had to apply for the benefit, which was paid out retrospectively four times a year	No percentage co-payment for children aged under 4 years Percentage co-payment of 25% reduced to 10% for children aged 4–16 years, people receiving a state pension, people aged over 63 years or people with partial or no capacity to work Threshold for enhanced coverage lowered to €100 a year: <ul style="list-style-type: none"> • €100–€300: users pay 50% • >€300: users pay 10% The fixed co-payment is included in the calculation of out-of-pocket payments, but reference pricing is not Calculation and administration are automatic at purchase; co-payments are reduced as soon as the threshold is reached
Cap on user charges	No	No	No

Table 5. Gaps in coverage

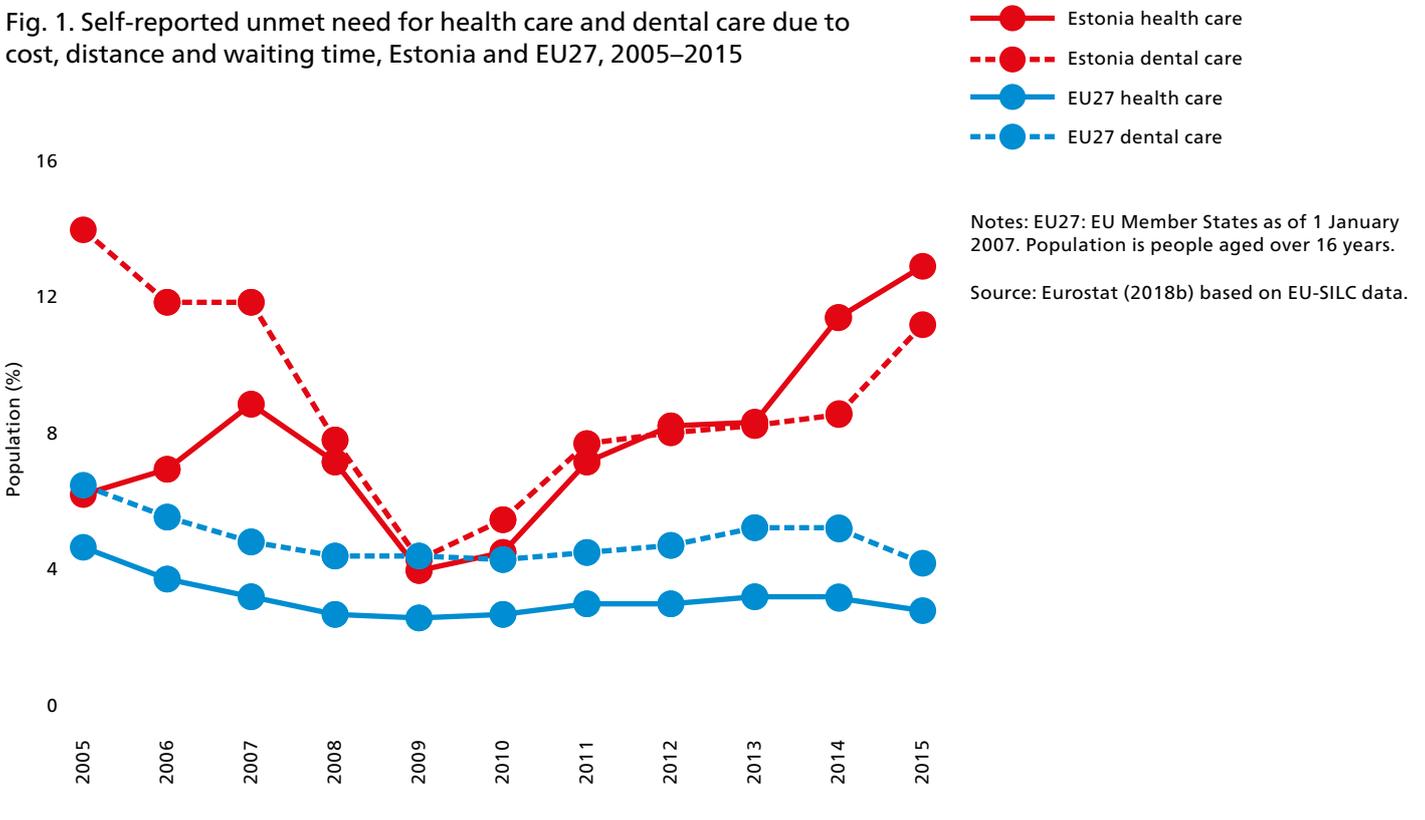
Source: authors.

	Population entitlement	Service coverage	User charges
Issues in the governance of publicly financed coverage	Entitlement depends on payment of contributions or being in a group that is entitled without paying contributions	Waiting time guarantees are in place but may be exceeded	Co-payments applied to all except primary care visits, with no exemptions for poor people and no overall cap on user charges
Main gaps in publicly financed coverage	~5% of the population are uninsured; ~11% of the working-age population have unstable coverage	Limited coverage of dental care for adults	Dental care for adults; outpatient prescriptions; nursing care in hospital
Are these gaps covered by voluntary health insurance?	No; VHI only accounted for 0.28% of total spending on health in 2016 and covered fewer than 1000 people		

3.2 Access, use and unmet need

EU data (Fig. 1) indicate that access to health care and dental care is more of a problem in Estonia than in the EU as a whole. Cost is the most common reason people give for unmet need for dental care, whereas waiting time is the main reason given for unmet need for health care (Box 1). In 2016, 9% of the adult population did not visit a dentist due to cost; up from 4% in 2009 (Eurostat, 2018b). In 2016, about 13% of adults reported unmet need for health care due to waiting time; the highest since 2004.

Fig. 1. Self-reported unmet need for health care and dental care due to cost, distance and waiting time, Estonia and EU27, 2005–2015



Box 1. Unmet need for health care

Source: WHO Barcelona Office for Health Systems Strengthening.

Financial protection indicators capture financial hardship among people who incur out-of-pocket payments through the use of health services, including medicines. 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 due to access barriers.

Information on health care use or unmet need is not routinely collected in the household budget surveys used to analyse financial protection. They 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.

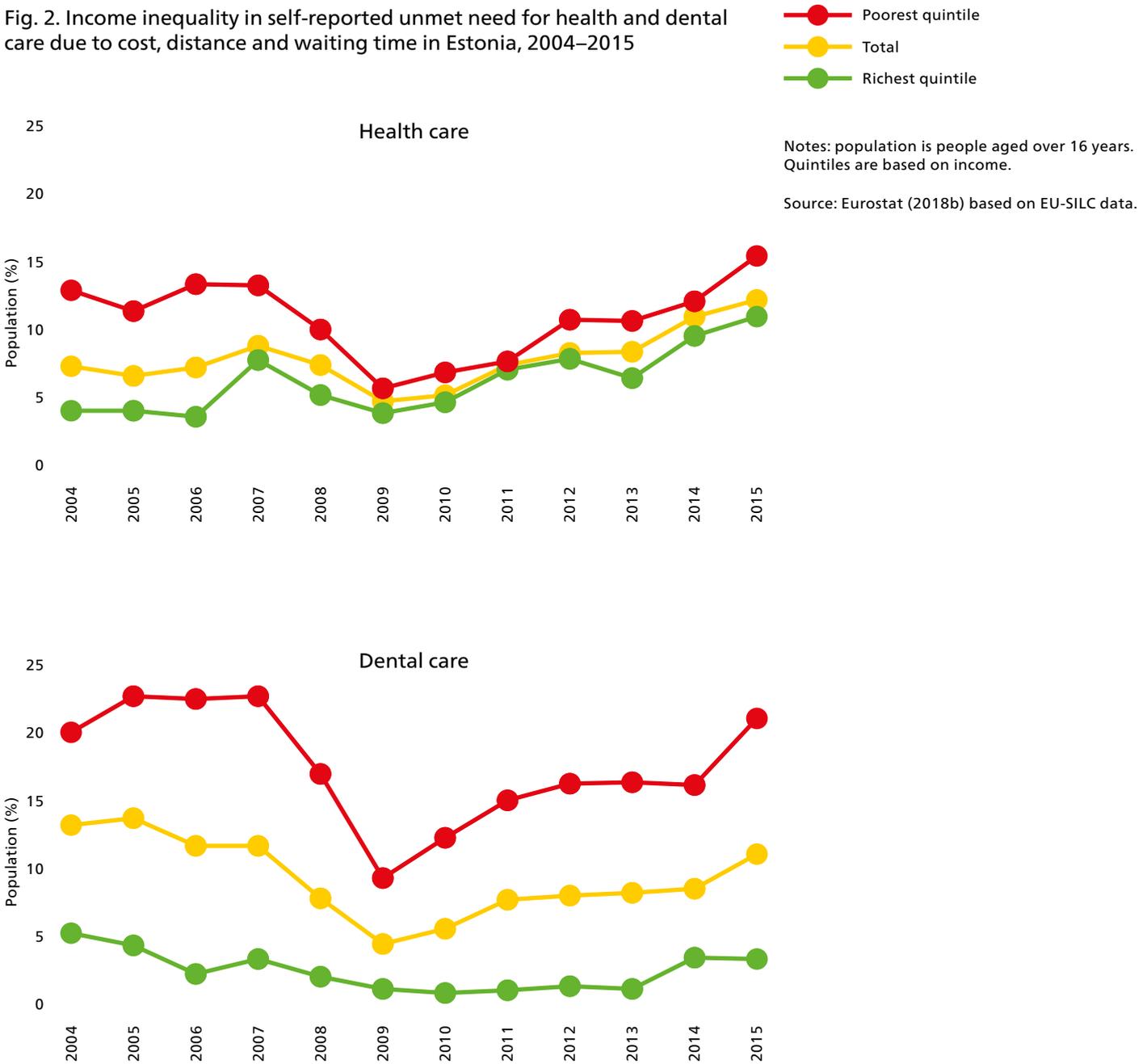
Financial protection analysis that does not account for unmet need could be misinterpreted. A country may have a relatively low incidence of catastrophic out-of-pocket payments because many people do not use health care, due to limited availability of services or other barriers to access. Conversely, reforms that increase the use of services can increase people's out-of-pocket payments – for example, through 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 draws on data on unmet need to complement the analysis of financial protection (section 3.2). It also draws attention to changes in the share and distribution of households without out-of-pocket payments (section 4.1). If increases in the share of households without out-of-pocket payments cannot be explained by changes in the health system – for example, increased 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 EU-SILC. 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; EXPH, 2016, 2017).

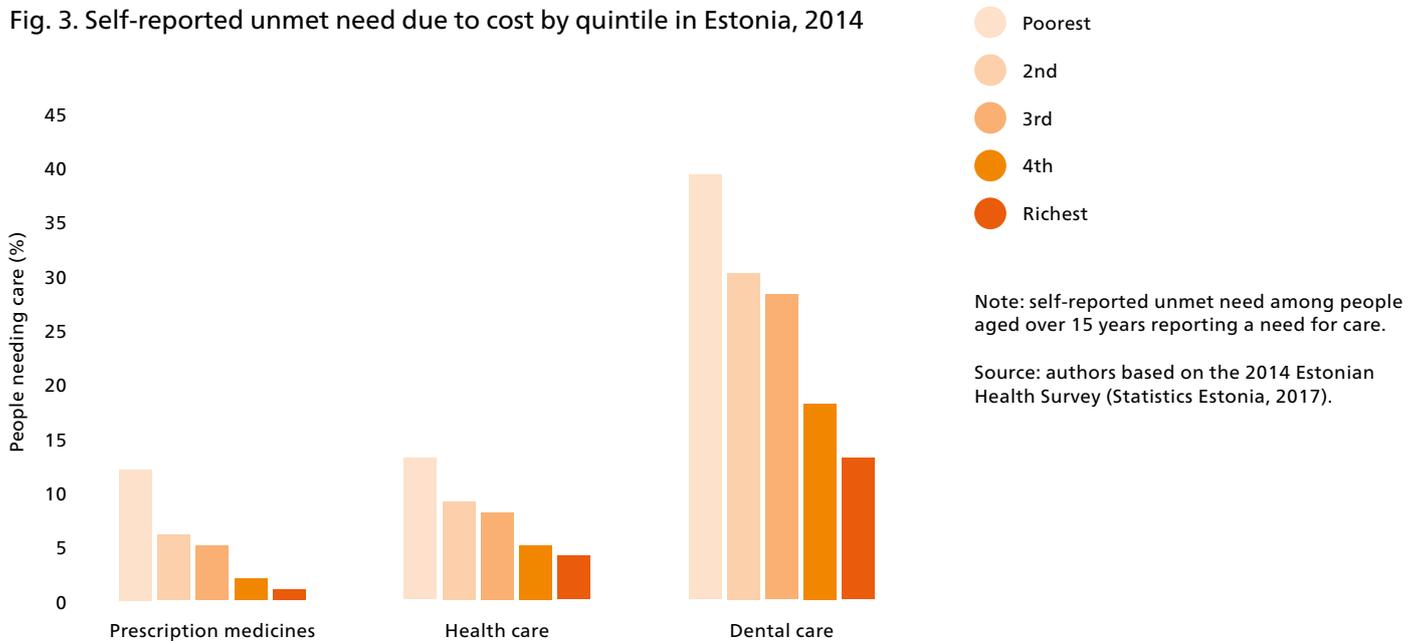
Substantial income inequality in unmet need was narrowing before the economic crisis, especially for health care, but since 2009 it has grown again, with a marked increase for dental care (Fig. 2). Access to dental care is particularly strongly related to income because the EHIF only covers some dental care costs for adults. In 2015, 21% in the poorest quintile faced unmet need for dental care, compared to 4% in the richest quintile (Fig. 2).

Fig. 2. Income inequality in self-reported unmet need for health and dental care due to cost, distance and waiting time in Estonia, 2004–2015



Data from the Estonian Health Survey carried out in 2014 (Statistics Estonia, 2017) also indicate that income inequality is a significant issue: unmet need for health care and dental care is more than three times more likely to be reported by people in the poorest quintile than by those in the richest (Fig. 3). Although the level of unmet need is lower for prescription medicines than for the health care or dental care categories, the degree of inequality is marked: unmet need for prescription medicines among people in the poorest quintile is more than 10 times higher than in the richest quintile.

Fig. 3. Self-reported unmet need due to cost by quintile in Estonia, 2014



The rise in self-reported unmet need after 2009 reflects changing rates of use of health services, as shown in Fig. 4. Outpatient visits increased during the period of rapid economic growth prior to the crisis, fell sharply during the crisis (2008–2010), increased slightly in 2011 and have remained stable since then. Dental care visits also declined during the crisis, probably partly in response to the reduction in benefits introduced in 2009. Although outpatient visits and dental care visits have grown since 2010, they have still not reached their pre-crisis level.

The EHIF has tried to encourage use of day care by implementing financial incentives; over time, use of day care has increased and hospital discharges have decreased, both per person and in total (Fig. 4).

The use of prescribed medicines fell slightly in 2009 but was back at its pre-crisis level by 2010 (Fig. 5).

Fig. 4. Use of health services (in thousands of visits) in Estonia, 2004–2016

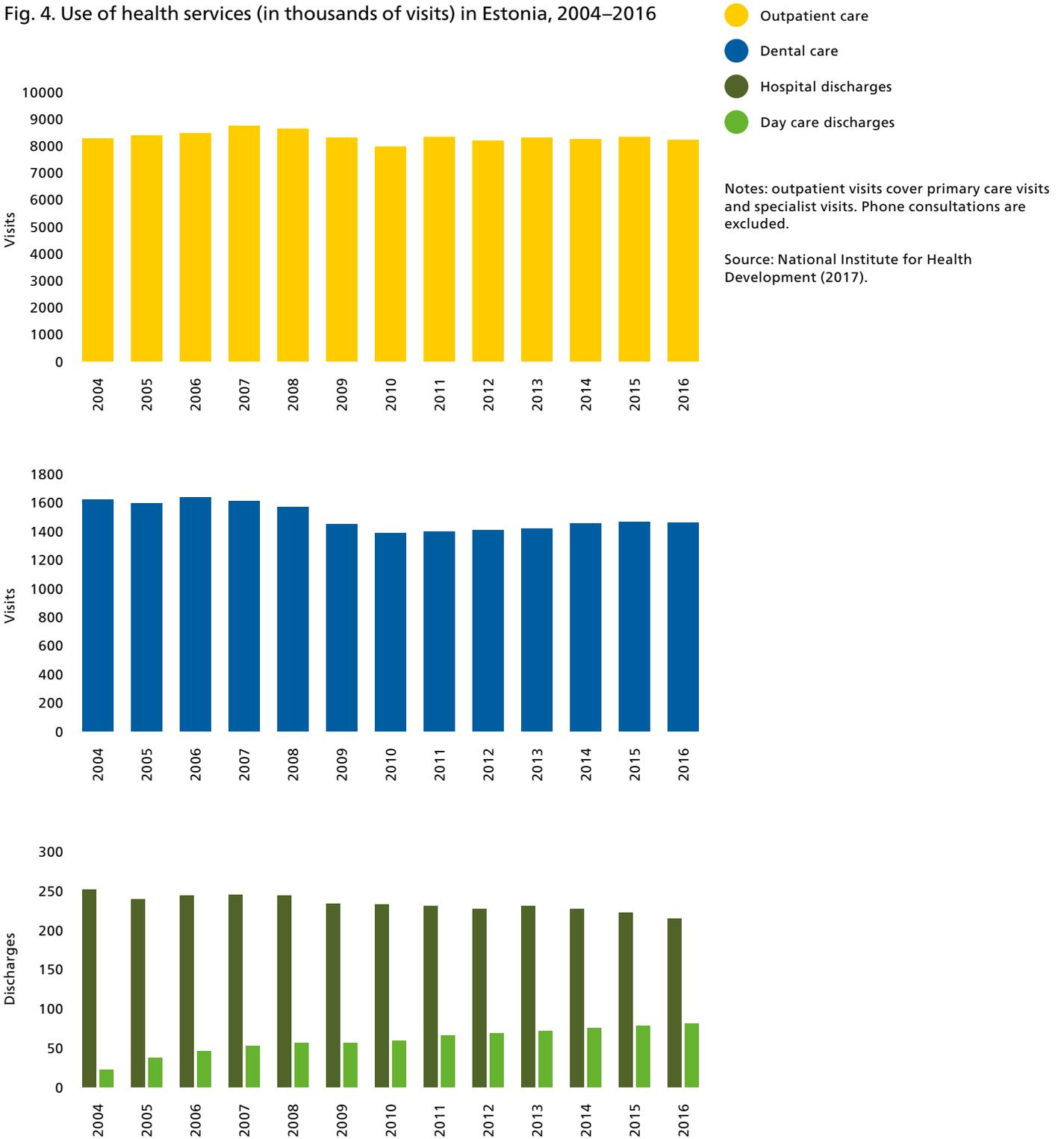
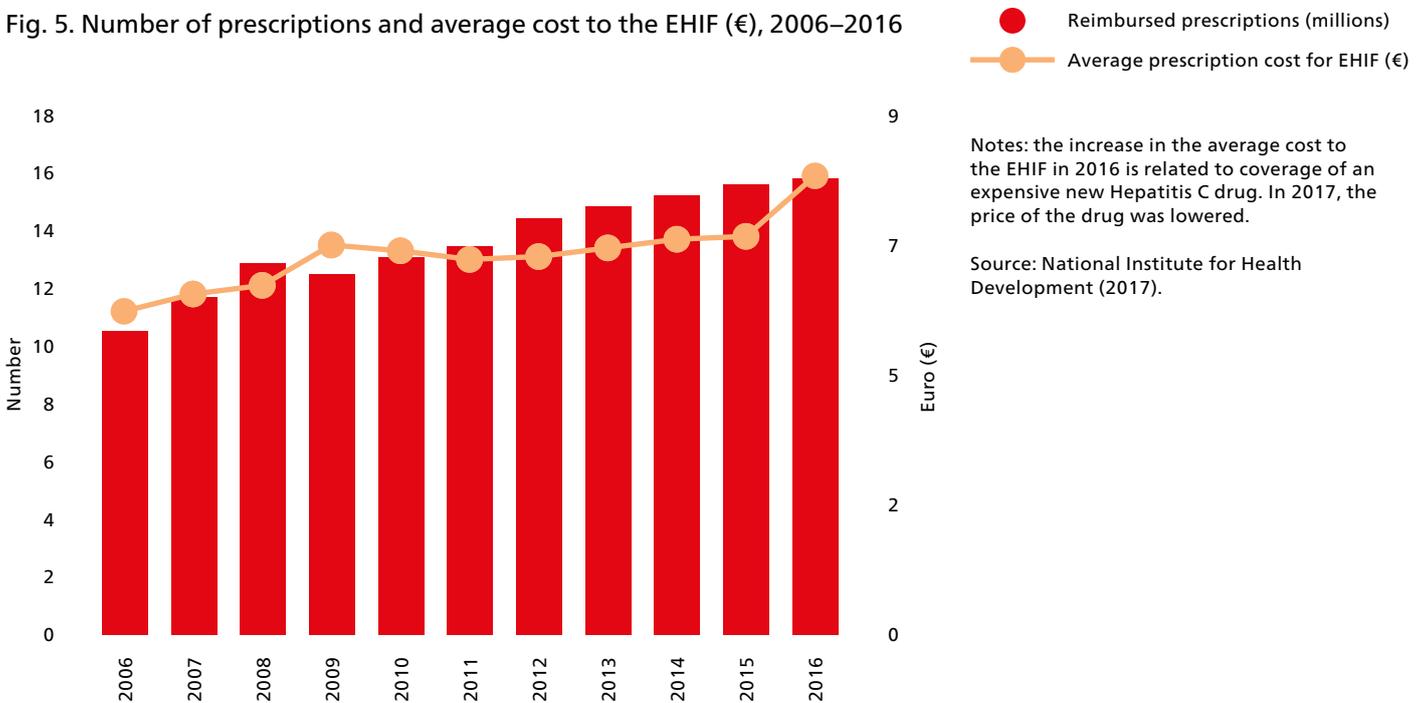


Fig. 5. Number of prescriptions and average cost to the EHIF (€), 2006–2016



3.3 Summary

Children aged under 18 and people aged over 65 years are automatically entitled to publicly financed health insurance provided by the EHIF. Other groups of people must pay contributions in order to obtain coverage. As a result, mandatory health insurance only covers 95% of the population.

Long-term unemployed people and inactive young men are most likely to be uninsured; in 2017, 14% of adults aged 20–39 years lacked coverage. Continuity of coverage is also an issue; in 2015, 11% of people aged 20–64 years were covered for less than 11 months of the year.

In addition to the absence of universal population entitlement, the main gaps in coverage are related to:

- limited coverage of dental care for adults, although this has been improved in recent years;
- user charges for outpatient prescribed medicines, dental care, specialist care and inpatient nursing care, including the use of percentage co-payments for dental care, prescribed medicines and some aspects of inpatient care;
- the absence of exemptions from user charges for poor people;

- the absence of a cap on user charges for outpatient prescribed medicines (although changes were introduced in 2015 and 2018 to provide greater protection for people with high annual out-of-pocket payments, there is still no annual limit on how much people have to pay);
- the absence of an overall cap on all user charges.

VHI does not play a role in covering these gaps. In 2016, it only accounted for 0.28% of total spending on health and covered fewer than 1000 people.

Self-reported unmet need is a significant problem in Estonia. It was declining before the economic crisis but has risen sharply since 2009; since 2010 it has been well above the EU27 average for dental care, health care and prescribed medicines. Income inequality in unmet need has also grown since 2009. EU-SILC data suggest income inequality is larger for dental care than for health care. Data from the Estonian Health Survey confirm this and also suggest that it is largest for prescription medicines.

4. Household spending on health

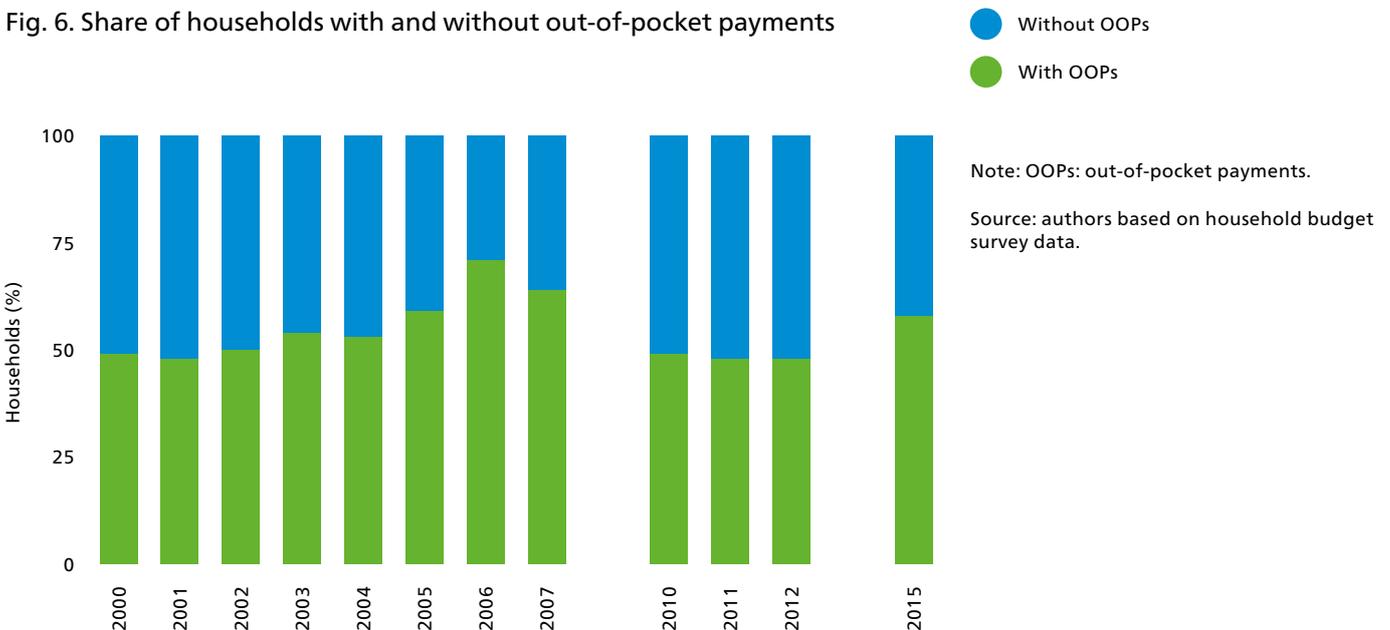
The first part of this section draws mainly on data from the household budget survey to identify trends in household spending on health: that is, out-of-pocket payments, the formal and informal payments made by people at the time of using any good or service delivered in the health system. Note that there was a break in series in the household budget survey data in 2007. There are also gaps in the series in 2008, 2009, 2013 and 2014 (see section 2.2 for details). This section also briefly discusses the role of informal payments and the main drivers of changes in out-of-pocket payments over time.

4.1 Out-of-pocket payments

Out-of-pocket payments consist of user charges for EHIF benefits, direct payments to providers for services that fall outside the EHIF's benefits package, direct payments to providers not contracted by the EHIF, and informal payments.

The share of households incurring out-of-pocket payments rose from 49% in 2000 to a peak of 71% in 2006, and then fell in 2007. From 2010 to 2012, about 48% of households incurred out-of-pocket payments; by 2015 it had increased to 58% (Fig. 6).

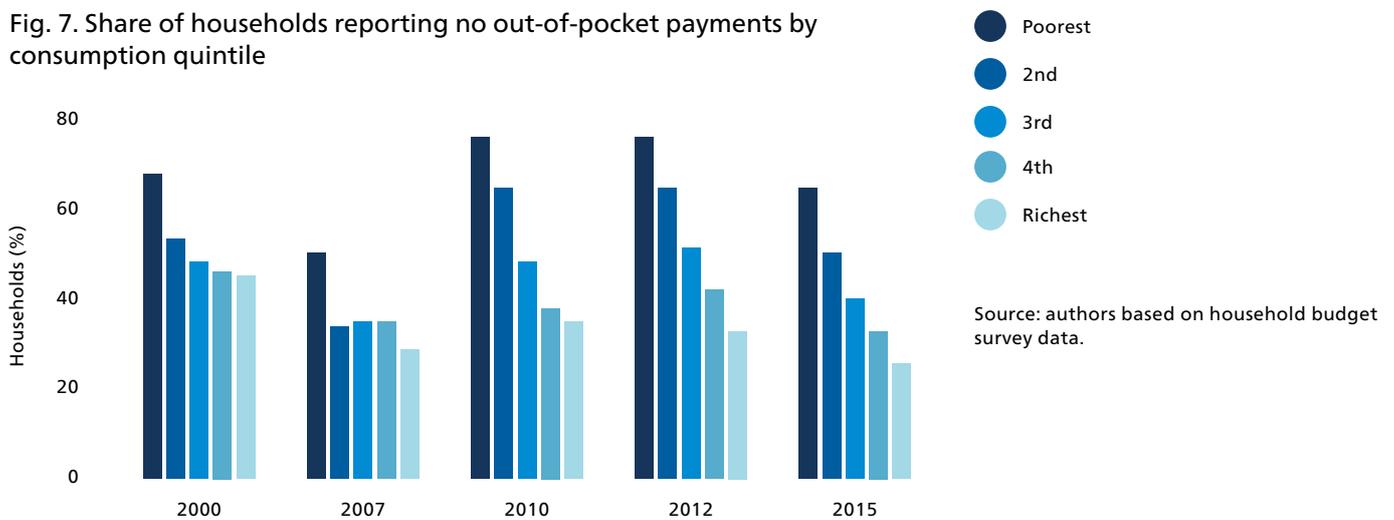
Fig. 6. Share of households with and without out-of-pocket payments



Across all years, households without out-of-pocket are more likely to be poor than rich (Fig. 7). The difference between consumption quintiles was most marked in the period 2010–2012, when 74% of households in the poorest quintile made no out-of-pocket payments, compared to only about 34% in the richest quintile. By 2015, the gap had narrowed slightly. Regression analysis shows that, after controlling for household type, the income-related difference

in the probability of making any out-of-pocket payments remains for all types of health care. Given that there are no income-related exemptions from user charges in the Estonian health system, which would result in poorer households having to pay less out of pocket than richer households, this difference may be the result of much higher unmet need for health care among poorer households, as shown in Fig. 2 and Fig. 3.

Fig. 7. Share of households reporting no out-of-pocket payments by consumption quintile



Between 2000 and 2015, out-of-pocket payments grew steadily, quadrupling in nominal terms. The average annual amount spent out of pocket per person rose from €45 in 2000 to €203 in 2015 (Fig. 8). Out-of-pocket spending grew particularly rapidly in the years of strong economic growth before the economic crisis (2005–2007) and after the crisis (2015). Spending growth has been highest in the richest quintile. In 2015, those in the richest quintile spent nearly six times as much out of pocket per person as those in the poorest quintile (€382 and €67, respectively).

On average, out-of-pocket payments accounted for about 4.5% of total household spending (consumption) in 2015 (Fig. 9). This ratio rose between 2000 and 2007, in 2010 it was slightly lower than it had been in 2007, and it grew again between 2012 and 2015. Before the crisis, the ratio was highest in the poorest consumption quintile. In 2010, after the crisis, it was lowest for the poorest consumption quintile. This dramatic shift in the position of the poorest quintile reflects a shift in the position of older people. Before the crisis, they were heavily concentrated in the poorest quintile; after the crisis, they moved up into richer quintiles.

Fig. 8. Annual out-of-pocket spending on health care per person by consumption quintile

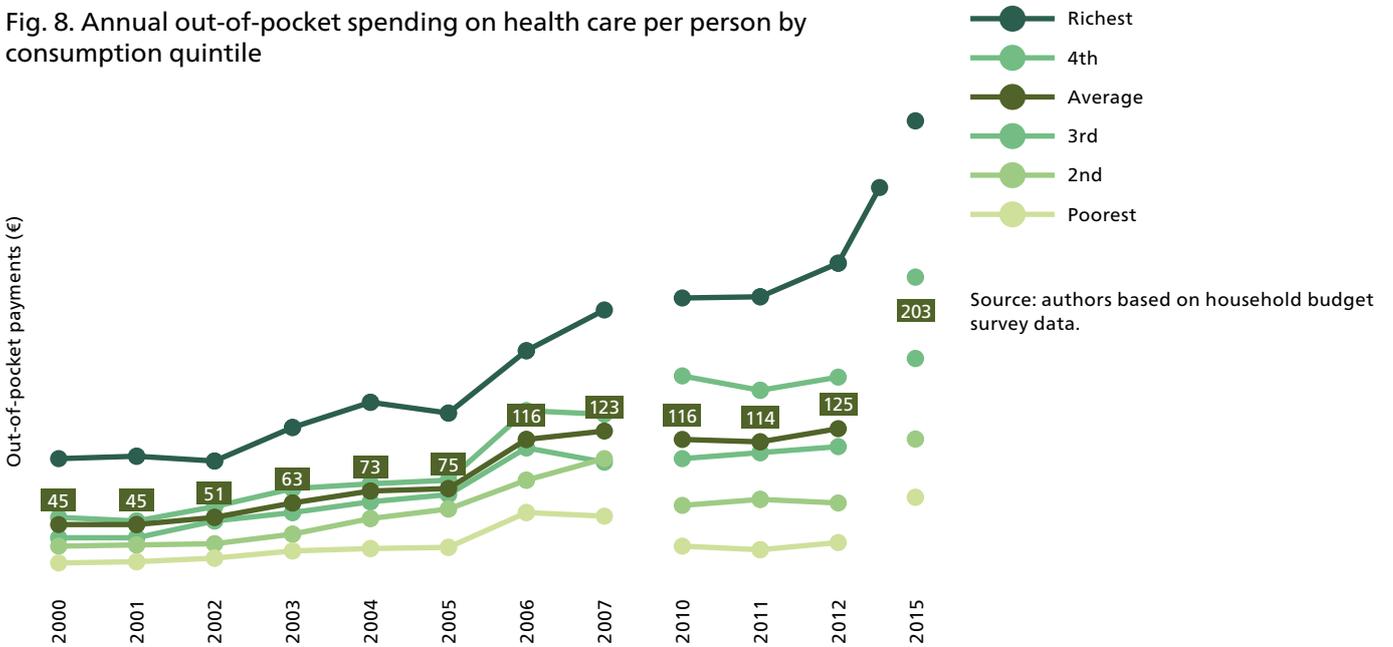


Fig. 9. Out-of-pocket payments for health care as a share of household consumption by quintile

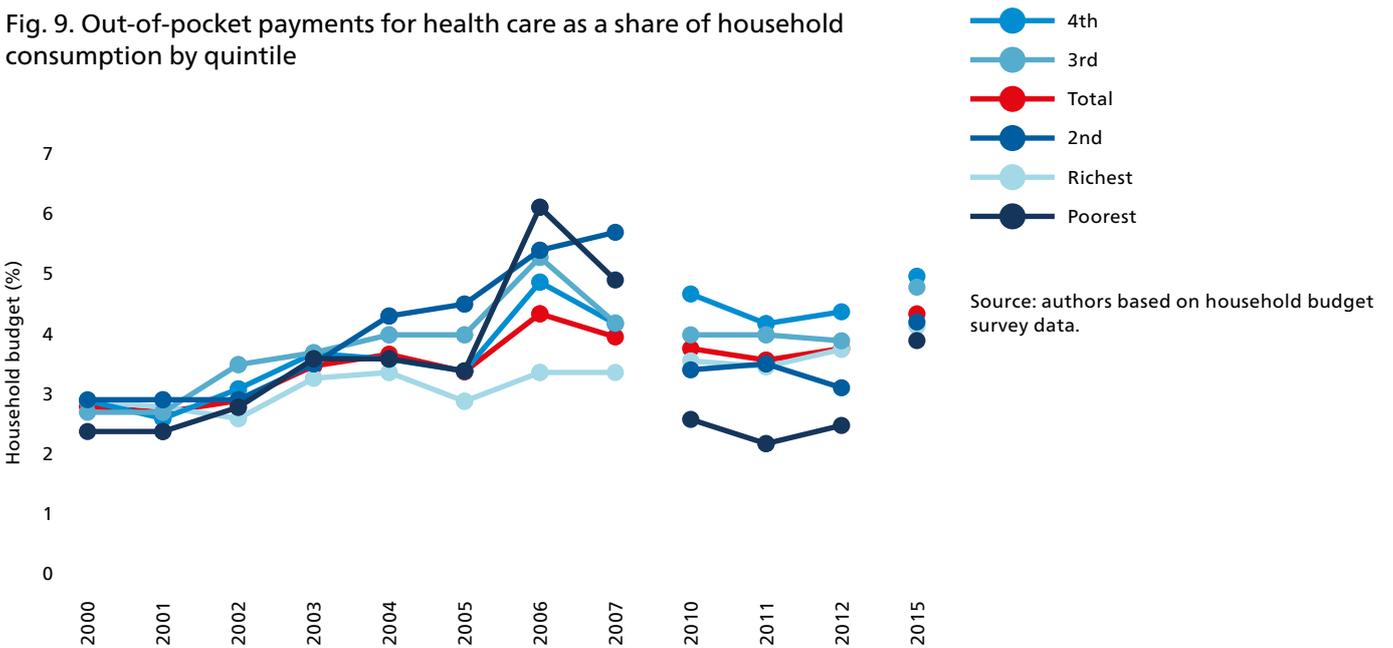
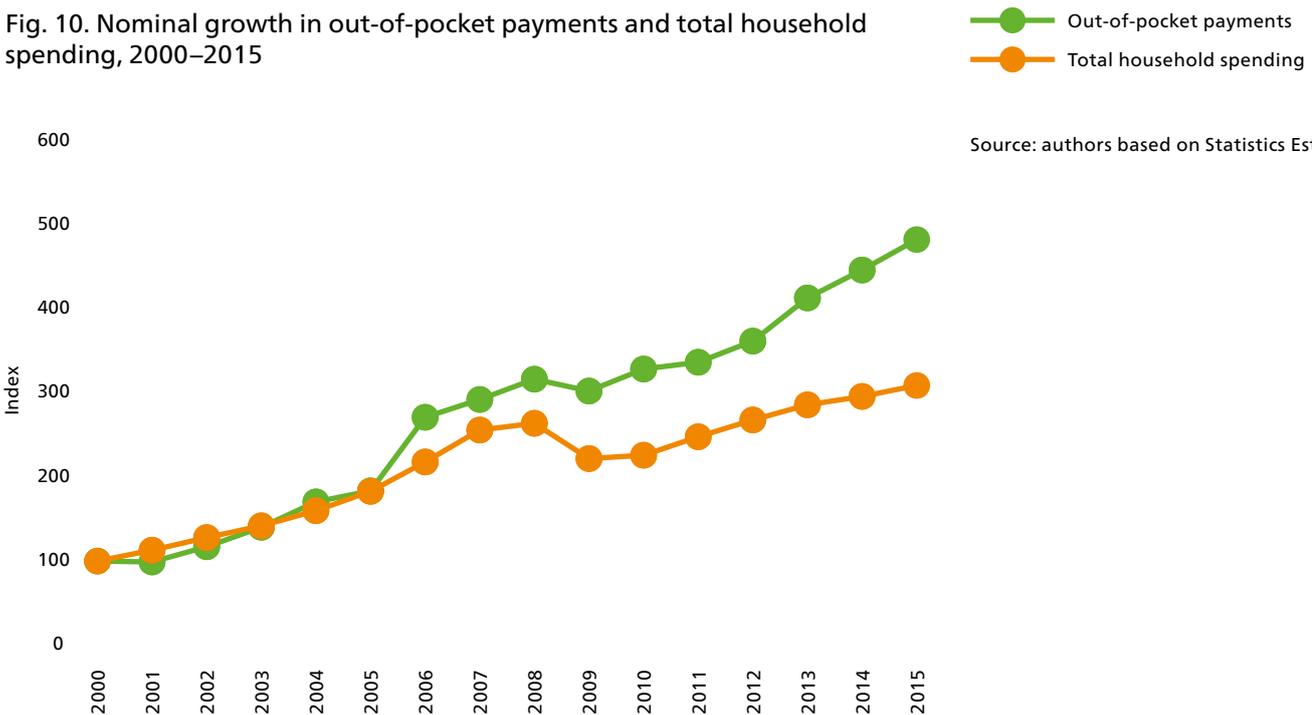


Figure 10 shows that out-of-pocket payments have grown at a faster rate than total household spending since 2005.

Fig. 10. Nominal growth in out-of-pocket payments and total household spending, 2000–2015



Source: authors based on Statistics Estonia.

Outpatient medicines are the single largest driver of out-of-pocket payments for all quintiles, followed by dental care (Fig. 11). Spending on inpatient care and diagnostic tests is negligible. The most expensive item in the medical products category is usually glasses.

Across all years, poorer households spend a greater share of out-of-pocket payments on medicines than richer households, while richer households spend a greater share of out-of-pocket payments on dental care (Fig. 12). This pattern was less pronounced in 2010 than in 2000, probably owing to the shift in the position of older people from poorer to richer quintiles during the crisis years. Household budget survey data show that in 2007, single pensioners and pensioner couples accounted for 40% of the poorest quintile. By 2011, their share had fallen to 29%, but by 2015 it was more notable once again.

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

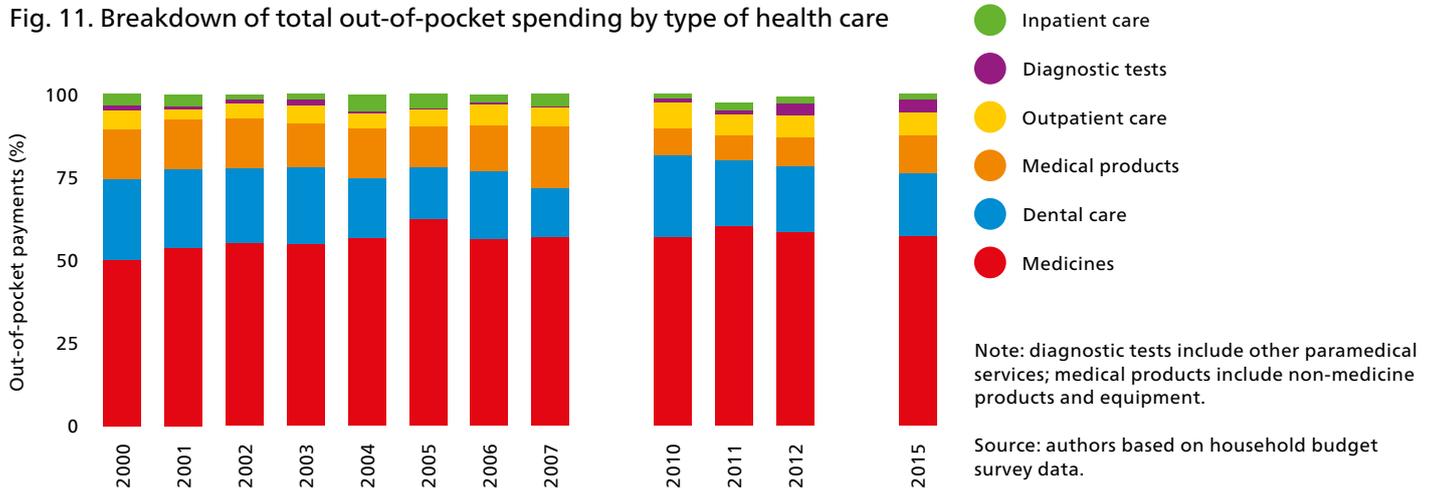


Fig. 12. Breakdown of total out-of-pocket spending by type of health care and consumption quintile

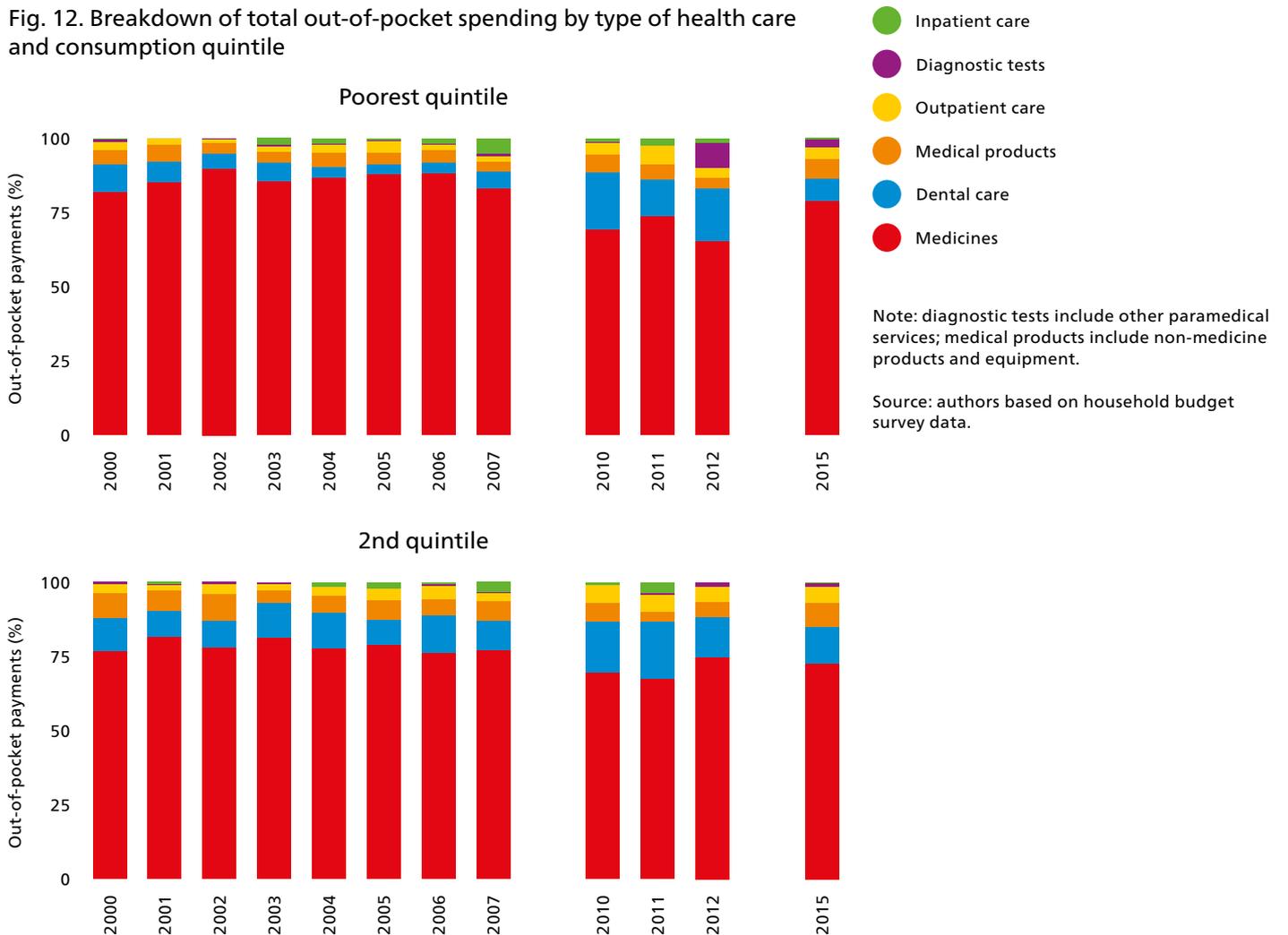
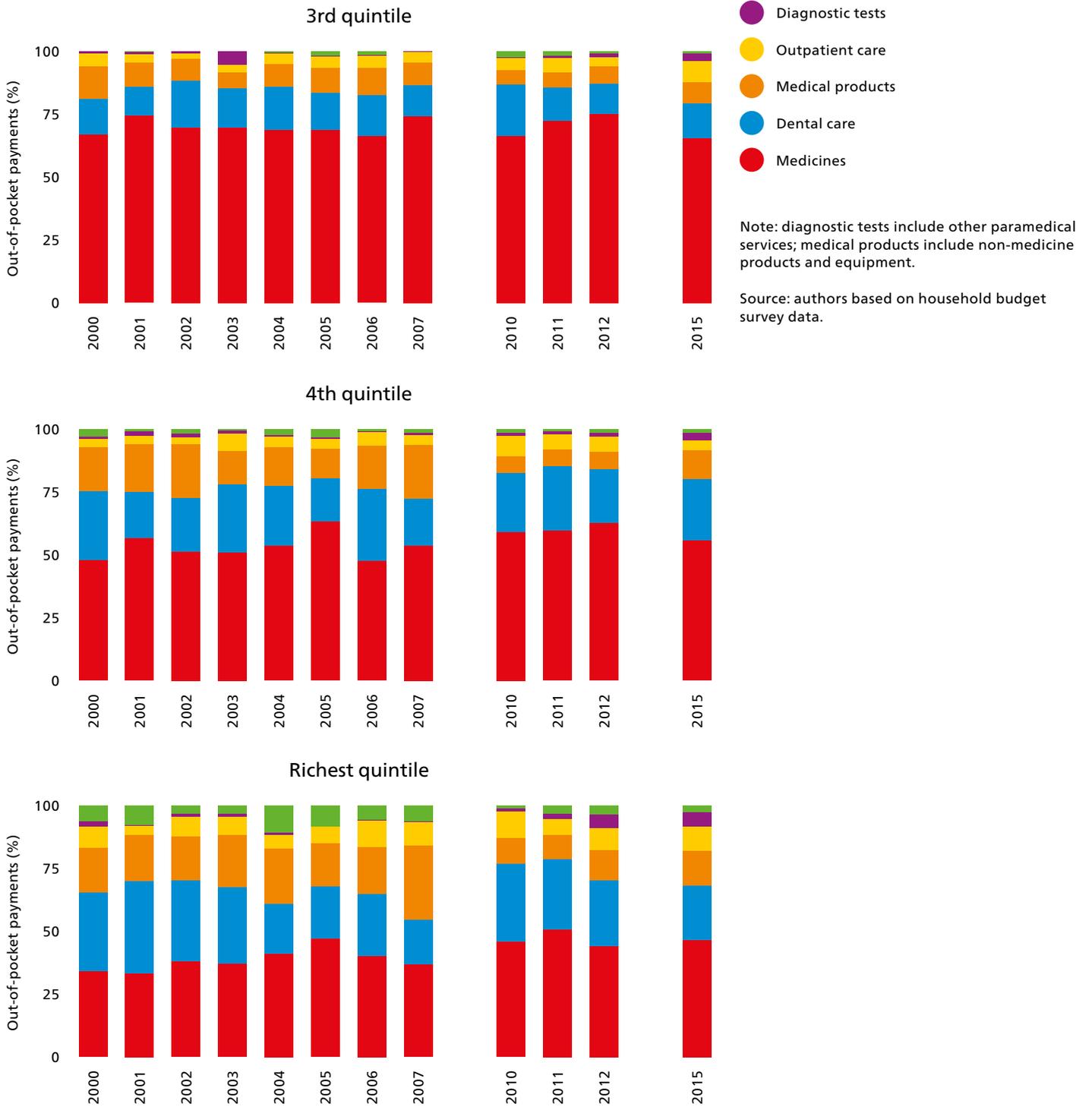


Fig. 12. contd



4.2 Informal payments

There is little information on informal payments. A 2011 survey suggests that up to 5% of adults have given a present or paid money to a doctor at least once in their lifetime to obtain faster access to treatment (Kiivet et al., 2011).

A Special Eurobarometer report on corruption found that 3% of survey respondents in Estonia who had visited a public health care provider in the previous 12 months (as compared with an EU28 average of 4% and an EU13 average of 9%) reported having had to make an extra payment or give a valuable gift to a nurse or doctor, or make a donation to the hospital (European Commission, 2017).

4.3 What drives changes in out-of-pocket payments?

National Health Accounts data also show out-of-pocket payments per person have grown steadily over time in real terms. In 2015, out-of-pocket payments were 2.5 times higher than in 2000 (Fig. 13). They grew between 2001 and 2006 and fell between 2007 and 2009, so that they were slightly lower in 2011 than they had been in 2006. They then grew again between 2012 and 2015.

Increases in out-of-pocket payments were not driven by cuts in public spending on health. Public spending on health per person grew rapidly between 2000 and 2008, rising from €303 in 2000 to €559 in 2008 in real terms (Fig. 13). When public spending on health fell during the economic crisis, out-of-pocket payments also fell, not only in per-person terms but also as a share of total spending on health (Fig. 14), reflecting a lowering of household living standards. Since 2012, public spending on health per person has risen steadily. The out-of-pocket share of total spending on health has also grown; it was 23% in 2015, which was close to the EU28 average.

National Health Accounts data (Fig. 15) show that between 2008 and 2015, out-of-pocket spending grew fastest for inpatient long-term care (+139%), followed by specialist outpatient care (+83%) and dental care (+58%). This rapid increase in out-of-pocket spending on inpatient care reflects the introduction of percentage co-payments for inpatient nursing care in 2010. The increase in out-of-pocket spending on specialist outpatient care might reflect people choosing to pay privately to obtain faster access to treatment. Part of the increase is the result of higher prices for health services and products. Between 2008 and 2015, average consumer prices in health rose by 19.4%, while prices for dental services rose by 24.5% (Eurostat, 2018a).

Fig. 13. Spending on health per person by financing scheme, 2000–2015

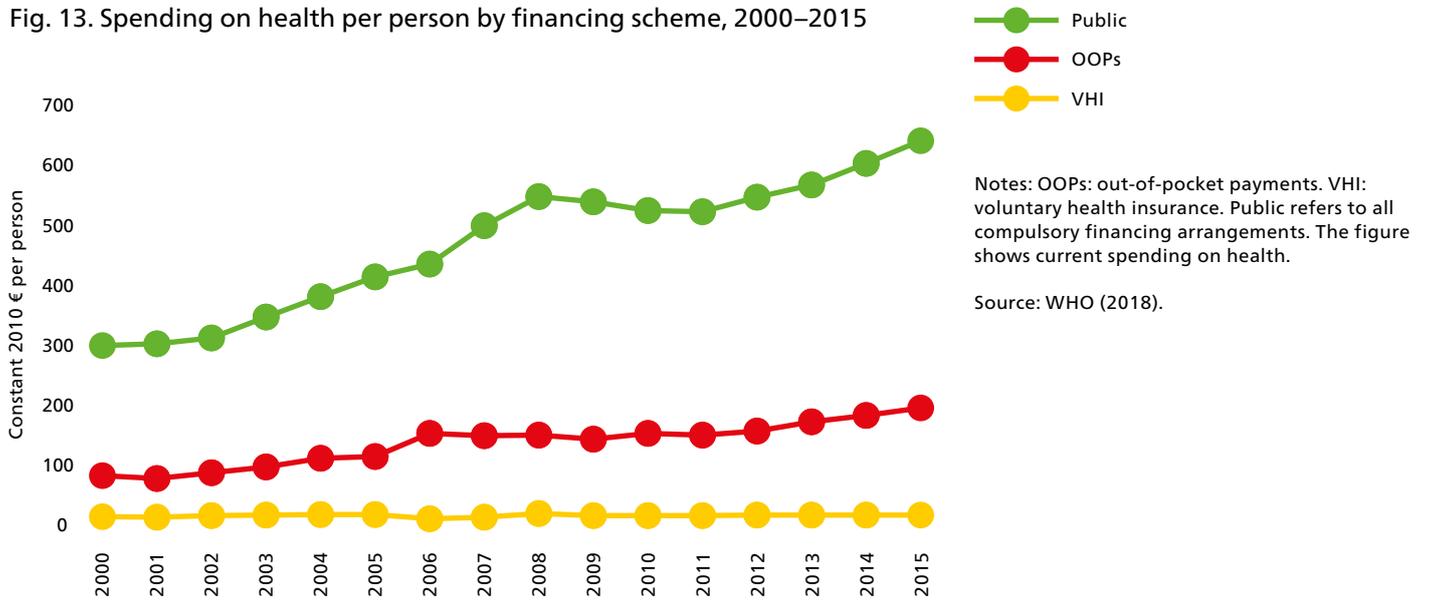


Fig. 14. Out-of-pocket payments as a share of total spending on health, 2000–2015

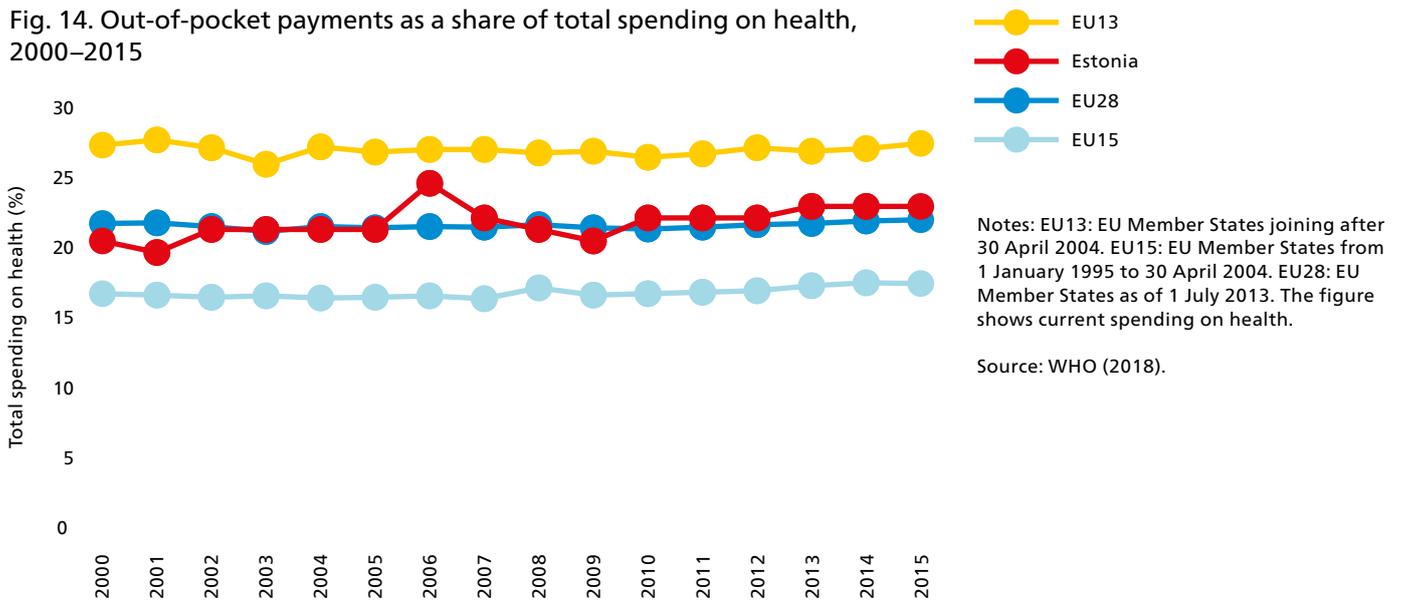
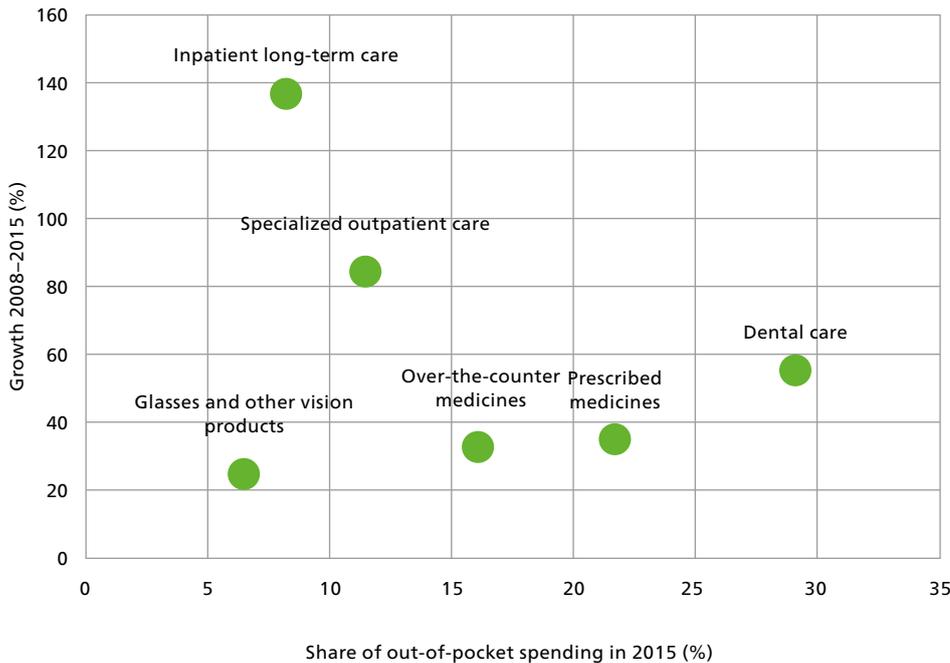


Fig. 15. Growth in out-of-pocket spending by type of health care, 2008–2015

Source: authors based on National Institute for Health Development data.



4.4 Summary

Household budget survey data show that 58% of households incurred out-of-pocket payments in 2015. The share of households with out-of-pocket payments rose from 49% in 2000 to a peak of 71% in 2006. It fell to 64% in 2007 and still further, to about 48%, by 2010.

Across all years, households without out-of-pocket payments are more likely to be poor than rich. The difference between consumption quintiles was most marked in the period 2010–2012 (the years after the economic crisis). Given that there are no income-related exemptions from user charges in the Estonian health system (which would lead to poorer households having to pay less out of pocket than richer households), this difference may be the result of much higher unmet need for health care among poorer households. In more recent years, it may also reflect a shift among older households from poorer to richer quintiles, reducing the need for health care in the poorest quintile.

Between 2000 and 2015, out-of-pocket spending grew at a much faster rate than total household spending, quadrupling in nominal terms. It grew particularly rapidly in the years of strong economic growth before the crisis (2005–2007) and after the crisis (2015). Spending growth has been highest among those in the richest quintile, who spent nearly six times as much out of pocket per person as those in the poorest quintile in 2015. In the same year,

out-of-pocket payments also accounted for a higher share of total household spending among richer households.

Outpatient medicines are the single largest driver of out-of-pocket spending for all quintiles, followed by dental care. Across all years, poorer households spend a greater share of out-of-pocket payments on medicines than richer households, while richer households spend a greater share of out-of-pocket payments on dental care.

Data from a national survey suggest that up to 5% of adults made informal payments to obtain faster access to treatment. The 2017 Special Eurobarometer survey on corruption reported that 3% of adults gave their doctor or nurse an additional payment or a valuable gift, or made a hospital donation to obtain faster treatment.

National Health Accounts data also show that out-of-pocket payments per person have grown over time in real terms, although growth was slower after the economic crisis. In 2015, out-of-pocket payments were 2.5 times higher than in 2000.

Between 2000 and 2008, public spending on health per person grew rapidly. When public spending on health fell during the crisis, out-of-pocket payments also fell; not only in per-person terms but also as a share of total spending on health, reflecting a lowering of household living standards. Since 2012, public spending on health per person has risen steadily. The out-of-pocket share of total spending on health has also grown; it was 23% in 2015, which was close to the EU28 average.

Between 2008 and 2015, growth in out-of-pocket spending was mainly driven by spending on inpatient and outpatient specialist care. This reflects coverage changes that lowered benefits and increased user charges, rather than reductions in public spending on health.

5. Financial protection

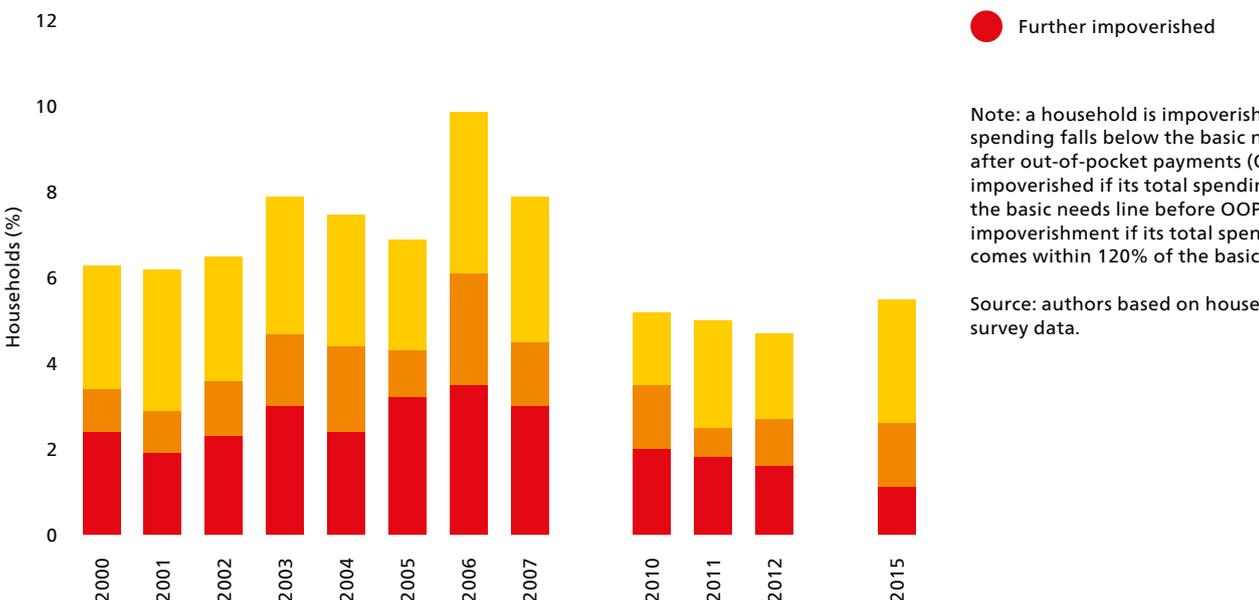
This section uses data from the Estonian household budget survey to assess the extent to which out-of-pocket payments result in financial hardship for households who use health services, including medicines. It shows the relationship between out-of-pocket spending on health and risk of impoverishment, and presents estimates of the incidence, distribution and drivers of catastrophic out-of-pocket payments. Note that there was a break in series in the household budget survey data in 2007. There are also gaps in the series in 2008, 2009, 2013 and 2014 (see section 2.2 for details).

5.1 How many households experience financial hardship?

5.1.1 Out-of-pocket payments and risk of impoverishment

Fig. 16 shows the share of households at risk of impoverishment after out-of-pocket spending on health care. The poverty line used here reflects the cost of spending on basic needs (food, rent and utilities) among a relatively poor part of the Estonian population (households between the 25th and 35th percentiles of the consumption distribution, adjusted for household size and composition). In 2015, the average monthly cost of meeting these basic needs – the basic needs line – was €213 (slightly higher than the national absolute poverty line of €201).

Fig. 16. Share of households at risk of impoverishment after out-of-pocket payments



Note: a household is impoverished if its total spending falls below the basic needs line after out-of-pocket payments (OOPs); further impoverished if its total spending is below the basic needs line before OOPs; at risk of impoverishment if its total spending after OOPs comes within 120% of the basic needs line.

Source: authors based on household budget survey data.

The share of households impoverished and further impoverished after out-of-pocket payments rose from around 3% in 2000 to a peak of 6% in 2006, then fell to 4.5% in 2007, 3.5% in 2010 and 2.6% in 2015. Around 2–3% of households are at risk of impoverishment after out-of-pocket payments.

The overall decline in the share of households who are impoverished or further impoverished after out-of-pocket payments may be explained by increased household earnings and reduced co-payments for prescription medicines. It might also reflect increased unmet need during the years of the economic crisis.

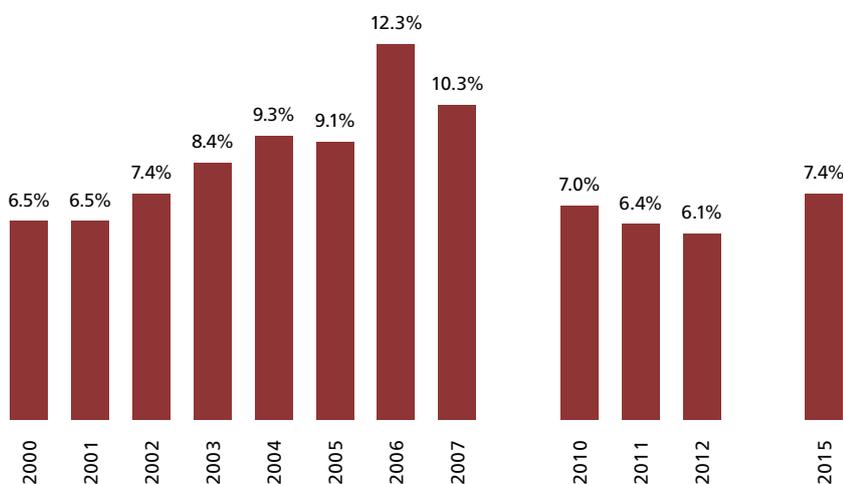
5.1.2 Catastrophic out-of-pocket payments

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

In 2015, about 7% of households experienced catastrophic levels of spending on health care (Fig. 17). Overall, the incidence of catastrophic out-of-pocket payments rose between 2000 and 2006, and then fell in 2007 and from 2010 to 2012. It rose slightly in 2015.

Fig. 17. Share of households with catastrophic out-of-pocket payments

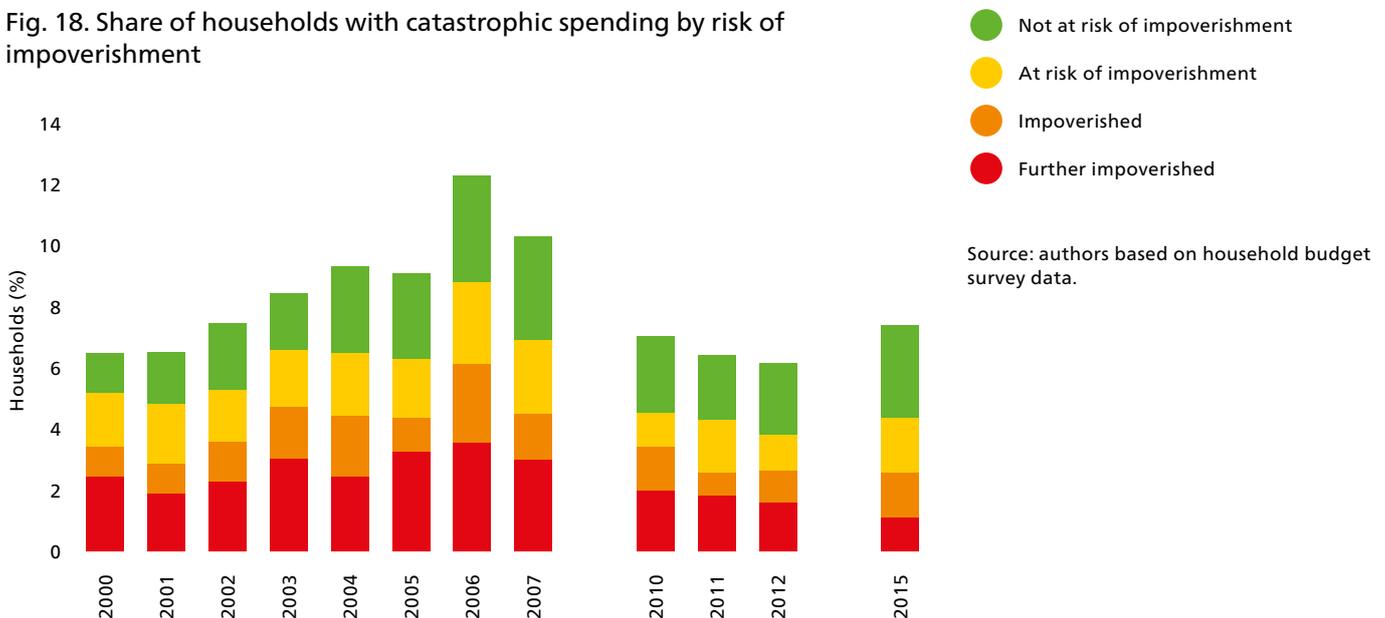
Source: authors based on household budget survey data.



5.2 Who experiences financial hardship?

Catastrophic out-of-pocket payments are concentrated among households who are already poor or at risk of poverty in all years, but slightly less so in recent years (Fig. 18), which suggests that an increasing share of high out-of-pocket payments are made by relatively well-off households.

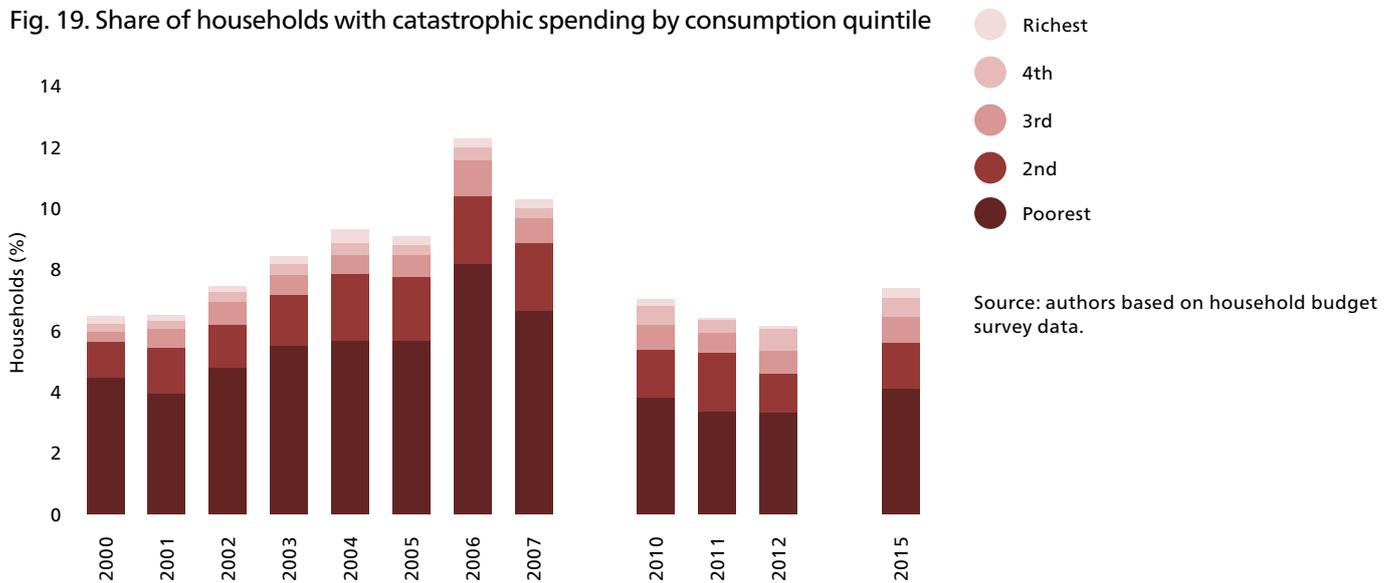
Fig. 18. Share of households with catastrophic spending by risk of impoverishment



In 2015, 4% of households in the poorest quintile were affected by catastrophic out-of-pocket payments; but only 0.3% in the richest quintile. The share of households affected by catastrophic spending has declined since 2010 in the poorest and second-poorest quintiles and has been relatively stable for the other quintiles (Fig. 19).

Catastrophic out-of-pocket payments are heavily concentrated among older people (both single pensioners and couples), but the impact of out-of-pocket spending has declined over recent years. In 2007, over 20% of pensioner households faced catastrophic spending on health; in 2015, this dropped to 12% for pensioner couples and 16% for single pensioners. Single and couple pensioners generally constitute about half of all households with catastrophic spending (Fig. 20). In 2010, however, during the economic crisis, their share was lower, at around 40%.

Fig. 19. Share of households with catastrophic spending by consumption quintile



5.3 Which health services are responsible for financial hardship?

Medicines are the largest single driver of catastrophic spending, followed by dental care and other medical products (such as glasses, hearing aids, orthopaedic supplies) (Fig. 21). The share of catastrophic spending on medicines has grown over time; it was highest in 2011 (72%) and has stabilized at around 65% since then.

For people in the poorest quintiles, out-of-pocket payments on medicines are by far the most significant driver of catastrophic spending (Fig. 22). Those in the richer quintiles spend more on dental care and medical products. Spending on inpatient care, which includes health services in spas, is significant only for those in the richest quintile.

Fig. 20. Breakdown of households with catastrophic spending by age and household structure

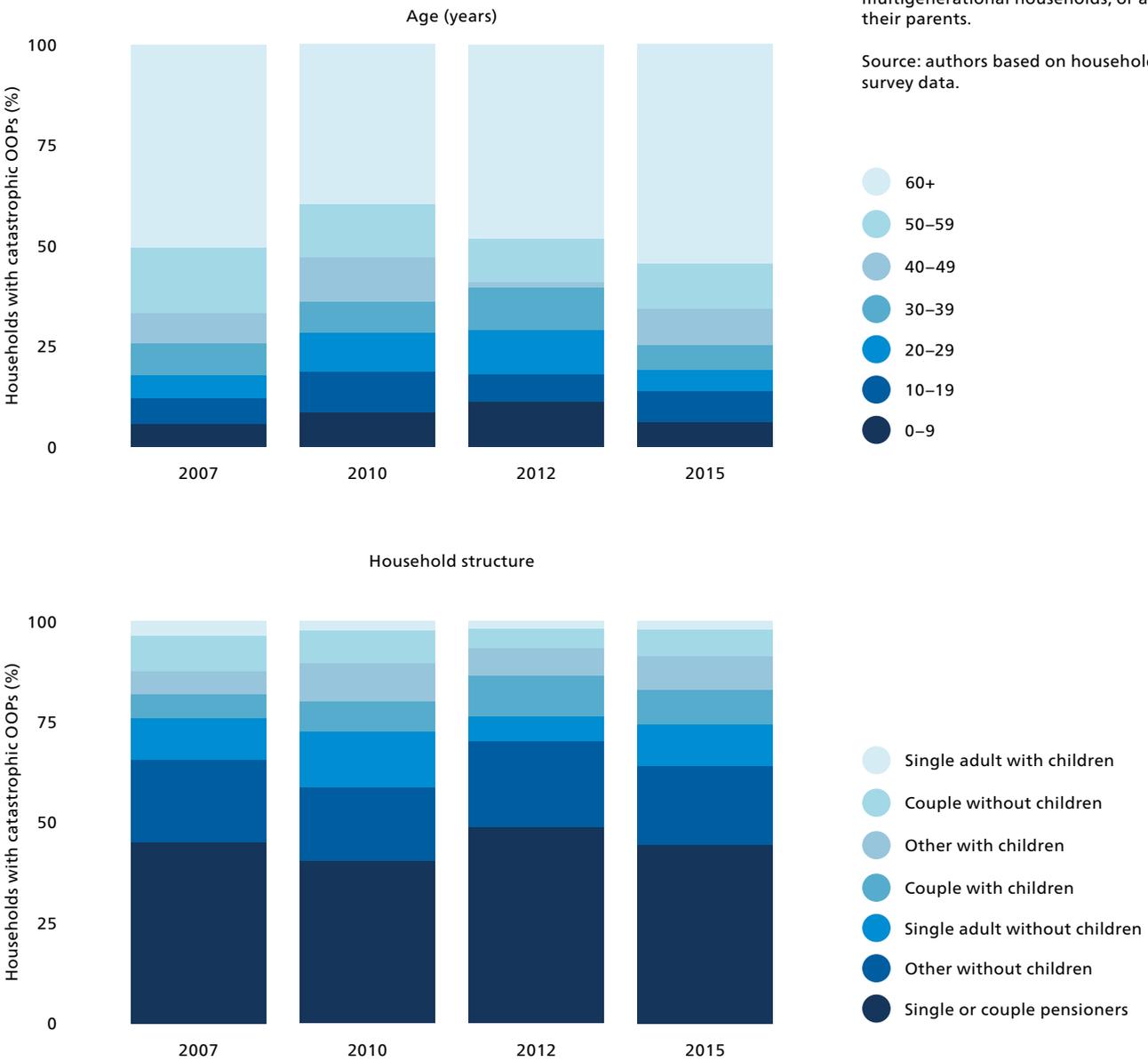


Fig. 21. Breakdown of catastrophic spending by type of health care

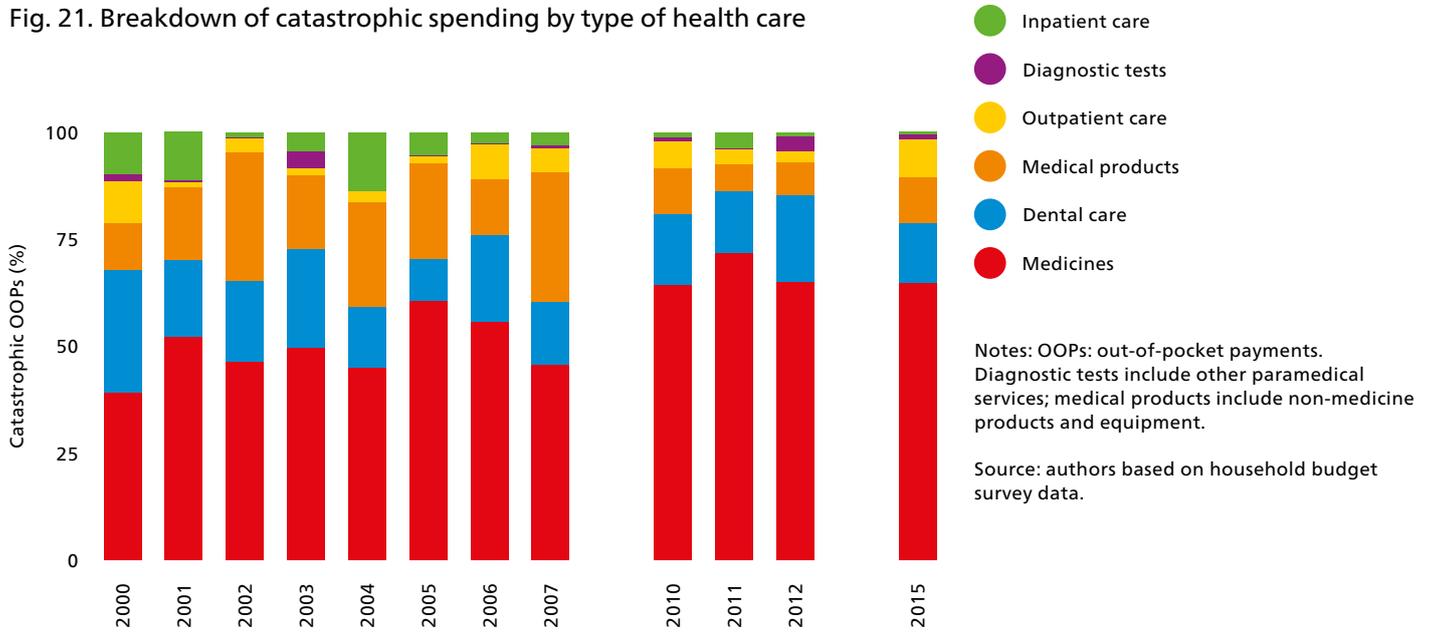
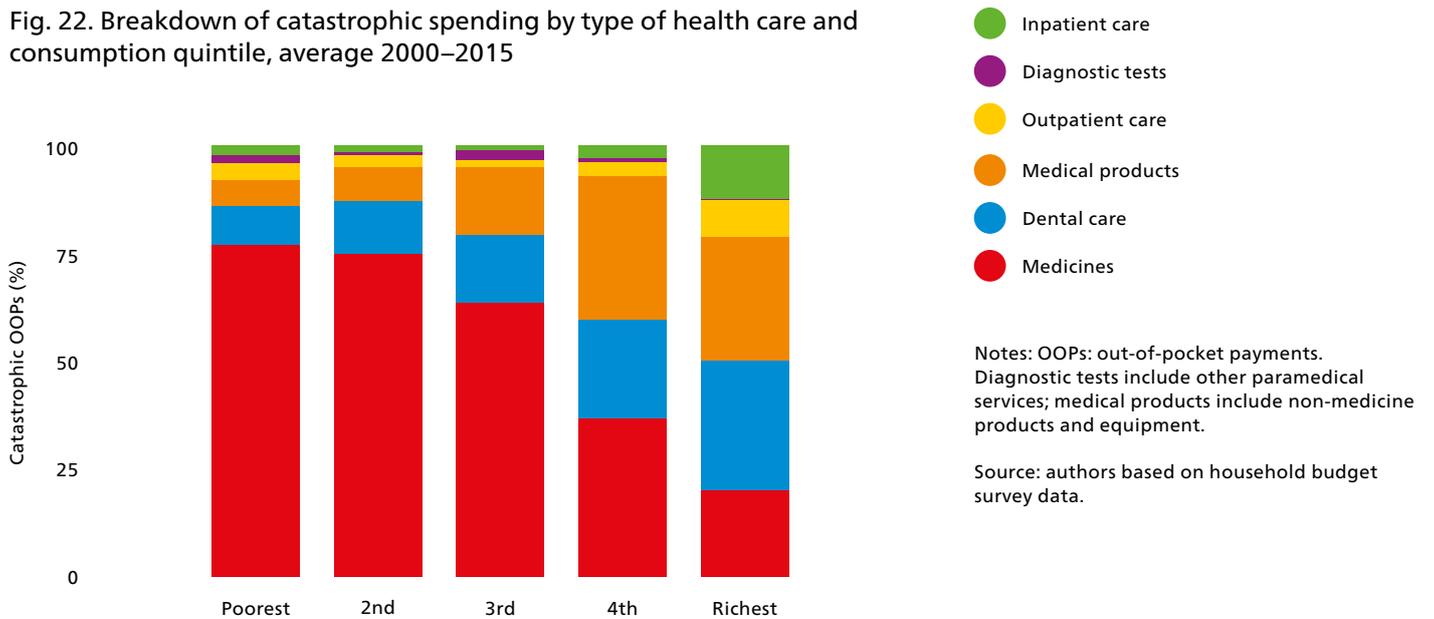


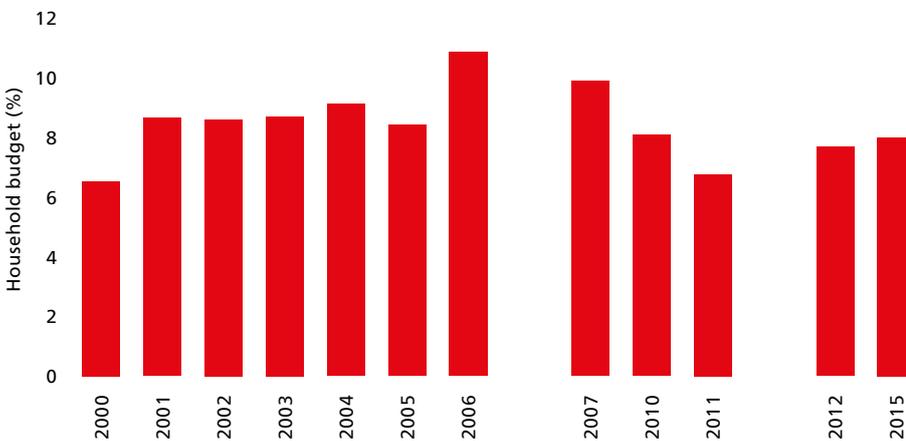
Fig. 22. Breakdown of catastrophic spending by type of health care and consumption quintile, average 2000–2015



5.4 How much financial hardship?

The average out-of-pocket share of total household spending among households already living below the basic needs line – those that are further impoverished after out-of-pocket payments – peaked at 11% in 2006 and then decreased slightly over time to 8% in 2015 (Fig. 23).

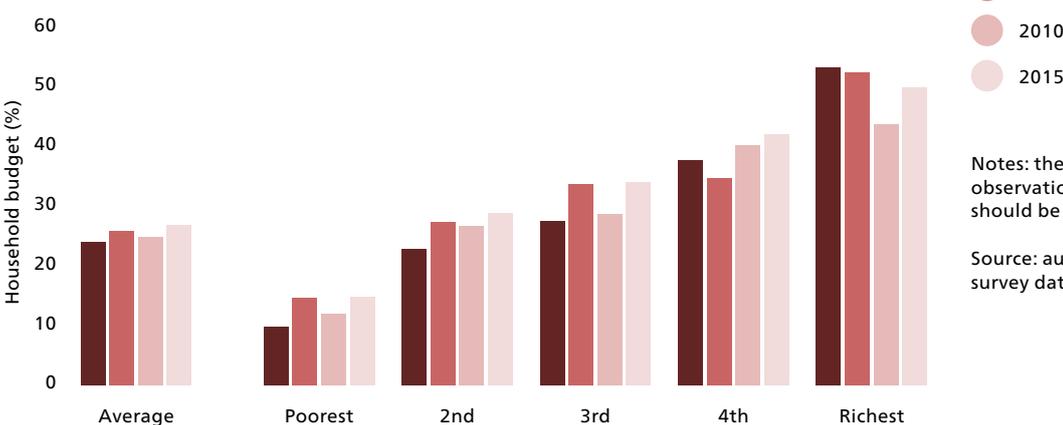
Fig. 23. Out-of-pocket payments as a share of total household spending among further impoverished households



Source: authors based on household budget survey data.

The average amount spent out of pocket and its share of household spending among those with catastrophic spending rises progressively with income (Fig. 24). The poorest quintile spends about €20–30 per month, mostly on medicines. This represents about 10% of their total budget.

Fig. 24. Out-of-pocket payments as a share of total household spending among households with catastrophic spending



Notes: the richest quintile has less than 10 observations in several cases. The numbers should be interpreted with caution.

Source: authors based on household budget survey data.

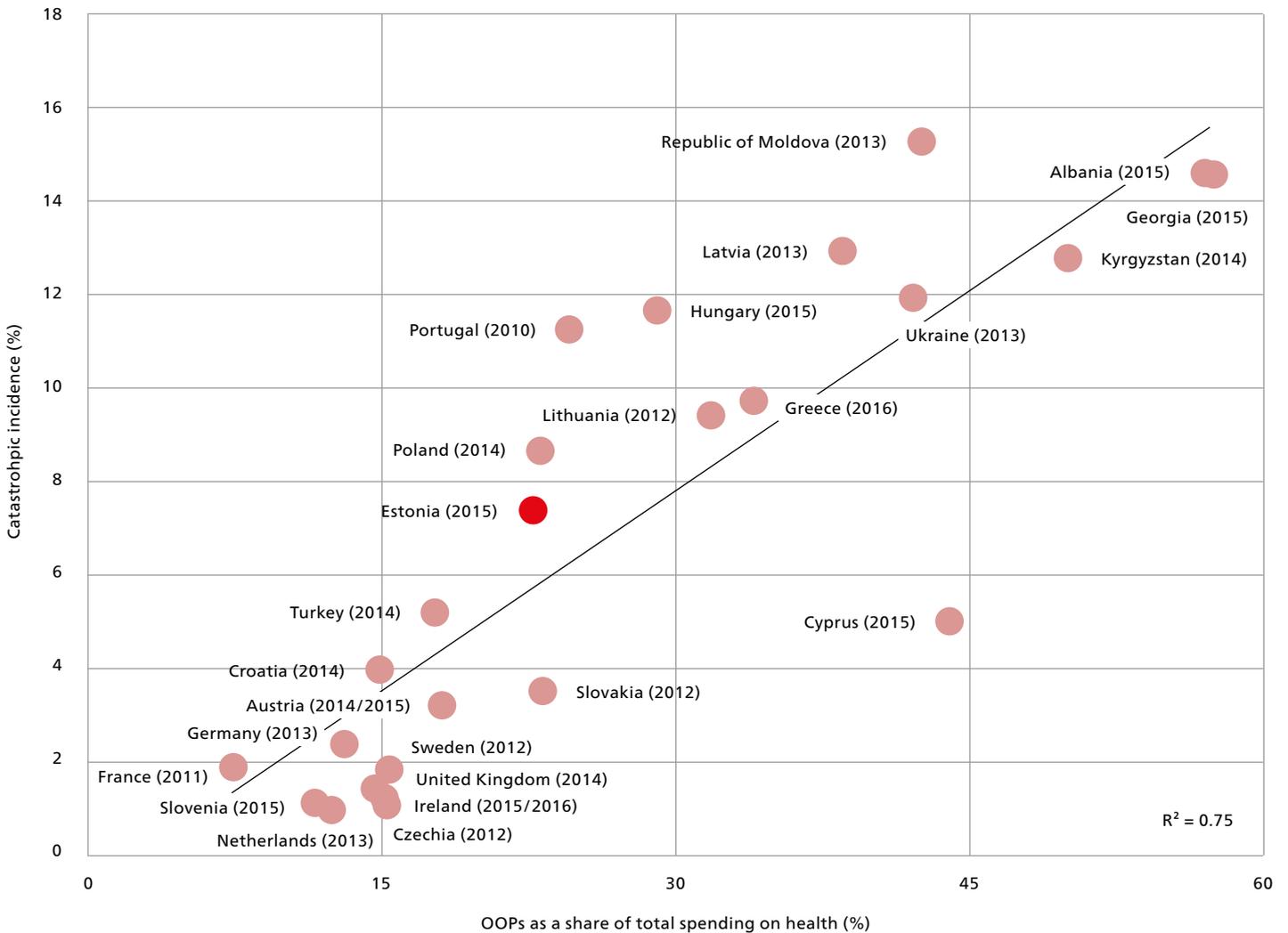
5.5 International comparison

The share of households with catastrophic out-of-pocket spending is higher in Estonia than in many EU countries, but lower than in Latvia and Lithuania (Fig. 25).

Fig. 25. Incidence of catastrophic spending on health and the out-of-pocket share of total spending on health in selected European countries, latest year available

Notes: OOPs: out-of-pocket payments. R²: coefficient of determination. The OOPs data are for the same year as those for catastrophic spending. Estonia is highlighted in red.

Sources: WHO Barcelona Office for Health Systems Strengthening; WHO (2018).



5.6 Summary

The share of households impoverished and further impoverished after out-of-pocket payments was at its highest (6%) in 2006. It fell to 4.5% in 2007, dropped below 4% in 2010 and has been around 2.5% since 2011. It is difficult to comment on the change between 2007 and 2010 owing to the break in series (explained in section 2.2). Across the period 2010–2015, the share of further-impoverished households fell steadily from 2% to 1%.

Between 2000 and 2006, the incidence of catastrophic out-of-pocket payments grew, reaching 12% of households in 2006. It fell to 10% in 2007, 7% in 2010, fell very slightly again in 2011 and 2012 and then rose to slightly higher in 2015 than it had been in 2010. It is difficult to comment on the change between 2007 and 2010 owing to the aforementioned break in series. The improvement between 2010 and 2012 and the deterioration between 2012 and 2015 were mainly driven by changes in incidence among the two poorest quintiles.

Catastrophic spending on health affects the poorest households the most. In 2015, one in five households in the poorest quintile experienced catastrophic out-of-pocket payments; together, the two poorest quintiles accounted for 75% of all households experiencing catastrophic out-of-pocket payments.

Medicines are the largest single driver of catastrophic spending and account for almost all catastrophic spending among those in the poorest quintile. For people in the richer quintiles, spending on dental care and medical products are the main sources of catastrophic out-of-pocket payments.

At 7.4% in 2015, the share of households with catastrophic out-of-pocket spending is higher in Estonia than in many EU countries, but lower than in Latvia and Lithuania.

6. Factors that strengthen and undermine financial protection

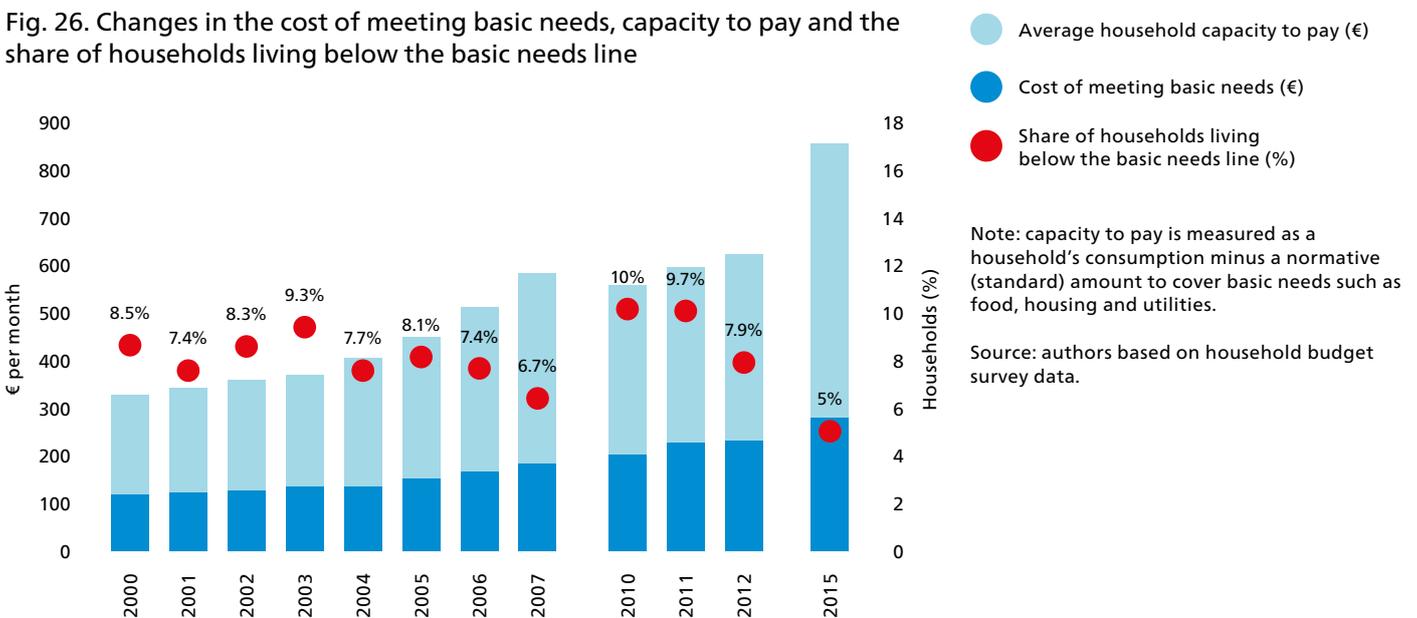
This section considers the factors that may be responsible for financial hardship caused by out-of-pocket payments in Estonia and that may explain the trend over time. Factors outside the health system that affect people's capacity to pay for health care, such as changes in living standards and the cost of living, are discussed first, and then 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 household budget survey and other sources to review changes in people's capacity to pay for health care. Poverty among people more likely to need health care is a particular challenge for financial protection.

Over time, the cost of meeting basic needs (food, housing and utilities) – the basic needs line – has risen by 135% (Fig. 26), while household capacity to pay for health care has increased by 176%, with a particularly steep rise between 2012 and 2015. The share of households living below the basic needs line has fallen sharply since 2010, from 10% in 2010 to 5% in 2015.

Fig. 26. Changes in the cost of meeting basic needs, capacity to pay and the share of households living below the basic needs line



Capacity to pay for health care is heavily influenced by overall household income, especially among poorer households. The absolute poverty rate in Estonia has closely followed patterns of economic development in recent years. In 2016, it fell to 3.3% – its lowest value ever (Fig. 27) – declining among all major socioeconomic groups thanks to steadily increasing wages and the indexation of pensions. The poverty rate among unemployed people remains

considerably higher than average; owing to weak protection of unemployed people in Estonia, only about half of newly registered unemployed people receive unemployment benefits. In contrast, financial protection of families with children has increased considerably in recent years.

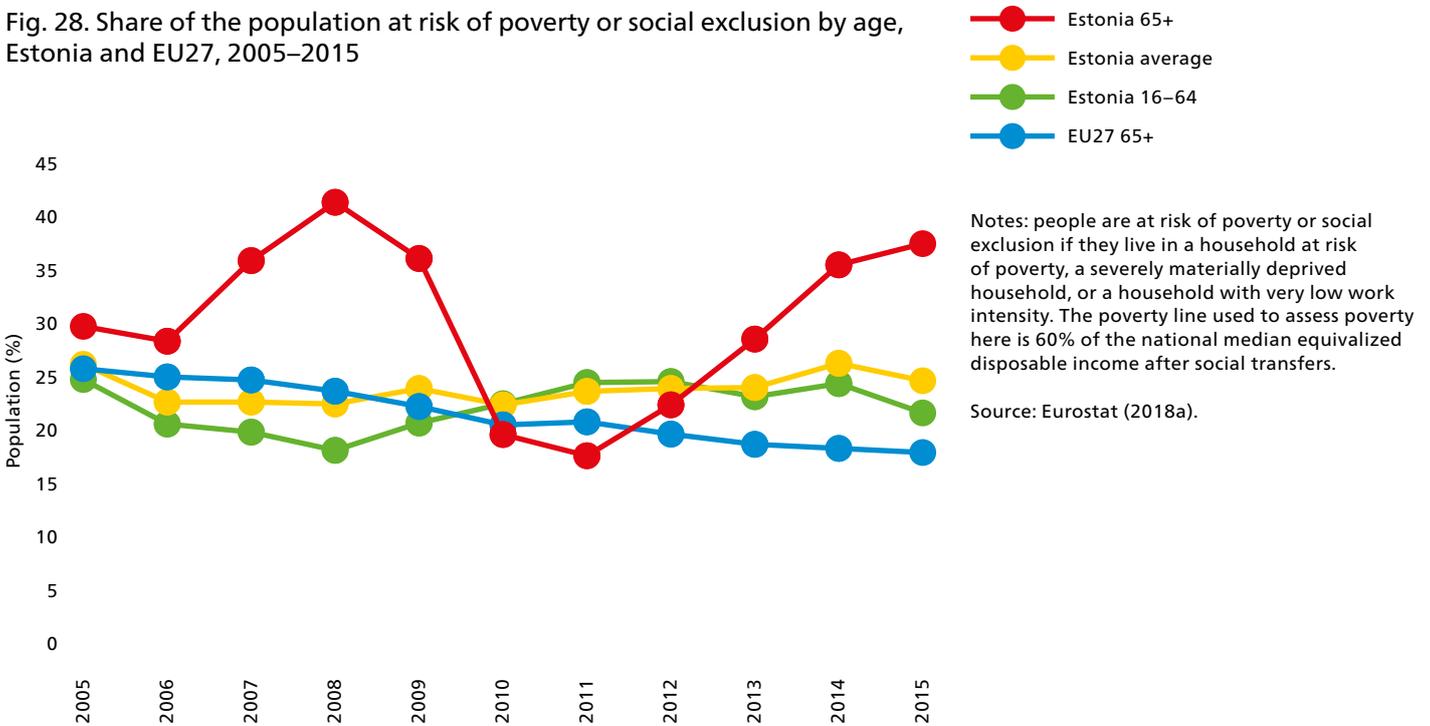
Fig. 27. Share of the population in poverty by labour market status, 2000–2016



In 2015, 37% of the population aged over 65 years in Estonia were at risk of poverty or social exclusion, compared to 17.3% in the EU27. Overall, the share of the population aged over 65 years that are at risk of poverty decreased by 3 percentage points at EU27 level between 2011 and 2015, but rapidly increased in Estonia by 20 percentage points in the same period. Roughly a quarter of the population in Estonia was at risk of poverty or social exclusion in 2015 (Fig. 28). Over time, the fluctuating poverty rate of pensioners reflects the fact that pensions are consistently around the level of the relative poverty line.

The fall in the incidence of households further impoverished after out-of-pocket payments appears to be linked to the reduction in the share of households below the basic needs line in 2015.

Fig. 28. Share of the population at risk of poverty or social exclusion by age, Estonia and EU27, 2005–2015



6.2 Health system factors

The following subsections look at health spending and health coverage.

6.2.1 Spending on health

Public spending on health as a share of GDP has been low in Estonia compared to both the EU28 and the EU13 averages, although it has recently risen to meet the EU13 average (Fig. 29). This increase in recent years is largely the result of the EHIF drawing on its reserve funds after the economic crisis. In spite of the increase, public spending on health is not as high in Estonia as its level of GDP per person indicates it could be (Fig. 30), and the out-of-pocket share of total spending on health has steadily increased (Fig. 14).

This may change in the future. From 2018, the EHIF’s revenue base is being broadened through the introduction of transfers from the government budget on behalf of non-working pensioners, leading to a rise of around 0.2% of GDP by 2022. However, to bring down the out-of-pocket share and improve financial protection, changes to health coverage policy will be required.

Fig. 29. Public spending on health as a share of GDP, Estonia and EU averages, 2000–2015

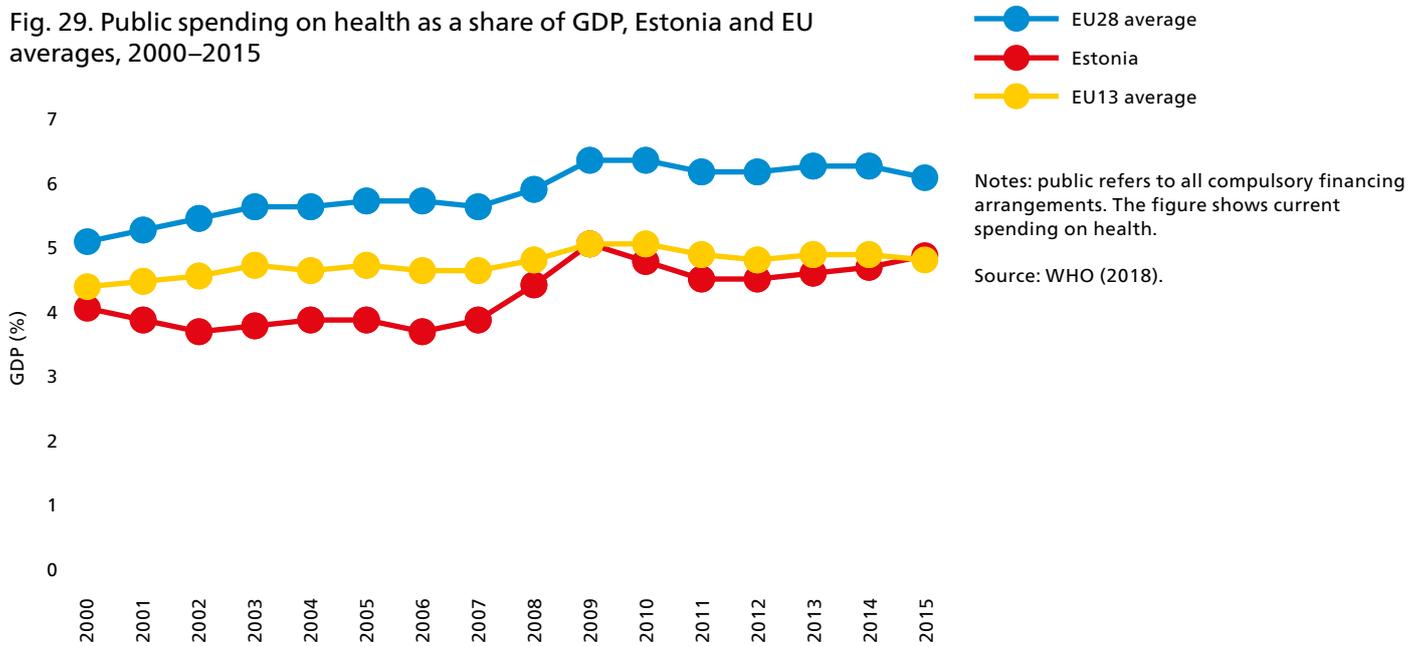
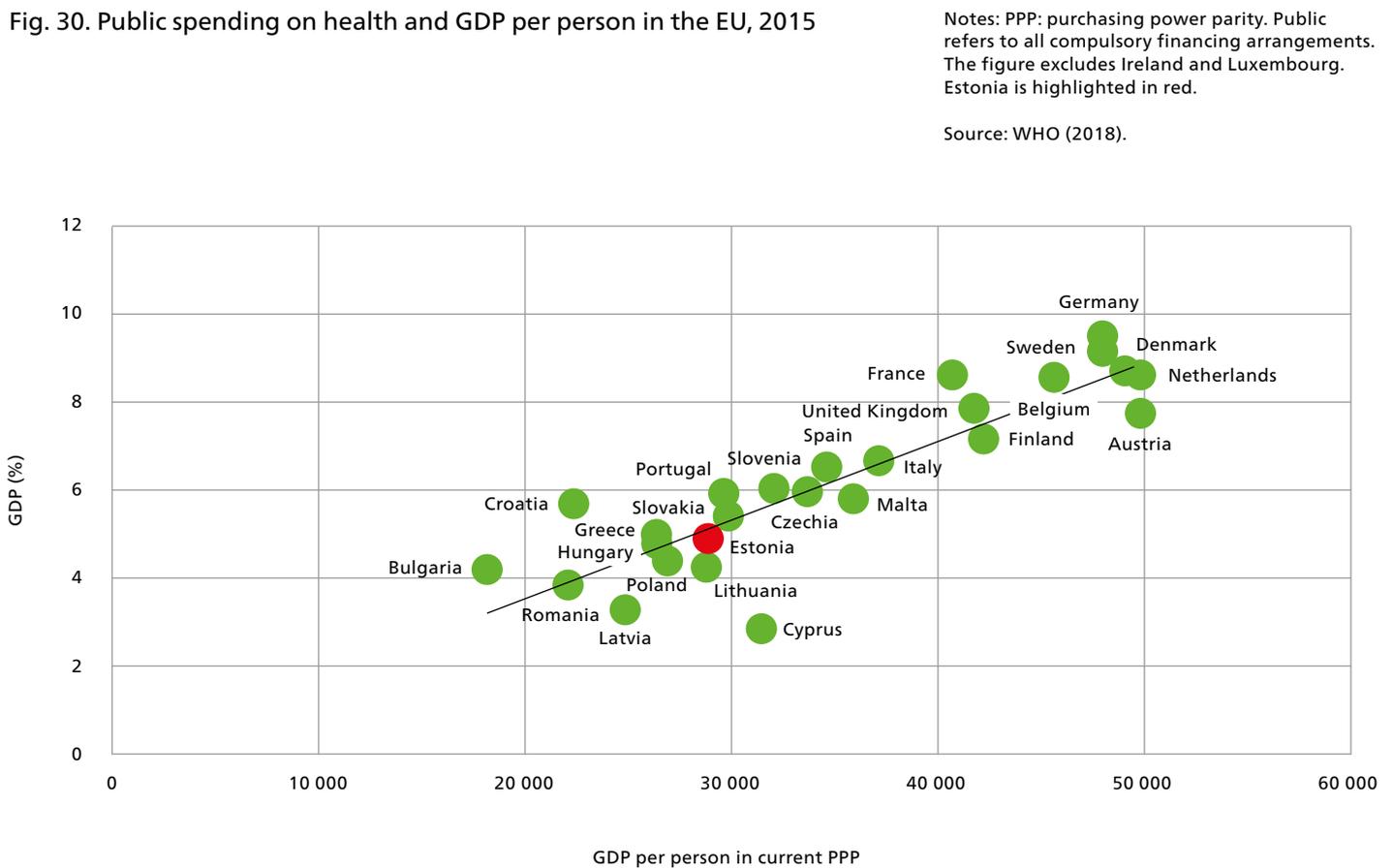


Fig. 30. Public spending on health and GDP per person in the EU, 2015



6.2.2 Health coverage

Owing to the linking of **population entitlement** to payment of contributions and employment status, the share of the population covered by the EHIF is very low by EU and OECD standards (OECD, 2018); at 95% it is one of the lowest coverage levels in the EU. The system is also administratively complex, with more than 50 different entitlement groups. Coverage varies widely by age group. For example, 14% of people aged 20–39 years were uninsured in 2017. Most uninsured people are young men of working age either lacking permanent employment or working abroad.

The continuity of insurance coverage is also an issue: in 2015, 11% of the population aged 20–64 years were covered for less than 11 months of the year. All this suggests that current coverage policy does not provide enough protection for working-age people. Although substitutive VHI is available, it does not fill this gap in coverage owing to its relatively high cost.

The range of benefits covered by the EHIF is broad. The main gap in **service coverage** is dental care for adults, which is also the second largest driver of out-of-pocket payments in general and of catastrophic out-of-pocket payments. Out-of-pocket spending on dental care is, however, much higher among richer households. This is likely to reflect unmet need for dental care, which is high in Estonia compared to the EU average. Inequalities in unmet need for dental care are also significant in Estonia.

Out-of-pocket spending on dental care was higher in 2010 than in 2007 for all consumption quintiles, perhaps reflecting the reduction in EHIF **dental care benefits** in 2009. Dental care for adults was reintroduced to the EHIF benefits package in 2017 (after the study period). Uptake has been slow, partly because the new benefit is in kind and requires dentists to accept fixed EHIF tariffs; as a result, some dental care providers have been reluctant to treat EHIF-funded patients.

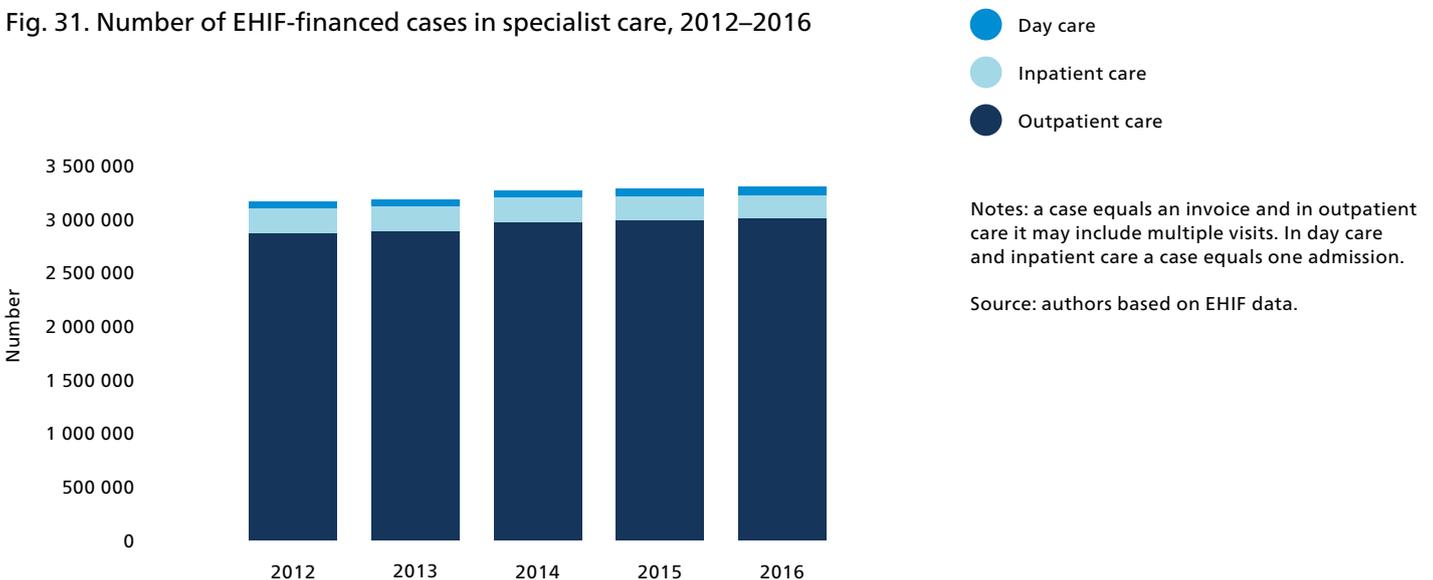
By improving access, the new benefit is likely to reduce inequalities in unmet need for dental care. Its impact on financial protection is less clear, however. Improved access to services that involve heavy user charges (the percentage co-payment is set at 50% of the price of treatment), and for which the benefit is capped at a very low level (€40 per year), will increase out-of-pocket spending and may therefore reduce financial protection, especially for poorer households and people with poor dental health. The lower percentage co-payment (15%) and a higher benefit cap (€85 per year) for people with poor dental health may not provide adequate protection for people with low incomes.

The share of the population facing long **waiting times for outpatient specialist care** has steadily increased since 2010. Long waiting times undermine equity of access to health care and can lead to higher out-of-pocket spending – undermining financial protection – if people opt to pay privately for faster treatment. Service volumes were cut during the economic crisis, but have since been restored. As Fig. 31 shows, the volume of EHIF-funded specialist cases is rising. Fig. 32 shows an increase in primary care volumes also, especially in family nurse visits, which have been encouraged through the introduction in 2013 of financial incentives for family doctors to employ a second nurse. EHIF spending on primary, specialist, and nursing care has grown significantly; in 2016 it was 60%, 49% and 111% higher, respectively, than in 2010.

In spite of these positive developments, however, self-reported unmet need for health care has continued to increase and public perceptions of the accessibility of specialist care have declined. Public satisfaction with access to health services fell from a peak of 60% in 2007 to 38% in 2016; the decline was particularly rapid after 2012 (EHIF et al., 2007, 2016). The lowest level of satisfaction is in Tallinn, where the supply of specialist care is highest. An improvement in the perception of access to primary care has not reversed the deterioration in the perception of access to specialist care.

Access and satisfaction problems cannot be explained simply as a result of the low volume of EHIF-funded services. A recent study found that a significant share of specialist visits and hospitalizations in Estonia are avoidable (World Bank, 2015). It suggested that the root causes of limited access are complex and include enhanced capacity among specialist care providers owing in part to financial incentives that push service delivery from primary to specialist care; the limited scope of services provided at primary care level, with only partial referral to specialist care; and patient preferences for specialist care, especially in the capital. As a result, improving access and financial protection is likely to involve further changes in incentives for providers, combined with greater effort to improve the attractiveness of primary care to the public.

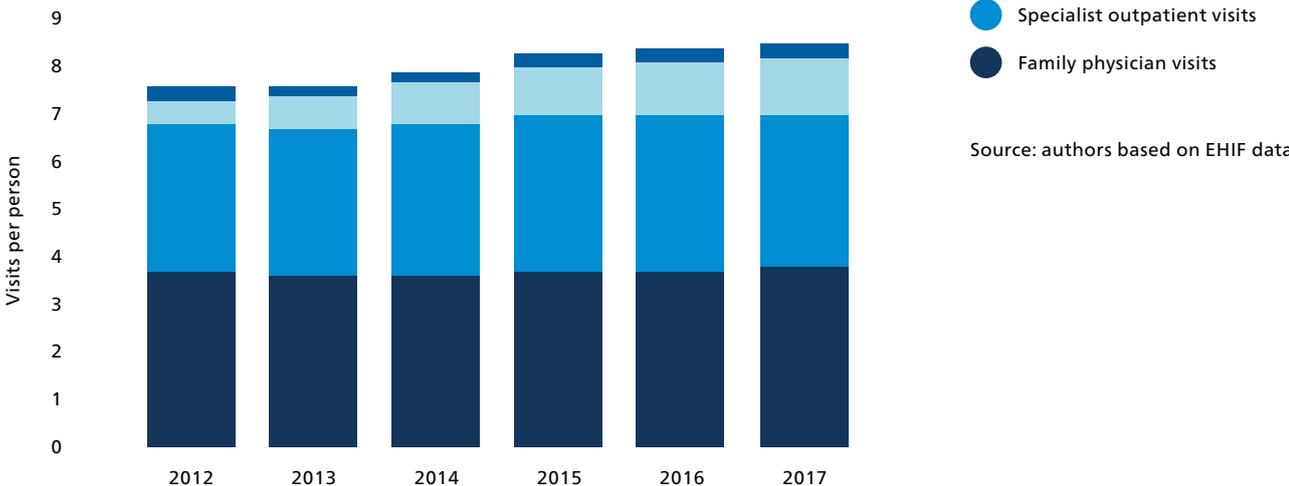
Fig. 31. Number of EHIF-financed cases in specialist care, 2012–2016



EHIF benefits are free at the point of use for everyone, for primary care, diagnostic tests and inpatient intensive care. Children aged under 2 years and pregnant women are exempt from **user charges** for family doctor home visits and outpatient specialist visits, as well as the daily charge for being in hospital. Children aged under 19 years benefit from free dental care.

Between 2008 and 2015, out-of-pocket payments for inpatient long-term care rose by 140% (Fig. 15). This followed the introduction of user charges

Fig. 32. EHIF-funded primary care and outpatient specialist visits per person, 2012–2017



for inpatient nursing care in 2010. Set as a percentage co-payment of 15%, the new charge not only meant people had to pay out of pocket, but it also exposed them to increases in service prices. In 2017, the average time for which inpatient nursing care was required was 22 days and the corresponding out-of-pocket payments amounted to almost €250 per person per stay. The increase in out-of-pocket payments also reflects increases in service prices. The household budget survey probably underestimates the negative impact of this particular user charge on financial protection for a highly vulnerable group of people.

Out-of-pocket payments for outpatient specialist visits grew by over 80% between 2008 and 2015 (Fig. 15). This may reflect increased waiting times, in part owing to reduced service volumes during the economic crisis, which push people to pay privately to see a specialist. It may also reflect the increase in the co-payment for specialist visits in effect from 2013.

Outpatient medicines are the largest item of out-of-pocket and catastrophic out-of-pocket spending, largely owing to a combination of high user charges for prescribed medicines and the relatively high price of medicines in Estonia (National Audit Office, 2012). Several aspects of the design of user charges for outpatient medicines are worth highlighting as factors that are highly likely to undermine financial protection.

- **The co-payment policy for prescribed medicines is complex.** It involves a fixed co-payment with two rates (reduced to one rate in 2018), percentage co-payments with three rates, and reference pricing (see Table 4 for details).
- **The use of percentage co-payments means people must pay a share of the medicine price.** As a result, their exposure to out-of-pocket payments depends on the price and quantity of medicines they need. Also, unless the

price is known in advance, people may face uncertainty about how much they have to pay out of pocket. The negative effect of this form of user charge is magnified for people who are regular users of medicines; for those who have a condition that requires higher-cost medicines; when medicine prices are relatively high; and when physicians and pharmacists are not required or do not have incentives to prescribe and dispense cheaper alternatives.

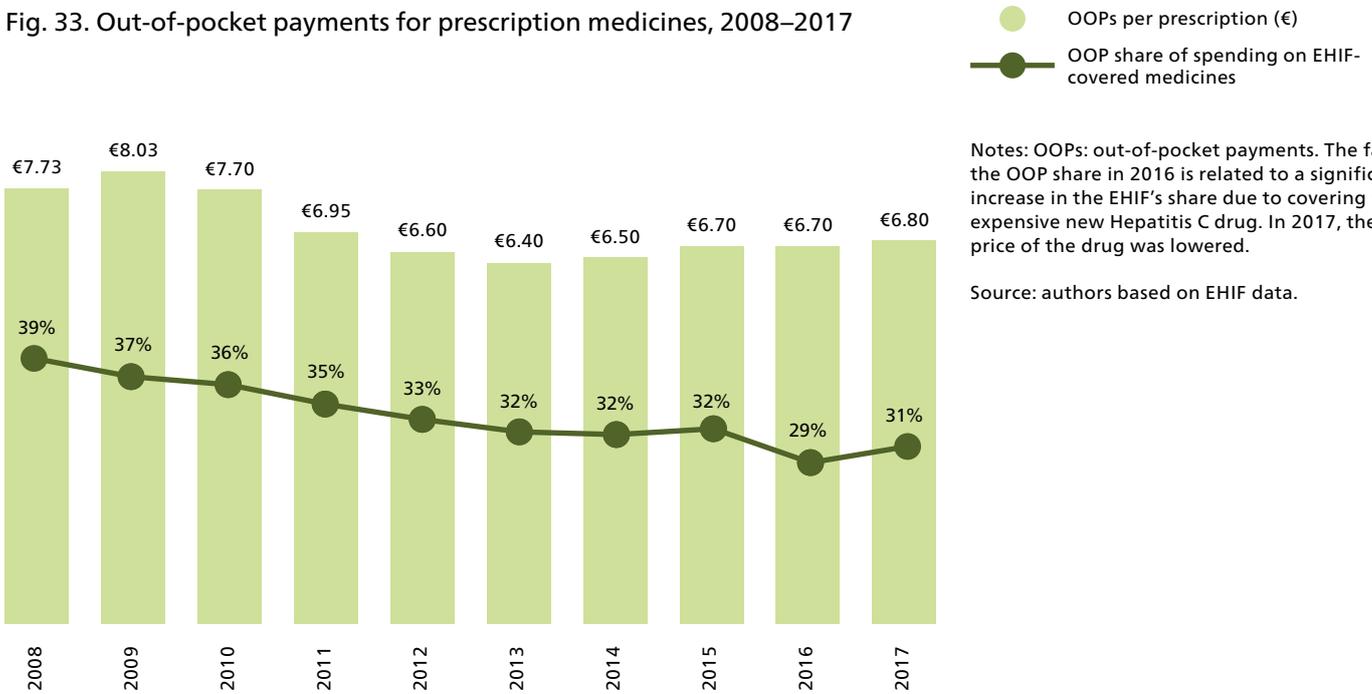
- **Mechanisms to protect people have improved over time but are still inadequate.** There are no full exemptions from co-payments. Although there are exemptions from percentage co-payments for children aged under 4 years, and reduced rates for children aged 4–16 years and older people, there are no exemptions for low-income households.

People are eligible for reduced rates if they spend more than a certain amount out of pocket as a result of percentage co-payments for prescriptions. Above this amount, they pay a lower share of the prescription cost, but continue to pay the fixed co-payment and any amount above the reference price. Over time, the annual threshold has been lowered from €1300 (25%) in 2011 and €500 (10%) in 2015 to €300 (10%) in 2018. From 2018, the fixed co-payment is included in the annual threshold for the first time. The changes introduced in 2018 may have different effects on different groups of people and its impact should be closely monitored.

- **There is no overall cap (ceiling) on out-of-pocket payments** arising from user charges for outpatient medicines or for other health services. This is particularly worrying when user charges take the form of percentage co-payments. Until 2012 there was a benefit cap, which meant that the EHIF would not cover more than €12.79 per prescription for medicines with a percentage co-payment of 50%. Although the abolition of the benefit cap and the lowering of the reduced-rate threshold are important steps forward, they do not take into account other user charges (e.g. co-payments for outpatient specialist visits, medical products, inpatient care, etc.). All of these impose a significant financial burden on people with a high level of need – for example, people with chronic conditions.

In terms of medicine prices, there is no explicit regulation requiring the mandatory use of generics in Estonia. Some measures are in place to direct doctors and patients towards using generics more. Doctors are required to prescribe medicines by their international nonproprietary name and in September 2010, the EHIF started an awareness campaign to empower patients to ask for an international nonproprietary name-based prescription from their doctor and to make price-aware choices in pharmacies. These measures have led to a decline in the out-of-pocket share of spending on EHIF-covered medicines, which fell from 39% in 2008 to 31% in 2017, but the share remains very high (Habicht & van Ginneken, 2014). User charges per prescription fell from €7.7 to €6.8 across the same period (Fig. 33).

Fig. 33. Out-of-pocket payments for prescription medicines, 2008–2017



Notes: OOPs: out-of-pocket payments. The fall in the OOP share in 2016 is related to a significant increase in the EHIF's share due to covering an expensive new Hepatitis C drug. In 2017, the price of the drug was lowered.

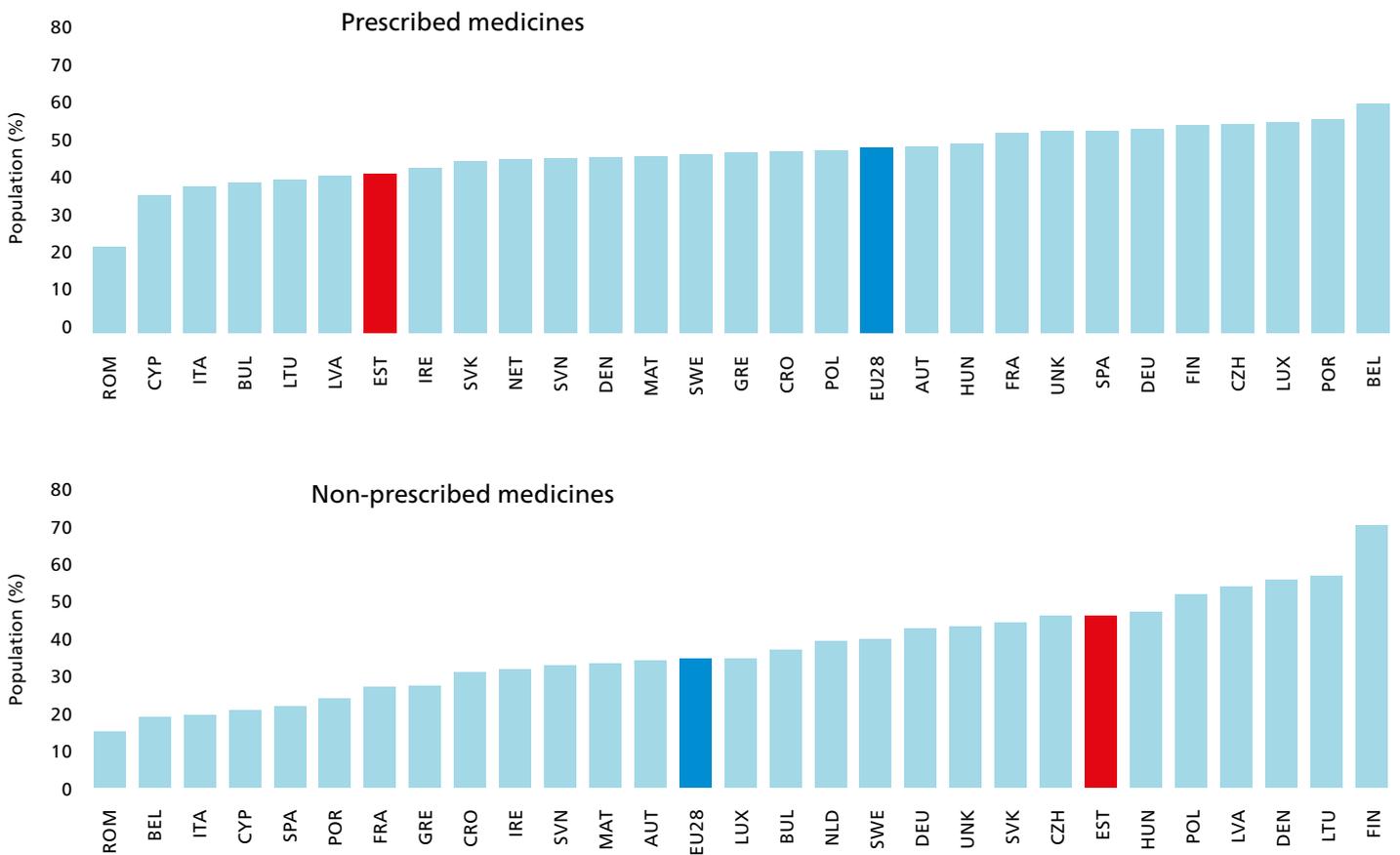
Source: authors based on EHIF data.

According to data from the European Health Interview Survey (EHIS), the use of prescribed medicines is on average lower in Estonia than in the EU as a whole, but the use of non-prescribed (over-the-counter) medicines is on average substantially higher (Fig. 34). Although the household budget survey data do not distinguish between spending on prescribed and non-prescribed medicines, in the light of the EHIS results, it is plausible that the use of non-prescribed medicines may be an important driver of catastrophic spending and therefore warrants policy attention.

Fig. 34. Use of medicines in the EU, 2014

Note: share of the population who used medicines prescribed by a doctor or medicines, herbal medicines or vitamins not prescribed by a doctor in the past two weeks.

Source: Eurostat (2018c).



6.3 Summary

Estonia’s relatively high incidence of catastrophic spending on health partly reflects a level of public spending on health that is well below the EU28 average and slightly lower than Estonia can afford. It also reflects substantial gaps in coverage. Several aspects of coverage policy are likely to undermine financial protection.

- Estonia has one of the lowest levels of **population coverage** among EU countries. Children, students and pensioners are automatically entitled to EHIF benefits, but current coverage policy does not provide enough protection for people of working age.
- Dental care for adults has been a major gap in **service coverage**, although coverage has recently improved. Long waiting times for

specialist care have become a growing issue, especially since the economic crisis, when maximum waiting times were extended. In spite of EHIF efforts to improve access to primary care and encourage more efficient patterns of care use, public satisfaction with access to specialist care has been steadily declining.

- The design of **user charges** for medicines undermines financial protection. It is complex and does not provide adequate protection for poor people and regular users of care. Attempts to simplify and enhance protection in recent years are an important step forward, but have not gone far enough (the use of prescribed medicines is still low by EU standards) and have not accounted for the impact on households of user charges for other health services (co-payments for outpatient specialist visits, medical products, inpatient care, etc.). Taken together, these user charges impose a significant financial burden on people with a high level of need.

In addition to coverage policy, both relatively high prices for medicines and the relatively high use of non-prescribed medicines may also play a role in causing financial hardship.

The out-of-pocket share of total spending on health in Estonia is lower than expected given the share of GDP Estonia spends on health – it is very close to the EU28 average. It seems likely that the limitations in coverage policy outlined here result in financial hardship for some people, and create barriers to access for others.

Estonia currently has very high levels of self-reported unmet need for health and dental care. Although unmet need and inequalities in unmet need improved before the economic crisis, since then unmet need has grown fast and inequalities have widened. For dental care, the gap in unmet need between rich and poor has widened substantially.

Growth in unmet need may explain some of the apparent improvement in financial protection seen between 2010 and 2012, especially since the small reduction in catastrophic out-of-pocket payments during this time was heavily concentrated among people in the poorest consumption quintiles, for whom unmet need grew the most.

Household capacity to pay for health care has increased at a faster rate than the cost of meeting basic needs. As a result, the share of households living below the basic needs line has fallen sharply since 2010, from 10% in 2010 to 5% in 2015. This suggests that the decline in the incidence of households further impoverished after out-of-pocket payments during this time (from 2% to 1%) was driven more by improvements in living standards following the economic crisis than by improvements in health coverage.

7. Implications for policy

The level of financial hardship in Estonia is higher than in many EU countries, but lower than in Latvia and Lithuania. In 2015, 7.4% of households in Estonia experienced catastrophic out-of-pocket payments. Just over 5% of households were impoverished, further impoverished or at risk of impoverishment after out-of-pocket payments.

Catastrophic spending affects the poorest households the most. In 2015, the poorest quintile accounted for half of all households with catastrophic spending; together, the two poorest quintiles accounted for three quarters of all households with catastrophic spending.

Medicines are the largest single driver of catastrophic spending and account for almost all catastrophic spending among people in the poorest quintile. For the richer quintiles, spending on dental care and medical products are the main sources of catastrophic out-of-pocket payments.

The fall in the share of households further impoverished after out-of-pocket payments is mainly driven by improvements in living standards following the economic crisis. It may also reflect a shift in the composition of the poorest consumption quintile, as older people – with their greater need for health care – moved into higher quintiles during and after the crisis.

A small reduction in catastrophic spending between 2010 and 2012 is likely to have multiple causes, mostly unrelated to improvements in the health system. The reduction was almost entirely driven by a fall in incidence among the two poorest quintiles. Part of it may reflect efforts to encourage the uptake of generic medicines in 2010 and the abolition of the benefit cap per prescription in 2012. Part of it is likely to reflect growing unmet need among poor households.

Growing unmet need – and rising inequalities in unmet need – are significant problems in Estonia. Estonia currently has very high levels of self-reported unmet need for health care. It was declining before the financial crisis but has risen sharply since. In 2014, it was well above the EU average for dental care, health care and prescribed medicines. Income inequality in unmet need has also grown since 2009. EU-SILC data suggest income inequality is much larger for dental care than for health care. Data from the Estonian Health Survey confirm this; they also suggest that income inequality in unmet need is largest for prescription medicines.

Estonia's relatively high incidence of catastrophic spending on health reflects limitations in coverage policy.

The fact that entitlement to EHIF benefits is based on payment of contributions for people of working age, combined with weak enforcement, means many people lack adequate protection. In 2017, 14% of people aged 20–39 years were uninsured. Continuity of coverage is also an issue. The current policy warrants attention. It is overly complex, results in significant gaps in coverage for working-age people, and may be seen as increasingly unfair as the EHIF begins to receive transfers from the government budget, since the uninsured contribute to government revenues through payment of VAT and other taxes.

Limited coverage of dental care leads to financial hardship for richer people and creates barriers to access for poorer people. Recent coverage expansions are an important step forward, but they lack protection specifically targeting poor people. Dental care is the largest driver of

catastrophic spending among richer households and the largest driver of unmet need among poorer households. Poorer people are up to five times more likely to encounter barriers to accessing dental care than richer people. Low levels of out-of-pocket spending on dental care by poorer households confirms its underuse. The reintroduction of in-kind dental care for adults to the EHIF benefits package in 2017 is expected to improve access to dental care, but is unlikely to reduce out-of-pocket spending owing to the high percentage co-payments involved and the presence of a benefit cap. Because there is no additional protection for poorer people, the policy change may actually increase the incidence of catastrophic spending.

Policy attention should focus on improving the affordability of outpatient prescribed medicines by strengthening the design of user charges policy.

Reforms to increase the use of generics and enhance coverage of prescription medicines have lowered the average amount spent out of pocket per prescription and the out-of-pocket share of spending on EHIF-covered medicines. However, medicines still account for almost all catastrophic out-of-pocket payments among poorer households and self-reported unmet need for prescription medicines is more than 10 times higher for the poorest quintile than the richest quintile. Percentage co-payments, the lack of exemptions from user charges for poor people and regular health care users, and the absence of a cap on user charges all give cause for concern. The overall design of user charges policy for medicines should be strengthened to remove financial barriers to access for poor people, improve financial protection, enhance adherence, prevent adverse events and promote the provision of care in outpatient settings.

The impact of out-of-pocket spending on over-the-counter medicines requires further analysis. Survey data reveal that in 2014, the use of over-the-counter medicines was relatively high in Estonia compared to the EU average. Although the share of total out-of-pocket spending on over-the-counter medicines fell from 18% in 2008 to 16% in 2016, the impact of this form of self-treatment on financial protection should be explored further.

In the context of multiple changes to user charges policy since 2010, it would be useful to review the overall design to ensure consistency across various health services, reduce complexity and strengthen protection for those who need it most. Although the current design reflects welcome efforts to protect some groups of people, overall there is significant scope to improve protection for poor people and regular users of health care by introducing exemptions for these groups. There is also scope to improve protection for the whole population by introducing an overall cap on user charges. This could be related to income, as seen in countries with stronger financial protection.

Stronger financial protection will require additional public investment in the health system. Public spending on health is slightly lower than Estonia can afford, given its level of GDP, partly owing to a decline in public spending in the years since the economic crisis, but also as a result of the small size of the country's Government – in 2015 Estonia had the fifth-lowest ratio of public spending to GDP in the EU.

Planned increases in public spending on health should be used to prioritize stronger protection for poor households, regular users of health care and working-age people. It may also be possible to pay for some improvement in financial protection through better use of existing resources.

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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). 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).

Surveys will usually specify that household spending on health services should be net of any reimbursement to the household from a third party such as the government, a health insurance fund or a private insurance company. Some surveys ask households about spending on voluntary health insurance, but 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? Household budget surveys vary across countries in terms of frequency, timing, content and structure. These differences limit comparability. Even among EU countries, where there have been sustained efforts to harmonize data collection, differences remain.

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
06.1 Medical products, appliances and equipment 06.1.1 Pharmaceutical products 06.1.2 Other medical products 06.1.3 Therapeutic appliances and equipment	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).
06.2 Outpatient services 06.2.1 Medical services 06.2.2 Dental services 06.2.3 Paramedical services	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).
06.3 Hospital services	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).

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 equalized 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 mutually exclusive categories based on their level of out-of-pocket payments in relation to the basic needs line.

No out-of-pocket payments are those households that report no health expenditure.

Not at risk of impoverishment after out-of-pocket payments are non-poor households with out-of-pocket payments that do not push them below the multiple of the basic needs line.

At risk of impoverishment after out-of-pocket payments are non-poor households with out-of-pocket payments that push them below a multiple of the basic needs line. This review uses a multiple of 120%, but the author also prepared estimates using 105% and 110%.

Impoverished after out-of-pocket payments are non-poor households that are pushed into poverty after paying out of pocket for health services. For them, the ratio of out-of-pocket payments to capacity to pay is greater than one. 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.

Further impoverished after out-of-pocket payments are households already below the basic needs line with out-of-pocket payments. Any household whose ratio of out-of-pocket payments to capacity to pay is less than zero (that is, negative) is pushed further into poverty by 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. Thresholds are arbitrary. The threshold used most often with capacity to pay measures is 40%. This review uses 40% for reporting purposes, but the author also prepared estimates 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; this includes all households who are impoverished after out-of-pocket payments, because their ratio of out-of-pocket payments to capacity to pay is greater than one; and
- those with out-of-pocket payments whose ratio of out-of-pocket payments to capacity to pay is less than zero (negative) – that is, all households who are further impoverished after out-of-pocket payments.

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 equalized 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 (R1, R2)	Global indicators (G1–G4)
Catastrophic out-of-pocket payments	
Indicator R1: the proportion of households with out-of-pocket payments greater than 40% of household capacity to pay	Indicator G1: 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)
Impoverishing out-of-pocket payments	
Indicator R2: 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)	<p>Indicator G2: changes in the incidence and severity of poverty due to household expenditure on health using an international poverty line of PPP-adjusted US\$ 1.90 per person per day</p> <p>Indicator G3: changes in the incidence and severity of poverty due to household expenditure on health using an international poverty line of PPP-adjusted US\$ 3.10 per person per day</p> <p>Indicator G4: changes in the incidence and severity of poverty due to household expenditure on health using a relative poverty line of 60% of median consumption or income per person per day</p>

Note: PPP: purchasing power parity.

Sources: WHO headquarters and WHO Regional Office for Europe.

Regional indicators

Indicators R1 and R2 reflect a commitment to the needs of European Member States. They were developed by the WHO Barcelona Office for Health Systems Strengthening (part of the Division of Health Systems and Public Health 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

Indicators G1–G4 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, global indicator G1 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, regional indicator R1 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.

This approach results in the incidence of catastrophic out-of-pocket payments being highly concentrated among poor households in all countries. 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 international poverty lines set at US\$ 1.90 or US\$ 3.10 a day in purchasing power parity (indicators G2 and G3) (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 R2 – facilitate international comparison (Saksena et al., 2014).

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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 consumption expenditure or income and may not fully capture all of a household's financial resources— for example, 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 spending on health. 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 (because they no longer have any capacity to pay after incurring out-of-pocket payments) and households who are further impoverished (because they have no capacity to pay from the outset).

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 extra billing (a system in which providers are allowed to charge patients more than the price or tariff determined by the third party payer) 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 adult: 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 or over count as 0.7 equivalent adults and children under 13 years 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 impoverishing out-of-pocket payments: An indicator of financial protection. Out-of-pocket payments made by households living below a national or international poverty line or a basic needs line. A household is further impoverished if its total consumption is below the line before out-of-pocket payments and if it then incurs 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.

Impoverishing out-of-pocket payments: 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.

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: (a) formal co-payments (user charges or user fees) for covered goods and services; (b) formal payments for the private purchase of goods and services; and (c) 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 the population into quintiles based on 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: All people are able to 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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