Governance and the Effectiveness of Public Health Subsidies in Ghana, Kenya, and Uganda

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Sector(s): Health

Location: Ghana

Sample: 168 rural health facilities (72 in Ghana, 48 in Kenya, and 48 in Uganda)

Target group: Health care providers

Outcome of interest: Social service delivery

Intervention type: Community monitoring

AEA RCT registration number: AEARCTR-0000331

Data: Download from Dataverse

Partner organization(s): Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), Hellman Fellows Fund, Stanford University , National Science Foundation (NSF), Alfred P. Sloan Foundation, University of California Los Angeles

Heavily subsidizing essential health products like insecticide-treated bed nets has the potential to substantially decrease child mortality in sub-Saharan Africa, but there is widespread concern that poor governance and limited accountability among health workers undermines the effectiveness of subsidy programs . Researchers measured the impact of several financial and monitoring incentives on the quality of bed net delivery to pregnant women in Ghana . The incentives had no impact on the quality of delivery. Audits in Ghana, Kenya, and Uganda revealed that around 80 percent of targeted recipients received a bed net subsidy as intended and leakage of products to ineligible recipients was limited. A system change that moved the point of delivery from the clinic to a local shop via vouchers worsened program coverage, reducing the likelihood of a woman receiving a net at her fist visit by 17.8 percentage points.

Policy issue

Distributing free or heavily subsidizing essential health products could substantially improve usage of these products, and, as a result, health outcomes in rural areas of developing countries. However, it is an open policy question whether such subsidies can be implemented effectively. Utilizing existing public health infrastructure is a potentially cost-effective strategy to identify beneficiaries and rapidly distribute such products. However, many government health workers receive a fixed wage and lack incentives to effectively deliver services and products and refrain from corruption.[1], For example, prior studies document alarming levels of health worker absence. One study found an average absence rate of 35 percent among health workers across a set of developing countries.[2]

Health workers may demand under-the-counter payments from eligible clients (extortion), provide the product to ineligible people (leakage), or generally underperform, for example, by failing to attend work or distribute products while at work (shirking). While previous research extensively studies corruption surrounding procurement and the management of monetary transfers, little is known regarding how effectively local government workers implement public distribution systems.

Context of the evaluation

This study spans three countries, Ghana, Kenya, and Uganda, which represent a wide range of perceived corruption levels. According to the 2012 Transparency International Corruption Index, in which the least corrupt country is ranked first, Ghana was ranked 64th, Uganda 130th, and Kenya 139th out of 178 countries.[3]

In these countries , researchers audited a WHO-recommended program that provides free antimalarial bed nets to pregnant women, who are among those most vulnerable to malaria, through antenatal care clinics. Prior to this study, government-led bed net distribution programs existed in Kenya and Uganda, but not in Ghana. Within the areas covered by the Ghana study, only 53 percent of households had an insecticide-treated bed net (ITN) in 2011, and only 22 percent of households had at least one ITN for every two people in the house.



Health clinic staff distributes free bednet in Kenya. Photo: Thomas Chupein | J-PAL/IPA

Thomas Chupein

Details of the intervention

This study measured the extent to which extortion, leakage, and shirking undermine the effectiveness of targeted subsidies for preventative health products in Ghana, Kenya, and Uganda. To measure how prevalent these behaviors were, researchers performed innovative audits of bed net distribution programs in all three countries . In Ghana, researchers also conducted a randomized evaluation to understand which program features matter for reducing these problems. The sample consisted of 168 rural health facilities (72 in Ghana, 48 in Kenya, and 48 in Uganda).

Audits: Ghana, Kenya, and Uganda

In all three countries, researchers conducted audits that included a broad set of measures, including whether eligible clients received a bed net, at what price, and eligibility criteria to obtain a net. Measurement techniques included audits on health center registers, back-check surveys with prenatal clients , and decoy visits in which ineligible men went to health centers to try to obtain bed nets.

Randomized Evaluation: Ghana

In Ghana, researchers also conducted a randomized evaluation to test the impact of different program management features on the quality of bed net distribution. Seventy-two rural health facilities received and accepted an invitation to participate in Saving Lives (SALI), an NGO program that trained facilities staff to distribute free Long Lasting Insecticide-Treated Nets (LLINs) to pregnant women during routine antenatal care visits at the clinics. The selected clinics had no free bed net distribution program in place at the time.

Forty-eight of the health centers were randomly assigned to a “direct distribution scheme,” in which clients would directly receive the LLIN. The other 24 health centers implemented a “voucher scheme,” in which clients would receive vouchers to redeem for a free LLIN at a local participating store. Researchers predicted the voucher scheme might decrease extortion since clients would be less willing to pay a bribe for a voucher than for the product itself, and health workers may be less inclined to shirk their duties since providing a voucher requires minimal effort.

Half of all clinics were also randomly selected to be audited; health workers in these clinics were informed that SALI would perform unannounced audits, and that results demonstrating leakage or extortion could potentially shut down the program. Audits could reduce corruption if workers wanted to avoid a shut-down of the program—for the sake of the communities or their own jobs.

Finally, among the 48 clinics in the direct distribution scheme, researchers randomized two other aspects of the program:

1. Bonus pay: in a random half of direct distribution clinics, health workers received a fixed monthly payment of 100 Ghana cedis (US$60, or about 25% of the median monthly salary of a health worker) for implementing the program. Health workers in the other clinics did not receive this extra pay. Increased income via the bonus could increase workers’ motivation and effort.
2. LLIN stock: a random half of direct distribution clinics received a large initial stock of LLINs, while the other half received a comparatively smaller initial stock. Having a smaller initial stock could decrease leakages by encouraging health workers to be more selective in distributing the nets.

SALI rolled out the program over a seven-week period, from October to early December 2011 , and data collection occurred between October 2011 and April 2012. To measure health worker performance, researchers used a variety of measurement techniques, including undercover surveyors who tried to acquire bed nets and who conducted informal interviews with community members. Researchers also surveyed antenatal care clients and health workers to verify that eligible individuals received bed nets .

Results and policy lessons

Audit Results

In contrast with much of the previous evidence on service delivery in developing countries , researchers found relatively high performance among health workers in all three countries.

- Coverage was high: Close to 80 percent of eligible women received the free net at the clinic.
- Extortion was rare: Only 1.4 percent of eligible subsidy recipients were asked to pay bribes.
- Leakage was limited: Ineligible men who tried to obtain a bed net from the health facility were only successful 4.7 percent of the time.

Researchers estimate that this level of leakage only marginally undermines the cost-effectiveness of free bed net distribution schemes, shifting the cost per life saved from US$200-662 to US$236-781.

Randomized Evaluation Results: Ghana

The threat of audits, bonus compensation, and size of initial stock had no impact on performance of the health workers. The voucher scheme mildly worsened some aspects of performance.

Patients who visited clinics that provided vouchers were 17.8 percentage points less likely to receive a net at their first visit, from a base of 74.4 percent at direct distribution clinics (a 23.9 percent decrease). Lower performance in the voucher clinics could have been due to the fact that almost 12 percent fewer treatment community members were aware of the program relative to the comparison group , presumably since people were less likely to notice neighbors leaving a clinic with a paper voucher than a bed net . This lack of awareness of the program could have reduced demand for bed nets. Qualitative evidence suggests that the voucher system could have negatively impacted performance because it lowered health worker morale; health workers reported feeling as though they were not trusted.

Survey data suggests that health workers were highly motivated to provide quality service, which may explain why providing financial compensation or monitoring had no effect on performance. That none of these simple tweaks improved coverage suggests that further improvements may be costly and difficult, and basic free distribution through existing systems might be more cost-effective than other approaches.

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2. Chaudhury, Nazmul, Jeffrey Hammer, Michael Kremer, Karthik Muralidharan, and F. Halsey Rogers. 2006. “Missing in Action: Teacher and Health Worker Absence in Developing Countries.” *Journal of Economic Perspectives* 20(1): 91-116.

3. Transparency International. "Corruption Perceptions Index 2012. http://www.transparency.org/cpi2012/results.