Improving primary health care financing in Ghana: potential fiscal space from efficiency analysis

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**Abstract**

**Background**

Following the Alma Ata Declaration, primary health service delivery has become crucial in many countries. In resource limited regions like Sub-Sahara Africa (SSA), primary health facilities bridge the health care inequity gap against deprived and vulnerable communities. However, most primary health care facilities are faced with inadequate resources. While health policy makers seek to increase resources committed to primary healthcare, it is important to understand the nature of inefficiencies that exist in these facilities. Studies that analyze the efficiency of primary health facilities are very limited especially in SSA. Therefore, the objectives of this study are threefold; (i) estimate efficiency among primary health facilities (health centers), (ii) examine the potential fiscal space from improved efficiency (iii) investigate the efficiency disparities in public and private facilities.

**Methods**

Data was from the 2015 Access Bottlenecks, Cost and Equity (ABCE) project conducted by the Institute for Health Metrics and Evaluation. The Stochastic Frontier Analysis (SFA) was used to estimate efficiency of health facilities. Efficiency scores were then used to compute potential savings from improved efficiency. Outpatient visits was used as output while number of personnel, hospital beds, expenditure on other capital items and administration were used as inputs. Disparities in efficiency between public and private facilities was estimated using the Nopo matching decomposition approach. Robustness checks were conducted using different distributional assumptions and functional forms of the production function.

**Results**

On average, efficiency across all health centers included in the sample was estimated to be 0.53. Also, average efficiency among primary health facilities was estimated to be about 0.61 and 0.52 for private and public facilities, respectively. Significant disparities in efficiency were identified across the various administrative regions. With regards to potential fiscal space, we found that, on average, facilities could save about 46.5% of total revenue if efficiency was improved. Rural and urban facilities could save 46.8% and 46.0% of total revenue, respectively, on average. Similarly, private and public facilities could save 38.8% and 47.4% of total revenue, respectively, if best practices were followed. The matching decomposition showed an efficiency gap of 0.23 private and public facilities. Also, the efficiency difference between the two facilities is unexplained in our model.

**Conclusion**

There is need for primary health facility managers to improve productivity via effective and efficient resource use. Efforts to improve efficiency should focus on training health workers and improving facility environment alongside effective monitoring and evaluation exercises.

**Keywords:** Primary health care, Efficiency, SFA, Fiscal space for health, Matching decomposition, Ghana