Health Policy xxx (2018) xxx–xxx

Contents lists available at ScienceDirect

Health Policy

journal homepage: www.elsevier.com/locate/healthpol

Financial protection in Europe: a systematic review of the literature and mapping of data availability

Pooja Yerramilli[a,1], Óscar Fernández[b,2], Sarah Thomson[a,*,3]

[a] WHO Barcelona Office for Health Systems Strengthening, Sant Pau Art Nouveau Site, Sant Antoni Maria Claret 167, Barcelona, 08025, Spain
[b] ESADE Madrid, Business School, Mateo Inurria, 25-27, Madrid, 28036, Spain

ARTICLE INFO

Article history:
Received 7 December 2017
Received in revised form 9 February 2018
Accepted 10 February 2018

Keywords:
Catastrophic health spending
Financial protection
Household health expenditures
Impoverishment
Out-of-pocket payments
Universal health coverage

1. Introduction

1.1. What is financial protection?

Universal health coverage ensures everyone can use the quality health services they need without experiencing financial hardship [1]. People experience financial hardship when out-of-pocket payments – formal and informal payments made at the time of using any health care good or service – are large in relation to ability to pay [2]. Even small out-of-pocket payments can cause financial hardship for poor households and those who have to pay for long-term treatment such as chronic medications [2]. Because all health systems involve a degree of out-of-pocket payment, financial hardship can be a problem in any country.

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 therefore 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. Recognising this, the World Health Organization (WHO) and the World Bank have long regarded financial protection as a core dimension of health system performance assessment [3]. The Sustainable Development Goals adopted by the United Nations in 2015 also include financial protection as a measure of universal health coverage [4].

1.2. How is financial protection measured?

Financial protection is measured using two well-established and distinct indicators: catastrophic and impoverishing out-of-pocket payments. Both indicators require data from household income or expenditure surveys.

Catastrophic spending occurs when the amount a household pays for health care out of pocket (the numerator) exceeds a predefined share of its ability to pay for health care (the denominator), which may make it difficult for the household to meet other basic needs [5]. It is measured in different ways, with metrics varying in how they define ability to pay for health care.

The simplest catastrophic metric defines ability to pay for health care as a household's total income or consumption – in other words, all of a household's available resources. This is known as the **budget share approach** [6].

* Corresponding author at: Sant Pau Art Nouveau Site, Sant Antoni Maria Claret 167, Barcelona, 08025, Spain.
E-mail addresses: pooja.yerramilli@aya.yale.edu (P. Yerramilli), oscar.fernandez9@esade.edu (Ó. Fernández), thomsons@who.int (S. Thomson).
[1] Researcher, WHO Barcelona Office for Health Systems Strengthening.
[2] Research Assistant, ESADE.
[3] Senior Health Financing Specialist, WHO Barcelona Office for Health Systems Strengthening.

https://doi.org/10.1016/j.healthpol.2018.02.006

So-called capacity to pay approaches define ability to pay for health care as resources remaining after accounting for household spending on basic needs, most commonly using food as a proxy for basic needs. The **actual food spending approach** deducts a household's actual spending on food from its total consumption and calculates catastrophic spending based on the remaining amount [6].

The **normative food spending approach** goes one step further and calculates a standard amount households need to spend on food, deducts this from a household's total consumption and calculates catastrophic spending based on the remaining amount [7]. In practice, it is only a partial adjustment to the actual food spending approach because if a household's actual food spending is below the standard amount, then actual food spending is deducted rather than the higher, standard amount.

Catastrophic metrics can also differ in whether they use household consumption, expenditure or income as the denominator. Most studies use consumption or expenditure where available, because consumption is typically regarded as a more reliable measure of welfare than income [8]. Different metrics are associated with different thresholds. The budget share approach tends to use thresholds of 10% and 25%, while the other approaches tend to use thresholds of 25% and 40%.

Impoverishing health spending provides important information regarding the impact of out-of-pocket payments on poverty [2]. It is measured by looking at a household's position in relation to a pre-defined poverty line before and after incurring out-of-pocket payments. A household is considered to be impoverished if its consumption or income is above the poverty line before out-of-pocket payments and below it after out-of-pocket payments. Metrics differ in the type of poverty line they use. Absolute poverty thresholds may include the World Bank's international poverty line (currently $1.90 per person per day in purchasing power parity) or national poverty lines based on the World Bank's poverty assessment (PA), food poverty (cost of minimum food requirements) or basic needs (current cost of a basket of goods thought to satisfy minimum biological needs) [9]. Relative poverty lines may be based on income (for example, the European Union's threshold of 60% of median income) or reflect household spending on basic needs [7].

1.3. Why is monitoring financial protection useful for policy?

Measuring the incidence of catastrophic and impoverishing out-of-pocket payments over time using nationally representative data answers questions about national and cross-national health system performance: *How many people experience financial hardship? How has this changed over time?* To understand what drives financial hardship, and how it can be addressed, requires a more comprehensive analysis of the same data, focusing on additional questions: *Who is most likely to experience financial hardship? What types of health care are these people paying for? How has this changed over time?* When the results of this analysis are considered in the context of a given country, to see if it is possible to link results to policies, it may be possible to generate actionable evidence at the national level. If this type of monitoring is then undertaken systematically across countries, it can help to identify factors associated with stronger and weaker performance, providing policy guidance at regional and global levels.

In summary, policy-relevant monitoring of financial protection involves the use of nationally representative data; analysis of the incidence (how many households?), distribution (which households?) and drivers (which health services?) of financial hardship over time; and some attempt to discuss and interpret results in the context of national policy developments.

1.4. The aims and content of this article

This article has three aims. First, it maps the availability of data for financial protection analysis in Europe. Second, it systematically reviews the empirical literature on financial protection in Europe to identify trends across countries and over time. Third, it identifies gaps in the scope and depth of the empirical literature and comments on its ability to inform policy. Throughout, Europe refers to the 53 countries in the WHO European Region.

The article is structured as follows. Section 2 sets out the methods used. Section 3 presents results; it starts with the mapping of data availability, goes on to analyse the empirical literature and then analyses the financial protection results extracted from the literature. Section 4 discusses findings and suggests ways of improving the monitoring of financial protection in Europe.

2. Methods

2.1. Data mapping

To assess the availability of data for financial protection analysis, we identified the data sources most frequently used in the empirical literature and conducted the following searches:

- websites of national statistical offices (NSOs) in 53 countries for information on household income and expenditure surveys
- the Eurostat website for information on household budget surveys in European Union (EU) countries
- websites associated with international surveys on household income or expenditure that include household spending on health care

These searches were not intended to be exhaustive. Once we found that a country had conducted a national (as opposed to international) household expenditure survey in the last five years, we did not look for additional sources of data.

2.2. Systematic review of the empirical literature

To identify empirical literature on financial protection, we undertook a systematic review of published literature on catastrophic and impoverishing out-of-pocket payments in Europe.

We used the following search engines: PubMed, Scopus, the World Bank E-Library and the World Bank Open Knowledge Repository. We also hand searched the WHO List of Online Publications and the WHO/Europe List of Health Financing Documents. We looked at World Bank and WHO databases because these two international organisations explicitly include financial protection in their health system performance frameworks, unlike other international organisations working on health systems in Europe (the European Commission and the OECD). In our search we used key phrases such as out-of-pocket expenditure, catastrophic health expenditure, impoverishing health expenditure and the names of countries in the WHO European Region. The full search string can be found in Appendix 1. Searches were conducted in November-December 2016, May 2017 and July 2017.

The titles, abstracts and full text of the publications identified were reviewed by two people to determine eligibility based on strict inclusion and exclusion criteria. Inclusion criteria were as follows: academic papers, reports or grey literature published between 1990 and early July 2017; published in English; and involving countries in the WHO European Region. Exclusion criteria were as follows: unpublished documents; documents that did not include their own empirical analysis (but may have cited the results of empirical analysis from other sources); and documents

Please cite this article in press as: Yerramilli P, et al. Financial protection in Europe: a systematic review of the literature and mapping of data availability. Health Policy (2018), https://doi.org/10.1016/j.healthpol.2018.02.006