

# **WHO description of methods**

## **Monitoring financial protection (affordable access to health care) in the European Region in the context of universal health coverage and the Sustainable Development Goals**

**April 2025**

This briefing was produced jointly by the Department of Health Systems Financing and Economics (WHO headquarters) and the WHO Barcelona Office for Health Systems Financing (part of the Division of Health Systems at the WHO Regional Office for Europe) for a country consultation held in 2025

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## 1 Note on key terms used in this document

**Household spending on health (out-of-pocket payments):** Household spending on health is also known as out-of-pocket payments. Out-of-pocket payments are formal and informal payments made by people at the time of using any health care provided by any type of provider. They do not include reimbursement by a third party such as the government, a health insurance fund or a private insurance company. For further information, see the classification of health care financing schemes in the [International Classification for Health Accounts](#), a collaboration between the OECD, Eurostat and the World Health Organization (WHO).

**Financial hardship (catastrophic or impoverishing health spending):** Out-of-pocket payments result in financial hardship for people when they exceed a pre-defined threshold of a household's budget or capacity to pay for health care. At regional level, out-of-pocket payments leading to financial hardship are characterized as 'catastrophic health spending' or 'impoverishing health spending'. In the context of the SDGs, financial hardship is referred to as 'large and impoverishing out-of-pocket health spending'.

**Household capacity to pay for health care:** This refers to household consumption or income minus an amount to cover basic needs such as food, housing and utilities. Basic needs can be defined in different ways.

**Poverty line:** A poverty line is a level of personal or household income or consumption below which one is classified as poor. Poverty lines can be defined in different ways.

## 2 Summary of indicators and their main differences

This document describes the methods underpinning the financial hardship indicators used in Europe and central Asia, as set out in Tables 1–3.

**Table 1 Combined set of regional and global indicators for monitoring financial hardship in Europe and central Asia**

| Regional indicators (R1 & R2)                                                                                                                                                                                                                                                                                          | + The global indicator and its components<br>(revised 3.8.2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catastrophic out-of-pocket payments</b>                                                                                                                                                                                                                                                                             | <b>Large and impoverishing out-of-pocket payments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Indicator R1:</b> The proportion of households with out-of-pocket payments greater than 40% of household capacity to pay for health care. Capacity to pay for health care is defined as household total consumption or income net of household spending to meet basic needs for food, housing and utilities.</p> | <p>Proportion of the population with positive out-of-pocket health expenditure exceeding 40% of household discretionary budget.</p> <p>A household's discretionary budget is defined as household total consumption expenditure or income net of the societal poverty line (SPL).</p> <p>In the context of the SDGs, capacity to pay corresponds to household discretionary budget defined as household total consumption or income net of a poverty line developed for global monitoring and capturing the minimum cost of needs and social participation conditional on the overall level of economic development. Using 2017 purchasing power parities (PPPs), the SPL corresponds to whichever is greater: \$2.15 (the international poverty line) or \$1.15 + 50% of median household consumption expenditure or income. The median is computed using the consumption or income distribution excluding out-of-pocket payments.</p>                                                                                                                                                                                               |
| <b>Impoverishing out-of-pocket payments</b>                                                                                                                                                                                                                                                                            | <p><b>Indicator R2:</b> The proportion of households with impoverishing health spending (households that are further impoverished or impoverished after out-of-pocket payments) using a country-specific line based on household spending to meet basic needs (food, housing and utilities)</p> <p>The global indicator can be used to identify two sub-populations: a) individuals with large out-of-pocket health expenditure exceeding 40% of the household discretionary budget, but who are neither pushed nor further pushed into poverty despite large out-of-pocket health expenditure and b) individuals with large and impoverishing health spending. For these individuals, out-of-pocket health expenditure always exceeds their discretionary budget. For those with a discretionary budget of zero or less – meaning they live in poverty – any out-of-pocket health expenditure worsens their financial situation. Those with a positive discretionary budget are not considered to be living in poverty but they still become impoverished when out-of-pocket payments exceed 100% of their discretionary budget.</p> |

## Selection of regional and global indicators

**Regional indicators R1 and R2 reflect a commitment to the needs of European Member States.** They were developed by WHO Europe, at the request of the Regional Director, 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.

**The global indicator reflects a commitment to the SDG global monitoring framework.** It allows comparison of the performance of Member States in the European Region to the performance of Member States in the rest of the world.

The definition of the the global indicator (SDG indicator 3.8.2) was revised in March 2025 following a two-year consultative process led by the Inter-Agency Expert Group on SDG indicators and adoption of the revised indicator by the UN Statistical Commission. The revised definition is based on methods developed by the World Bank (in 2014) and the WHO Regional Office for Europe (in 2015), building on previous methods developed by WHO and the World Bank in collaboration with academics. See the Annex in the briefing document for details.

## The main differences between the regional and global indicators

The global indicator draws on the regional indicator of catastrophic health spending (R1) and methods proposed by the World Bank. Both indicators are based on a needs approach, which identifies out-of-pocket payments that exceed a pre-defined share of a household's consumption minus an amount to cover needs. Consumption minus the amount needed to cover basic needs is referred to as a household's *capacity to pay for health care* in the regional framework and consumption minus the minimum cost of needs as a household's *discretionary budget* in the global framework.

The regional and global frameworks differ in how they define basic needs – explicitly in the regional framework and implicitly through the societal poverty line (SPL) in the global framework. WHO/Europe uses household spending on food, housing and utilities (water, gas, electricity and heating) as a proxy for basic needs. It captures spending on these items among relatively poor households in a given country. The global indicator uses the SPL (developed for global poverty monitoring with the objective of being closely aligned with national poverty lines) to capture the minimum cost of needs. The SPL has a fixed value for countries at the same income level and a relative component that increases with the level of economic development.

To measure impoverishing health spending, the regional indicator (R2) uses household spending on food, housing and utilities in households between the 25<sup>th</sup> and 35<sup>th</sup> percentiles of the household consumption distribution in a given country as the poverty line. In the global indicator, impoverishing health spending is a subcomponent rather than a separate indicator and uses the SPL.

The unit of analysis of the regional and global indicators also differs. The regional indicators are defined at the household level and all monetary values expressed in per adult equivalent using OECD scales. The global indicator and its components are defined at the population level and monetary values are expressed in per capita terms (as there is no global standard for equivalence scales).

Table 2 and Table 3 provide a side-by-side comparison of the regional and global indicators.

**Table 2 Key dimensions of indicators used by WHO in the European Region to monitor catastrophic health spending**

|                                                                 | <b>Indicator R1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>The global indicator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Definition</b>                                               | The proportion of households with out-of-pocket payments that are greater than a pre-defined threshold of household capacity to pay for health care.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Revised SDG indicator 3.8.2</b> Proportion of population with positive out-of-pocket household expenditures on health exceeding 40% of household discretionary budget.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Background</b>                                               | Developed and used by WHO/Europe in response to demand from Member States for performance measures more suited to high- and middle-income countries and with a stronger focus on pro-poor policies. Builds on an approach developed by WHO and the World Bank.                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Developed by the World Bank and WHO based on methods developed by the World Bank in 2014 and the WHO Regional Office for Europe in 2015. Proposed for SDG monitoring by WHO and the World Bank, recommended by the Inter-Agency Expert Group as an indicator for SDG target 3.8 and adopted in March 2025.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Household expenditure on health (out-of-pocket payments)</b> | Any expenditure incurred by any household member at the time of use to obtain any type of health care good or service from any type of provider. This includes formal and informal payments but excludes payments that are subsequently reimbursed by the government, health insurance funds or private insurers.                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ability to pay</b>                                           | Total household consumption: the sum of the monetary and in-kind payments for all goods and services (including out-of-pocket payments) and the monetary value of the consumption of homemade products minus a standard amount to cover basic needs. Total household consumption does not include imputed rent. Using the same dataset that is used to measure total household consumption, the standard amount to cover basic needs is calculated as the average amount spent on food, housing (rent) and utilities (water, gas, electricity and heating) by households between the 25 <sup>th</sup> and 35 <sup>th</sup> percentiles of the household consumption distribution, adjusted for household composition. | <p>The discretionary budget is the total household consumption expenditure or income after deducting the societal poverty line (SPL). 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 procured for consumption in other ways. It includes imputed rent. In the absence of information on household consumption, the alternative is household income. The SPL is used to assess the minimum cost of needs taking into account the economic level of each country. Using 2017 PPPs, the SPL corresponds to whichever is greater: \$2.15 (the international poverty line) or \$1.15 + 50% of the median monetary welfare indicator net of OOP household health expenditure.</p> <p>The SPL is computed using the same data source used to produce the global indicator. All amounts defined in PPP values (\$2.15 and \$1.15) are converted to local currencies in 2017 prices and then converted to the prices prevailing at the time of the relevant household survey using the best available Consumer Price Index (CPI). The SPL local nominal value can be requested from WHO and the World Bank.</p> |
| <b>Thresholds</b>                                               | 40% of household capacity to pay for health care.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 40% of household discretionary budget as an explicit threshold. There is one implicit threshold (100%) which corresponds to out-of-pocket payments exceeding the discretionary budget. WHO and the World Bank can decompose the population rate into those with large and impoverishing health spending identified with the implicit threshold of 100% and those with relatively large out of pocket payments but who are neither                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                       |                                                                                                                                                                                                                                                                                                                                                                                                           | pushed nor further pushed into poverty (e.g. those with out-of-pocket payments greater than 40% but below 100%).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Aggregation and disaggregation</b> | Results are not aggregated. They are disaggregated into household quintiles by consumption. Other disaggregation is possible on a country-by-country basis where relevant to policy.                                                                                                                                                                                                                      | Global and regional aggregates are based on a combination of survey-based estimates at the country level, with and without econometric modelling, and imputation of missing values. Results are disaggregated by urban vs rural area of residence; gender of the head of the household; age of the head (below and above 60); and the age structure of the household (this includes at most 6 categories: 20-59 years old members – “adults”; below 59 years old members – “adults w/ children and adolescents”; all ages – “Multigenerational households”; from 20 years old – “Adults w/ older persons”; from 60 years old – “Only older adults”; below 20 years old – “children and adolescents only”. For more information see <a href="#">Tracking inequalities in financial hardship due to out-of-pocket health spending by age structure of a household</a> . Other disaggregation can be considered but it needs to be feasible at global level. |
| <b>Data sources and availability</b>  | No additional data collection burden for Member States. Data come from routine household budget surveys (HBS), household income and expenditure surveys (HIES) or socio-economic or living standards surveys. These surveys are generally carried out at least every five years in EU Member States and at least every few years in non-EU countries and are available from national statistical offices. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Data limitations</b>               | Bias due to sampling or non-sampling errors. Not always possible to identify when out-of-pocket payments have been reimbursed retrospectively by a third party. Not usually able to capture unmet need for health care. Results may not be consistent with nationally produced consumption aggregates due to variations in standardization processes.                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Table 3 Key dimensions of indicators used by WHO in the European Region to monitor impoverishing health spending**

|                                                                 | <b>Indicator R2</b>                                                                                                                                                                                                                                                                                   | <b>Second component of the global indicator</b>                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Definition</b>                                               | Impoverishing health spending                                                                                                                                                                                                                                                                         | Impoverishing health spending at the SPL                                                                                                                                                                                                                                                                                                                                     |
| <b>Background</b>                                               | Developed and used by WHO Europe in response to demand from Member States for performance measures more suited to high- and middle-income countries and with a stronger focus on pro-poor policies. Builds on approaches developed by WHO, the World Bank and the European Union.                     | Developed by the World Bank and used by WHO and the World Bank to demonstrate the interdependency between SDG 1 (End poverty in all its form everywhere), and SDG target 1.1 in particular (the eradication of extreme poverty for all people everywhere, reduce inequalities within and between countries (SDG 10) and SDG target 3.8 (universal health coverage for all)). |
| <b>Household expenditure on health (out-of-pocket payments)</b> | Same as indicators G1 and R1.                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Welfare measure</b>                                          | Total household consumption excluding imputed rent.                                                                                                                                                                                                                                                   | Total household consumption, including imputed rent, see Table 2.                                                                                                                                                                                                                                                                                                            |
| <b>Poverty line</b>                                             | The basic needs line is calculated as the average amount spent on food, housing (rent) and utilities (water, gas, electricity and heating) by households between the 25 <sup>th</sup> and 35 <sup>th</sup> percentiles of the household consumption distribution, adjusted for household composition. | Using 2017 PPPs, the SPL corresponds to whichever is greater: \$2.15 (the international poverty line) or \$1.15 + 50% of the median monetary welfare indicator net of out-of-pocket health expenditure.                                                                                                                                                                      |
| <b>Poverty dimensions captured</b>                              | The proportion of households further impoverished and impoverished after out-of-pocket payments.                                                                                                                                                                                                      | Component 2: Proportion of population with positive out-of-pocket payments $\geq$ 100% of discretionary budget (facing large and impoverishing out-of-pocket payments).                                                                                                                                                                                                      |
| <b>Aggregation and disaggregation</b>                           | Same as indicator R1.                                                                                                                                                                                                                                                                                 | Both components of the global indicator can be disaggregated in the same way as the overall indicator.                                                                                                                                                                                                                                                                       |
| <b>Data sources and availability</b>                            | Same as indicator R1.                                                                                                                                                                                                                                                                                 | Same as indicator R1 and the global indicator.                                                                                                                                                                                                                                                                                                                               |

### 3 Regional indicators

WHO support to member states for monitoring financial protection in the European Region 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. It is also underpinned by the [Tallinn Charter](#) and [EUR/RC65/13](#) on priorities for health systems strengthening in the WHO European Region 2015–2020, both of which include a commitment to work towards a Europe free of impoverishing out-of-pocket payments for health.

The WHO Regional Office for Europe is working closely with national experts to prepare estimates that are embedded in country-level policy analysis. This work aims to support policy development through context-specific analysis and carefully tailored policy recommendations at the country and regional level.

The **regional indicators R1 and R2** were developed by the WHO Barcelona Office for Health Systems Financing, at the request of the Regional Director of WHO/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.

The indicators are adapted from the approach set out in Xu K, Evans D, Kawabata K, Zeramdini R, Klavus J and Murray C (2003). Household catastrophic health expenditure: a multicountry analysis. *Lancet* 362: 111–17 and Xu K, Evans D, Carrin G, Aguilar-Rivera A, Musgrove P and Evans T (2007). Protecting households from catastrophic health spending. *Health Affairs* 26(4):972-983. They also draw on elements of the approach set out in Wagstaff A and P Eozenou (2014). *CATA Meets IMPOV: a unified approach to measuring financial protection in health*, Washington DC: World Bank.

For further information, see:

Cylus J, Thomson S, Al Tayara L, Cerezo-Cerezo J, Gallardo-Martínez M, García-Ramírez JA et al. (2024). Assessing the equity and coverage policy sensitivity of financial protection indicators in Europe. *Health Policy*. 147:105136 (<https://doi.org/10.1016/j.healthpol.2024.105136>).

Thomson S, Cylus J, Al Tayara L, Gallardo-Martínez M, García-Ramírez JA, Serrano-Gregori M, Cerezo-Cerezo J, Karanikolos M, Evetovits T (2024). Monitoring progress towards universal health coverage in Europe: a descriptive analysis of financial protection in 40 countries. *The Lancet Regional Health–Europe*. 37(100826) (<https://doi.org/10.1016/j.lanepe.2023.100826>).

WHO Regional Office for Europe (2023). [Can people afford to pay for health care? Evidence on financial protection in 40 countries in Europe](#). Copenhagen: WHO Regional Office for Europe.

WHO Regional Office for Europe (2023). Can people afford to pay for health care? Evidence on financial protection in 40 countries in Europe. [Summary](#). Copenhagen: WHO Regional Office for Europe.

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.

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.

## **Data sources and requirements**

Preparing country-level estimates for indicators R1 and R2 requires nationally representative household survey data.

The following variables are required at the 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)
- health expenditure (out-of-pocket payments), disaggregated by type of health care goods and services<sup>1</sup>
- household size and the number of children (under 13 years of age) in the household

If the survey includes a household sampling weight variable, calculations should consider the weights in all instances.

Information on household or individual-level characteristics such as age, sex, education and location are useful for additional equity analysis.

## **Defining household consumption expenditure variables**

Survey data come in various time units, often depending on whether the reporting period is seven days, two weeks, one month, three months, six months or one year. It

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<sup>1</sup> The level of detail and sequencing of questions in household surveys have a significant impact on reported levels of consumption and out-of-pocket payments. Efforts should be made to use standardised surveys with well-sequenced and detailed questions on consumption and out-of-pocket payments. It is important to document the quality of the survey.

is important to convert all variables related to household consumption expenditure to a common time unit. It may be most useful to annualize all survey data to facilitate comparison with other national-level indicators.<sup>2</sup>

**Total household consumption expenditure does not include imputed rent:**

Household consumption expenditure comprises both monetary and in-kind payments for all goods and services (including out-of-pocket payments) and the monetary value of the consumption of homemade products. Because many household budget surveys do not calculate imputed rent, to maintain cross-country comparability, if the household budget survey does include imputed rent ([COICOP](#) code 4.2), this value should be subtracted from total consumption.

**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 section 1.

**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 sections 4.1 (for rent) and 4.4 and 4.5 (for utilities). Care should be taken to exclude spending on secondary dwellings. Imputed rent (COICOP section 4.2) 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 care provided by any type of provider (COICOP section 6).

Health care is any good or service delivered in the health system. It typically includes 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, anesthesiologists, 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 from the government, health insurance funds or private insurance companies.

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<sup>2</sup> If annualising 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.

## **Estimating basic needs expenditure and capacity to pay**

Basic needs expenditure is a socially recognized minimum level of spending considered necessary to ensure sustenance and other basic personal needs. We calculate household-specific levels of basic needs expenditure to estimate a household's capacity to pay for health services. 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. In the European Region, we consider food, utilities and rent to be basic needs and distinguish between:

- households that do not report any utilities or rent expenses, so their basic needs include food only
- 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, so that their basic needs include food and utilities only<sup>3</sup>
- 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), so that 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

To estimate standard (normative) levels of basic needs expenditure, we first rank all households based on their total consumption expenditure per (equivalent) person. Households between the 25<sup>th</sup> to 35<sup>th</sup> percentiles of the total sample are referred to as the representative sample to estimate basic needs expenditure. It is assumed that they are able to meet, but not necessarily exceed, basic needs for food, utilities and rent.<sup>4</sup>

**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

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<sup>3</sup> Adjusting households' capacity to pay for rent (among renters) is particularly important. Mortgages are considered as investments, not consumption expenditure, in household budget surveys, and for this reason household spending on mortgages is often not collected. This means that without subtracting some measure of rent expenditure from those who rent, renters will appear systematically wealthier (and have greater capacity to pay) than identical households with mortgages.

<sup>4</sup> 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.

consumption. We use the OECD equivalence scale to generate the equivalent household size for each household:

$$\begin{aligned} \text{equivalent household size} \\ &= 1 + 0.7 \times (\text{number of adults} - 1) \\ &\quad + 0.5 \times (\text{number of children aged 0 – 13 years}) \end{aligned}$$

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

Households whose equivalised total consumption expenditure is between the 25<sup>th</sup> and 35<sup>th</sup> percentile across the whole weighted sample are the representative households used to calculate normative basic needs levels. Using survey weights, the weighted average of expenditure for food, utilities and rent among these representative households that report positive values for food,<sup>5</sup> utilities and rent expenditure, respectively, gives the basic needs expenditure per (equivalent) person for food, utilities and rent.

Note that for households that do not report any rent or utilities expenses, we use only the sample-weighted food basic needs expenditure to represent total basic needs expenditure per (equivalent) person.

For households that report utilities expenditures but do not report any rent expenses, we sum the two basic needs expenditure sample-weighted averages for food and utilities to calculate total basic needs expenditure per (equivalent) person.

For households that report rent expenditures but do not report any utilities expenses, we sum the two basic needs expenditure sample-weighted averages for food and rent to calculate total basic needs expenditure per (equivalent) person.

For households that report both rent and utilities, we sum the three basic needs expenditure sample-weighted averages for food, utilities and rent 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 the basic needs level.

**Capacity to pay for health care:** A household's capacity to pay for health care is defined as non-basic needs consumption expenditure. Some households may report total consumption expenditure that is lower than the basic needs level, which defines

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<sup>5</sup> Note again that we exclude households that do not report food expenditure as this may reflect reporting errors.

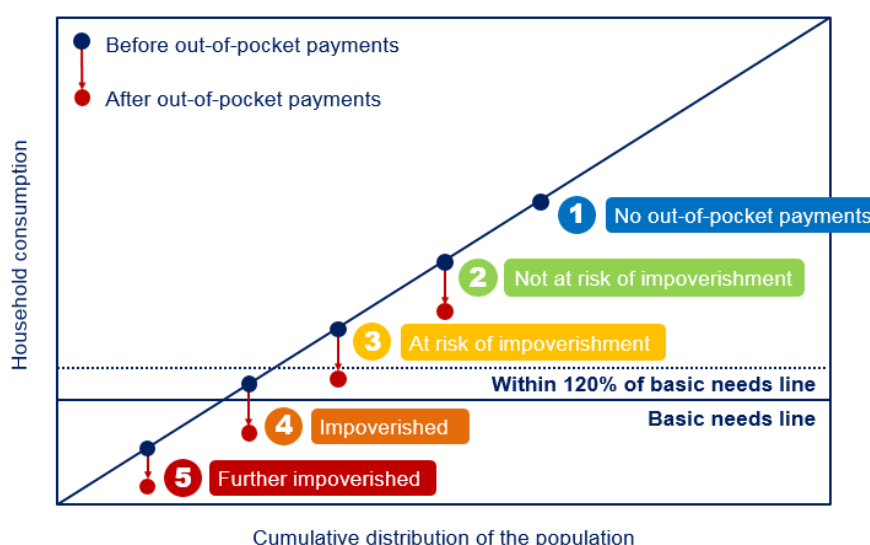
them as being poor. Note that if a household is poor, capacity to pay will be negative after subtracting the basic needs level.

### Estimating impoverishing health spending (indicator R2)

Measures of impoverishing health spending aim to quantify the impact of out-of-pocket payments on poverty. For indicator R2, we divide households into five mutually exclusive categories based on their level of out-of-pocket payments in relation to the basic needs line, as shown in Figure 1.

- 1 **No out-of-pocket payments:** those that report no health expenditure.
- 2 **Not at risk of impoverishment after out-of-pocket payments:** non-poor households with out-of-pocket payments that do not push them below the multiple of the basic needs line.
- 3 **At risk of impoverishment after out-of-pocket payments:** non-poor households with out-of-pocket payments that push them below a multiple of the basic needs line. The multiple we report is 120%, but we also estimate 105% and 110%.
- 4 **Impoverished after out-of-pocket payments:** non-poor households that are pushed into poverty after paying out of pocket for health services. For them, the ratio of out-of-pocket payments to capacity to pay is greater than 1.<sup>6</sup>
- 5 **Further impoverished after out-of-pocket payments:** households already below the basic needs line with out-of-pocket payments. Any household whose ratio of out-of-pocket payments to capacity to pay is less than zero (that is, negative) is pushed further into poverty by out-of-pocket payments.

**Figure 1 Impoverishing health spending**



<sup>6</sup> 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.

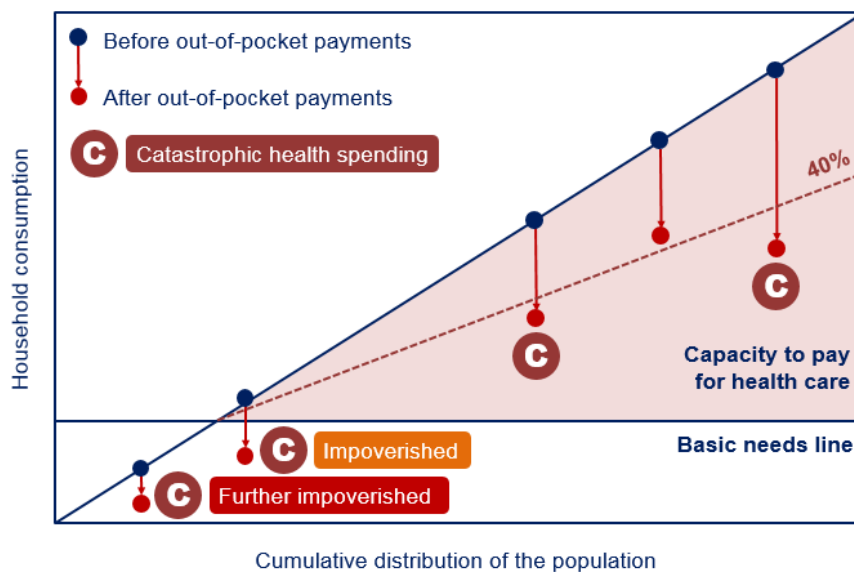
## Estimating catastrophic health spending (indicator R1)

Catastrophic health spending occurs when a household's out-of-pocket payments equal or exceed some threshold of a household's capacity to pay. Thresholds are arbitrary. The threshold used most often in capacity-to-pay measures is 40%. We use 40% for reporting purposes but also prepare estimates using thresholds of 20%, 25% and 30%.

Households with catastrophic health spending are defined as those with out-of-pocket payments greater than 40% of their capacity to pay. This includes all households who are impoverished, because their out-of-pocket payments are greater than their capacity to pay. It also includes all households who are further impoverished, because they do not have any capacity to pay.

Households with non-catastrophic health spending are defined as those with out-of-pocket payments that are less than the pre-defined catastrophic spending threshold, as shown in Figure 2.

**Figure 2 Catastrophic health spending**



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

**Distribution:** The first equity dimension is expenditure quintile. Expenditure quintiles are determined based on equivalised per person household expenditure.<sup>7</sup> Household weights should be used when grouping the population by quintile. Countries may find

<sup>7</sup> 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 equivalised per person household expenditure.

it relevant to analyse other equity dimensions such as differences between urban and rural populations, regions, men and women, age groups and household types.

**Structure:** 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. We recommend the following categories, with their corresponding COICOP categorization: medicines<sup>8</sup> (6.1.1), medical products (6.1.2 and 6.1.3), outpatient care (6.2.1, and 6.2.3 from 2018), dental care (6.2.2), diagnostic tests (6.2.3) and inpatient care (6.3). Given that sample sizes may be very small for some categories, it would be good to report 95% confidence intervals.

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<sup>8</sup> If possible, a distinction should be made between prescription and over-the-counter medicines.

## 4 Global indicators

At a global level, WHO support for monitoring financial protection is underpinned by a a World Health Assembly [resolution](#) (2015) on sustainable health financing, universal coverage and social health insurance and UN General Assembly [resolution](#) (2019) on universal health coverage. WHO and the World Bank are working together on global monitoring of financial protection for the SDGs. The United Nations (UN) recognizes WHO as the custodian agency for SDG indicator 3.8.2 and the World Bank as the co-custodian agency.

### Data sources and requirements

Preparing country-level estimates for the revised global indicator and its components requires access to the same nationally representative household survey data that is used to produce the regional indicators. In addition to household budget surveys (HBS), household income and expenditure surveys (HIES) and socio-economic or living standards surveys are also considered. These surveys are sometimes standardized for cross-country comparability by EUROSTAT, the Luxembourg Income study or the World Bank.

The survey used to prepare the global indicators in the attached excel file can be identified using the ISO 3166-1 alpha-3 code, the year of the survey, the survey acronym, the version of the survey and (where relevant) the adaptation.

A subset of the variables used for the regional analysis at the household level is needed to produce the global indicator, with only one notable difference: total household consumption expenditure should include imputed rent (when available). As for the regional analysis, it should also include all payments for health care.

The other variables required are:

- total household expenditure on health net of any reimbursement
- household size
- household sampling weight ( $w_h$ )

### Distribution

Global indicators are disaggregated by area of residence; gender of the head of the household (male/female); age of the head (below and above 60); and the age structure of the household using at most 6 categories<sup>9</sup>: 20-59 years old members – “adults only”; below 59 years old members – “adults w/ children and adolescents”; all

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<sup>9</sup> WHO (2024). [Tracking inequalities in financial hardship due to out-of-pocket health spending by age structure of a household: technical brief on measurement](#). Geneva: World Health Organization.

ages – “Multigenerational households”; from 20 years old – “Adults w/ older persons”; from 60 years old – “Only older adults”; below 20 years old – “children and adolescents only”. For the age structure, information on each member’s age with five years intervals is required<sup>10</sup>. Countries may find it relevant to analyse other equity dimensions. To include other dimensions in the global framework, they need to be feasible across most regions in the World.

For an in-depth analysis of the drivers of financial hardship, information on the composition of total household expenditure on health by type of provider is required.

## Defining household consumption expenditure variables

Total household consumption expenditure is the preferred indicator of a household’s monetary welfare. However, total household income may be used if a country uses income to monitor poverty, and so as long the survey reporting income *also* collects information on total household expenditure on health.

Total household expenditure on health must include the following broad categories of health commodities and services: medicines and medical products (6.1), outpatient care services (6.2) and inpatient care services (6.3) as described in section 6 of the UN Classification of Individual Consumption According to Purpose ([COICOP](#)). It should also be net of any reimbursement by a third party such as the government, a health insurance fund or a private insurance company.

All variables related to expenditure should be in daily figures. Where survey data are provided in other units (when the recall period is seven days, two weeks, three months, six months or one year), the data will need to be converted to **daily** figures. An example here is to denote daily total household consumption expenditure or income per capita (*hh\_expcapd*) and daily total household expenditure on health per capita (*hh\_hexpcapd*).

## How are the revised and initial SDG indicator 3.8.2 definitions calculated?

The initial SDG indicators 3.8.2 **was calculated as follows:**

$$\sum_i \frac{m_i \omega_i}{\sum_i m_i \omega_i} * \mathbf{1} \left( \frac{oop_i^{health}}{y_i} > \tau \right)$$

with

- $m_i$  corresponding to the number of household members of household  $i$

<sup>10</sup> Diaz T, Strong KL, Cao B, Guthold R, Moran AC, Moller AB, Requejo J, Sadana R, Thiyagarajan JA, Adebayo E, Akwara E, Amouzou A, Aponte Varon JJ, Azzopardi PS, Boschi-Pinto C, Carvajal L, Chandra-Mouli V, Crofts S, Dastgiri S, Dery JS, Elnakib S, Fagan L, Jane Ferguson B, Fitzner J, Friedman HS, Hagell A, Jongstra E, Kann L, Chatterji S, English M, Glaziou P, Hanson C, Hosseinpoor AR, Marsh A, Morgan AP, Munos MK, Noor A, Pavlin BI, Pereira R, Porth TA, Schellenberg J, Siddique R, You D, Vaz LME, Banerjee A. A call for standardised age-disaggregated health data. *Lancet Healthy Longev.* 2021 Jul;2(7):e436-e443. doi: 10.1016/S2666-7568(21)00115-X. Erratum in: *Lancet Healthy Longev.* 2021 Aug;2(8):e458. PMID: 34240065; PMCID: PMC8245325.

- $\omega_i$  corresponds to the sampling weight of household  $i$ ,
- $1()$  is the indicator function that takes on the value 1 if the bracketed expression is true and 0 otherwise,
- $oop_i^{health}$  corresponds to daily per capita out-of-pocket household expenditure on health
- $y_i$  corresponding to daily per capita total household consumption expenditure or income
- $\tau = 10\%$  and  $25\%$  and corresponds to the two thresholds identifying large household expenditure on health as a share of total household consumption or income.

The revised SDG indicator 3.8.2 definition is calculated as follows:

$$\sum_i \frac{m_i \omega_i}{\sum_i m_i \omega_i} * 1(oop_i^{health} > 0.4 * (y_i - \text{SPL}) \cap oop_i^{health} > 0)$$

where

- All variables ( $oop_i^{health}$ ,  $y_i$ ,  $m_i$ ,  $\omega_i$ ,  $1()$ ) are defined exactly as in the initial SDG indicator 3.8.2
- **SPL** is the **only new component**. It corresponds to the societal poverty line.
- Using 2017 purchasing power parities (PPPs), the **SPL** corresponds to whichever is greater: \$2.15 (the international poverty line) or \$1.15 + 50% of median household consumption expenditure or income, but there isn't any explicit health allowance in the definition of the societal poverty line. On these grounds, the median is computed based on the distribution of household consumption expenditure or income, excluding out-of-pocket household expenditure on health as follows:
 
$$\max(\$2.15 \text{ a day}; \$1.15 \text{ a day} + 0.5 * \text{median}(y_i - oop_i^{health}))$$
- All amounts defined in PPP values (\$2.15 and \$1.15) are converted to local currencies in 2017 price and then converted to the prices prevailing at the time of the relevant household survey using the best available Consumer Price Index (CPI). This approach is consistent with the methodology used for SDG indicator 1.1.1.
- The SPL data produced by the World Bank is available on the Poverty and Inequality Platform ([pip.worldbank.org](http://pip.worldbank.org)) but might differ from the one computed for this revision as the median might not be systematically based on the distribution of consumption or income excluding OOP health spending.
- **0.4** is **the only explicit threshold** applied to the household discretionary budget ( $y_i - \text{SPL}$ ).

- There is one implicit threshold, 100%, which corresponds to OOP health spending exceeding the discretionary budget. This can happen when OOP health spending is positive ( $OOP > 0$ ) but the discretionary budget is negative or null ( $y_i - SPL \leq 0$ ). This type of spending affects people living in poverty (with  $SPL > y_i$ ) and at the poverty line (with  $SPL = y_i$ ) for whom any OOP health expenditure worsens their financial situation. Those with a positive discretionary budget are not considered to be living in poverty, but they still become impoverished when OOP health expenditures surpass 100% of their discretionary budget. With the revised definition, WHO and the World Bank can decompose the population rate into those with large and impoverishing OOP health expenditures identified with the implicit thresholds of 100% and those with relatively large OOP health but who are neither pushed nor further pushed into poverty, i.e., those with OOP health spending greater than 40% but below 100%.
- For both the revised and initial SDG 3.8.2 indicators, the choice of the threshold (10%, 25%, 40%) affects the population level rates – the higher the value, the lower the rate. But it does not affect the trends. However, the revised and initial SDG indicator 3.8.2 definitions differ in their pro-poor gradient and sensitivity to the choice of consumption versus income. When the initial SDG indicator 3.8.2 was based on consumption, higher thresholds tended to lead to a greater concentration among the better-off and in the top quintiles of per capita consumption. However, when the initial SDG indicator 3.8.2 was based on income, higher thresholds tended to lead to a greater concentration among the worse off and in the lowest quintiles of per capita income. The revised definition is always more concentrated among the poorer and in the lowest quintiles of both per capita consumption and income.

The revised definition does not change the data requirements. It can be computed from the same type of household surveys as the initial SDG indicator 3.8.2 definition.

The revised definition requires the computation of two additional variables (the SPL and the discretionary budget). However, both are computed using the same data source used to produce SDG 3.8.2 indicators. The SPL won't be reported as a separate indicator within the SDG monitoring framework.

The CPI data and purchasing power parities (PPP) that are needed to convert the SPL into local nominal currency values for the relevant year of the household survey can be downloaded from the Poverty and Inequality Indicators page of the World Bank's Poverty and Inequality Platform (<https://pip.worldbank.org/poverty-calculator>). The societal poverty estimates (societal poverty rate and societal poverty lines) are also available for downloading by selecting Societal Poverty Rate from the Other Indicators menu, but they might differ from the ones that are to be computed for the revised SDG indicator 3.8.2 definition as it should be based on the median net of OOP health spending. SPL local nominal value can also be requested from WHO and the World Bank and is included in the country consultation table. WHO is available to support the computation of the SPL for SDG indicator 3.8.2 reporting.

With the adoption of the revision, the number of series to be reported for SDG indicator 3.8.2 will be cut from two to one. The decomposition based on the implicit 100% threshold is not requested as part of the SDG monitoring framework.

### **Why use the societal poverty line (SPL) in the definition of discretionary budget?**

The definition of a household discretionary budget relies on a poverty line to approximate the minimum cost of needs.

The societal poverty line was developed to acknowledge that the estimated minimum cost of needs and social participation varies across countries over time, conditional on the overall level of economic development. This is important for the cross-country comparability requirement embedded in the global SDG monitoring framework.

- The societal poverty line is calibrated as the closest empirical fit to existing definitions of national poverty lines.
- Other international poverty lines that can be used to assess the cost of basic needs include the one used in SDG indicator 1.1.1.
- The SPL definition includes the use of the international poverty line for some countries (as used by SDG indicator 1.1.1), but it allows the use of higher values using a formula that includes a fixed element and a relative gradient in consumption or income levels, which is better aligned with the relative concept of poverty adopted as countries become richer.
- For all these reasons, the SPL is preferred to any other poverty line for SDG reporting. Other regional and national methods to define household discretionary budget and methods to estimate basic needs exist and are relevant to contextualize findings.

### **How do global, regional, and country-level trends differ between the initial and revised SDG indicator 3.8.2 definition?**

- The level of the proposed revised indicator will be higher than SDG indicator 3.8.2 globally, regionally and for almost all countries. As described above, the revised indicator can be interpreted as combining the share of the population with both large and impoverishing health spending, while SDG indicator 3.8.2 only captures large OOP health spending.
- Compared to the trends based on SDG indicator 3.8.2, the trends based on the revision will be different. The global SDG indicator 3.8.2 rate has been continuously increasing between 2000 and 2019. The rate of impoverishing OOP health spending followed a different trend. When considering the international poverty line as a benchmark for impoverishment, there was a sharp decrease in the rate of people experiencing impoverishing OOP health spending since 2000,

largely driven by a reduction in the global poverty headcount ratio. When considering a relative poverty line, however, there has been an increase in the rate of population incurring impoverishing OOP health spending. The overall trend with the revision will be a combination of the reduction observed in impoverishing OOP health spending at the international poverty line and the increase observed in both impoverishing OOP health spending at the relative poverty line and large OOP health spending. Country-specific trends in large and impoverishing health spending differ, so the change in trend will differ from country to country.

For further information on the methods used for the global indicators, please consult the revised SDG 3.8.2 metadata (see the Annex) and:

WHO (2024). [Comprehensive Review Proposal Submission Form to revise SDG 3.8.2](#). Geneva: World Health organization.

Jolliffe D, Beer Prydz E (2021). [Societal Poverty: A Relative and Relevant Measure](#). *The World Bank Economic Review*. 35(1):180–206.

For disaggregation:

World Health Organization (2024). [Tracking inequalities in financial hardship due to out-of-pocket health spending by age structure of a household: technical brief on measurement](#).

For further information about the global reports, please consult:

WHO and the World Bank (2023) [Tracking universal health coverage: 2023 global monitoring report](#). Geneva: World Health Organization and International Bank for Reconstruction and Development / The World Bank; 2023.

United Nations (2024). [The sustainable development goals report 2024](#). New York: United Nations.

Earlier publications can be accessed [here](#).