

Assessing Inequalities in Healthcare Spending in Burkina Faso, Malawi, and Zambia: Data and Methods

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MAIN MESSAGE

A new study¹ examines the distributional incidence of healthcare spending in three countries in sub-Saharan Africa. Understanding the techniques used to conduct the analysis will help key decisions on both future policy and future data collection.

CONTEXT & MOTIVATION

Across sub-Saharan Africa, countries are investing in reforming their health financing structures to achieve Universal Health Coverage (UHC).

These actions respond to the appeal by the international community to 'leave no one behind': expansions in coverage need to include the most vulnerable groups, notably the very poor. UHC-oriented health financing reforms include targeted and non-targeted user fee exemption mechanisms, performance-based financing, and state-subsidized health insurance schemes.

These reforms aim to increase equity in health by improving equity in access to quality healthcare services. Equity in access rests first on an equitable distribution of resources: investments in UHC are expected to foster equal reach across socio-economic groups (WHO, 2010).² While there are many analyses of

equity and equality in health service utilization, little is known on equality in the distribution of resources. There is a lack of knowledge as to whether the implementation of UHC-oriented health financing reforms has resulted in a more equitable distribution of resources.

The new study addresses this gap using Benefit Incidence Analysis (BIA), a technique originally developed to assess the distributional incidence of public spending on healthcare, looking at the extent to which different socio-economic groups benefit from government subsidies (O'Donnell et al, 2008). The study expands its application to determine the distributional incidence of overall spending on health (donor and private). The study assesses the distributional incidence of spending over time in Burkina Faso, Malawi, and Zambia, combining economic with geo-spatial analysis to explore disparities across regions.

METHODS

How is BIA conducted and interpreted?

BIA combines data on health service utilization rates by socio-economic group with data on the unit cost of healthcare services, a measure of healthcare spending, to generate a concentration curve (CC) and a related concentration index (CI). Benefits are

ultimately expressed in monetary terms and not in terms of service use units (McIntyre and Ataguba, 2011). The CC illustrates the existence of socio-economic inequality in the distribution of health service benefits by plotting the cumulative proportion of health service benefits (health service utilization rates by socio-economic group*unit cost) on the y-axis against the cumulative proportion of the population ranked by socio-economic group, from poorest to least poor, on the x-axis. The 45° line represents the absence of any wealth-related inequality (green line). If the concentration line lies above the line of inequality (black line), there is a situation in which the poorest accrue most benefits. If the concentration line lies below the line of inequality (blue line), there is a situation in which the least poor accrue most benefits. The further the CC lies above or below the line of equality, the more the benefits are concentrated among the poor or the least poor. The CI quantifies the degree of wealth-related inequality and is defined as twice the area between the CC and the line of equality. The CI takes a negative value when the CC lies above the line of equality, indicating a pro-poor distribution of benefits. The CI takes a positive value when the CC lies below the line of equality, indicating a pro-least-poor distribution of benefits.

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Geography Burkina Faso, Malawi, Zambia

Find out more about this project: afd.fr/en/carte-des-projets/assessing-equity-health-spending-sub-saharan-africa

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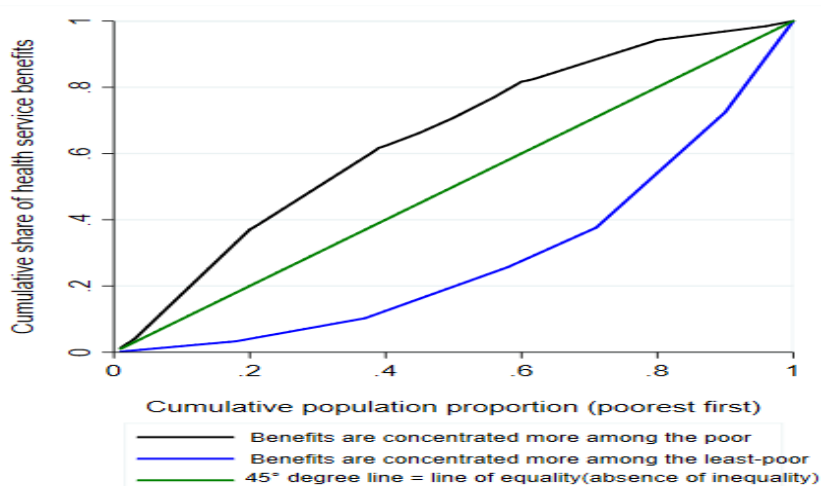
Themes Health Spending; Benefit Incidence Analysis

The CI is zero in the absence of any wealth-related inequality. This work evolves over a series of CC and related CI, which differentiates: maternal care services from curative services; public subsidies from overall spending; and types of provider (public and private) and levels of care.

The analysis is completed by a dominance test, set to estimate at the 5% significance level whether the CC dominates (lies above) or is dominated (lies below) by the line of equality at all its ordinates. This test is essential to determine the distribution of benefits when the visual representation is not clearly pro-poor or favors the least poor.

How are health service utilization rates computed? The study extracts country-specific data from nationally representative household surveys: Living Condition and Monitoring Survey; Zambia Household Health and Expenditure Survey; Performance-Based Financing Survey; and Demographic Health Survey.

The first survey is used to extract data for the analysis of curative services; the second and third surveys are used to extract data for the analysis of both curative and maternal services; the last survey is used to obtain data for the analysis of maternal care services. Years vary across countries due to the need to match data on service use with data on costs. The study uses them to compute health service utilization rates looking at the number of yearly visits



within each socio-economic group for each category of healthcare provider (public or private) and for each level of care (primary or secondary) and adjust estimates for seasonality variations, using routine health management information system data. For curative services, the study differentiates inpatient from outpatient care. For maternal care services, the focus is on facility-based deliveries. Socio-economic status is defined at the individual level either based on a consumption measure or on a wealth-index measure, depending on country-specific data availability.

How are unit costs computed? The study extracts data from National Health Accounts (NHA): recurrent public spending; donor spending; and household out-of-pocket expenditures. Traditional BIA uses only recurrent public spending data to calculate unit cost, whereas comprehensive BIA makes use of all three data sources. The

study uses the constant unit subsidy assumption to compute public and donor subsidies. To account for differences in out-of-pocket expenditures across socio-economic groups, the study uses the constant unit cost assumption and, based on evidence from previous research, the analysis adjusts out-of-pocket expenditure levels from NHA to reflect their distribution across socio-economic groups.

How is heterogeneity across regions explored? The research uses descriptive geo-spatial analysis to visualize disparities in the distributional incidence of both public and overall spending across regions (Anselin, 1995) and uses the resulting maps to solicit policy dialogue at the country level. The study examines the extent to which inequality within a region is related to inequality in the neighboring regions (spatial autocorrelation methods).

RECOMMENDATIONS

- ▶ Policy-makers are advised to use the results of BIA to appraise the distributional incidence of healthcare spending and inform further financing decisions.
- ▶ Geo-spatial analysis can accompany BIA to identify geographical disparities, which may be missed by pooled analyses.
- ▶ It is essential to improve efforts in the collection of data on both service use and cost to ensure more accurate and comparable analyses.

¹ Rudasingwa, M. et al (2020) Distributional Effects of Healthcare Spending: Lessons from Burkina Faso, Malawi, and Zambia, AFD Policy Dialogues No. 19, December 2020

² Anselin L. (1995) Local indicator of spatial association – LISA. *Geographical Analysis*; 27 (2), 93-115.

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