

Can people afford to pay for health care?

New evidence on financial protection in Ukraine 2023





Ukraine

# WHO Barcelona Office for Health Systems Financing

The WHO Barcelona Office is a centre of excellence in health financing for universal health coverage (UHC). It works with Member States in Europe and Central Asia to promote evidence-informed policy making. It also offers training courses on health financing.

A key part of the work of the Office is to assess country and regional progress towards UHC by monitoring financial protection – affordable access to health care. Financial protection is a core dimension of health system performance, an indicator for the Sustainable Development Goals, part of the European Pillar of Social Rights and central to the European Programme of Work, WHO/Europe's strategic framework. The Office supports countries to strengthen financial protection through tailored technical assistance, including analysis of country-specific policy options, high-level policy dialogue and the sharing of international experience.

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





# Can people afford to pay for health care?

New evidence on financial protection in Ukraine 2023 Can people afford to pay for health care? series ISSN: 2789-5319 (print) ISSN: 2789-5327 (online)

ISBN: 978-92-890-6016-5 (PDF)

#### © World Health Organization 2023

Some rights reserved. This work is available under the Creative Commons AttributionNonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Under the terms of this licence, you may copy, redistribute and adapt the work for noncommercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition: Can people afford to pay for health care? New evidence on financial protection in Ukraine 2023.

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

**Suggested citation.** Can people afford to pay for health care? New evidence on financial protection in Ukraine 2023. Copenhagen: WHO Regional Office for Europe; 2023. Licence: CCBY-NC-SA3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris. Sales, rights and licensing. To purchase WHO publications, see http://apps.who.int/bookorders. To submit requests for commercial use and queries on rights and licensing, see http://www.who.int/about/licensing.

**Third-party materials.** If you wish to reuse material from this work that is attributed to a thirdparty, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

**General disclaimers.** The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Design Aleix Artigal and Alex Prieto.

## Abstract Keywords

This review is part of a series of country-based studies generating new evidence on financial protection - affordable access to health care in health systems in Europe. It updates an analysis of financial protection in Ukraine published in 2018. Financial protection is central to universal health coverage and a core dimension of health system performance. The incidence of catastrophic health spending is higher in Ukraine than in many other countries in Europe. It is heavily concentrated in the poorest fifth of the population and among households headed by older people or pensioners. The main drivers of catastrophic spending are medicines in poorer households and inpatient care in richer households. Unmet need for health care is highest for medicines, dental care and outpatient care, mainly driven by cost and affects poorer households the most. In spite of near universal population coverage and the limited presence of user charges, informal payments and other out-of-pocket payments are widespread in the health system, reflecting gaps in the service dimension of health coverage, low levels of public spending on health (persistent underfunding of the Program of Medical Guarantees) and other inefficiencies. Although the Government has taken steps to strengthen access and financial protection, as demonstrated by recent reforms, and given priority to public spending on health, the health system needs to continue to reduce out-of-pocket payments for medicines and inpatient care. Options for achieving this include prioritizing public spending on comprehensive primary care, which includes funding for better access to medicines and diagnostic tests; strengthening the prescribing, dispensing, price regulation and availability of medicines; tackling informal payments for inpatient care; improving the ability of the National Health Service of Ukraine to use public resources efficiently; and enabling the Government to implement policies to enhance protection for households with low incomes and others at high risk of catastrophic health spending.

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

### About the series

This series of country-based reviews monitors financial protection in European health systems. Financial protection – ensuring access to health care is affordable for everyone – is central to universal health coverage and a core dimension of health system performance.

What is the policy issue? Out-of-pocket payments can create a financial barrier to access, resulting in unmet need, and lead to financial hardship for people using health services. 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 undermine health, deepen poverty and exacerbate inequalities. Because all health systems involve a degree of out-of-pocket payment, unmet need and financial hardship can occur in any country.

How do country reviews assess financial protection? Each review is based on analysis of common indicators used to monitor financial protection: the share of people foregoing health care due to cost (*unmet need*) and the share of households experiencing financial hardship caused by out-of-pocket payments (*impoverishing* and *catastrophic health spending*). These indicators are generated using household survey data.

Why is monitoring financial protection useful? The reviews identify the health system 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.

How are the reviews produced? Each review is produced by one or more country experts in collaboration with the WHO Barcelona Office for Health Systems Financing, part of the Division of Country Health Policies and Systems of the WHO Regional Office for Europe. To facilitate comparison across countries, the reviews follow a standard template, draw on similar sources of data (see Annex 1) and use the same methods (see Annex 2). Every review is subject to external peer review. Results are also shared with countries through a consultation process held jointly by 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? The Sustainable Development Goals adopted by the United Nations in 2015 call for monitoring of, and reporting on, financial protection as one of two indicators of universal health coverage. WHO support to Member States for monitoring financial protection in Europe is also underpinned by the European Programme of Work, 2020–2025 (United Action for Better Health in Europe), which includes moving towards universal health coverage as the first of three core priorities for the WHO European Region. Through the European Programme of Work, the WHO Regional Office for Europe supports national authorities to reduce financial hardship and unmet need for health services (including medicines) by identifying gaps in health coverage and redesigning coverage policy to address these gaps. The Tallinn Charter: Health Systems for Health and Wealth and resolution EUR/RC65/R5 on priorities for health systems strengthening in the WHO European Region include a commitment to work towards a Europe free of impoverishing out-of-pocket payments for health. A number of other regional and global resolutions call on WHO to provide Member States with tools and support for monitoring financial protection, including policy analysis and recommendations.

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

# Contents

Figures, tables and boxes	viii
Acknowledgements	Х
Abbreviations	xi 
Executive summary	xii
1. Introduction	1
2. Methods	5
2.1 Financial hardship linked to out-of-pocket payments	6
2.2 Unmet need for health services	7
3. Coverage policy	9
3.1 Population coverage	10
3.2 Service coverage	12
3.3 User charges (co-payments)	16
3.4 The role of VHI	18
3.5 Summary	20
4. Spending on health	21
4.1 Public and private spending on health (health accounts data)	22
4.2 Out-of-pocket payments (household budget survey data)	27
4.3 Informal payments	33
4.4 Summary	36
5. Financial protection	37
5.1 Household capacity to pay for health care	38
5.2 Financial hardship	40
5.3 Unmet need for health services	51
5.4 Summary	52
6. Factors that strengthen and undermine financial protection	53
6.1 Gaps in coverage	54
6.2 Other factors	55
6.3 Summary	59
7. Implications for policy	61
References	65
Annex 1. Household budget surveys in Europe	71
Annex 2. Methods used to measure financial protection in Europe	75
Annex 3. Regional and global financial protection indicators	82
Annex 4. Catastrophic health spending in Ukraine using	
the global indicator (SDG 3.8.2)	85
Annex 5. Glossary of terms	86

### **Figures**

- **Fig. 1.** Out-of-pocket payments as a share of current spending on health, Ukraine, EU and EU candidate countries, 2000–2022
- **Fig. 2.** Public spending on health and GDP per person, Ukraine, EU and EU candidate countries, 2020 23
- **Fig. 3.** Public spending on health as a share of total public spending, Ukraine, EU and EU candidate countries 24
- **Fig. 4.** Health spending per person by financing scheme 25
- **Fig. 5.** Breakdown of current spending on health by type of health care and financing scheme, Ukraine and the EU, 2020 26
- **Fig. 6.** Share of households with out-of-pocket payments by consumption quintile 27
- **Fig. 7.** Annual out-of-pocket payments per person by consumption quintile 28
- **Fig. 8.** Out-of-pocket payments for health care as a share of household consumption by consumption quintile

- **Fig. 9.** Breakdown of out-of-pocket payments by type of health care 29
- **Fig. 10.** Annual out-of-pocket payments per person by type of health care
- **Fig. 11.** Share of the population hospitalized at least once in the last 12 months
- **Fig. 12.** Breakdown of out-ofpocket payments by type of health care and consumption quintile 31
- **Fig. 13.** Annual out-of-pocket payments for medicines and inpatient care per person by consumption quintile 33
- **Fig. 14.** Share of people hospitalized incurring out-of-pocket payments for inpatient care 34
- **Fig. 15.** Average out-of-pocket payments for inpatient care 35
- **Fig. 16.** Changes in the cost of meeting basic needs, capacity to pay for health care and the share of households living below the basic needs line 39

- **Fig. 17.** Changes in GDP per capita 40
- **Fig. 18.** Share of households with impoverishing health spending 41
- **Fig. 19.** Share of households with catastrophic health spending (%) 42
- **Fig. 20.** Households with catastrophic health spending and out-of-pocket payments as a share of current spending on health, 2019 or latest available year before COVID-19
- **Fig. 21.** Share of households with catastrophic health spending by risk of impoverishment 44
- **Fig. 22**. Share of households with catastrophic health spending by consumption quintile 45
- **Fig. 23.** Share of households with catastrophic health spending by age and occupation of the head of the household and area of residence, 2021
- **Fig. 24.** Breakdown of out-of-pocket payments in households with catastrophic health spending by type of health care 47

28

### **Tables**

### **Boxes**

**Fig. 25.** Breakdown of out-of-pocket payments in households with catastrophic health spending by type of health care and consumption quintile 48

**Fig. 25.** Breakdown of out-of-pocket payments in households with catastrophic health spending by type of health care and consumption quintile (contd) 49

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

**Fig. 27.** Out-of-pocket payments as a share of total household spending among further impoverished households 50

**Fig. 28.** Share of households reporting unmet need for health care by type of care 51

**Fig. 29.** Prescribing patterns in outpatient care 56

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

**Table 2.** Changes to coverage policy, 1996–2022

**Table 3.** User charges for publicly financed health services, 2022 17

**Table 4.** Gaps in publicly financed and VHI coverage 19

**Box 1.** Unmet need for health services

8

Box 2. The AMP

**Box 3.** Impact of the COVID-19 pandemic on service coverage in Ukraine

**Box 4.** Impact of the war on financial protection in Ukraine 58

### Acknowledgements

This series of financial protection reviews is produced by the WHO Barcelona Office for Health Systems Financing, which is part of the Division of Country Health Policies and Systems in the WHO Regional Office for Europe. The series editors are Sarah Thomson, Jonathan Cylus and Tamás Evetovits.

The review of financial protection in Ukraine was written by Alona Goroshko (WHO Barcelona Office for Health Systems Financing), Nataliia Riabtseva (Ukrainian Healthcare Center) and Natalia Shapoval (Kyiv School of Economics). It was edited by Jorge Alejandro García-Ramírez and Sarah Thomson (WHO Barcelona Office for Health Systems Financing WHO Barcelona Office).

The WHO Barcelona Office is grateful to Olena Doroshenko (World Bank), Aliaksei Vavokhin (United Nations Resident Coordinator's Office), Ben Zinner (United States Agency for International Development), Triin Habicht (WHO Barcelona Office for Health Systems Financing) and Olga Demeshko, Jarno Habicht, Solomiya Kasyanchuk, Svitlana Pakhutova and Tomas Roubal (WHO Country Office in Ukraine) for their feedback on an earlier draft of the review.

Thanks are also extended to the State Statistics Service of Ukraine (especially to Larysa Rokytko for her support with data analysis) and the International Renaissance Foundation for making data available for the study.

Data on financial protection were shared with the Ministry of Health of Ukraine as part of a WHO consultation on universal health coverage indicators held in 2018, 2019, 2021 and 2023.

WHO gratefully acknowledges funding from the Government of the Autonomous Community of Catalonia, Spain and the European Union (EU) (the EU and WHO initiative on health system development in Ukraine and the EU-Luxembourg-WHO Universal Health Coverage Partnership). The contents of this publication are the sole responsibility of WHO and can in no way be taken to reflect the views of the EU.



### **Written by** Alona Goroshko

Nataliia Riabtseva Natalia Shapoval

#### **Edited by**

Jorge Alejandro García-Ramírez Sarah Thomson

### Series editors Sarah Thomson Jonathan Cylus Tamás Evetovits

### **Abbreviations**

AMP Affordable Medicines Program COVID-19 novel coronavirus disease 2019

EML essential medicines list
EU European Union
GDP gross domestic product

**ID** Identification

IDP internally displaced peopleINN international non-proprietary

MOH Ministry of Health

NHSU
PMG
Program of Medical Guarantees
PPS
purchasing power standard
UEML
Ukrainian essential medicines list

**UAH** Ukrainian hryvnia

VHI voluntary health insurance

### **Executive summary**

This review assesses the extent to which people in Ukraine experience financial hardship when they use health services, including medicines, and unmet need caused by financial barriers to access. It updates a report on financial protection in Ukraine published in 2020. This report draws on data from household budget surveys conducted between 2009 and 2021 and information on coverage policy (population coverage, service coverage and user charges) up to the end of 2022. The current analysis covers the period after the introduction of the new Law on State Financial Guarantees of Health in 2017 and assesses the state of financial protection before the Russian Federation's invasion of Ukraine in February 2022.

The review's main findings are as follows.

- In 2021 11% of households were impoverished or further impoverished after out-of-pocket payments and 17% of households (around 2.5 million households) experienced catastrophic health spending one of the highest rates in Europe. In the same year 64% of households in the poorest quintile (close to 2 million households) experienced catastrophic health spending.
- Catastrophic health spending is heavily concentrated among poor households, households headed by older people or pensioners and households in rural areas.
- It is almost entirely driven by spending on outpatient and inpatient medicines and inpatient care. Medicines are the main driver of catastrophic health spending in the two poorest quintiles and inpatient care is the main driver in the three richer quintiles.
- Unmet need for health care is highest for medicines, dental care and outpatient care. It is mainly driven by cost and affects poorer households the most.

Coverage policy in Ukraine has three features that contribute to financial protection.

- Entitlement to publicly financed health services is based on residence, ensuring that most of the population is covered.
- The introduction of the Affordable Medicines Program (AMP) in 2017 and the Program of Medical Guarantees (PMG) in 2018 (with further expansion in 2020), which have been an important attempt to explicitly link publicly financed health benefits to health needs and available resources.

 User charges (co-payments) are kept to a minimum, especially in primary care.

Despite near universal population coverage and the limited presence of user charges, informal payments and other out-of-pocket payments are widespread in the health system. This reflects gaps in the service dimension of health coverage, low levels of public spending on health (persistent underfunding of the PMG) and other inefficiencies.

Key health system factors that undermine financial protection include the following.

- People frequently pay out of pocket for outpatient medicines because the AMP introduced in 2017 still only covers a relatively small number of medical conditions and is accessed by a small share of the population.
- Although the law requires outpatient medicines to be prescribed by international non-proprietary name (INN), in practice this is not the norm.
- There is geographical inequity in access to AMP benefits.
- People are generally expected to provide their own medicines and other supplies in hospital due to persistent underfunding of the PMG relative to the range of services it covers, the limited scope of the Ukrainian essential medicines list (UEML), which defines covered inpatient medicines), failures in procuring or distributing centrally procured medicines and medical products and low levels of provider accountability.

Although the Government has taken steps to strengthen financial protection, as demonstrated by recent reforms, and has given priority to public spending on health, the health system needs to continue to reduce out-of-pocket payments for medicines and inpatient care. This will increase trust in the health system and confidence in the Government's capacity to improve people's lives.

Options for achieving this include the following.

Prioritize public spending on comprehensive primary care, which includes funding for better access to medicines and diagnostic tests, and strengthen the prescribing, dispensing, price regulation and availability of medicines.

- Continue to expand the AMP, so that it better meets the health needs of the population, and ensure that the medicines it covers are cost-effective, aligned with clinical guidelines and target the needs of households with low incomes.
- Develop incentives and other mechanisms to stimulate INN prescribing by doctors and the dispensing of cheaper medicines by pharmacies, and monitor prescribing and dispensing under the AMP.
- Ensure an equitable distribution of pharmacies participating in the AMP across oblasts.
- Expand the UEML and monitor spending on inpatient medicines. This
  should be accompanied by rules to prevent providers from asking people
  to pay for medicines covered by the UEML and by the monitoring of
  providers.

#### Reduce informal payments for inpatient care.

- Curb "charitable donations" through better enforcement of the providerpurchaser contract provisions that already prohibit these charges and by monitoring providers.
- Ensure that health care facilities do not induce the use of services on the negative list and that there is no double billing of covered services (for example, through "charitable donations").
- Develop a comprehensive and long-term strategy to tackle the root causes of informal payments.
- Implement strategies to improve people's understanding of their entitlements to health care.

Improve the governance of the PMG by making the process for its design and expansion more explicit, transparent and inclusive of a range of perspectives.

Strengthen the capacity of the NHSU to be an active purchaser of services, which will allow it to make better use of public resources.

Implement policies to enhance protection for households with low incomes and others at high risk of catastrophic health spending.

To strengthen financial protection, the Government will need to continue to give priority to health in allocating public spending. It should also support the NHSU so that it is better able to reduce out-of-pocket payments for the services that cause financial hardship and to account for changing health needs in the context of the war and growing poverty.

# 1. Introduction

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

The review updates an earlier analysis of financial protection in Ukraine (Goroshko, Shapoval & Lai, 2018). It covers the period from 2009 to the present day, drawing on data from household budget surveys carried out annually between 2009 and 2021, data on unmet need for health care up to 2019, internationally comparable data on health spending up to 2020 and information on coverage policy – the way in which health coverage is designed and implemented – up to the end of 2022. The focus is on three key dimensions of coverage policy: population coverage, service coverage and user charges (co-payments).

Three factors have had a major impact on health and society in Ukraine since the publication of the 2018 review. First, starting in 2017, the health system has been undergoing significant reform. Second, Ukraine has been affected by the COVID-19 pandemic that began in early 2020. Third, on 24 February 2022 the Russian Federation invaded Ukraine, resulting in a war with profound implications for all aspects of Ukrainian society.

Reforms to health financing policy began in 2017 with the aim of moving towards universal health coverage and enhancing efficiency and equity in public spending on health. The Government created a single, national purchasing agency – the National Health Service of Ukraine (NHSU) – to enable better resource allocation and strategic purchasing. It introduced a purchaser-provider split, new methods of paying health care providers and allowed the NHSU to contract private providers. At the same time, it established two explicitly defined sets of benefits, one for outpatient medicines known as the Affordable Medicines Program (AMP) and one for other health services known as the Program of Medical Guarantees (PMG). The AMP was set up in 2017 by the Ministry of Health. The NHSU began to contract primary care providers in 2018, took over the AMP in 2019 and introduced e-prescriptions for AMP medicines. In 2020 it launched the PMG for specialized health services.

The health system was challenged by the COVID-19 pandemic in 2020. The pandemic exacerbated existing problems in the health system and has had a major impact on access to covered health services, with a large reduction in the detection of cancer and tuberculosis, routine vaccination rates and the use of outpatient care and other health services (Betliy et al., 2021; Kyiv School of Economics, 2021; National Cancer Registry, 2021).

The Russian Federation's invasion of Ukraine in February 2022 has had a dramatic impact on household finances and the wider economy. High rates of inflation (27% in 2022 and an expected inflation of 20% in 2023) and unemployment (24%) caused GDP to contract by 29% in 2022; there

was also a sharp increase in the poverty rate, which rose from 5% in 2021 to 24% in 2022, undermining 15 years of progress and further reducing households' capacity to pay for health care (IMF, 2023; World Bank, 2022; World Bank, 2023a). The health system has also been severely affected by the war, resulting in new barriers to access at the same time as health care needs are increasing due to sexual and gender-based violence and other physical and mental trauma caused by the war (IMF, 2023; WHO Regional Office for Europe, 2022a, 2022b).

Before the invasion, public spending on health had been increasing as a share of GDP, rising from 3% in 2018 (WHO, 2023a) to 4% in 2021 (authors' own calculations). In spite of the economic shock caused by the war, the Government managed to maintain the same nominal level of public spending on health in 2022 with additional direct budget support from international donors. However, the health system's longstanding underfunding and inefficient use of available resources have led to continued heavy reliance on out-of-pocket payments, which accounted for 48% of current spending on health in 2020 (WHO, 2023a). Heavy reliance on out-of-pocket payments looks set to continue as the Government budget faces growing financial pressure, and in the context of high inflation, but the actual level of out-of-pocket payments may fall due to rising poverty and unmet need.

Although this review covers the period before the war, its findings are highly relevant to the current context. In the face of rising health care needs and a huge economic shock, many people will need even greater protection from financial barriers to access and impoverishing and catastrophic out-of-pocket payments – particularly households pushed into poverty by the conflict and people with chronic illnesses, especially the elderly (WHO Regional Office for Europe, 2022a).

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 coverage policy. Sections 4 and 5 present the results of the statistical analysis, with a focus on out-of-pocket payments in Section 4 and financial protection (financial hardship and unmet need for health services) in Section 5. Section 6 provides a discussion of the results of the financial protection analysis and identifies health system factors that strengthen and undermine financial protection. Section 7 highlights implications for policy. Annex 1 provides information on household budget surveys, Annex 2 – the extended methods used, Annex 3 – regional and global financial protection indicators, Annex 4 – catastrophic health spending in Ukraine using the global indicator (SDG 3.8.2), and Annex 5 a glossary of terms.

# 2. Methods

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

The analysis of financial protection in this study is based on an approach developed by the WHO Regional Office for Europe (Cylus et al., 2018; WHO Regional Office for Europe, 2019), building on established methods of measuring financial protection (Wagstaff & van Doorslaer, 2003; Xu et al., 2003).

# 2.1 Financial hardship linked to out-of-pocket payments

Financial hardship is measured using two main indicators: impoverishing and catastrophic health spending. Table 1 summarizes the key dimensions of each indicator. For more information on how these indicators are calculated and relate to global indicators, see Annexes 2 and 3. Annex 4 shows the share of

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

Note: see Annex 5 for definitions of words in italics

Source: WHO Regional Office for Europe (2019).

	Impoverishing health spending	
Definition	The share of households impoverished or further impoverished after out-of-pocket payments	
Poverty line	A basic needs line, calculated as the average amount spent on food, housing (rent) and utilities (water, electricity and fuel used for cooking and heating) by households between the 25th and 35th percentiles of the household consumption distribution that report any spending on each item, respectively, adjusted for household size and composition using Organisation for Economic Co-operation and Development (OECD) equivalence scales; these households are selected based on the assumption that they are able to meet, but no necessarily exceed, basic needs for food, housing and utilities; this standard amount is also used to define a household's capacity to pay for health care (see below)	
Poverty dimensions captured	The share of households further impoverished, impoverished and at risk of impoverishment after out-of-pocket payments and the share of households not at risk of impoverishment after out-of-pocket payments; a household is impoverished if its total consumption falls below the basic needs line after out-of-pocket payments; further impoverished if its total consumption is below the basic needs line before out-of-pocket payments; and at risk of impoverishment if its total consumption after out-of-pocket payments comes within 120% of the basic needs line	
Disaggregation	Results can be disaggregated into household <i>quintiles</i> by consumption and by other factors where relevant	
Data source	Microdata from national household budget surveys	
	Catastrophic health spending	
Definition	The share of households with out-of-pocket payments that are greater than 40% of household capacity to pay for health care	
Numerator	Out-of-pocket payments	
Denominator	A household's capacity to pay for health care is defined as total household consumption minus a standard amount to cover basic needs; the standard amount is calculated as the average amount spent on food, housing and utilities by households between the 25th and 35th percentiles of the household consumption distribution, as described above; this standard amount is also used as a poverty line (basic needs line) to measure impoverishing health spending	
Disaggregation	Results are disaggregated into household quintiles by consumption per person using OECD equivalence scales; disaggregation by place of residence (urban–rural), age of the head of the household, household composition and other factors is included where relevant	
Data source	Microdata from national household budget surveys	

households with catastrophic health spending in Ukraine calculated using a global indicator (SDG 3.8.2), which allows Ukraine to be compared to countries outside Europe.

Financial hardship indicators draw on data from household budget surveys. The study analyses anonymized microdata from household budget surveys conducted annually by the State Statistics Service of Ukraine between 2009 and 2021. The data sample consisted of 10 459 households in 2009 (with a response rate of 82%), 10 428 in 2010 (81%), 10 461 in 2011 (83.4%), 10 499 in 2012 (83%), 10 528 in 2013 (83%), 8814 in 2014 (78%), 9097 in 2015 (77%), 8168 in 2016 (70%), 7958 in 2017 (68%), 8051 in 2018 (69%), 8107 in 2019 (71%), 7849 in 2020 (69%) and 12 148 in 2021 (67%) (State Statistics Service of Ukraine, 2022). No household budget survey data were collected in 2022 due to the full-scale invasion of Ukraine.

There were no major changes to the design of the household budget survey during the study period and none that affected the analysis of household spending on health.

All currency units in the study are presented in Ukrainian hryvnia (UAH), with notes on inflation-adjusted spending where relevant. In 2021, 1000 UAH had the equivalent purchasing power of €86 in the average European Union (EU) country.

### 2.2 Unmet need for health services

Unmet need is typically measured using household surveys that ask people about foregone care (Box 1). For Ukraine, data on unmet need come from a survey carried out by the State Statistics Service of Ukraine and another national survey known as the Health Index. The Health Index is an annual survey on satisfaction with health services, perceptions about health system reform, healthy behaviours, health spending and careseeking experiences. It has been carried out since 2016, with a regionally and nationally representative annual sample of over 10 000 respondents (Health Index, 2016–2021).

#### Box 1. Unmet need for health services

Source: WHO Regional Office for Europe (2019).

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

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

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

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

# 3. Coverage policy

This section describes the three main dimensions of publicly financed health coverage – population coverage, service coverage and user charges (co-payments) – and reviews the role played by voluntary health insurance (VHI).

Coverage policy is governed by Article 49 of the Constitution of Ukraine and elaborated in a special decision of the Constitutional Court adopted in 2002, which entitles all citizens and permanent residents to health services in public facilities. For years, however, Ukraine struggled to introduce the mechanisms needed to make this entitlement a reality and this task has proven very difficult to achieve. As a result, access to health care was implicitly rationed and largely depended on whether people were able to pay out of pocket.

The health financing reforms initiated in 2017, through a new Law on State Financial Guarantees for Health Care Services, aim to strengthen financial protection through a range of policy changes, as set out in the introduction and summarized in Table 2.

### 3.1 Population coverage

Entitlement to publicly financed health services is based on citizenship and permanent residence. The Constitution (article 49) grants entitlement to services provided in public facilities contracted by the NHSU without user charges.

In parallel to the general population covered by the NHSU, civil servants, military staff, railway workers, scientists, members of parliament and others have their own entitlements, in addition to being entitled to NHSU benefits. These parallel schemes are funded through the Government budget and sometimes give access to health services in their designated facilities, which fragments the public funds allocated to health, draws public resources away from the NHSU and may result in unequal access to health care. In 2021 public spending on parallel health schemes amounted to UAH 1.8 billion (which is equivalent to 1.4% of the NHSU budget of 2021). There is an ongoing process to integrate most of these schemes (all except the military and the police) into the NHSU contracting process.

People without documents may face challenges when accessing non-emergency health services, as this requires registration with a primary care provider, which in turn requires some form of valid identification (ID). Emergency care can be accessed without registration with a primary care provider and without ID. Refugees are entitled to the same health services as citizens, but undocumented migrants and asylum seekers are entitled to emergency care only and must pay the full cost after treatment. These groups of people also face administrative barriers because access to health services requires a certificate of permanent residence for undocumented migrants and asylum seekers and a refugee certificate for refugees.

### Table 2. Changes to coverage policy, 1996–2022

Source: authors.

Year	Change	Health services targeted	People targeted
1996	Article 49 of the constitution entitles all citizens to health services free at the point of use in public facilities	All health services	Whole population
	Voluntary health insurance permitted	All health services	Whole population
2010	Some medical products (e.g. hearing aids, incontinence pads, urine or colostomy bags) provided free of charge to people with disabilities	Medical products	Covered people
2011	Clinical trials permitted, giving people access to expensive medicines, especially for cancer	Inpatient care	Covered people
2012	Health rights removed from people without legal permission to stay in the country	All health services	Refugees and people without citizenship
2015	Dental prostheses, some medicines, annual check-ups and spa treatment no longer covered for selected groups of people	Dental care, medicines, outpatient care	Covered people
	Diagnostic tests for and treatment of orphan diseases covered	Outpatient care, outpatient medicines	Covered people
2017	Introduction of the Law on State Financial Guarantees for Health Care Services establishing the NHSU, a single, national pool, better resource allocation and strategic purchasing, a purchaser-provider split, a more explicitly defined benefits package and new methods of paying health care providers	All health services	Covered people
	Introduction of the AMP to cover medicines for cardiovascular disease, bronchial asthma and type 2 diabetes	Outpatient prescribed medicines	Covered people
2018	The NHSU begins to purchase health services and people begin to register with family doctors	Outpatient care (primary care)	Covered people
	Launch of the PMG covering primary care services only	Outpatient care (primary care)	Covered people
	People can choose a family doctor in any part of the country and can use services at an NHSU-contracted facility in any part of the country	Outpatient care (primary care)	Covered people
2019	The NHSU takes over the AMP and introduces e-prescription for AMP medicines	Outpatient prescribed medicines	Covered people
2020	Introduction of access to planned services in any part of the country through e-referral	Outpatient care (specialized care), inpatient care (including rehabilitation and palliative care)	Covered people
	Expansion of the PMG to cover specialist and emergency care	Outpatient care (specialized care) and emergency care	Covered people
2021	New medicines added to the AMP (treatment of rheumatic disorders, diabetes mellitus (insulin), diabetes insipidus, mental disorders, epilepsy)	Outpatient prescribed medicines	Covered people
	COVID-19 services added to the publicly financed benefits package, the PMG	All health services	Covered people
2022	New medicines added to the AMP (chronic obstructive pulmonary disease and Parkinson disease).	Outpatient prescribed medicines	Covered people

### 3.2 Service coverage

Before the 2017 reform the publicly financed benefits package was not defined. People were entitled to the full range of health services, including dental care, without user charges, but due to the low level of public spending on health and the uncertainty of entitlements, in practice people had to pay out of pocket to cover part of their health care through formal and informal payments defined by providers.

The 2017 reform established a national benefits package for the NHSU – the PMG launched in 2018, covering primary care services – and enabled the Ministry of Health (MOH) to set priorities to guide its development. The NHSU reviews the PMG once a year in collaboration with other stakeholders (the MOH, professional and patient organizations and experts). Any changes to the PMG are approved by the Cabinet of Ministers; the budget is approved by parliament. The NHSU suggests provider payment methods and tariffs for the PMG and enters into contracts with providers within a budget limit determined by the Ministry of Finance and approved by parliament. If the budget limit is to be exceeded during the year, a budget neutrality rule is applied, which lowers unit prices for providers to keep within the approved budget.

The PMG was expanded in 2020 to include specialist care and emergency care. People are entitled to use services in any part of the country, although they must register with a family doctor (which requires a formal ID card) and obtain a referral to access free non-emergency care.

**Emergency care** is provided free at the point of use and does not require previous registration with a family doctor or referral. Emergency care is not covered for foreigners and stateless persons temporarily residing or staying in the territory of Ukraine (Cabinet of Ministers of Ukraine, 2014).

**Primary care** is provided by family doctors, therapists and paediatricians in public and private facilities and by individual private practitioners. People must register with a family doctor of their choice for primary care, use e-referrals to access specialist care free of charge and e-prescriptions for reimbursable outpatient medicines. At the end of 2021 32.5 million people (82% of the population) had registered with a family doctor (NHSU, 2022). In response to the current war in Ukraine, the MOH introduced an entitlement for internally displaced people (IDP) to free primary care without the need to register with a primary care provider.

**Specialist care** is provided by contracted facilities and professionals, mainly in public polyclinics, hospitals and specialized centres; it generally requires an e-referral from a doctor. Recurring visits for people with chronic conditions and consultations with some specialists (e.g. obstetricians, paediatricians, dentists, psychiatrists and narcologists) do not require a referral.

**Dental care** is limited to preventive check-ups, planned treatment and acute care for children and emergency care for adults. Although these preventive and emergency services should be free at the point of use, access is restricted by underfunding of this type of care. Most dental clinics are private and even public facilities charge patients, so in practice almost all dental care is financed through out-of-pocket payments.

A few medical products are explicitly defined as part of the PMG (e.g. products for the treatment of myocardial infarction, COVID-19 or neonatal care). Other medical products are included as a general provision, which obliges providers to ensure medical products needed to provide care are available without charge). In practice people often pay out of pocket for covered items. Optical care (glasses and contact lenses), hearing aids, orthopaedic devices, medical products for chronic conditions and palliative care are covered through separate Government programmes rather than through the PMG and should be funded by local budgets. Access to these devices depends on budget availability and priority of this type of care at local level.

**Diagnostic tests** are covered in NHSU-contracted primary care facilities or with referral, but because many are not available in public facilities, people often have to pay for them in private facilities.

**Medicines**, vaccines and some medical products are covered through centralized procurement (by the Medical Procurements Agency) for the treatment of HIV, tuberculosis, cancer, cardiovascular diseases, lifethreatening communicable diseases, post-transplantation treatment, hepatitis B, hepatitis C and some rare diseases. Some hospitals also procure inpatient medicines.

Since 2017 coverage of **outpatient medicines** has been defined through the AMP, which is expanded every year. In 2022 the AMP covered 431 outpatient medicines (trade names) comprising 52 international non-proprietary names (INNs) for specific chronic conditions (Ministry of Health of Ukraine, 2023) (see Box 2 and Section 3.3). Medicines for palliative care and post-transplantation support and glucose test strips for people with type 1 diabetes were added to the AMP in early 2023.

AMP medicines and, since August 2022, all antibiotics require an e-prescription. E-prescriptions will be extended to all medicines in 2023. In response to the current war in Ukraine, the MOH had allowed the use of paper-based prescriptions, but since July 2022 paper-based prescriptions are only allowed in temporarily occupied territories or areas with active hostilities. The dispensing of medicines is regulated by licensing rules for pharmacies and an explicit list of over-the-counter medicines exists, but in practice most medicines can be purchased without a prescription. There is a fragmented strategy to regulate the price of medicines and medical products and to ensure efficient use of medicines through priority-setting processes, prescribing guidelines or policies to promote the prescribing, dispensing and use of generics. In 2014 the Government introduced a value-added tax of 7% to the price of all medicines (Ministry of Economic Development and Trade of Ukraine, 2014).

#### Box 2. The AMP

Sources: Health Index (2020); NHSU (2021).

The AMP was set up in 2017 to improve access to outpatient medicines. It initially covered medicines for cardiovascular disease, bronchial asthma and type 2 diabetes. In 2021 it was expanded to cover medicines for rheumatic disorders, diabetes mellitus (insulin), diabetes insipidus, mental disorders and epilepsy.

Although AMP medicines only account for 2% of the retail market, their use is growing: in 2020 21% of people prescribed medicines in outpatient settings benefited from the AMP, up from 8% in 2017. Increased use reflects an increase in the number of covered medicines and, since the NHSU took over the AMP in 2019, national pooling of the AMP budget and the use of e-prescriptions. The AMP has had a positive impact on the affordability of medicines. In 2020 75% of people benefiting from the AMP said that it had made medicines more affordable for them.

The AMP continues to be expanded in the context of the war. For instance, in 2022 medicines for chronic obstructive pulmonary disease and Parkinson disease were added to the AMP.

Inpatient medicines are defined through a positive list known in Ukraine as the Essential Medicines List (UEML, not to be confused with the WHO Essential Medicines List). The state also covers some centrally procured medicines. Access to inpatient medicines is restricted for two main reasons. First, the list is limited in scope. Second, due to persistent underfunding and other inefficiencies (for example, failures with the procurement or distribution of centrally procured medicines and medical products, low priority given to medicines in facility budgets and low levels of facility accountability), people are generally expected to provide their own medicines and other supplies in hospital, meaning they often have to pay out of pocket.

**Explicit exclusions** from the benefits package are defined through a negative list established by Government decree. The list includes cosmetic surgery, occupational check-ups, infertility treatment, optical care (glasses and contact lenses) and planned services without referral. People pay facilities directly for non-covered services (see Section 3.3).

There are no formal volume caps for patients for services covered by the NHSU.

The PMG does not vary across the country in terms of what is contracted and covered by the NHSU, but publicly financed benefits may vary in practice because local authorities are allowed to provide additional benefits for local people, with national legislation allowing local governments to define these benefits but not clarifying how local entitlements should be defined. For example, the city of Kyiv has its own programme – "Health of the Kyiv population" – which includes the procurement of things like medicines for multiple sclerosis, human papillomavirus vaccines and glucose strips for people with diabetes for residents of Kyiv (Kyiv city administration, 2022).

Although the reforms have improved transparency, implicit rationing continues to take place due to underfunding and other inefficiencies, which limits access to PMG benefits, encourages informal payments and means the health system is still heavily reliant on out-of-pocket payments.

Informal payments are widespread in the health system (Gaál et al., 2010; WHO Regional Office for Europe et al., 2014, Kyiv School of Economics et al., 2017). The largest share occurs in hospitals, and the prevalence of informal payments has dropped at primary care level since the introduction of capitation payments for primary health care by the NHSU in 2018. See Section 4.3 for more information.

Waiting times are not considered to be an issue, partly because the health system generally has an overcapacity of health professionals and facilities but perhaps also due to lack of data and the presence of informal payments, which may prevent people from being put on a waiting list. Anecdotal evidence suggests that some providers impose waiting times for services covered by the PMG so that people opt to pay for services out of pocket instead of waiting for treatment that should be free at the point of use. Waiting times are not monitored by the Government and there are no waiting time guarantees in place.

The impact of the COVID-19 pandemic on service coverage is briefly described in Box 3.

Box 3. Impact of the COVID-19 pandemic on service coverage in Ukraine

Sources: Betliy et al. (2021); Doroshenko et al (2022); Kyiv School of Economics (2021); National Cancer Registry (2021); World Bank (2023a).

The COVID-19 pandemic, and Government responses to the pandemic, have significantly affected access to publicly financed health services in Ukraine, exacerbating existing challenges. Due to issues with outbreak detection, testing and early response, as well as other factors, many people faced barriers to accessing health facilities or chose not to seek care. As a result, routine immunization declined and in 2020 cancer and tuberculosis detection rates were 43% and 30% lower than in 2019 respectively, the use of outpatient care was 26% lower and diagnostic procedures were 39% lower.

COVID-19 emerged just as the NHSU launched a full-scale contracting of the provider network for the provision of the PMG. Having this contracting mechanism in place, the Government was able to introduce additional benefits for COVID-19 in primary care, emergency care and inpatient care. Not all COVID-19-related financing was channelled through the NHSU; the MOH also carried out emergency procurement of equipment and personal protection equipment for health facilities. However, the new provider payment mechanisms and the additional funds made available were initially not enough to address the lack of personal protective equipment, ventilators and initially, oxygen supplies in hospitals.

Out-of-pocket payments were less prevalent among people with COVID-19 than among people with other conditions. For example, survey data show that 22% of people hospitalized for COVID-19 paid for medicines while receiving inpatient treatment, compared to 94% of other hospitalizations. The same applies for outpatient services; only 20% of people with COVID-19 had to pay for an X-ray or CT scan compared to 55% in general.

### 3.3 User charges (co-payments)

co-payments for publicly financed health care. The main change to user charges implemented by the reform is the introduction of (internal) reference pricing for all medicines covered by the AMP. The reference price of AMP medicines is regulated by the Government and standard for all pharmacies taking part in the AMP (see Table 3). People have to pay any difference between the reference price and the retail price. However, at least one medicine in each INN should be available free of charge for users (they should not be subject to internal reference pricing) in pharmacies taking part in the AMP, which means that of the 431 medicines in the AMP in 2022 (comprising 52 INNs), 98 were available for free at the point of use (Ministry of Health of Ukraine, 2023; NHSU, 2021).

Table 3. User charges for publicly financed health services, 2022

Source: authors.

Service area	Type and level of user charge	Exemptions	Сар
Outpatient primary care visits	None for covered services	NA	NA
Outpatient specialist visits	None for covered services with referral (with exceptions from e-referral for some specialties e.g. obstetricians, paediatricians, dentists, psychiatrists and narcologists)	NA	NA
Outpatient emergency visit	None	NA	NA
Dental care visits and treatment	None for covered services with e-referral (e.g. preventive check-ups and acute care for children and emergency care for other adults)	NA	NA
Outpatient prescribed medicines	AMP medicines (by INN): (internal) reference pricing (i.e. people pay the difference between the reference and approved retail price of generic medicines (which is standard for all pharmacies in the AMP), if they do not choose the free-of-charge option available for each INN	Medicines covered through centralized procurement: HIV, tuberculosis, cancer, transplants, hepatitis B, hepatitis C and rare diseases	No
		At least one generic medicine should be available free of charge for cardiovascular diseases, type 2 diabetes, bronchial asthma, rheumatic disorders, diabetes mellitus (insulin), mental disorders and epilepsy	
Diagnostic tests	None for covered services with e-referral or emergency care	NA	NA
Medical products	None for covered services with e-referral or emergency care	NA	NA
Inpatient care	None for covered services in with e-referral for planned care	NA	NA
	Extra billing is permitted for non-covered services, which means users pay out of pocket for wards with superior accommodation, planned hospitalization without referral, infertility treatment and surgical abortion		
	Users also pay for parents accompanying children over 6 years old and in facilities under the Ministry of Internal Affairs		
Inpatient medicines	None for covered medicines under the UEML	NA	NA

**Extra billing** is permitted for non-covered services and people pay facilities directly for these services. Before 2021 prices for services on the negative list were approved by local governments. From 2021 these prices are set by facilities. In addition to the negative list, there are some high-technology services (for example, newer treatments for selected chronic conditions) that are available only in private facilities and are not publicly financed.

### 3.4 The role of VHI

VHI does not play a significant role in the health system and plays almost no role in addressing gaps in coverage. It accounted for 2% of current spending on health in 2020 (WHO, 2023a). VHI covers up to 3% of the population, mainly rich people (WHO Regional Office for Europe et al, 2016). It is often purchased by employers as a corporate bonus for employees in private companies and some large state companies (e.g. Ukrainian Railways). Insurers typically exclude older people and people with pre-existing and/or chronic conditions defined as high-risk (Lekhan et al., 2015). Due to the impact of the war on businesses, VHI saw a significant drop in payments (around 20%) and tariffs are expected to rise due to inflation in 2023 (National Bank of Ukraine, 2022b).

VHI plays a complementary role, covering services that are excluded from the benefits package (e.g. influenza vaccinations, dental hygienist services and massages) or not so well covered (medicines, outpatient and inpatient care and dental care). It also plays a supplementary role, providing faster access to treatment, enhanced choice of provider and superior accommodation in public and private facilities. VHI policies often combine both roles.

Community health insurance schemes known as "likarniana kasa" operate as quasi-VHI schemes in some areas. Altogether, there are 206 likarniana kasas in 16 regions, covering the cost of medicines, diagnostic tests and inpatient care for between 2% and 17% of the regional population (WHO, 2020). The schemes function as charitable funds and collect contributions determined by their members. In 2020 they accounted for 0.1% of current spending on health (WHO, 2023a).

Table 4 highlights the main gaps in publicly financed coverages and indicates the role of VHI in filling these gaps.

### Table 4. Gaps in publicly financed and VHI coverage

Source: authors.

Coverage dimension	Main gaps in publicly financed coverage	Are these gaps covered by VHI?
Population coverage	Undocumented migrants and asylum seekers have extremely limited entitlement to publicly financed health care; although they are entitled to emergency care, they are expected to pay for it in full afterwards.	No.
	Migrants and refugees are formally entitled to the same health services as citizens and residents but may face administrative barriers to access.	
	People who do not have any official Ukrainian ID may face barriers to registering with a family doctor, which is a requirement for access to publicly financed health services.	
Service coverage	Very limited coverage of medicines and dental care.	Although VHI covers some non-covered
	The list of covered outpatient medicines (the AMP) does not cover many essential medicines. The list of covered inpatient medicines (the UEML) is also small and access is further limited by budget constraints and inefficiencies in procuring and distributing medicines.	services, it mainly plays a supplementary role, providing faster access to treatment and greater choice of provider. It covers less than 3% of the population and accounted for 2% of current spending on health in 2020.
	Adults only have access to emergency dental care. Access is further limited as a consequence of underfunding and other inefficiencies.	
	Informal payments are widespread, particularly in hospitals.	
User charges (co-payments)	Formal user charges are limited to outpatient prescribed medicines, but the range of covered medicines is limited and people frequently pay out of pocket, even for covered services, due to underfunding and other inefficiencies. Extra billing is permitted for non-covered services.	No.

### 3.5 Summary

Entitlement to publicly financed health care is based on citizenship and permanent residence. As a result coverage is near universal. Migrants and refugees are formally entitled to the same health services as citizens and residents but may face administrative barriers to access. Undocumented migrants and asylum seekers are only entitled to emergency care and are expected to pay for it after being treated.

The publicly financed benefits package (the PMG) has been explicitly defined since 2020, but coverage of medicines and dental care is very limited. Although the AMP has been expanded annually, it still only covers a few conditions. The list of covered inpatient medicines (the UEML) is also relatively small, meaning people are frequently expected to provide their own medicines and other supplies in hospital. Adults only have access to emergency dental care and dental check-ups for pregnant women and access to dental care is further limited by underfunding and inefficiencies.

User charges (co-payments) only apply to outpatient prescribed medicines covered by the AMP and are in the form of (internal) reference pricing. If people choose the free generic option available for each INN, they should not have to pay anything out of pocket. Extra billing is permitted for non-covered services.

Informal payments are widespread, particularly in hospitals. Waiting times for accessing health care are not considered to be an issue

VHI plays almost no role in covering the gaps in coverage. It covers a very small share of the population (no more than 3%), mainly offers people faster access to treatment or a greater choice of provider, and accounted for only 2% of current spending on health in 2020.

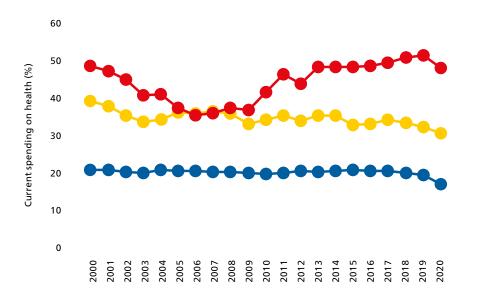
# 4. Spending on health

The first part of this section uses data from health accounts to present patterns in public and private spending on health. The second and third parts use household budget survey data to review out-of-pocket payments (the formal and informal payments made by people at the time of using any good or service delivered in the health system). The fourth part considers the role of informal payments.

# 4.1 Public and private spending on health (health accounts data)

Data from health accounts (WHO, 2023a) indicate that the out-of-pocket payment share of current spending on health is much higher in Ukraine (48% in 2020) than the average in EU candidate countries (31%) and the EU average (19%) (Fig. 1). Although this share fell between 2000 and 2007, it grew after 2008 so that it was higher in 2019 than it had been in 2000. The observed fall in 2020 was due to increased public spending on health in response to COVID-19 and possibly because the PMG was expanded to include specialist care.

Fig. 1. Out-of-pocket payments as a share of current spending on health, Ukraine, EU and EU candidate countries, 2000–2022





Notes: EU average includes the United Kingdom up to and including 2019. EU candidate countries comprise Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, the Republic of Moldova, Serbia, Türkiye and Ukraine. Ukrainian data are presented individually and included in the EU candidate country average.

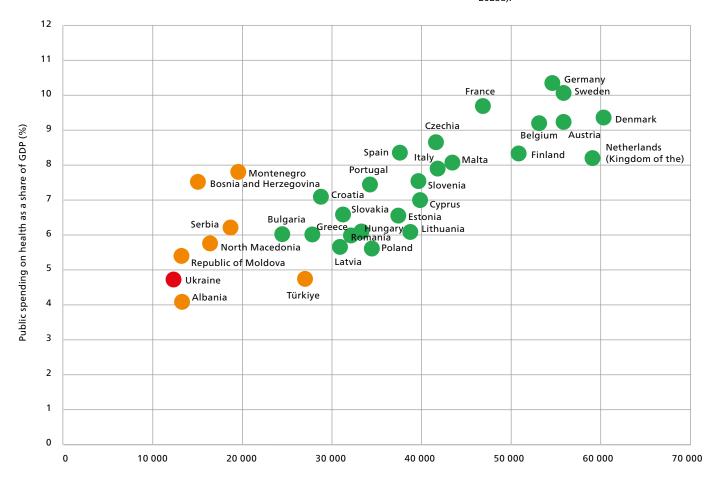
Source: WHO (2023a).

Heavy reliance on out-of-pocket payments reflects both inefficiencies and low levels of public spending on health, which accounted for only 4% of the GDP in 2020 (Fig. 2). This is lower than any EU country and lower than all other EU candidate countries except Albania and Türkiye.

Fig. 2. Public spending on health and GDP per person, Ukraine, EU and EU candidate countries, 2020

Notes: public spending on health refers to transfers from the Government budget and social health insurance contributions; it excludes other forms of compulsory prepayment (premiums for compulsory private health insurance in France, Germany and Netherlands (Kingdom of the). The figure excludes Ireland and Luxembourg. EU countries are shown in green. EU candidate countries are shown in orange and Ukraine is in red.

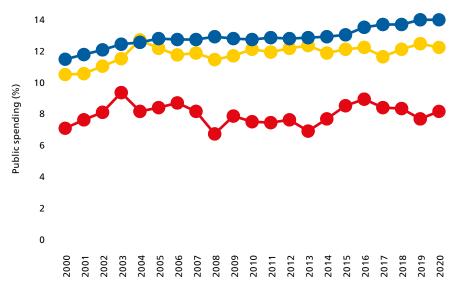
Source: data from health accounts (WHO, 2023a).



GDP per person in current purchasing power parities

In 2020 public spending on health accounted for 8% of total public spending (Fig. 3), which is much lower than the average for EU candidate countries (12%) and the EU average (14%). This share has fluctuated over time and fell between 2016 and 2019, rising in 2020 due to increased spending on health in response to COVID-19.

Fig. 3. Public spending on health as a share of total public spending, Ukraine, EU and EU candidate countries





Notes: EU average includes the United Kingdom up to and including 2019. EU candidate countries comprise Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, the Republic of Moldova, Serbia, Türkiye and Ukraine. Ukrainian data are presented individually and included in the EU candidate country average.

Source: data from health accounts (WHO, 2023a).

Out-of-pocket payments per person were higher than public spending on health per person between 2016 and 2019 (Fig. 4) and have increased consistently in real terms in the last 20 years and at an even faster pace following the global financial crisis in 2008. Public spending per person fell between 2012 and 2019 but increased in 2020 again due to increased Government prioritization of the health sector during the COVID-19 pandemic and possibly as a consequence of the expansion of the AMP and PMG.

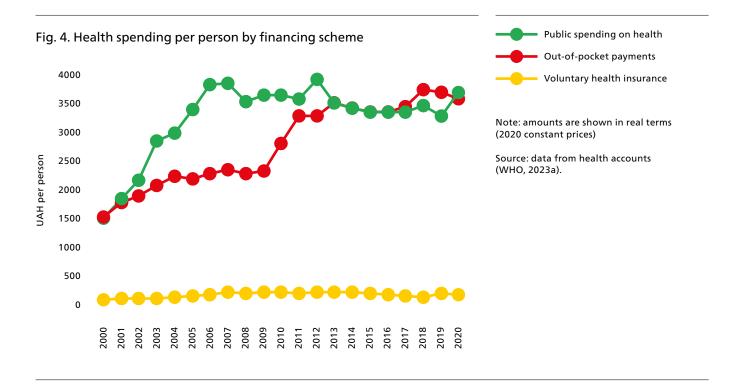
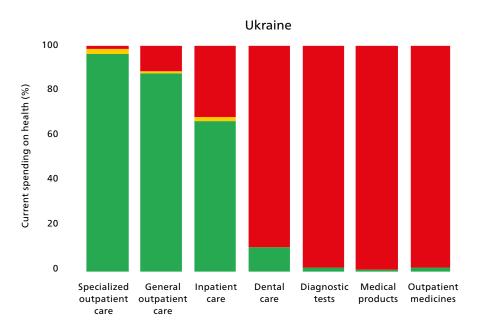
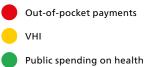


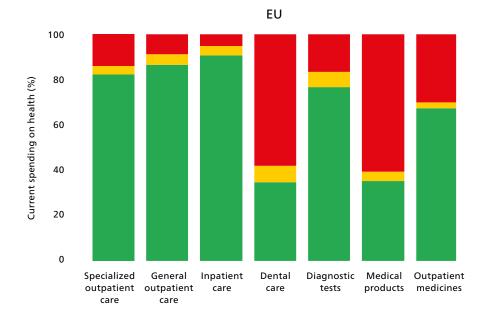
Fig. 5 shows that the public share of spending on health care is much lower in Ukraine than the EU average for all types of care except outpatient care. Outpatient medicines, medical products (e.g. glasses, prostheses, hearing aids) and diagnostic tests are almost completely financed through out-of-pocket payments in Ukraine. It is not possible to make this comparison for other EU candidate countries due to a lack of internationally comparable data.

Fig. 5. Breakdown of current spending on health by type of health care and financing scheme, Ukraine and the EU, 2020



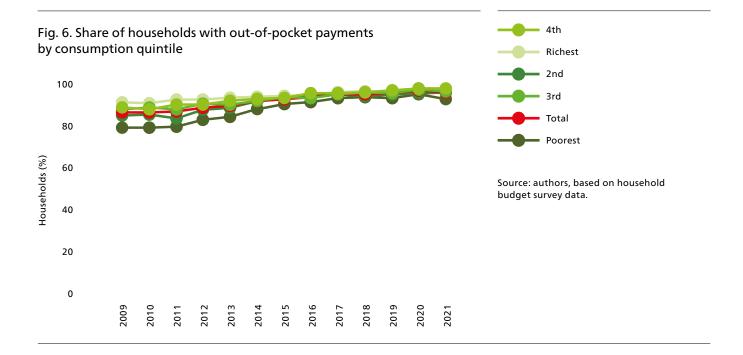


Source: Health Accounts (2021) for Ukraine and OECD (2023) for the EU.

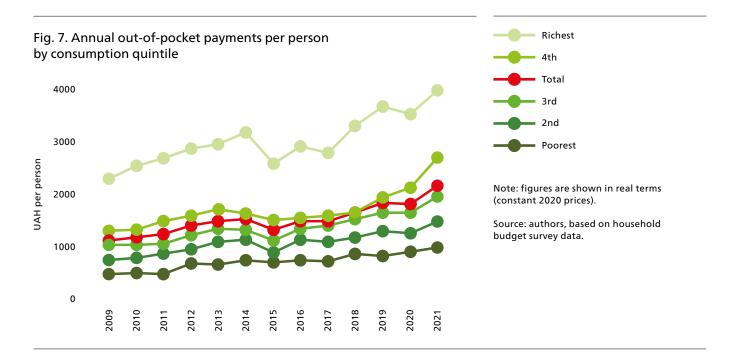


# 4.2 Out-of-pocket payments (household budget survey data)

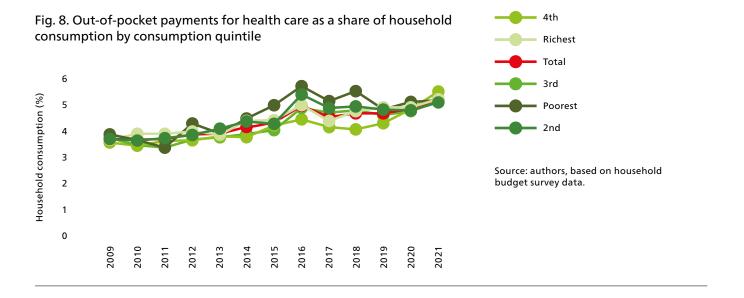
Data from household budget surveys indicate that in 2021 nearly all households (96%) paid for health care out of pocket, up from 86% in 2009 (Fig. 6). This increase occurred in households at all income levels but was greatest among the poorest 20% of households.



On average households spent UAH 2190 on health care per person in 2021, up from UAH 1174 in 2009 (Fig.7). Out-of-pocket payments increased in real terms in every year studied except 2015 and 2017. Richer households consistently spend much more than poorer households.

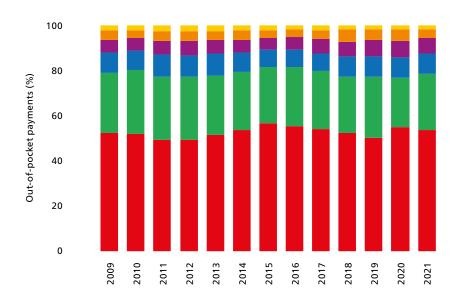


In 2021 households spent 5.4% of their consumption (the household budget) on health care, up from 3.7% in 2009, with a substantial increase in 2016 (Fig. 8). There is very little difference in this share across households and over time it has increased for all households regardless of their level of income.



Most out-of-pocket payments are spent on medicines (54% in 2020), followed by inpatient care (25%), dental care (9%) and diagnostic tests (7%) (Fig. 9). This pattern has not changed over time. The share spent on medicines has fluctuated a little, falling between 2009 and 2012, increasing between 2013 and 2016 and falling after 2016. Unlike in most other countries, the Ukrainian household budget survey groups all household spending on medicines in the medicines category, regardless of setting (outpatient or inpatient). The medicines category shown in Fig. 9 therefore includes inpatient medicines as well as over-the-counter and prescribed outpatient medicines.







Medical products

Diagnostic tests

Dental care

Inpatient care

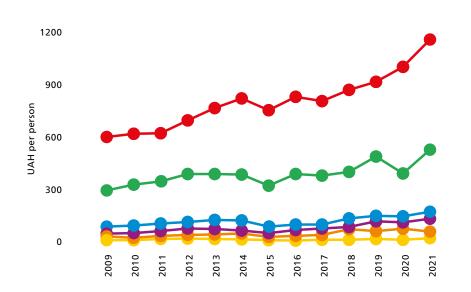
Medicines

Notes: unlike in most other countries, the medicines category in Ukraine includes both outpatient and inpatient medicines. The category "diagnostic tests" includes paramedical services. According to the Ukrainian household budget survey the category "inpatient care" refers to health services paid for during a hospital admission.

Source: authors, based on household budget survey data.

The inpatient care share of household spending on health fell from 27% in 2019 to 22% in 2020 before rising again (to 25%) in 2021; in contrast, the medicines share rose from 50% in 2019 to 55% in 2020 before falling slightly to 54% in 2021 (Fig. 9). These shifts reflect changes in the amounts spent (Fig. 10), which in turn are likely to be due to the COVID-19 pandemic. The share of the population reporting being hospitalized at least once in the last 12 months fell from 13.5% in 2019 to 9.2% in 2020 (Fig. 11). It fell in all income groups (data not shown).

Fig. 10. Annual out-of-pocket payments per person by type of health care

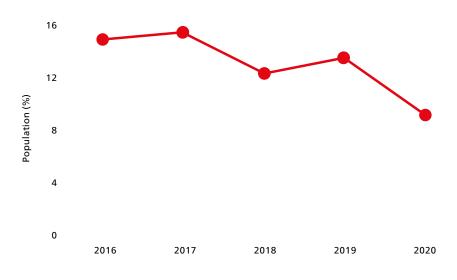


Medicines
Inpatient care
Dental care
Diagnostic tests
Medical products
Outpatient care

Notes: figures are shown in real terms (constant 2020 prices). Unlike in most other countries, the medicines category in Ukraine includes both outpatient and inpatient medicines. The category "diagnostic tests" includes paramedical services. According to the Ukrainian household budget survey the category "inpatient care" refers to health services paid during the hospital admission.

Source: authors based on household budget survey data.

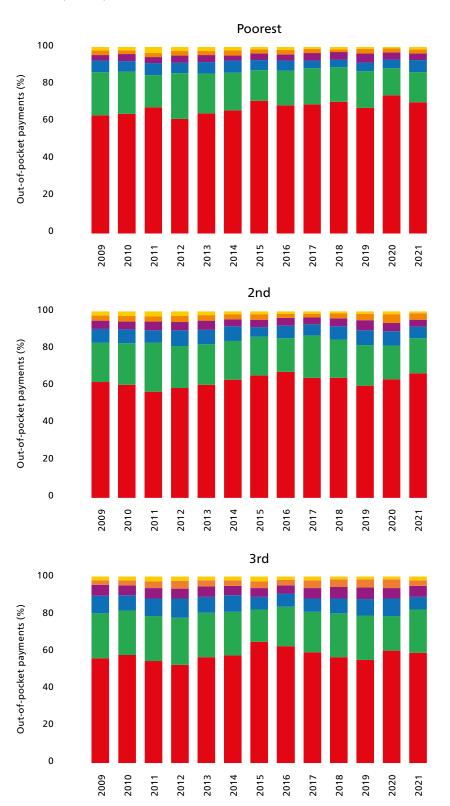
Fig. 11. Share of the population hospitalized at least once in the last 12 months



Source: Health Index (2021).

In all years poorer households spent a higher share of out-of-pocket payments on medicines than the richer households – a pattern that is reversed for inpatient care (Fig. 12). In 2021 the poorest 20% of households spent 70% of out-of-pocket payments on medicines compared to 42% in the richest quintile. The medicines share increased more over time in the poorest households than in others. The much lower share of spending on medical products and dental care in the poorest households is likely to reflect a degree of unmet need for these types of health care.

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

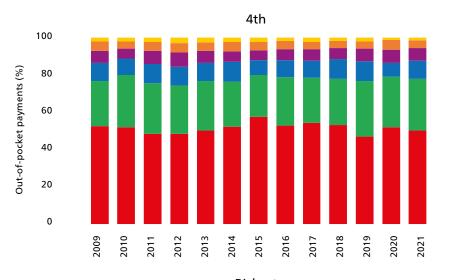


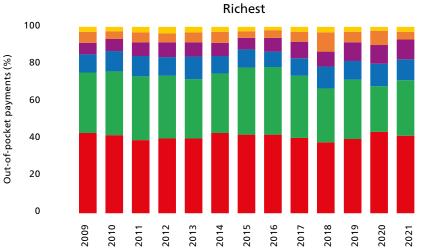


Notes: unlike in most other countries, the medicines category in Ukraine includes both outpatient and inpatient medicines. The category "diagnostic tests" includes paramedical services. According to the Ukrainian household budget survey the category 'inpatient care' refers to health services paid for during a hospital admission.

Source: authors, based on household budget survey data.

Fig. 12. Breakdown of out-of-pocket payments by type of health care and consumption quintile (contd.)





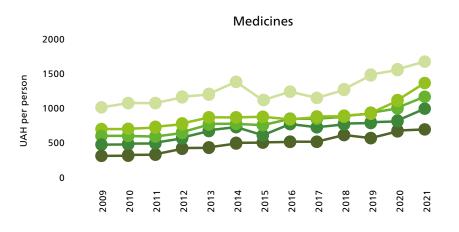


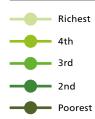
Notes: unlike in most other countries, the medicines category in Ukraine includes both outpatient and inpatient medicines. The category 'diagnostic tests' includes paramedical services. According to the Ukrainian household budget survey the category 'inpatient care' refers to health services paid for during a hospital admission.

Source: authors, based on household budget survey data.

Household spending on medicines and inpatient care increases with consumption and this trend persists over time (Fig. 13). In 2021 the poorest households spent UAH 737 on medicines and UAH 169 on inpatient care on average, compared to UAH 1656 and UAH 794 respectively in the richest households. Between 2009 and 2020 spending on medicines grew most in the poorest households, while spending on inpatient care grew most in the richest households.

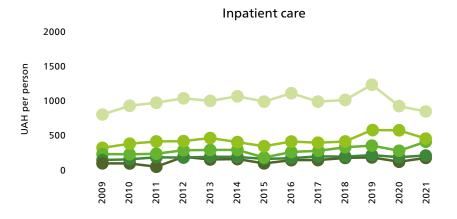
Fig. 13. Annual out-of-pocket payments for medicines and inpatient care per person by consumption quintile





Notes: figures are shown in real terms (constant 2020 prices). Unlike in most other countries, the medicines category in Ukraine includes both outpatient and inpatient medicines. According to the Ukrainian household budget survey the category 'inpatient care' refers to health services paid for during a hospital admission.

Source: authors, based on household budget survey data.



## 4.3 Informal payments

Informal payments are out-of-pocket payments that are made in addition to any payment determined by the terms of entitlement by patients or others acting on their behalf to health care providers for services and related inputs, to which patients are entitled (Gaal & McKee, 2004). A major challenge in health systems with pervasive informal payments is that it is difficult to introduce policies to protect poor people and regular users of health care from exposure to out-of-pocket payments (Jakab, Akkazieva & Kutzin, 2016).

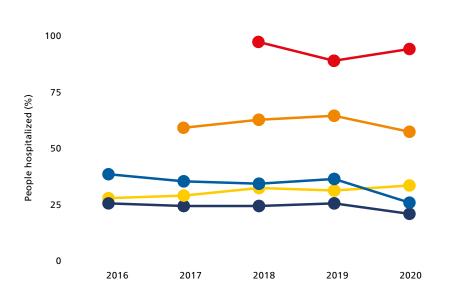
Informal payments are widespread in the Ukrainian health system and mainly occur in inpatient care and outpatient specialist care (Kyiv School of Economics et al., 2017) for the following reasons.

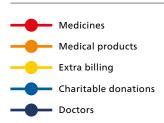
 People are expected to bring or buy medicines, dressings and other disposables with them on admission to a public hospital (even when such benefits are already publicly covered). Although some inpatient medicines and medical products are centrally procured and supplied to health care facilities, where they should then be provided to people free of charge, there is evidence that medicines may be resold to patients (Health Index, 2019).

- Public facilities may ask people to make payments that are known as "charitable donations" but are in fact payments that facilities require people to make to receive treatment.
- Anecdotal evidence suggests that people admitted to a public hospital may also be encouraged to buy what is known as "insurance" from the hospital to cover their care; this has no relationship to VHI, however, as the payment is made at the point of use and only covers that particular stay in hospital.

Inpatient care is supposed to be free at the point of use, but in 2020 94% of people hospitalized in the last 12 months reported paying out of pocket for medicines (Fig. 14) and paid on average UAH 4550 (Fig. 15). Additionally, 59% of hospitalized people paid for medical products (UAH 963), 33% for extra billing – payments for non-covered services (UAH 5253), 26% for "charitable donations" (UAH 894) and 21% for doctors' services (UAH 2942). Out-of-pocket payments for all of these items were higher in 2020 than in 2016 (Fig. 15).

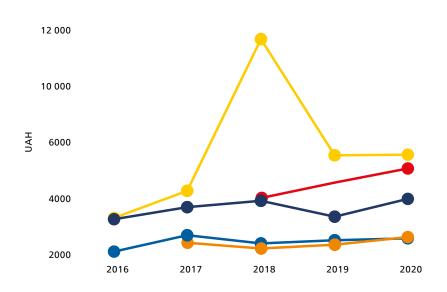
Fig. 14. Share of people hospitalized incurring out-of-pocket payments for inpatient care





Source: Health Index (2022).

Fig. 15. Average out-of-pocket payments for inpatient care





Note: values are reported in nominal terms.

Source: Health Index (2022).

In 2020 25% of people using **outpatient services** reported having to make a "charitable donation" or informal payment during their last outpatient specialist visit and 55% reported that they paid for outpatient services, tests or medical products, down from 63% in 2019 (Health Index, 2021). NHSU financial data show that in 2020 facilities received much more money from charitable donations (7% of their budget) than from extra billing (2%) (NHSU, 2021). Both charitable donations and formal payments are likely to be paid for services already purchased by the NHSU.

Informal payments are least common in **primary care**, where they are mainly paid to health care workers. In 2021 21% of people using primary care reported making informal payments, down from 62% in 2018 (USAID Health Care Reform Support Project, 2021). This decrease is linked to increased funding for primary care, the introduction of capitation to pay for primary care and an explicitly defined benefits package for primary care, which was clearly communicated to people.

Negative attitudes towards informal payments are common among service users and health staff (over 60% in 2021). The main reason service users give for accepting them is to secure better attention from health staff and the main reason health staff give is low wages.

Possible explanations for the high level of informal payments in Ukraine include economic factors (insufficient public financing, low salaries of health care workers and inefficiencies), poor governance (low transparency and provider accountability) and the sociocultural context (the perception that paying informally secures a better quality of care).

## 4.4 Summary

Data from health accounts (WHO, 2023a) indicate that the out-of-pocket payment share of current spending on health is much higher in Ukraine (48% in 2020) than the average in EU candidate countries (31%) and the EU average (19%).

Heavy reliance on out-of-pocket payments reflects low levels of public spending on health in Ukraine compared to EU and other EU candidate countries, both in terms of share of GDP and share of total public spending. In the five years before 2020 public spending on health did not keep pace with GDP growth and only increased in 2020 in response to COVID-19.

The public share of spending on health is much lower in Ukraine than the EU average for all types of health care except outpatient care. Outpatient medicines, medical products (e.g. glasses, prostheses and hearing aids) and diagnostic tests are almost completely financed through out-of-pocket payments in Ukraine.

Household budget survey data show that in 2021 nearly all households (96%) paid out of pocket for health services, with richer households consistently spending much more than poorer households in absolute terms. Out-of-pocket payments have increased as a share of household budgets over time (5.4% in 2021 up from 3.7% in 2009).

Most out-of-pocket payments are spent on medicines (54% in 2021), followed by inpatient care services (25%). This pattern has not changed over time. Poorer households consistently spend a higher share of out-of-pocket payments on medicines than richer households, while richer households consistently spend a higher share on inpatient care services. Relatively limited spending on medical products and dental care is likely to reflect a degree of unmet need for these types of health care, especially among poorer households.

In 2020 spending on medicines increased while spending on inpatient care fell, probably in response to reduced hospitalization due to the COVID-19 pandemic. This was partly reversed in 2021.

Informal payments are widespread in the health system, particularly in hospitals. They are most commonly made for inpatient prescribed medicines that should be available free of charge for the most part, as part of inpatient care services defined by the PMG; in the form of "charitable donations" to facilities – payments facilities require people to pay before they can be admitted or treated; and as payments to health workers. Levels of informal payments have decreased in primary care since the introduction of reforms in 2018.

# 5. Financial protection

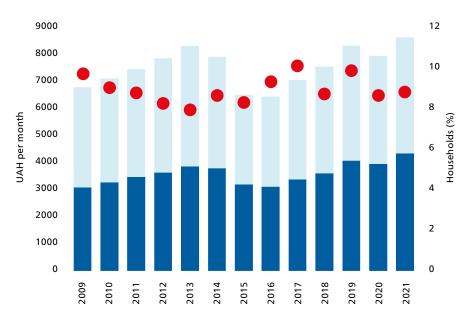
This section uses data from the Ukrainian household budget survey to assess the extent to which out-of-pocket payments result in financial hardship for households who use health services. It looks at household capacity to pay for health care, the relationship between out-of-pocket spending on health and poverty – impoverishing health spending – and the incidence, distribution and drivers of catastrophic health spending. The section also draws on other survey data to assess unmet need for health services.

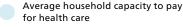
# 5.1 Household capacity to pay for health care

Household capacity to pay for health care is what is left of a household's budget after spending on basic needs – food, housing and utilities (water, electricity, heating etc.). In this study, basic needs are defined as the average cost of spending on food, housing and utilities among a relatively poor part of the Ukrainian population (households between the 25th to 35th percentiles of the consumption distribution), adjusted for household size and composition. In 2021 the monthly cost of meeting these basic needs – the basic needs line – was UAH 4369. This is slightly lower than the national poverty line, an absolute poverty line known as "the survival minimum" (based on a basket of essential goods), which was set at UAH 4478 per person per month in 2021 (Ministry of Social Policy of Ukraine, 2022).

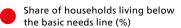
Just under 9% of households lived below the basic needs line in 2021, one of lowest shares in the study period (Fig. 16). Household capacity to pay for health care and the cost of meeting basic needs increased between 2017 and 2019 (the latter perhaps related to the gradual decline of Government subsidies for utilities introduced in 2015), but decreased slightly in 2020, probably due to the effect of COVID-19 on consumption, before rising again in 2021.

Fig. 16. Changes in the cost of meeting basic needs, capacity to pay for health care and the share of households living below the basic needs line





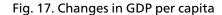
Cost of meeting basic needs

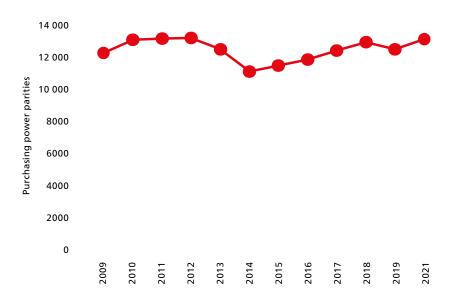


Notes: capacity to pay for health care is measured as a household's consumption minus a normative (standard) amount to cover basic needs such as food, housing and utilities. Amounts are shown in real terms (constant 2020 prices).

Source: authors, based on household budget survey data.

Ukraine experienced two drops in GDP during the study period, corresponding to changes in household capacity to pay for health care (Fig. 17). The first drop, between 2013 and 2015, was caused by political instability and armed conflict in the east of Ukraine. The COVID-19 pandemic led to a second drop in GDP (World Bank, 2022). More recently, the war in Ukraine has also affected GDP, leading to a drop of 29% in GDP in 2022 (World Bank, 2023b).





Note: amounts are shown in real terms (2017 constant prices).

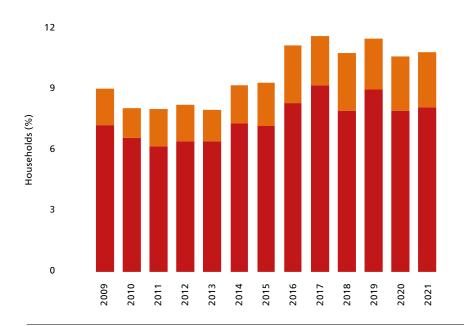
Source: World Bank (2023b).

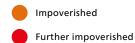
# 5.2 Financial hardship

#### How many households experience financial hardship?

Impoverishing health spending is defined in this review as out-of-pocket payments that push people into poverty or deepen their poverty. A household is counted as "impoverished" if its total consumption falls below the poverty line (the basic needs line) after out-of-pocket payments and "further impoverished" if its total spending is already below the basic needs line before out-of-pocket payments. In 2021 11% of households experienced impoverishing health spending (Fig. 18). This share peaked at 12% in 2017 and has decreased slightly since then, driven by a fall in the share of further impoverished households. Throughout the study period, the majority of households with impoverishing health spending are those that are already below the basic needs line.

Fig. 18. Share of households with impoverishing health spending





Note: a household is impoverished if its total spending falls below the basic needs line after out-of-pocket payments and further impoverished if its total spending is below the basic needs line before out-of-pocket payments.

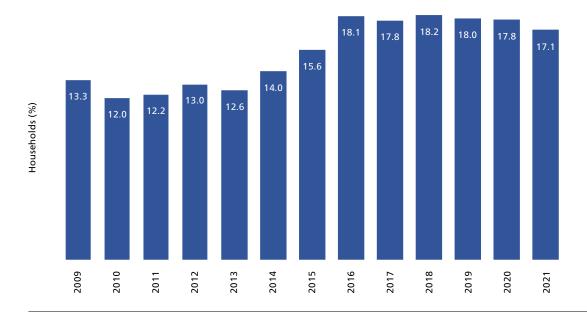
Source: authors, based on household budget survey data.

Households with catastrophic health 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 2021 17% of households experienced catastrophic health spending (Fig. 19). Catastrophic health spending grew steadily between 2010 and 2015. The increase in 2016 may also reflect a decline in people's capacity to pay – the share of households living below the basic needs line rose in 2016. Since then the incidence of catastrophic health spending has slowly decreased, a trend that persisted in 2021, despite the COVID-19 pandemic, perhaps reflecting both a reduced use of health services and an increase in Government support to households.

Fig. 19. Share of households with catastrophic health spending (%)

Source: authors, based on household budget survey data.

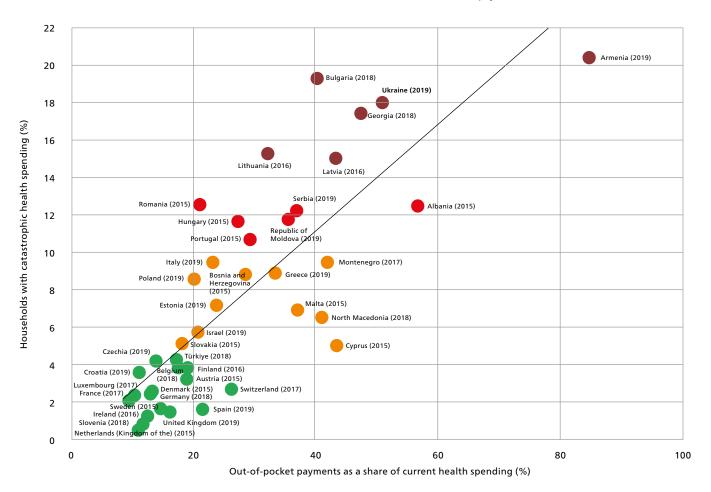


The incidence of catastrophic health spending is high in Ukraine compared to many EU and EU candidate countries, in line with Ukraine's heavy reliance on out-of-pocket payments to finance the health system (Fig. 20).

Fig. 20. Households with catastrophic health spending and out-of-pocket payments as a share of current spending on health, 2019 or latest available year before COVID-19

Notes: data on catastrophic health spending and out-of-pocket payments are for the same year. The colour of the dots reflects the incidence of catastrophic health spending. Green (0–5%); orange (5.1%–10%); red (10.1–15%); dark red (above 15%). For catastrophic health spending, data from the Netherlands (Kingdom of the) are not comparable.

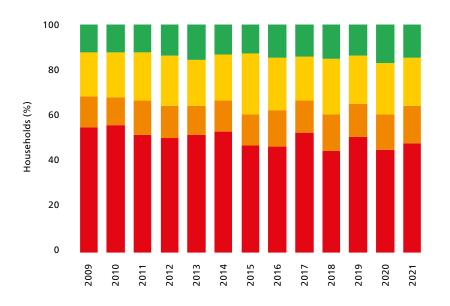
Source: WHO Barcelona Office for Health Systems Financing (catastrophic health spending) and WHO (2023a) (out-of-pocket payments).



#### Who experiences financial hardship?

Most households with catastrophic health spending are further impoverished, impoverished or at risk of impoverishment after out-of-pocket payments (Fig. 21). In 2021 further impoverished households accounted for 48% of households with catastrophic health spending, down from 54% in 2009.

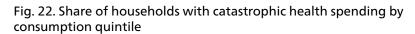
Fig. 21. Share of households with catastrophic health spending by risk of impoverishment

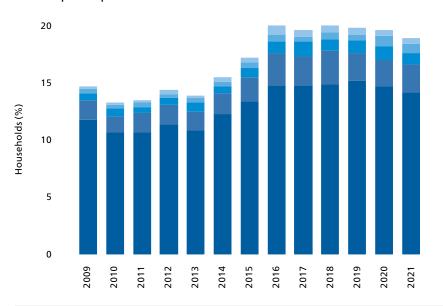




Source: authors, based on household budget survey data.

Households experiencing catastrophic health spending are heavily concentrated in the poorest 20% of households. In 2021 these households constituted 75% of households with catastrophic out-of-pocket payments, down from 80% in 2009 (Fig. 22).







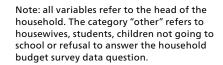
Source: authors, based on household budget survey data.

Catastrophic health spending is also heavily concentrated among households headed by pensioners or older people and households in rural areas – groups likely to overlap with households in the poorest quintile (Fig. 23). The incidence of catastrophic health spending for pensioners and unemployed people is almost four times higher than it is for employed people (data not shown).

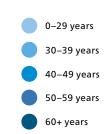
Households (%)

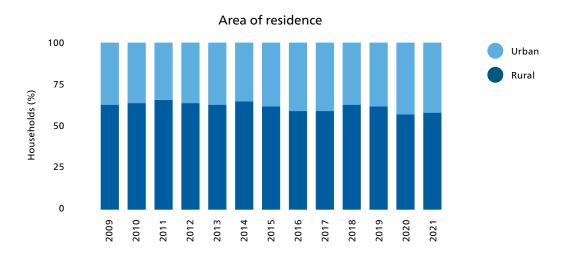
Fig. 23. Share of households with catastrophic health spending by age and occupation of the head of the household and area of residence, 2021

Age



Source: authors, based on household budget survey data

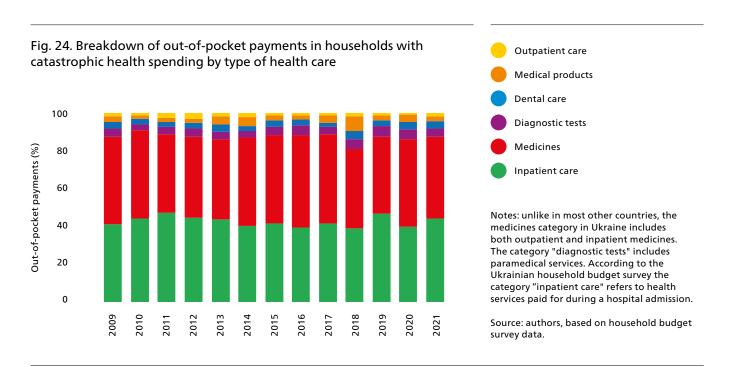






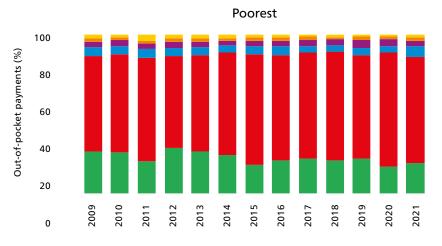
#### Which health services are responsible for financial hardship?

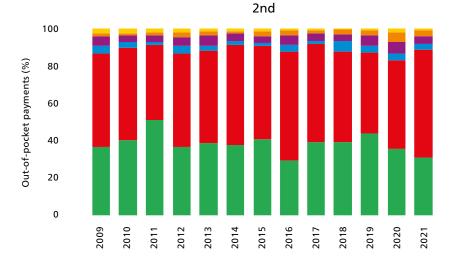
In 2021 catastrophic health spending was mainly driven by inpatient care and medicines, which accounted for 44% and 43% of catastrophic health spending, respectively (Fig. 24). These shares have been relatively stable over time, although the medicines share increased in earlier years and slowly decreased between 2017 and 2019 before rising again in 2020 and decreasing in 2021. In 2020 the inpatient care share fell, probably reflecting a substitution effect as rates of hospitalization dropped during the COVID-19 pandemic.

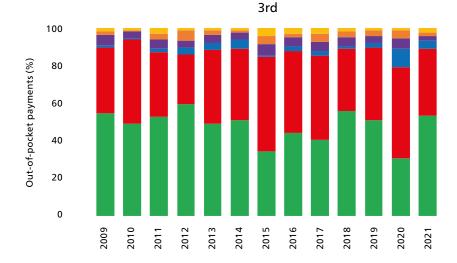


In the poorer households medicines are a much larger driver of catastrophic health spending, accounting for 67% of out-of-pocket payments in the poorest quintile in 2021 compared to only 19% for inpatient care (Fig. 25). Over time the poorest households also experienced the highest increase in the share of catastrophic health spending on medicines. In the richest households, catastrophic health spending is mainly driven by inpatient care (53%) followed by medicines (28%).

Fig. 25. Breakdown of out-of-pocket payments in households with catastrophic health spending by type of health care and consumption quintile





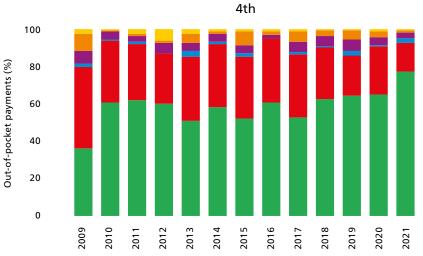




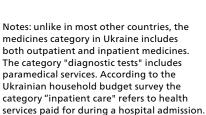
Notes: unlike in most other countries, the medicines category in Ukraine includes both outpatient and inpatient medicines. The category "diagnostic tests" includes paramedical services. According to the Ukrainian household budget survey the category "inpatient care" refers to health services paid for during a hospital admission.

Source: authors, based on household budget survey data.

Fig. 25. Breakdown of out-of-pocket payments in households with catastrophic health spending by type of health care and consumption quintile (contd)







Outpatient care

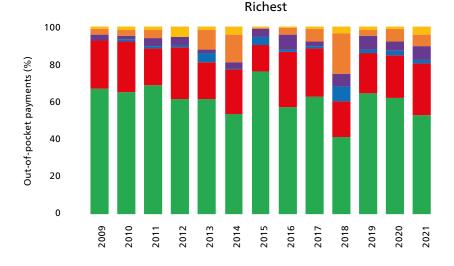
Medical products

Dental care
Diagnostic tests

Medicines

Inpatient care

Source: authors, based on household budget survey data.

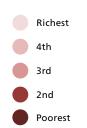


#### How much financial hardship?

Among households with catastrophic health spending the out-of-pocket payment share of total household spending (the household budget) rises progressively with household consumption, from 7% in the poorest quintile in 2021 to 46% in the richest (Fig. 26). For further impoverished households (the poorest households already living below the basic needs line), the out-of-pocket payment share of the household budget was 4.8% in 2021 (Fig. 27). These figures clearly indicate that even a seemingly low share of a household's budget spent on health can lead to financial hardship for people with low incomes.

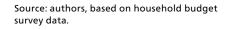
Fig. 26. Out-of-pocket payments as a share of total household spending among households with catastrophic spending by consumption quintile

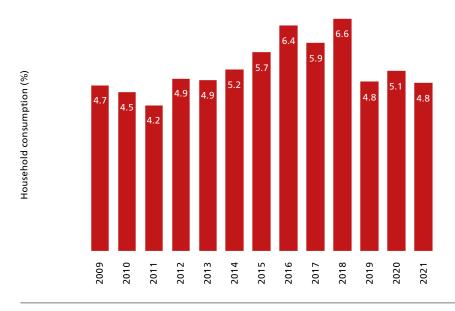




Source: authors, based on household budget survey data.

Fig. 27. Out-of-pocket payments as a share of total household spending among further impoverished households



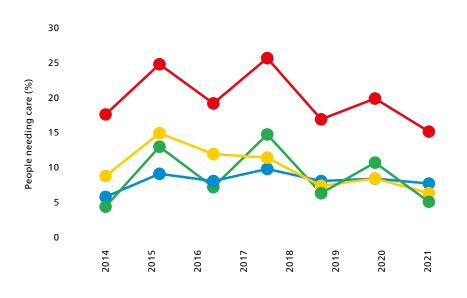


## 5.3 Unmet need for health services

National data on self-reported unmet need for health care show that unmet need is highest for medicines (affecting 15% of people who needed any type of care), followed by dental care (8%), outpatient care (6%) and inpatient care (5%) (Fig. 28). Cost is by far the main reason for unmet need: in 2020 96% of respondents gave cost as the main reason (State Statistics Service of Ukraine, 2022). The State Statistics Service reports that poorer households are more likely to report unmet need (State Statistics Service of Ukraine, 2022).

Unmet need has fallen since 2016 for all types of health care and was lower than ever in 2020, in spite of the COVID-19 pandemic (Fig. 28). See Box 3 for more on the impact of COVID-19 on access to health care. Improved access to medicines may be due to the introduction of the AMP in 2017 or to increases in household capacity to pay, as shown in Fig. 16, while improved access to outpatient care could reflect the introduction of reforms in primary care.

Fig. 28. Share of households reporting unmet need for health care by type of care





Note: the category "medicines" here includes both outpatient and inpatient medicines.

Source: State Statistics Service of Ukraine (2021).

## 5.4 Summary

In 2021 11% of households were impoverished or further impoverished after out-of-pocket payments, down from 12% in 2017. In the same year 17% of households experienced catastrophic health spending, down from 18% in 2017.

The incidence of catastrophic health spending is high in Ukraine compared to many EU and EU candidate countries, in line with Ukraine's heavy reliance on out-of-pocket payments to finance the health system.

In all years catastrophic health spending is heavily concentrated in the poorest consumption quintile. In 2021 64% of households in the poorest quintile experienced catastrophic spending – three times higher than the overall average. Catastrophic health spending is heavily concentrated among households headed by pensioners or older people and households in rural areas – groups likely to overlap with households in the poorest quintile.

The main drivers of catastrophic health spending are inpatient care and medicines, which accounted for 44% and 43% of catastrophic health spending respectively in 2021. There is significant variation across quintiles, however. Medicines are the main driver of catastrophic spending in the two poorest quintiles and inpatient care is the main driver in the three richer quintiles.

Unmet need for health care is highest for medicines, dental care and outpatient care, mainly driven by cost and affects poorer households the most – but it has fallen since 2016 for all types of health care and was lower than ever in 2020, despite the COVID-19 pandemic. Improved access to medicines may reflect the introduction of the AMP in 2017 and increases in household capacity to pay, while improved access to outpatient care could reflect the introduction of reforms in primary care.

# 6. Factors that strengthen and undermine financial protection

This section considers factors within the health system that may be responsible for financial hardship caused by out-of-pocket payments in Ukraine and which may explain the trend over time. The following paragraphs consider gaps in coverage first and then other factors.

Financial hardship in Ukraine is mainly driven by out-of-pocket payments for inpatient care and medicines (Fig. 24). For the poorer quintiles, it is more heavily driven by medicines than inpatient care. Because the medicines category in the Ukrainian household budget survey includes both inpatient and outpatient medicines (unlike in other countries, where inpatient medicines are included under inpatient care), the role of inpatient care in driving financial hardship is probably understated.

## 6.1 Gaps in coverage

Coverage policy in Ukraine – the way in which publicly financed health coverage is designed and implemented – has three features that are associated with stronger financial protection:

- entitlement to publicly financed health services (through the NHSU) is based on residence, ensuring that most of the population is covered, unlike in health systems that link entitlement to payment of contributions, where many people can lack coverage (WHO Regional Office for Europe, 2019 and 2021a);
- the introduction of the AMP in 2017 and the PMG in 2018 was an important step in linking publicly financed health benefits to health needs and available resources; and
- formal user charges (co-payments) are nearly non-existent for all types of health care, playing a very limited role in the health system, especially in primary care.

In spite of the limited presence of user charges, informal payments and other out-of-pocket payments are widespread in the health system, reflecting the following gaps in service coverage (also see Table 3 in Section 3.3).

- Outpatient medicines: the AMP, introduced in 2017 and regularly expanded, has been a major step forward in terms of coverage of outpatient medicines. Use of the AMP has grown over time and it has had a positive impact on access to outpatient medicines: in 2020 75% of people benefiting from the AMP said that it had made medicines more affordable for them (Health Index, 2021). However, the AMP still only covers a relatively small number of conditions 49 INNs for selected chronic conditions and a small share of the population (3.3 million people in 2021, nearly 8% of the total population) (NHSU, 2023) (see Box 2 in Section 3.3 for details).
- Inpatient medicines: covered inpatient medicines are defined by the UEML, which is also relatively small. A review of prescriptions in Poltava oblast showed that only 20% of INNs prescribed in 2017 (153 out of 759) were in the UEML (Muratov et al., 2018).

• Dental care: covered dental care is limited to preventive check-ups and acute care for children, and emergency care for adults. These services should be free at the point of use, but access is restricted by a shortage of public facilities and underfunding. Most dental clinics are private and public facilities charge patients for services outside the PMG, so in practice almost all dental care is financed through out-of-pocket payments.

Dental care is not a driver of financial hardship in Ukraine, even though it is heavily financed through out-of-pocket payments (89% of spending on dental care in 2020; see Fig. 5). This reflects two factors: first, dental care only accounts for a small share of household spending on health (9% of out-of-pocket payments in 2021, compared to 25% on inpatient care and 54% on medicines; see Fig. 9) and second, there is likely to be a significant degree of unmet need for dental care in Ukraine, particularly among people with low incomes, as seen in many other countries in Europe (WHO Regional Office for Europe, 2019). At present, however, very little is known about unmet need for dental care in Ukraine, so it is not possible to assess the extent to which people experience financial barriers to accessing dental care.

These gaps are a consequence of significant underfunding of the PMG relative to the range of services it covers, which leads to implicit rationing at the point of care.

### 6.2 Other factors

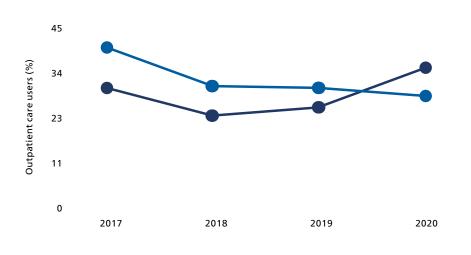
Weaknesses in the prescribing, dispensing and regulation of **outpatient and inpatient medicines** also contribute to financial hardship, as the following examples show.

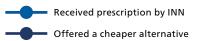
- In 2020 91% of people were prescribed medicines during their last outpatient visit, with an average of four medicines prescribed per visit (Health Index, 2021).
- In 2017 about 26% of outpatient medicines purchased out of pocket were not of proven efficacy or were dietary supplements (International Renaissance Foundation, 2017). Analysis of patients discharged from Poltava hospitals in 2016 found that the evidence base was low or moderate for 47% of all prescribed inpatient medicines (Muratov et al., 2018).
- INN prescribing is required by law, but in practice it is not the norm. Although INN prescribing is increasing, in 2020 only 36% of people using outpatient care reported receiving a prescription by INN (Fig. 27).
- AMP medicines should be prescribed by INN and the user should have at least one free-of-charge medicine in each INN. However, people can choose to pay if they want a branded medicine or a medicine priced above the (internal) reference price. In 2020 61% of AMP users paid out of pocket for an AMP medicine, up from 54% in 2018, and only 28% users of outpatient services said their doctor had "prescribed them a cheaper option" during their last visit, down from 40% in 2017 (Fig. 29) (Health Index, 2021).

- There is evidence of geographical inequity in access to AMP benefits. While all oblasts saw increases in the number of AMP-contracted pharmacies between 2019 and 2021, coverage across oblasts ranges from 17 to 30 pharmacies per 100 000 population, meaning that for some people it is harder to find a pharmacy participating in the AMP (Bredenkamp et al., 2022).
- People are generally expected to provide their own medicines and other supplies in hospital due to persistent underfunding of the PMG relative to the range of services it covers, low levels of provider accountability, the limited scope of the UEML and failures in procuring or distributing centrally procured medicines and medical products. In 2020 94% of people in hospital paid for medicines out of pocket, spending a median amount of UAH 2500, five times higher than the median amount spent on outpatient medicines (Health Index, 2021).
- The health system lacks a comprehensive strategy to regulate the price of medicines and ensure appropriate use through priority-setting processes, prescribing guidelines and policies to promote the use of generics. Instead, widespread use of strategies such as "evergreening" to extend patent protection limit the availability of generic medicines, resulting in higher prices (Petrenko, Zhikharev & Trofymenko, 2020).

As a result of gaps in service coverage and these other inefficiencies, public spending on medicines is very low. In 2019 only 12% of spending on outpatient and inpatient medicines came from the Government; the remaining 88% was through out-of-pocket payments (Kyiv School of Economics, IQVIA, 2020). The public share of spending on outpatient medicines is even lower: 2% in Ukraine in 2020 versus 67% on average in the EU (see Fig. 5 in Section 4.1).

Fig. 29. Prescribing patterns in outpatient care





Note: 2020 is the latest available year of data.

Source: Health Index (2016–2021).

Publicly financed inpatient care is supposed to be free at the point of use but in 2020 31% of all spending on inpatient care came from out-of-pocket payments, compared to only 5% on average in EU countries (see Fig. 5 in Section 4.1). Out-of-pocket payments for inpatient care can be mainly attributed to informal payments.

Informal payments are widespread (see Section 4.3 for details) and arise in three main ways: first, people paying for medicines and other supplies, even those that are formally covered (as described above and in Section 4.3); second, in the form of "charitable donations", which are payments people must make to facilities in order to be admitted or treated; and third, as payments to health workers. Levels of informal payments have decreased in primary care since the introduction of capitation as a method of paying for primary care, increased financing and an explicitly defined benefits package, which was clearly communicated to people.

NHSU contracts with facilities prohibit providers from asking people to pay for covered services, although they allow all contracted facilities to engage in extra billing for medicines not in the UEML and for additional services such as an individual room. Measures are needed to ensure that people are not induced to use these non-covered services. The prohibition on charging people for covered services also needs to be enforced so that people do not have to pay for covered medicines and services or make these "charitable donations" to facilities or give cash to health workers, especially when using inpatient care. One reason why providers ask patients to pay out of pocket is to compensate for lost revenue when the budget neutrality principle is applied. Because of the low level of the health budget and the inability of the NHSU to contract providers using needs-based criteria, the application of the budget neutrality rule lowers NHSU tariffs below costs.

In 2016 about 38% of admissions and over half of total bed-days were found to be unnecessary (Zhao et al., 2019). New payment methods for inpatient care introduced in 2021 – case-based payment with a global budget – may reduce incentives to keep people in hospital for longer than needed but the incentive to admit more people is still in place.

#### Box 4. Impact of the war on financial protection in Ukraine

Sources: International Monetary Fund (2023); National Bank of Ukraine (2022b); The Lancet (2023); WHO Regional Office for Europe (2023); World Bank (2022).

The Russian Federation's war on Ukraine, starting in February 2022 and ongoing at the time of the publication of this report, has had enormous negative and long-term consequences for the people of Ukraine, its human capital, its economy, the health system and access to health care. It is likely to further weaken financial protection through its effects on the Government budget, the cost of meeting basic needs, households' capacity to pay for health care, health needs and barriers to accessing health care.

Due to the war GDP was estimated to have contracted by 29% in 2022. This sharp drop has affected public revenues and the Government's ability to spend on health and other social sectors. In 2023 the health budget is estimated to be cut by 10% in nominal terms, which is likely to have a negative impact on the accessibility of services included in PMG (which includes the AMP).

Household finances have been affected through a fall in average income and increasing unemployment. Based on the global poverty line of US\$ 6.85 a day (2017 purchasing power parity), poverty is projected to increase from 5.5% in 2021 to 25% in 2022. Headline inflation reached 26.6% in 2022, with high inflation in food prices hurting poor households the most.

Key findings from the WHO health needs assessment survey carried out in 2022 show that during the war people face multiple barriers to accessing primary care, chronic care and medicines – especially IDP.

More than half of those who sought primary care faced at least one barrier, with cost, time and transport the top three barriers. People living in areas that have faced or continue to face hostilities tended to seek health care less than people in other areas and IDP sought care significantly more than non-IDP. IDP are less likely than local people to know where primary care facilities are located and have less access to a family doctor (20% have no access compared to 5% among local people).

More than half of all respondents sought care for chronic conditions, of which 57% faced at least one barrier. Women tended to have a greater need for services and a better chance of getting needed care than men. One in five people were unable to find medicines, with the main barriers being increased price, lack of availability in the nearest pharmacies and long queues in local pharmacies. People living in areas that have faced or continue to face hostilities and IDP had a significantly higher chance of not getting needed medicines compared to other groups of people.

These barriers to access services are likely to be a consequence of the scale of attacks on Ukrainian health care facilities and workers. By the end of 2022 707 documented attacks had occurred, damaging almost 9% of the country's hospitals.

### 6.3 Summary

Coverage policy in Ukraine has three features that contribute to financial protection. First, entitlement to publicly financed health services is based on residence, ensuring that most of the population is covered. Second, the introduction of the AMP in 2017 and the PMG in 2018 (and its further expansion in 2020) were important attempts to explicitly link publicly financed health benefits to health needs and available resources. Third, user charges (co-payments) are kept to a minimum.

In spite of near universal population coverage and the limited presence of user charges, informal payments and other out-of-pocket payments are widespread in the health system, reflecting gaps in the service dimension of health coverage, low levels of public spending on health (persistent underfunding of the PMG) and other inefficiencies that undermine financial protection, particularly for people using medicines and inpatient care: the two main drivers of catastrophic health spending in Ukraine.

NHSU coverage of medicines has been growing but is still limited. Although the AMP has had a positive impact on access to outpatient medicines, it only covers a small number of conditions. The UEML, which defines medicines covered in hospitals, is also relatively small.

In addition, there are weaknesses in the prescribing, dispensing and regulation of medicines. As a result, most spending on outpatient and inpatient medicines continues to come from out-of-pocket payments.

Publicly financed inpatient care is supposed to be free at the point of use but nearly a third of all inpatient care is financed through out-of-pocket payments in Ukraine, compared to only 5% on average in EU countries. Out-of-pocket payments for inpatient care could be largely attributed to informal payments.

Informal payments are widespread in hospitals and other facilities and arise in three main ways: first, people paying for medicines and other supplies, even those that are formally covered; second, in the form of "charitable" donations to facilities; and third, as payments to health workers. Levels of informal payments have decreased in primary care since the introduction of capitation as a method of paying for primary care and an explicitly defined benefits package, which was clearly communicated to people.

NHSU covers very little dental care, especially for adults, and access to covered treatment is restricted by underfunding of this type of care. While almost all dental care is financed through out-of-pocket payments, dental care is not a significant driver of financial hardship, which is likely to reflect a high degree of unmet need.

# 7. Implications for policy

Although financial protection is weaker in Ukraine than in many other countries in Europe, it had been improving in the years immediately before the war. In 2021 17% of households (around 2.5 million households) experienced catastrophic health spending, but the trend suggests a small but consistent decrease from 18% in 2016.

The financial hardship caused by out-of-pocket payments for health care is heavily concentrated among households with low incomes, households headed by pensioners or older people and households in rural areas. In 2021 64% of households in the poorest quintile (close to 2 million households) experienced catastrophic health spending.

Financial hardship is almost entirely driven by spending on outpatient and inpatient medicines and inpatient care. Medicines are the main driver of catastrophic spending in the two poorest quintiles and inpatient care is the main driver in the three richer quintiles.

Unmet need for health care is highest for medicines, dental care and outpatient care. It is mainly driven by cost and affects poorer households the most, but it has fallen since 2016 for all types of health care. This may reflect the introduction of the AMP in 2017, the introduction of the PMG in 2018 and increases in household capacity to pay.

The war is likely to undermine financial protection even further because of its dramatic impact on households, the health system and the economy. GDP contracted sharply in 2022, putting pressure on government revenues. Some of this pressure was alleviated by direct budget support from international donors, but the overall poverty rate has increased. The health system has also been badly affected by the war. Attacks on health care facilities and the displacement of health care workers has increased unmet need for health care and is expected to lead to a huge increase in health needs in the years to come.

Coverage policy in Ukraine has three features that contribute to financial protection and should be further reinforced over time. First, entitlement to publicly financed health services is based on residence, ensuring that most of the population is covered. Second, the introduction of the AMP in 2017 and the PMG in 2018, which have been an important attempt to explicitly link publicly financed health benefits to health needs and available resources. Third, user charges (co-payments) are kept to a minimum.

The high incidence of catastrophic health spending in Ukraine reflects gaps in the coverage of outpatient and inpatient medicines, low levels of public spending on health and other inefficiencies, including weaknesses in the prescribing, dispensing and regulation of medicines and widespread informal payments.

Although the Government has taken steps to strengthen financial protection, as demonstrated by recent reforms, and has given priority to public spending on health, the health system needs to continue to reduce out-of-pocket payments for medicines and inpatient care. This will increase trust in the health system and confidence in the Government's capacity to improve people's lives.

Options for strengthening financial protection include the following.

Prioritize public spending on comprehensive primary care, which includes funding for better access to medicines and diagnostic tests, and strengthen the prescribing, dispensing, price regulation and availability of medicines.

- Continue to expand the AMP (outpatient medicines), so that it better meets the health needs of the population, and ensure that the medicines it covers are cost–effective, aligned with clinical guidelines and target the needs of households with low incomes. More analysis is needed to identify the medicines that drive out-of-pocket payments for people.
- Implement and enforce the mandatory electronic prescription system to improve transparency in prescribing and to stimulate INN prescribing.
- Develop incentives and other mechanisms to stimulate INN prescribing by doctors and the dispensing of cheaper medicines by pharmacies, and monitor prescribing and dispensing under the AMP and the number of people accessing the free-of-charge option for prescribed medicines.
- Ensure an equitable distribution of pharmacies participating in the AMP across oblasts.
- Reduce VAT on medicines from 7% to 0% for medicines included in the AMP and the UEML.
- Expand the UEML (inpatient medicines) and monitor spending on inpatient medicines. This should be accompanied by rules to prevent providers from asking people to pay for medicines covered by the UEML and by monitoring of providers.

## Reduce out-of-pocket payments for inpatient care, including informal payments.

- Curb "charitable donations" through better enforcement of the provider-purchaser contract provisions that already prohibit these charges and by monitoring providers.
- Ensure that health care facilities do not induce the use of services on the negative list and that there is no double billing of covered services (for example, through "charitable donations").
- Develop a comprehensive and long-term strategy to tackle the root causes of informal payments. This should be a part of a broader plan to reform professional education and staffing in public hospitals; improve and expand the PMG; apply adequate and evidence-informed tariffs; strengthen provider accountability; and adapt to changing health needs in the context of the war. It will require support from sectors responsible for addressing corruption.
- Allow region-level needs assessments to serve as the basis for contracting by the NHSU so that it can contract a specified volume of services with fixed tariffs. This would enable a move away from open-

ended volume contracts and the 'budget neutrality' principle and prevent the need for patients to cover provider deficits when service volumes increase. Multiyear contracts would give providers incentives to invest in more efficient service delivery.

Improve the governance of the PMG by making the political and technical process for its design and expansion more explicit, transparent and inclusive of a range of perspectives.

Strengthen the capacity of the NHSU to be an active purchaser of services, which will allow it to make better use of public resources.

Implement policies to enhance protection for households with low incomes and others at high risk of suffering from catastrophic health spending. These include households in the poorest quintiles, households headed by pensioners or older people and households in rural areas. Policies should prioritize access to medicines, especially for regular users of health care (often older people) – for example, through the use of mechanisms to protect people from user charges such as exemptions from co-payments and a cap on co-payments for outpatient medicines for pensioners and by improving access to AMP benefits in rural areas.

Current proposals to introduce user charges (co-payments) and balance billing are unlikely to reduce informal payments. Without robust accountability mechanisms in place these formal charges are likely to result in triple payment for the same service – once by the NHSU and again by people (both formally and informally). Co-payments and balance billing are also unlikely to generate significant additional revenue for the health system.

VHI is highly unlikely to reduce financial hardship because most people with catastrophic health spending are in the two poorest quintiles and unable to afford VHI. In most countries VHI exacerbates inequalities in affordable access to health care (WHO, 2021a; WHO, 2021b).

To strengthen financial protection, the Government will need to continue to give priority to health in allocating public spending. It should also support the NHSU so that it is better able to reduce out-of-pocket payments for the services that cause financial hardship and to account for changing health needs in the context of the war and growing poverty (WHO, 2022a; WHO, 2022b).

### References<sup>1</sup>

1. All references were accessed on the 1 June 2023

Betliy O, Dzhyhyr Y, Kovtoniuk P, Novosad A, Panchenko Y. (2021) Health and Education: Impact of COVID-19 Pandemic on Access to Public Services in Ukraine. Analytical review. Kyiv: International Renaissance Foundation.

Bredenkamp C, Dale E, Doroshenko O, Dzhygyr Y, Habicht J, Hawkins L, et al (2022). Health financing reform in Ukraine: progress and future directions. Copenhagen and Washington DC: WHO Regional Office for Europe and World Bank (https://apps.who.int/iris/handle/10665/357169).

Cabinet of Ministers of Ukraine (2014). ПОСТАНОВА N°121. Про затвердження Порядку надання медичної допомоги іноземцям та особам без громадянства, які постійно проживають або тимчасово перебувають на території України [Resolution N°.121 on the approval of the procedure for providing medical assistance to foreigners and stateless persons permanently residing or temporarily staying on the territory of Ukraine]. Kyiv: Cabinet of Ministers of Ukraine (In Ukrainian) (https://zakon.rada.gov.ua/laws/show/121-2014-%D0%BF#Text)

Cylus J, Thomson S, Evetovits T (2018). Catastrophic health spending in Europe: equity and policy implications of different calculation methods. Bull World Health Organ. 96:599–609 (https://apps.who.int/iris/handle/10665/275085).

Doroshenko O, Goroshko A, Pak K, Shekar V, Khan O, Bredenkamp C, et al (2022). Ukraine COVID-19 Purchasing: Building Resilience While Reinforcing Reforms. Washington DC: World Bank (https://documents1.worldbank.org/curated/en/099740012222229791/pdf/P17032100818da0160adc50d218cb0bad86.pdf).

Gaál P, Jakab M, Shishkin S, Kutzin J (2010). Strategies to address informal payments for health care. Copenhagen: World Health Organization (http://catalog.ihsn.org/citations/59945).

Gaál P, McKee M (2004) Informal Payment for Health Care and the Theory of 'INXIT'. International Journal of Health Planning and Management 19(2):163-78. doi:10.1002/hpm.751.

Goroshko A, Shapoval N, Lai T (2018). Can people afford to pay for health care? New evidence on financial protection in Ukraine. Copenhagen: WHO Regional Office for Europe. (https://apps.who.int/iris/handle/10665/342261).

Health Index (2016). Ukraine – 2016: Results of the National Survey. Kyiv: Health Index (http://health-index.com.ua/zvit\_index\_2016\_eng.pdf).

Health Index (2018). Ukraine – 2017: Results of the National Survey. Kyiv: Health Index (http://health-index.com.ua/zvit\_index\_2017\_eng.pdf).

Health Index (2019). Ukraine – 2018: Results of the National Survey. Kyiv: Health Index (http://health-index.com.ua/zvit\_index\_2018\_eng.pdf).

Health Index (2020). Ukraine – 2019: Results of the National Survey. Kyiv: Health Index (http://health-index.com.ua/HI%20Report%202019%20 eng.pdf).

Health Index (2021). Ukraine – 2020: Results of the National Survey. Kyiv: Health Index

International Monetary Fund (2023). Amid War, Ukraine Is Maintaining Macroeconomic Stability and Embarking on Reforms. Kyiv: International Monetary Fund Ukraine (https://www.imf.org/en/News/Articles/2023/04/05/cf-amid-war-ukraine-is-maintaining-macroeconomic-stability-and-embarking-on-reforms).

International Renaissance Foundation (2017). Дослідження ринку лікарських засобів з недостатньою доказовою базою [Market research of medicines with insufficient evidence of efficacy]. Kyiv: International Renaissance Foundation (https://issuu.com/irf\_ua/docs/fuflomicyny) (in Ukrainian).

Institute of Demography and Social research (2019). Комплексна оцінка бідності та соціального відчуження в Україніза 2016-2018 роки [Complex poverty and social alienation assessment in Ukraine in 2016–2018]. Kyiv: Institute of Demography and Social research (https://idss.org.ua/arhiv/Year\_2018\_Pov.pdf) (in Ukrainian).

Jakab M, Akkazieva B, Kutzin J (2016). Can reductions in informal payments be sustained? Evidence from Kyrgyzstan, 2001–2013. Copenhagen: WHO Regional Office for Europe (https://kyrgyzstan.un.org/en/29718-can-reductions-informal-payments-be-sustained-evidence-kyrgyzstan-2001%E2%80%932013-2016).

Kyiv city administration (2022). програма «Здоров'я киян» на 2020-2022 роки [Health of Kyiv population 2020–2022]. Kyiv: Kyiv city administration (https://health.kyivcity.gov.ua/content/programa-zdorovya-kyyan-na-20202022-roky.html) (in Ukrainian).

Kyiv School of Economics (2021). Foregone care due to COVID-19. Kyiv: Kyiv School of Economics.

Kyiv School of Economics, IQVIA (2020). Spending on healthcare and access to treatment: Report of key findings. Kyiv and Durham: Kyiv School of Economics and IQVIA

(http://publications.chamber.ua/2020/HCC/Study\_resiults\_%28eng%29\_full%20\_version\_of\_the\_report.pdf).

Kyiv School of Economics, Lykyanova N, Vakhitova H, Sologub I, Yavorskyi P (2017). Public Expenditure Tracking Survey / Quantitative Service Delivery Survey (PETS/QSDS) Kyiv: United Nations Development Programme Ukraine (https://www.undp.org/ukraine/publications/public-expenditure-tracking-survey).

Lekhan VN, Rudiy VM, Shevchenko MV, Nitzan Kaluski D, Richardson E. Ukraine: Health system review. Health Systems in Transition, 2015; 17(2): 1–153 (https://apps.who.int/iris/handle/10665/176099).

Ministry of Economic Development and Trade of Ukraine (2014). Щодо порядку розрахунку визначення вартості лікарських засобів та виробів медичного призначення з урахуванням податку на додану вартість та існуючих надбавок. [Regarding the procedure for calculating the value of medicinal products and medical devices, taking into account value added tax and existing surcharges] Kyiv: Ministry of Economic Development and Trade of Ukraine (https://zakon.rada.gov.ua/rada/show/v3721731-14#Text) (in Ukrainian).

Ministry of Health of Ukraine (2023). Наказ МОЗ України від 21.02.2023 № 351 "Про затвердження Реєстру лікарських засобів, які підлягають реімбурсації за програмою державних гарантій медичного обслуговування населення, станом на 14 лютого 2023 року" [Order of the Ministry of Health of Ukraine dated 21 February 2023, No. 351 "On approval of the Register of medicinal products that are subject to reimbursement under the programme of state guarantees of medical care for the population, as of February 14, 2023"] Kiev: Ministry of Health of Ukraine (https://moz.gov.ua/article/ministry-mandates/nakaz-moz-ukraini-vid-21022023--351-pro-zatverdzhennja-reestrulikarskih-zasobiv-jaki-pidljagajut-reimbursacii-za-programoju-derzhavnihgarantij-medichnogo-obslugovuvannja-naselennja-stanom-na-14-ljutogo-2023-roku) (in Ukrainian).

Ministry of Social Policy of Ukraine (2022). України « Фактичний розмір прожиткового мінімуму у 2015-2022 роках» [ The actual size of the living wage in 2015-2022]. Kyiv: Ministry of Social Policy of Ukraine (https://www.msp.gov.ua/news/12286.html) (in Ukrainian).

Muratov S, Katsaga A, Zues O (2018). Technical Brief: Hospital Drug Expenditures – Estimating Budget Needs at the Regional Level in Ukraine. Rockville, MD: Health Finance & Governance Project, Abt Associates.

National Bank of Ukraine (2022a). Огляд страхового ринку Україниза I півріччя 2022 року [Overview of the insurance market of Ukraine for the first half of 2022]. Kyiv: National Bank of Ukraine (https://bank.gov.ua/admin\_uploads/article/%D0%9E%D0%B3%D0%BB%D1%8F%D0%B4\_%D1%81%D1%82%D0%B0%D0%BD\_%D1%81%D1%82%D1%80%D0%B0%D1%85%D0%BE%D0%B2%D0%BE%D0%B3%D0%BE\_%D1%80%D0%B8%D0%BD%D0%BA%D1%83-%D0%BD%D0%B0%D0%B3%D0%BB%D1%8F%D0%B4\_pr\_2022-09-23.pdf?v=4)(in Ukrainian).

National Bank of Ukraine (2022b). Monthly macroeconomic and monetary review. Kyiv: National Bank of Ukraine (https://bank.gov.ua/en/news/all/makroekonomichniy-ta-monetarniy-oglyad-jovten-2022-roku)

National Cancer Registry (2021). PAK B YKPAÏHI, 2019–2020 [Cancer in Ukraine 2019–2020]. Kyiv: National Cancer Registry (http://www.ncru.inf.ua/publications/BULL\_22/index.htm) (in Ukrainian).

NHSU (2021). Скільки лікарських засобів у програмі "Доступні ліки"? [How many medicines are in the "Affordable Medicines" program?]. Kyiv: NHSU website. (https://nszu.gov.ua/novini/skilki-likarskih-zasobiv-u-programi-dostupni-liki-670) (in Ukrainian).

NHSU (2022). Dashboard on revenues and expenditures (selected indicators). Kyiv: NHSU. (https://edata.e-health.gov.ua/e-data/dashboard) (in Ukrainian).

NHSU (2023). Електронні рецепти на лікарські засоби: виписування та відпуск [Electronic prescriptions for medicinal products: prescribing and dispensing] Kyiv: NHSU. (https://edata.e-health.gov.ua/e-data/dashboard/reimb-prescription-details) (in Ukrainian).

OECD (2023). OECD Health Statistics. In: OECD [website]. Paris: OECD (https://www.oecd.org/els/health-systems/health-data.htm).

Petrenko S, Zhikharev A, Trofymenko (2020). Report. Evergreening patents in Ukraine. Kyiv: 100 Percent Life (https://network.org.ua/wp-content/uploads/2020/12/Report-eng-curves-1-1.pdf).

State Statistics Service of Ukraine (2021). Self-assessment by the population of the state of health and the level of availability of certain types of medical care in 2020. Kyiv: State Statistics Service of Ukraine

State Statistics Service of Ukraine (2022). Household Budget Survey. Kyiv: State Statistics Service of Ukraine.

The Lancet (2023). Russia's invasion of Ukraine: an attack on health. London: Lancet, 401(10377), 617. doi:10.1016/S0140-6736(23)00387-2.

USAID Health Care Reform Support Project (2021). Report on the results of the study Informal payments at the level of primary health care after the implementation of funding reform, Kyiv: USAID.

Wagstaff A, van Doorslaer E (2003). Catastrophe and impoverishment in paying for health care: with applications to Vietnam 1993–1998. Health Econ. 2(11):921–34. doi.org/10.1002/hec.776.

WHO (2010). The world health report: health systems financing: the path to universal health coverage. Geneva: World Health Organization (https://apps.who.int/iris/handle/10665/44371).

WHO (2020). Budgetary space for health in Ukraine. Policy document to support budget preparation dialogue for 2021 (https://apps.who.int/iris/handle/10665/350215).

WHO (2023a). Global Health Expenditure Database [online database]. Geneva: World Health Organization (http://apps.who.int/nha/database/Select/Indicators/en).

WHO (2023b). Population with household expenditures on health greater than 10% of total household expenditure or income (SDG 3.8.2) (%, national, rural, urban). In: The Global Health Observatory [online database]. Geneva: World Health Organization (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/population-with-household-expenditures-on-health-greater-than-10-of-total-household-expenditure-or-income-(sdg-3-8-2)-(-)).

WHO Country Office in Ukraine (2023). Health accounts. Kyiv: World Health Organization.

WHO Regional Office for Europe, European Observatory on Health Systems and Policies, Rechel B, Richardson E, McKee M (2014) Trends in health systems in the former Soviet countries. Copenhagen: WHO European Regional Office for Europe on behalf of the Observatory on Health Systems and Policies (https://apps.who.int/iris/handle/10665/326352).

WHO Regional Office for Europe, European Observatory on Health Systems and Policies, Sagan A, Thomson S (2016). Voluntary health insurance in Europe: Country experience. Copenhagen: WHO Regional Office for Europe on behalf of the Observatory on Health Systems and Policies (https://apps.who.int/iris/handle/10665/326314).

WHO Regional Office for Europe (2019). Can people afford to pay for health care? New evidence on financial protection in Europe. Copenhagen: WHO Regional Office for Europe (https://apps.who.int/iris/handle/10665/311654).

WHO Regional Office for Europe (2021a). Co-payment policy: considerations for Ukraine. Copenhagen: WHO Regional Office for Europe (https://apps.who.int/iris/handle/10665/341727).

WHO Regional Office for Europe (2022a). Health financing in Ukraine: resilience in the context of war. Copenhagen: WHO Regional Office for Europe (https://apps.who.int/iris/handle/10665/361645).

WHO Regional Office for Europe (2022b). Principles to guide health system recovery and transformation in Ukraine. Copenhagen: WHO Regional Office for Europe. (https://apps.who.int/iris/handle/10665/358446).

WHO Regional Office for Europe (2023). Health needs assessment of the adult population in Ukraine: survey report: December 2022. Copenhagen: WHO Regional Office for Europe (https://apps.who.int/iris/handle/10665/366415).

World Bank (2022). Health Enhancement And Life-saving (HEAL) Ukraine Project (P180245). Washington (DC): World Bank (https://projects.worldbank.org/en/projects-operations/project-detail/P180245).

World Bank (2023a). The World Bank in Ukraine. In: World Bank [website]. Washington (DC): World Bank (https://www.worldbank.org/en/country/ukraine/overview#3).

World Bank (2023b). World development indicators. In: World Bank [website]. Washington (DC): World Bank (https://databank.worldbank.org/source/world-development-indicators).

Xu K, Evans D, Kawabata K, Zeramdini R, Klavus J, Murray C (2003). Household catastrophic health expenditure: a multicountry analysis. Lancet 362:111–7. doi.org/10.1016/S0140-6736(03)13861-5.

Xu K, Evans D, Carrin G, Aguilar-Rivera A, Musgrove P, Evans T (2007). Protecting households from catastrophic health spending. Health Aff. 26(4):972–83. doi.org/10.1377/hlthaff.26.4.972.

Zhao F, Doroshenko O, Lekhan VN, Kriachkova LV, Goroshko A (2019) Assessment of appropriateness of hospitalisations in Ukraine: analytical framework, method and findings. BMJ Open (https://bmjopen.bmj.com/content/9/12/e030081).

# Annex 1. Household budget surveys in Europe

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Includes** 

Source: United Nations Statistics Division (2018).

#### **COICOP** codes

#### 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

#### 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.

This covers medicaments, prostheses, medical appliances and

individuals or households, either with or without a prescription,

equipment suppliers. They are intended for consumption or use

equipment and other health-related products purchased by

usually from dispensing chemists, pharmacists or medical

outside a health facility or institution.

#### **Excludes**

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).

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).

#### References<sup>2</sup>

Eurostat (2015). Household Budget Survey 2010 Wave EU Quality report. Brussels: Eurostat (http://ec.europa.eu/eurostat/ documents/54431/1966394/LC142-15EN\_HBS\_2010\_Quality\_Report\_ ver2+July+2015.pdf/fc3c8aca-c456-49ed-85e4-757d4342015f).

Eurostat (2016). Regulation (EU) 2016/792 of the European Parliament and of the Council of 11 May 2016 on harmonised indices of consumer prices and the house price index, and repealing Council Regulation (EC) No 2494/95. O. J. E. U. L135/11:1–28 (https://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:32016R0792&from=EN).

Heijink R, Xu K, Saksena P, Evans D (2011). Validity and comparability of out-of-pocket health expenditure from household surveys: a review of the literature and current survey instruments. Geneva: World Health Organization (HSS/HSF/DP.E.11.1; https://apps.who.int/iris/ handle/10665/85711).

2. All references accessed 18 October 2022.

OECD (2019). Health systems characteristics survey 2016 [online database]. Paris: Organisation for Economic Co-operation and Development (https://qdd.oecd.org/subject.aspx?Subject=hsc).

United Nations Statistics Division (2018). Classification of Individual Consumption According to Purpose (COICOP) 2018. New York: United National Statistics Division (https://unstats.un.org/unsd/classifications/unsdclassifications/COICOP\_2018\_-\_pre-edited\_white\_cover\_version\_-\_2018-12-26.pdf).

Yerramilli P, Fernández O, Thomson S (2018). Financial protection in Europe: a systematic review of the literature and mapping of data availability. Health Policy 122(5):493–508 (https://doi.org/10.1016/j. healthpol.2018.02.006).

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

#### **Background**

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

#### **Data sources and requirements**

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

The following variables are required at household level:

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

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

If the survey includes a household sampling weight variable, calculations should consider the weight in all instances. Information on household or individual-level characteristics such as age, sex, education and location is 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:

equivalent household size = 1 + 0.7\* (number of adults – 1) + 0.5\* (number of children under 13 years of age)

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

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

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

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

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

#### Capacity to pay for health care

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

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

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

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

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

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

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

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

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

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

3. All references accessed 18 October 2022.

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

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

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

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

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

#### References<sup>3</sup>

Thomson S, Evetovits T, Cylus J, Jakab M (2016). Monitoring financial protection to assess progress towards universal health coverage in Europe. Public Health Panorama. 2(3):357–66 (https://apps.who.int/iris/handle/10665/325385).

United Nations Statistics Division (2018). Classification of Individual Consumption According to Purpose (COICOP) 2018. New York: United National Statistics Division

(https://unstats.un.org/unsd/classifications/unsdclassifications/COICOP\_2018\_-\_pre-edited\_white\_cover\_version\_-\_2018-12-26.pdf).

Wagstaff A, Eozenou P (2014). CATA meets IMPOV: a unified approach to measuring financial protection in health. Washington (DC): The World Bank (Policy Research Working Paper No. 6861).

WHO Regional Office for Europe (2019). Can people afford to pay for health care? New evidence on financial protection in Europe. Copenhagen: WHO Regional Office for Europe (https://apps.who.int/iris/handle/10665/311654).

Xu K, Evans D, Carrin G, Aguilar-Rivera A, Musgrove P, Evans T (2007). Protecting households from catastrophic health spending. Health Aff. 26(4):972–83. doi:10.1377/hlthaff.26.4.972.

Xu K, Evans D, Kawabata K, Zeramdini R, Klavus J, Murray C (2003). Household catastrophic health expenditure: a multicountry analysis. Lancet. 362:111–7. doi:10.1016/S0140-6736(03)13861-5.

# Annex 3. Regional and global financial protection indicators

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

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

Regional indicators + Global indicators

Impoverishing out-of-pocket payments

Risk of poverty due to out-of-pocket payments: the proportion of households further impoverished, impoverished, at risk of impoverishment or not at risk of impoverishment after out-of-pocket payments using a country-specific line based on household spending to meet basic needs (food, housing and utilities)

Changes in the incidence and severity of poverty due to household expenditure on health using:

- an extreme poverty line of PPP-adjusted US\$ 1.90 per person per day
- a poverty line of PPP-adjusted US\$ 3.10 per person per day
- a relative poverty line of 60% of median consumption or income per person per day

Catastrophic out-of-pocket payments

The proportion of households with outof-pocket payments greater than 40% of household capacity to pay for health care The proportion of the population with large household expenditure on health as a share of total household consumption or income (greater than 10% or 25% of total household consumption or income)

#### **Regional indicators**

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

At regional level, WHO's support for monitoring financial protection is underpinned by the European Programme of Work, 2020–2025 (United Action for Better Health in Europe), which includes moving towards universal health coverage as the first of three core priorities for the WHO European Region; the Tallinn Charter: Health Systems for Health and Wealth; and resolution EUR/RC65/R5 on priorities for health systems strengthening in the WHO European Region 2015–2020.

Note: PPP: purchasing power parity.

Sources: WHO headquarters and WHO Regional Office for Europe.

#### **Global indicators**

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

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

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

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

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

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

In contrast, to identify households with catastrophic out-of-pocket payments, the regional indicator deducts a standard amount representing spending on three basic needs – food, housing (rent) and utilities – from each household's consumption expenditure. It then applies the same fixed percentage threshold to the remaining amount (which is referred to as the household's capacity to pay for health care). As a result, although the same threshold is applied to all households, the amount to which it is applied is now significantly less than total household consumption for poorer households but closer to total household consumption for richer

households. This implies that very poor households spending small amounts on out-of-pocket payments, which constitute a relatively small share of their total budget, may experience financial hardship, while wealthier households are assumed not to experience hardship until they have spent a comparatively greater share of their budget on out-of-pocket payments.

4. All references accessed 18 October 2022.

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

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

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

#### References 4

Cylus J, Thomson S, Evetovits T (2018). Catastrophic health spending in Europe: equity and policy implications of different calculation methods. Bull World Health Organ. 96:599–609 (doi.org/10.2471/BLT.18.209031).

Saksena P, Smith T, Tediosi F (2014). Inputs for universal health coverage: a methodological contribution to finding proxy indicators for financial hardship due to health expenditure. BMC Health Serv Res. 14:577.

WHO, World Bank (2015). Tracking universal health coverage: first global monitoring report. Geneva: World Health Organization (https://apps.who.int/iris/handle/10665/174536).

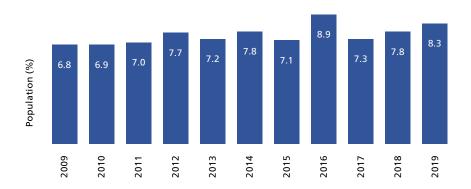
WHO, World Bank (2017). Tracking universal health coverage: 2017 global monitoring report. Geneva: World Health Organization (https://apps.who.int/iris/handle/10665/259817).

Yerramilli P, Fernández O, Thomson S (2018). Financial protection in Europe: a systematic review of the literature and mapping of data availability. Health Policy 122(5):493–508 (http://www.healthpolicyjrnl.com/article/S0168-8510(18)30049-6/fulltext).

# Annex 4. Catastrophic health spending in Ukraine using the global indicator (SDG 3.8.2)

The global financial protection indicator – Sustainable Development Goal (SDG) 3.8.2 – allows Ukraine to be compared to countries outside the WHO European Region (see Annex 3 for details). In 2019 8% of people experienced catastrophic health spending (Fig. A4.1). This is much lower than the share reported using the regional indicator (Fig. 19) but the overall trend is similar for both indicators.

Fig. A4.1. Share of the population with catastrophic health spending in Ukraine as measured using SDG 3.8.2



Notes: these estimates refer to the share of the population with large household expenditures on health as a share of total household expenditure or income (greater than 10%). These estimates have been produced by the World Bank and jointly reviewed by WHO and the World Bank and selected after quality checks. No estimates are available for 2020 and 2021.

Source: WHO (2023b).

### Annex 5. Glossary of terms

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

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

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

Budget: See household budget.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### The WHO Regional Office for Europe

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

#### **World Health Organization Regional Office for Europe**

UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark Tel.: +45 45 33 70 00 Fax: +45 45 33 70 01

Email: eurocontact@who.int Website: www.who.int/europe

#### **Member States**

Albania **Andorra** Armenia **Austria** Azerbaijan **Belarus Belgium** Bosnia and Herzegovina

Bulgaria Croatia Cyprus Czechia Denmark

Estonia

**Finland** France Georgia Germany Greece Hungary Iceland Ireland | Israel Italy Kazakhstan Kyrgyzstan Latvia Lithuania

Luxembourg Malta Monaco Montenegro Netherlands (Kingdom of the) North Macedonia Norway **Poland Portugal** Republic of Moldova Romania **Russian Federation** 

San Marino

Serbia

Slovakia Slovenia Spain Sweden Switzerland **Tajikistan** Türkiye Turkmenistan Ukraine **United Kingdom** Uzbekistan

