Can we adequately measure the financial protection component of Universal Health Coverage?

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What is Universal Health Coverage?

- All people should have access to quality health services when needed without being exposed to undue financial hardship.
- Seen as the primary desired outcome and unifying goal of health systems.
- Not a new idea but gained real traction when enshrined as part of the SDGs (SDG target 3.8).

UHC HAS TWO DISTINCT COMPONENTS

- 3.8.1: Population coverage of essential health services.
- 3.8.2: Proportion of households protected financially against economic consequences of using health services.

Why provide financial protection?

- Illness is among the least predictable and most devastating shock that households can face - in particular in low and middle income countries (Gertler & Gruber, 2002).
- In 2010, based on data from 133 countries, approximately 808 million people experienced financial catastrophe globally due to out-of-pocket health spending (11.7% globally) and another 97 million people suffered impoverishment due to health spending (Wagstaff et al., 2017).

How to measure and monitor financial protection?

- Lesson from MDG, we need an internationally comparable indicator to monitor progress across countries.
- The Inter-Agency Expert Group on SDG recommends the proportion of the population with catastrophic health spending (SDG indicator 3.8.2).
- Other indicators exist and a lack of consensus in the literature in terms of what measure is best.

What is financial protection against health expenditures?

- The WHO defines financial protection as a state when ”direct payments made to obtain health services do not expose people to financial hardship and do not threaten living standards”.
- Does not necessarily mean that health services must be free but must be affordable relative to capacity of households to pay for health services.
- Excludes indirect economic effects of ill health and non-financial costs of using health services.

How do we measure financial protection?

Catastrophic Health Expenditures – 10% of total income or consumption

$$\%\ CHE = \frac{1}{N}\sum_{i} I\left(\frac{h_i}{x_i} \geq z\right)$$

The percentage of households (i) in the population (N) OOPs (h_i) that exceed a z-percent of their total consumption or income (x_i). The operator $I(\quad)$ is an indicator function that takes value one if household i has CHEs, and zero otherwise.

How do we measure financial protection?

Catastrophic Health Expenditures – 40% of non-food income or consumption

$$\%\ CHE = \frac{1}{N}\sum_{i} I\left(\frac{h_i}{x_i - f_i} \geq z\right)$$

The percentage of households (i) in the population (N) OOPs (h_i) that exceed a z-percent of their total consumption or income (x_i) minus household expenditures on food (f_i).

How do we measure financial protection?

Catastrophic Health Expenditures – 40% of non-subsistence income or consumption

$$\%\ CHE = \frac{1}{N}\sum_i I\left(\frac{h_i}{CTP_i} \geq z\right)$$

Where the CTP_i is defined for poor and non-poor households as:

$$CTP_i = \begin{cases} x_i - se_i & if\ x_i - se_i \geq 0 \\ x_i - f_i & if\ x_i - se_i < 0 \end{cases}$$

and subsistence consumption of each household (se_i) is defined as:

$$se_i = pl * hhsize^{\beta}$$

How do we measure financial protection?

Impoverishing Health Expenditures

$$\%\ IHE = \frac{1}{N}\sum_{i} I(x_i - h_i < pl)$$

Households that fall below the poverty line when OOPs (h_i) are subtracted from total income or consumption.

How do we measure financial protection?

Financial Protection Index

A. Immiserizing: households with a total consumption below the poverty line before paying for OOPs and who are pushed further into poverty after paying.
B. Impoverished: households with a total consumption above the poverty line before paying for OOPs, but who fall below the poverty line after paying for them.
C. Households with CHEs: households with a total consumption below (1+z)% the poverty line after paying for OOPs, where the z-multiplier reflects a percent over the poverty line, selected by the researcher. (Wagstaff et al. (2014) propose 20%).
D. Households with Non-CHEs: households with a total consumption above (1+z%) the poverty line after paying for OOPs.
E. Zero Spending: Households who did not report any OOPs during the survey period.

How do we measure financial protection?

FPI Score

$$FPI = \frac{\%A + 2(\%B) + 3(\%C) + 4(\%D) + 5(\%E)}{15}$$

What makes a good indicator?

- Measurement is a process that link abstract concepts to quantitative indicators through theoretically and empirically derived steps.
- Commonly used criteria: validity and reliability.
- But not all high quality indicators are useful to policy.

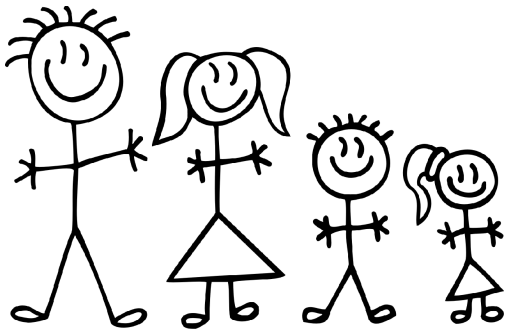
What makes a good indicator of financial protection?

Criteria:

1. It should make sense conceptually
2. It should identify households that are most vulnerable to out-of-pocket health spending
3. It should be useful to policy makers

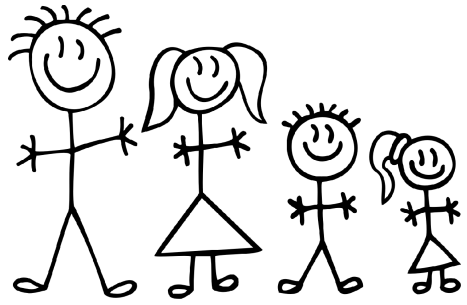
Is it equitable?

Family A



- Earns $10 a month in income
- Spent $1 last month on health care
- Catastrophic spending > 10%
- Surplus $9 a month to spend on everything else

Family B



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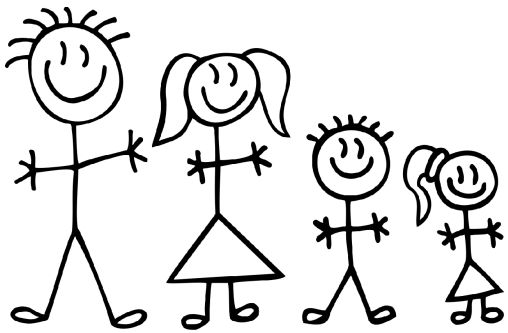
Is it fair?

Family A



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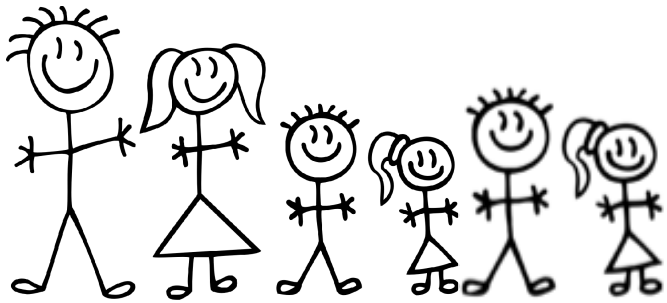

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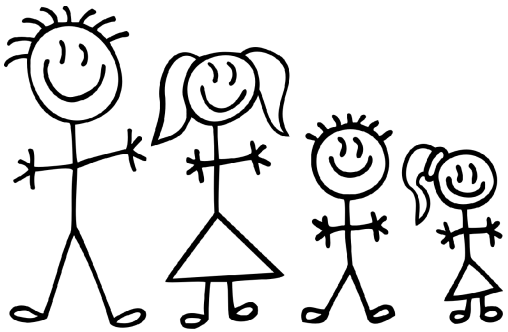
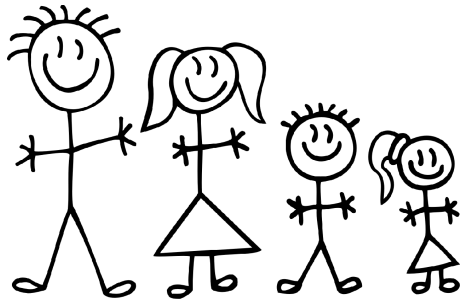
Does it measure access?

Family A



- Earns $10 a month in income
- Spent ~~**$10**~~ **$0** last month on health care because they cannot afford it
- Catastrophic spending 0%!

Family B



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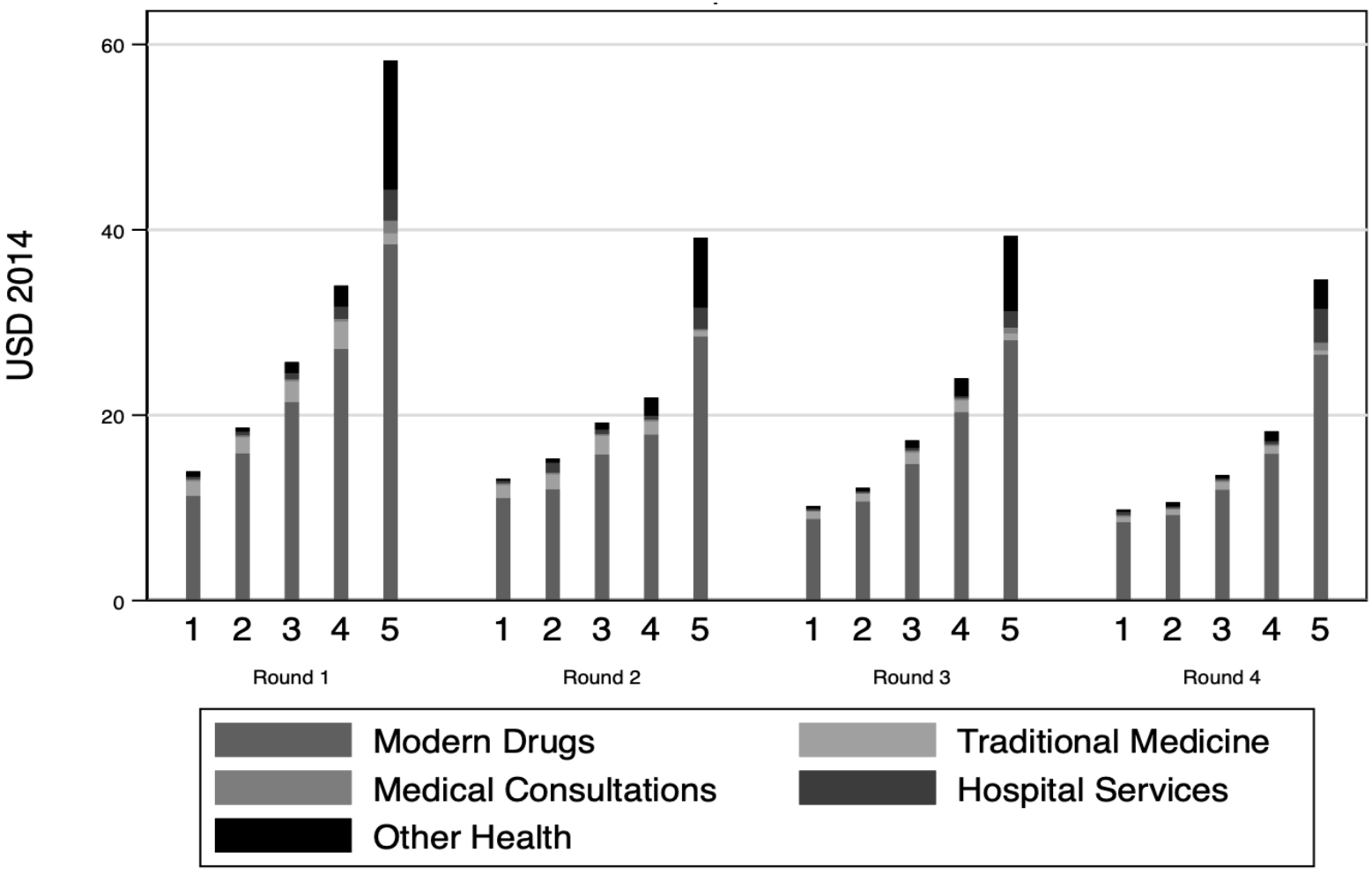
Burkina Faso Health Expenditure Project

- Enquete Multisectorielle Continue (EMC) conducted in 2014 by INSD and the government of Burkina Faso.
- Based on LSMS questionnaire: consumption, assets/durables, and other modules.
- Panel: visited households once per quarter for a full year.

Out-of-pocket health expenditures

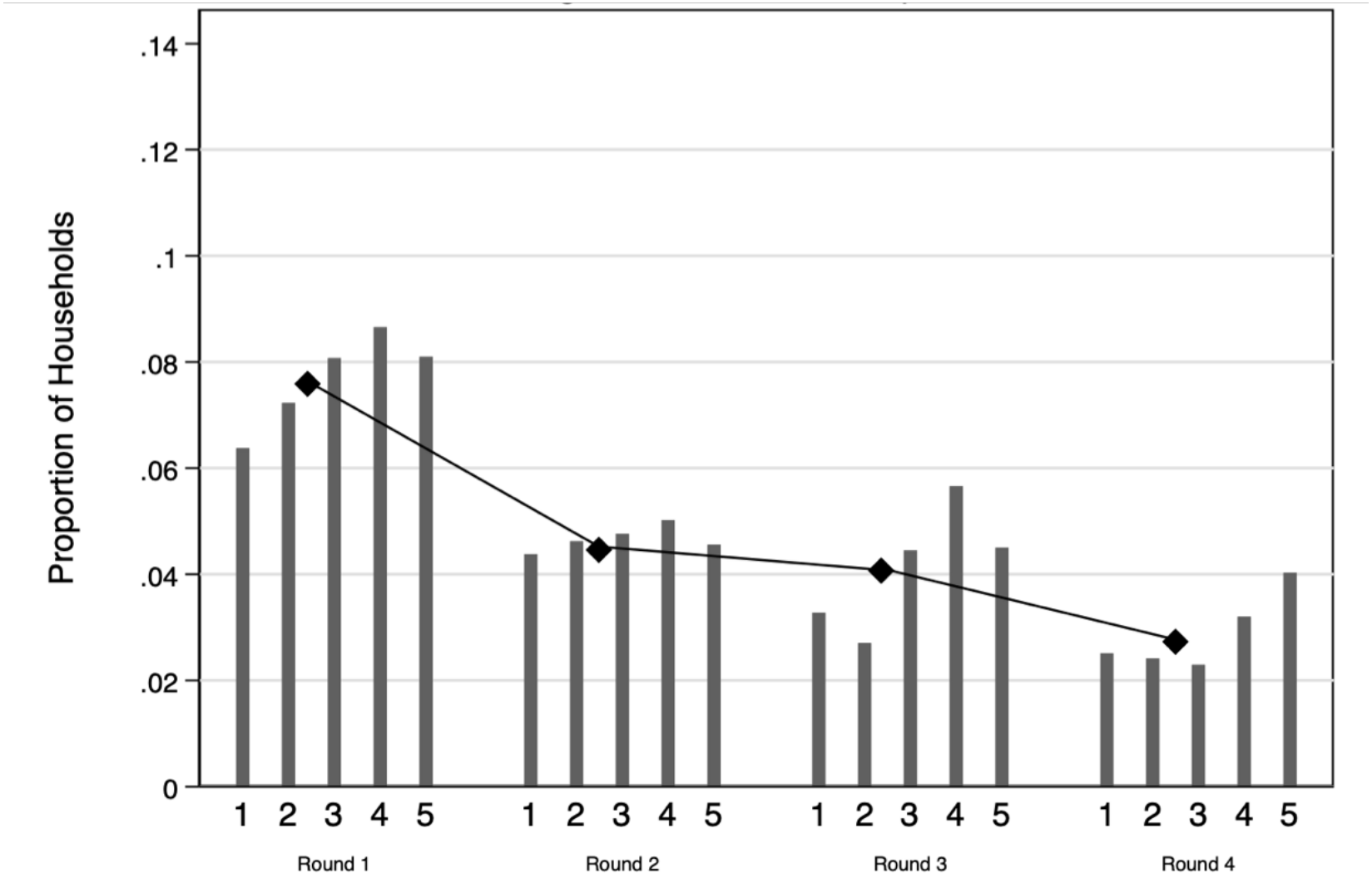


Empirical evaluation of FP indicators in Burkina Faso

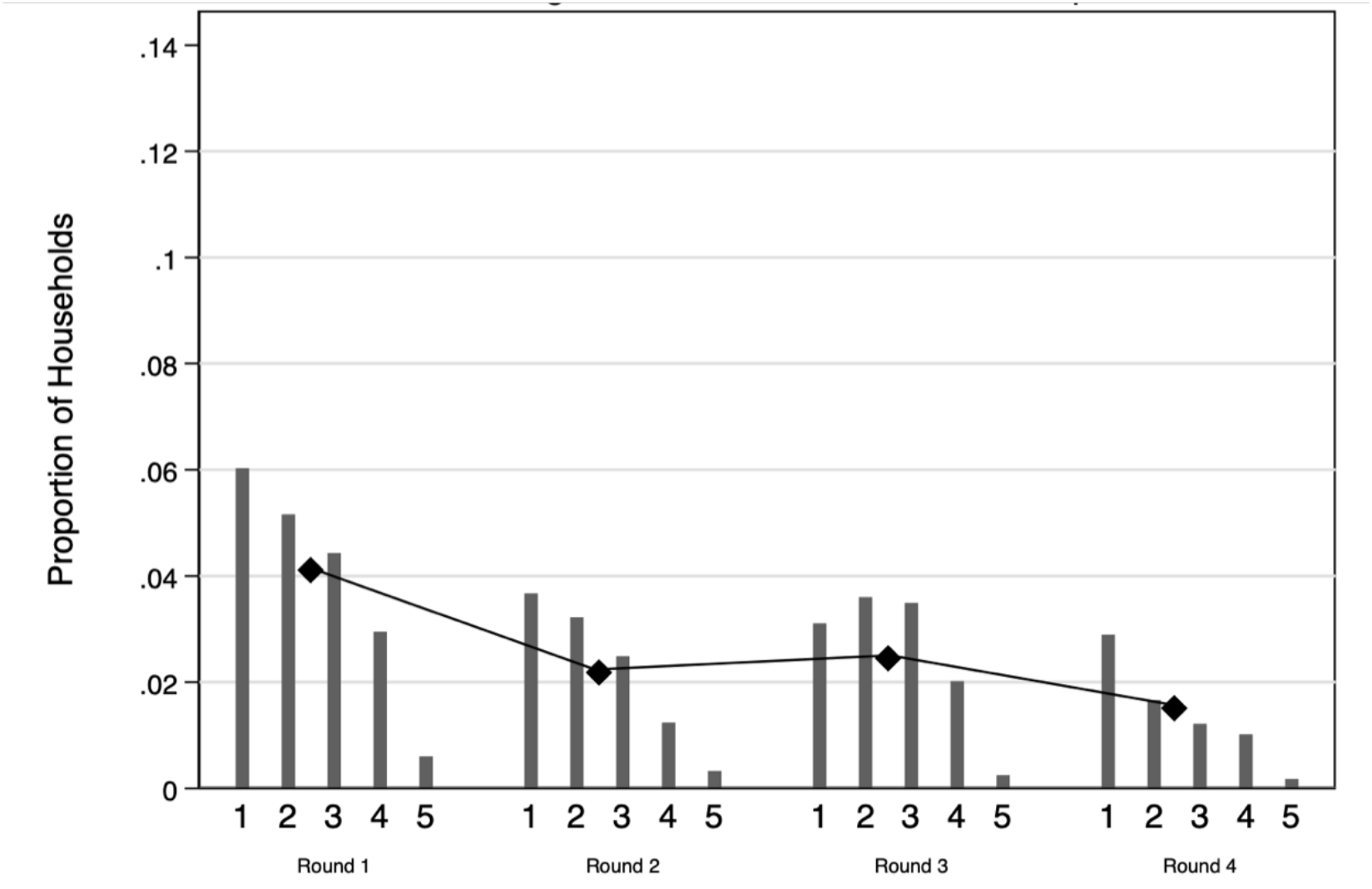
Assumptions:

- Poor households should have lower levels of financial protection than richer households
- Households that have experienced recent major health events and/or deaths also should have lower levels of financial protection

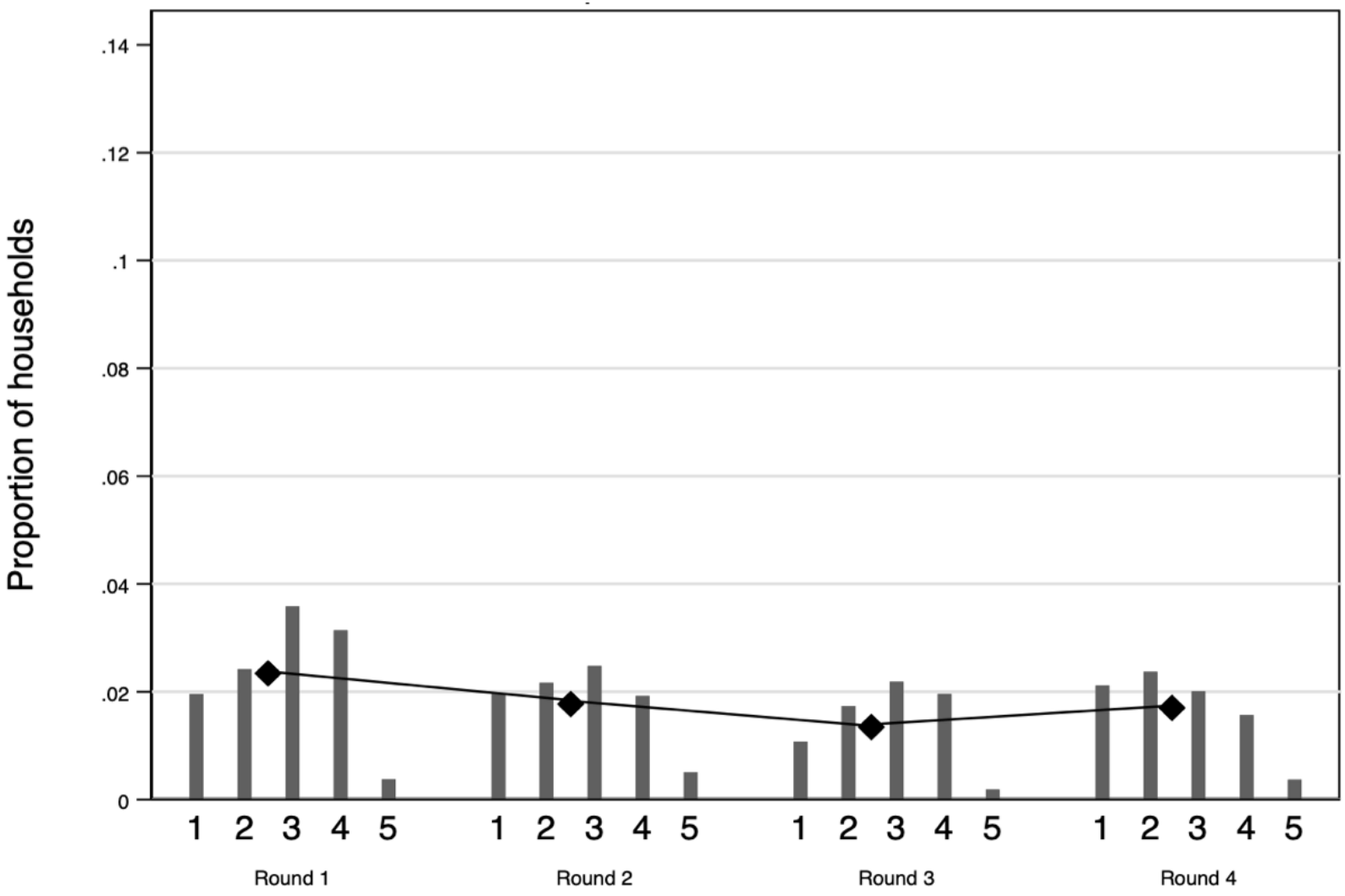
CATASTROPHIC HEALTH EXPENDITURES



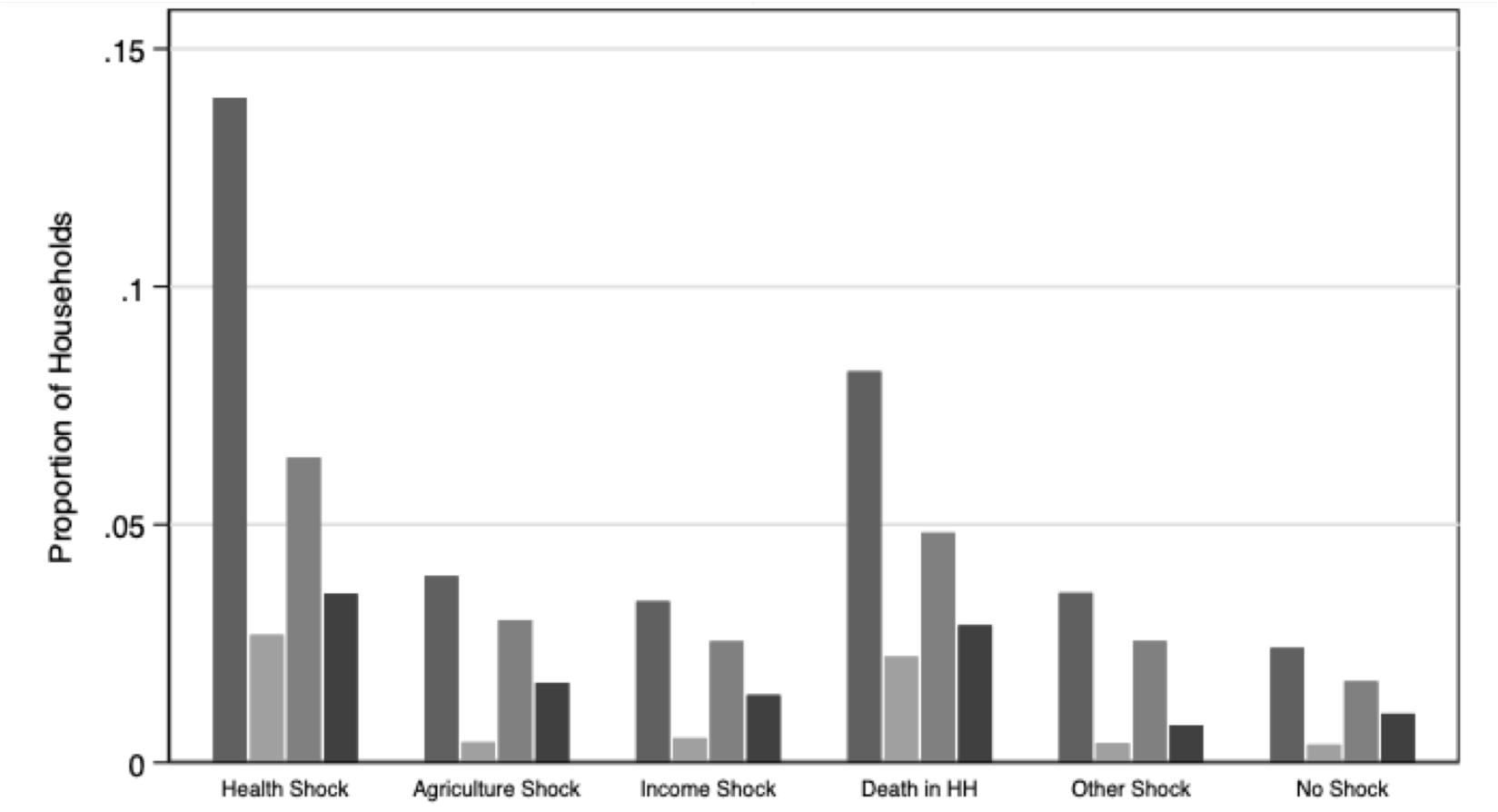
Non-subsistence catastrophic health expenditures



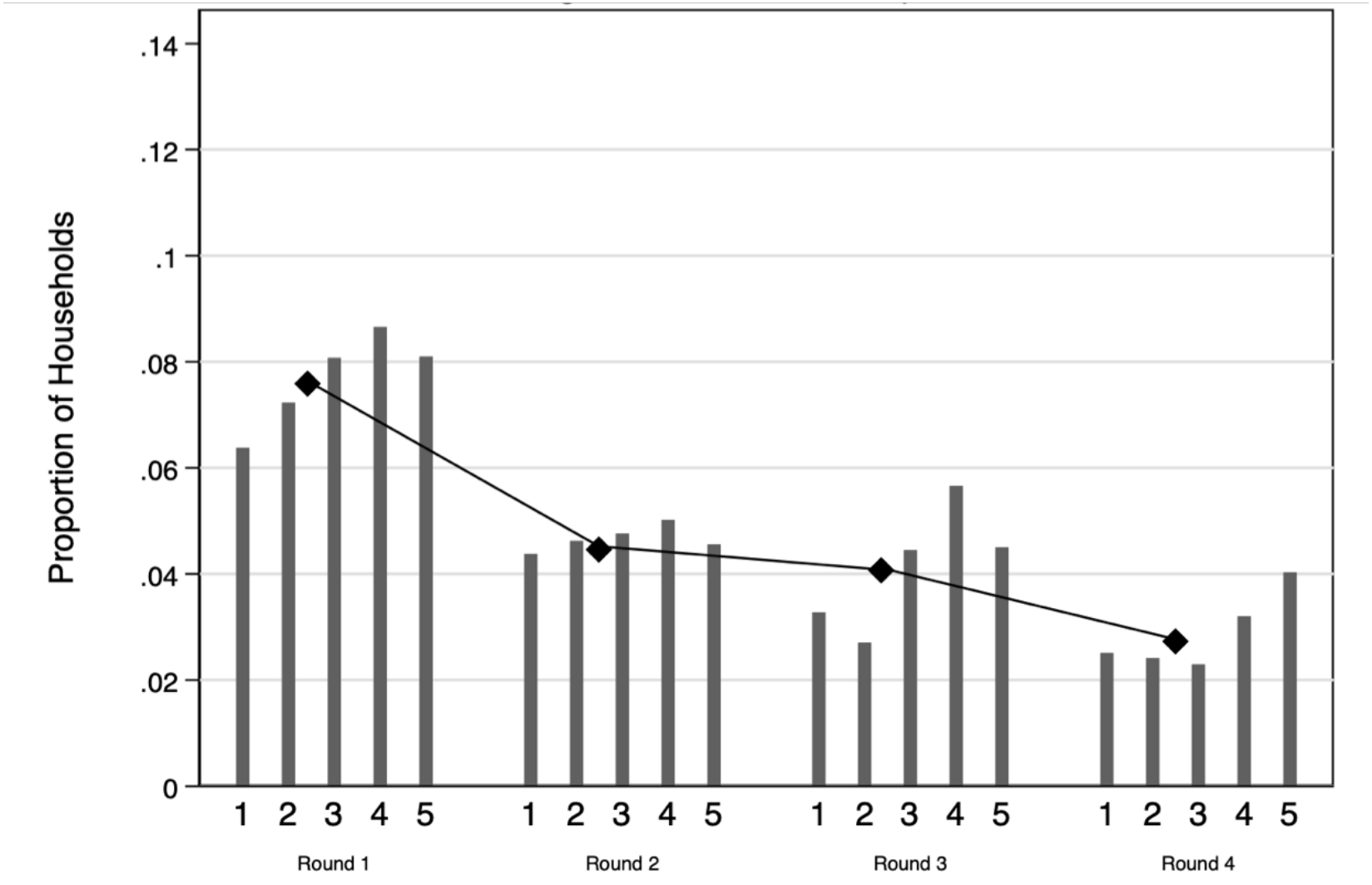
Impoverishing health expenditures



Health shocks



STABILITY OF MEASURES



RACER criteria for assessing the usefulness of an indicator

- Relevant: measures what it sets out to measure and intended objectives
- Acceptable: accepted by stakeholders
- Credible: unambiguous, transparent, and easy to interpret
- Easy: feasible to collect and analyze the necessary data
- Robust: sensitive, reliable, and complete, and sourced from high quality data

How relevant is the current indicator?

- Does not distinguish households that forego health services due to a lack of affordability.
- Ignores other economic effects of ill health (e.g. job loss, lost productivity, or changes in composition of consumption).
- Ignores impact of coping mechanisms employed by households to deal with OOPs (i.e. consumption smoothing).

How acceptable is the current indicator?

- Contested: great debate on which indictor should be used to monitor SDG 3.8.2 target.
- Compromise: trade-off between what should be measured vs. what data were readily available.
- Complicated: calculation of alternatives is more data intensive and requires disaggregated data.

How credible is the current indicator?

- Ambiguous: changes in indicator could be driven by changes in either the numerator or the denominator.
- Interpretability: trends in indicator cannot be attributed directly to improvements in financial protection.
- Transparency: lack of standardized data collection tools to calculate data.

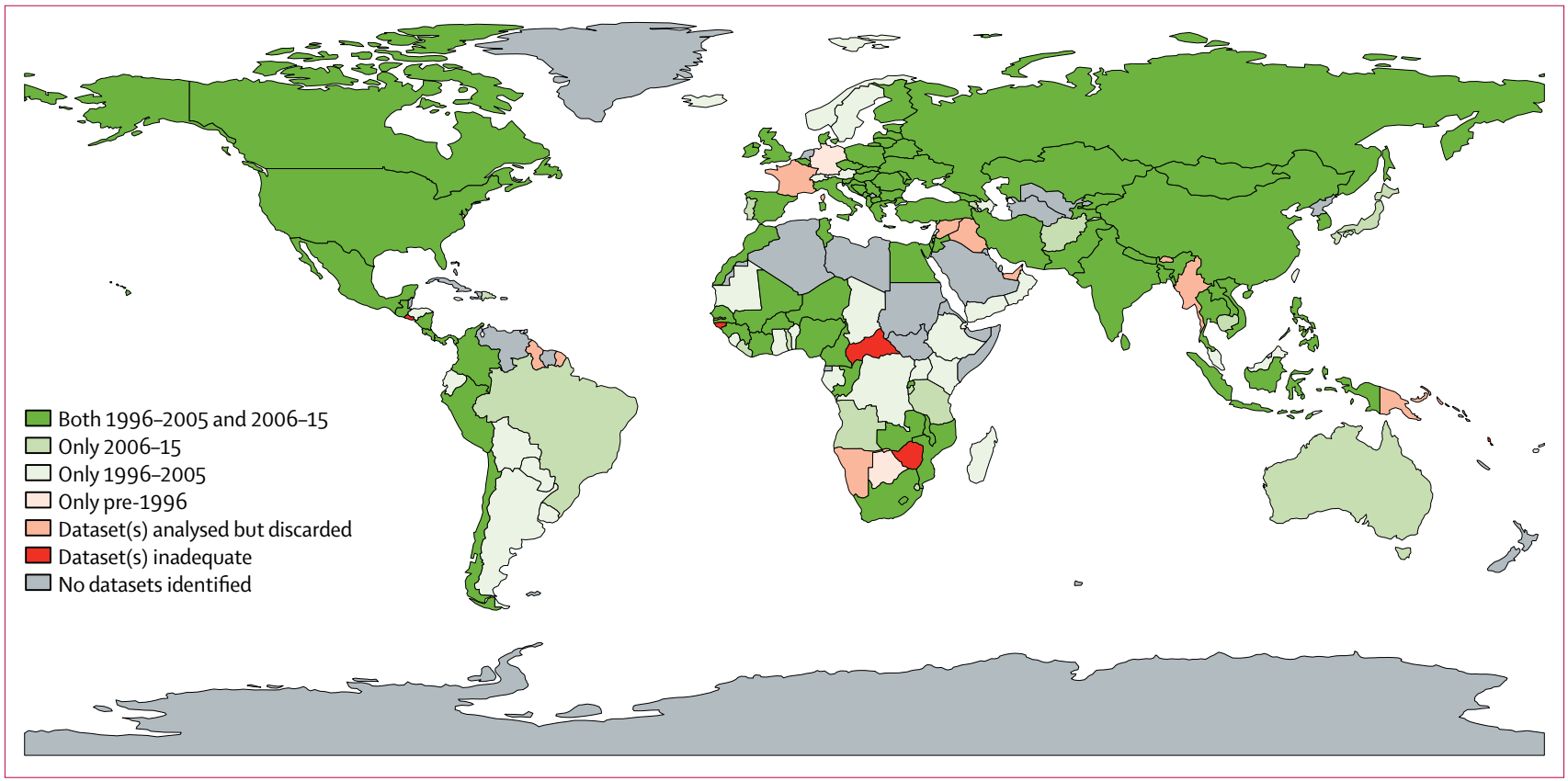
How easy is it to construct the current indicator?

- Data typically sourced from household budget and expenditure studies not health surveys.
- Multiple methodologies used to construct estimates of consumption.
- Construction of indicators can be done by trained analysts.

How robust are underlying data?

- SDG 3.8.2 indicator categorized as a tier II: indicators for which there are established international methodologies and standards but for which data are not regularly produced by all countries.
- Recent study was only able to identify data from 122 countries - only 93 had data from more than one time point (Wagstaff et al., 2017).
- Median year of surveys was 2005 - a more meaningful benchmark for the MDGs, not the SDGs.

Lack of data in low-income countries



Recommendations and Conclusions

- All current indicators for measuring financial protection have limitations and no one indicator is better than all others in all cases.
- Current indicators will not be useful to measure and monitor progress towards UHC.
- Efforts should be made to at least adjust the official indicator to account for differences in available resources.
- Urgent need to develop new tools to better measure health expenditures.
- Better indicators of financial protection should also account for lack of affordability and other economic effects of ill health.