

Factors influencing the burden of health care financing and the distribution of health care benefits in Ghana, Tanzania and South Africa

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Abstract

In Ghana, Tanzania and South Africa, health care financing is progressive overall. However, out-of-pocket payments and health insurance for the informal sector are regressive. The distribution of health care benefits is generally pro-rich. This paper explores the factors influencing these distributions in the three countries. Qualitative data were collected through focus group discussions and in-depth interviews with insurance scheme members, the uninsured, health care providers and managers. Household surveys were also conducted in all countries. Flat-rate contributions contributed to the regressivity of informal sector voluntary schemes, either by design (in Tanzania) or due to difficulties in identifying household income levels (in Ghana). In all three countries, the regressivity of out-of-pocket payments is due to the incomplete enforcement of exemption and waiver policies, partial or no insurance cover among poorer segments of the population and limited understanding of entitlements among these groups. Generally, the pro-rich distribution of benefits is due to limited access to higher level facilities among poor and rural populations, who rely on public primary care facilities and private pharmacies. Barriers to accessing health care include medical and transport costs, exacerbated by the lack of comprehensive insurance coverage among poorer groups. Service availability problems, including frequent drug stock-outs, limited or no diagnostic equipment, unpredictable opening hours and insufficient skilled staff also limit service access. Poor staff attitudes and lack of confidence in the skills of health workers were found to be important barriers to access. Financing reforms should therefore not only consider how to generate funds for health care, but also explicitly address the full range of affordability, availability and acceptability barriers to access in order to achieve equitable financing and benefit incidence patterns.

Keywords: Contribution pattern, financial protection, health benefit, health care use, access to health care

Topic: ghana, income, insurance, health insurance, south africa, tanzania, health care financing

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KEY MESSAGES

- The regressivity of voluntary health insurance and out-of-pocket payments results from charging flat insurance premiums, ineffective systems to exempt poor groups and insufficient prepayment funding to cover the health care costs of the poor.
- The cost of health care is not the only barrier to health care access; there are a wide range of affordability, availability and acceptability barriers, which affect poorer groups most severely.
- Changing the way in which health services are funded, particularly moving away from out-of-pocket payments and towards a greater reliance on prepayment funding mechanisms, will be necessary to address these inequities. However, explicit measures to address the full range of access barriers are also required.

Introduction

Providing households with financial protection and access to needed health care is a growing priority for low- and middle-income countries, and is at the core of efforts to move towards universal coverage. To this end, many African countries are seeking to expand health insurance coverage, introduce more effective user fee exemption mechanisms for those who cannot afford care, and/or improve tax collection and increase general tax allocations to health care. The governments of Ghana and Tanzania, for example, have introduced different forms of health insurance over the past 10 years and South Africa is currently designing a universal National Health Insurance (NHI) system to be funded largely from tax revenue. However, these three countries still face challenges in achieving equitable health care access and adequate financial risk protection, especially for vulnerable groups ([Mills *et al.* 2012](#)).

We draw on recent analyses conducted by the Strategies for Health Insurance for Equity in Less Developed Countries (SHIELD) project, which highlight inequities in the distribution of health care financing burden (who pays what) and health care benefits (who benefits from service use and by how much) among socio-economic groups in Ghana, Tanzania and South Africa (Table 1). Health care financing is progressive (regressive) if, on average, the richer segments of the population are paying more (less) as a proportion of their income for health care than the poorer segments. Table 1 shows that the health financing systems in the three countries are progressive, driven largely by direct taxes, especially personal income tax, and, in South Africa, by private voluntary health insurance. However, in all three countries, out-of-pocket (OOP) payments for health care are regressive, as is voluntary health insurance for the informal sectors in Ghana and Tanzania. Table 1 also shows that although there are variations in the distribution by level of care and type of provider in the three countries, as in many other countries, the distribution of total health benefits is pro-rich (rather than pro-poor), meaning that poorer groups receive a lesser share of benefits from using health services (measured in monetary terms) than richer segments, and benefits are not distributed according to need for care (Akazili *et al.* 2012; Ataguba and McIntyre 2012; Mtei *et al.* 2012).

Table 1 Distribution of health care financing burden and health care benefits

		Ghana	South Africa	Tanzania
Financing burden				
taxes	General	Overall tax is progressive [Value Added Tax (VAT) is progressive, fuel is regressive overall but this is driven by kerosene levy, import duty is progressive, personal income tax is progressive as well as corporate tax].	Indirect taxes (fuel levy, VAT, excise taxes) are regressive; direct taxes (personal and corporate income taxes) are progressive; general taxes are overall progressive.	Income taxes are considerably more progressive than consumption taxes.
	Out-of-pocket payments	Regressive	Marginally regressive	Regressive

Insurance	Overall insurance is progressive but informal sector contributions are very regressive due to lack of variance in contribution.	Private voluntary insurance is progressive.	The NHIF is the most progressive. CHF contributions are regressive. <i>Note:</i> Regressivity of CHF contributions reduced the progressivity of insurance contributions overall.
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	Overall	Progressive health care financing	Progressive health care financing	Marginally progressive
Health care benefits				
Primary health services		More evenly distributed but generally pro-rich.	Pro-poor services (CHCs and district hospitals).	Pro-poor
Tertiary health services		Pro-rich distribution.	Pro-rich services (regional, central and provincial tertiary hospitals).	Pro-rich
Private health services		Pro-rich distribution of health care services.	Pro-rich health services.	Pro-rich private for-profit. Even distribution for faith-based providers.
	Overall	Pro-rich health care services and not distributed according to perceived need for health care.	Pro-rich health services and not distributed according to perceived need for health care.	Marginally pro-rich health services and not distributed according to perceived need for health care.

Source: Akazili *et al.* (2012) for Ghana; Ataguba and McIntyre (2012) for South Africa; Mtei *et al.* (2012) for Tanzania.

Many studies have limited their equity analysis to the relative progressivity of financing mechanisms (Wagstaff *et al.* 1992; Wagstaff *et al.* 1999; Wagstaff and Lindelow 2007; O'Donnell *et al.* 2008) or the distribution of health care benefits or utilization at public facilities (Castro-Leal 1996; Castro-Leal *et al.* 2000; McIntyre *et al.* 2009). Few have considered financing and benefit incidence together (O'Donnell *et al.* 2005) and fewer still have explored in detail the factors influencing these incidence patterns (Culyer *et al.* 1992; Wagstaff *et al.* 1992; Van Doorslaer *et al.* 1999). This paper aims to shed light on the factors contributing to inequities in the distribution of both the financing burden and the benefits from using health care in Ghana, South Africa and Tanzania. We focus on the most regressive financing mechanisms; namely OOP payments and voluntary health insurance contributions, because they disproportionately affect poor households and are of particular policy concern. We also explore reasons for the pro-rich distribution of benefits in terms of the affordability, availability and acceptability of health care services in the three countries.

Methods

Study setting

Key elements of the health systems in Ghana, Tanzania and South Africa are summarized in [Box 1](#).

Box 1 Key features of the health systems in Ghana, Tanzania and South Africa

In Ghana, a National Health Insurance Scheme (NHIS) covers the formal and informal sectors for outpatient and inpatient services at accredited public and private facilities. NHIS coverage reached 66.4% of the population by June 2010 (www.nhis.gov.gh). While formal sector contributions are deducted at source, those in the informal sector have to pay their district mutual health insurance scheme between US\$5 and US\$35^a per person per year according to their socio-economic status. Although all Ghanaians are legally required to belong to the NHIS, membership is effectively 'voluntary' for the informal sector due to the inability to enforce contribution payments by this group.

Tanzania has mandatory health insurance schemes for formal sector employees, offering comprehensive health care benefits to their members, the largest being the National Health Insurance Fund (NHIF) covering civil servants. There is also a voluntary insurance scheme, the Community Health Fund (CHF) for rural dwellers, costing between US\$4.2 and US\$12.7^b per household per year and offering public primary care to the informal sector; and Tiba kwa Kadi (TIKA)^c, a similar scheme for urban dwellers. Insurance schemes covered around 12% of the population.

South Africa has a long history of private insurance covering mainly higher-income formal sector employees. Enrolment is voluntary and on an individual basis. The premiums paid vary widely (from about US\$480 to US\$6800 per annum^d) depending on the benefit option chosen and the number of dependants enrolled. Each private insurance scheme is mandated by law to cover a prescribed minimum benefit package, which includes a list of chronic diseases and certain inpatient services. While private insurance accounts for 44% of total health care finance in South Africa, less than one-sixth of the population have cover ([Borghi et al. 2009](#)). However, a proposed National Health Insurance (NHI) aims at achieving universal coverage.

Notes: ^aThe interbank exchange rate at the time (September 2008) was GH¢1.40 to US\$1.00.

^bThe exchange rate at the time of the study 2008 was Tsh 1178 to US\$1. The premium rate within a district is the same for all but there is variation across districts.

^cThe TIKA had been only recently introduced at the time of the study; hence, the focus here is on the CHF.

^dThis is at a nominal exchange rate of ZAR 7.5 to US\$1.

Study design

To explore the 'hows' and 'whys' of the financing and benefit incidence patterns in Tanzania, Ghana and South Africa, i.e. to understand the factors influencing these patterns, we combined qualitative focus group discussions (FGDs) and in-depth interviews (IDIs) with quantitative household surveys in each country. Data were collected simultaneously and integrated through

analysis, as part of a concurrent triangulation strategy to corroborate and confirm results (Creswell 2003). Through these different data sources, we explored: enrolment in voluntary health insurance schemes; informal sector contributions to the Community Health Fund (CHF) (Tanzania) and National Health Insurance Scheme (NHIS) (Ghana); and OOP payments in all three countries. We also examined access barriers to care through dimensions of affordability (financial access), availability (physical access) and acceptability (cultural access), defining access as a dynamic interchange between the health system and individuals/households, culminating in the freedom or opportunity to use care, rather than utilization per se (Thiede et al. 2007).

Ethics approval was obtained from institutional and national ethics boards in each country. Written informed consent was obtained from all respondents.

Sampling and data collection

In 2008, household surveys were conducted in each country. In Tanzania, 2234 households (approximately 12 200 individuals) were interviewed in four rural and three urban councils, selected such that voluntary insurance coverage was relatively high (rural sites) and to provide insight into utilization patterns and expenditures in urban sites of differing levels of infrastructural development (Mtei et al. 2012). In Ghana, a two-staged stratified random sampling design was adopted based on the Ghana Living Standard Survey (GLSS 5) frame and 2986 households (approximately 14 050 individuals) in six districts were interviewed (Akazili et al. 2012). The data from Ghana and Tanzania were weighted to approximate national representation. In South Africa, a nationally representative sample of 4800 households (approximately 22 000 individuals) was selected across all nine provinces using a multi-stage sampling framework (McIntyre et al. 2009). Enumeration areas were stratified by province, type of settlement and race.

Over the same time-period, qualitative IDIs and FGDs were carried out with purposively selected participants to reflect a range of different perspectives about health care access and benefits, including those with and without health insurance, patients, health care providers and facility managers in rural and urban areas. Hour-long audio-taped interviews and FGDs were conducted by trained fieldworkers in participants' own languages and English for some providers. These were transcribed, translated and anonymised to protect confidentiality. Table 2 provides an overview of the methods, groups and participants involved.

Table 2 Overview of qualitative data collection methods

Country	Districts	Data collection method	Total number of groups (type of respondents)
Tanzania	4 districts (2 rural, 2 urban)	Focus group discussions (FGDs)	22 (insured/uninsured, health service managers)
		In-depth interviews (IDIs)	2 (facility managers)
Ghana	6 districts (3 largely rural, 3 largely urban)	FGDs	26 (insured/uninsured)
		IDIs	29 (health providers)
South Africa ^a	3 sub-districts (1 rural, 2 urban)	IDIs	44 [successful, partial and non-users of antiretroviral therapy (ART), tuberculosis (TB) treatment and maternal delivery services]
		IDIs	67 (health providers)

Note: ^aThe South African qualitative data were drawn from the Researching Equity in Access to Health Care (REACH) project (2007–2012), specifically focused on inequities in access to health care and related-barriers in South Africa.

Data analysis

Descriptive analyses of the survey data from each country were conducted using STATATM 11. Means are presented along with 95% confidence intervals. In South Africa and Ghana, socio-economic status was measured using per capita consumption expenditure. In Tanzania, an index of socio-economic status was constructed using a combination of asset ownership variables, demographic and socio-economic variables, and housing particulars and utilities. In all three countries, the populations were then ranked and allocated into quintiles of equal size, from the poorest 20% (quintile 1) to the richest 20% (quintile 5).

Thematic content analysis was used to analyse the qualitative data. Short summaries of the IDIs and FGDs were compiled and access themes of affordability, availability and acceptability were used to guide data coding (Patton 2002), using QSR NVivo 8 (Tanzania), MAXQDA 2007 (Ghana) and Atlas.ti 6.1.16 (South Africa). Independent coding was carried out by a team of researchers and codes were repeatedly reviewed for validation and reliability, and compared with the initial data summaries. There was good inter-coder agreement and congruence between the data sources.

Qualitative data were triangulated with quantitative data wherever possible in each country and then comparisons were made across countries.

Results

Factors influencing inequities in financing incidence

Regressive voluntary insurance contributions in Tanzania and Ghana

We found that informal sector insurance contributions in Ghana and Tanzania are regressive ([Table 1](#)) largely because of flat-rate premiums. In Tanzania, the CHF is designed such that premiums are based on the ability of the population (rather than an individual) to pay at a district level. Although premiums vary across districts, they are constant for households within a district, irrespective of wealth. As shown in [Table 3](#), 66% (CI: 63–67%) of CHF members in Tanzania were from the three lowest wealth quintiles, and only 11% (CI: 10–12%) from the highest quintile. The concentration of CHF membership among poorer groups is partly attributable to better-off formal sector employees being covered under mandatory insurance schemes.

Table 3 Basic descriptive statistics

	Ghana	South Africa	Tanzania		
Distribution of the insured across quintiles					
Insurance type (per household)	NHIS n = 2986	Private insurance n = 2454	CHF n = 3210	NHIF n = 1641	Others n = 428
Quintile 1 (poorest)	20.7%	1.37%	18%	–	3%
	[18.6–22.8%]	[1.36–1.37%]	[16–19%]		[1–5%]
Quintile 2	22.6%	3.03%	25%	–	1%
	[20.4–24.7%]	[3.01–3.04%]	[23–26%]		[0.1–2%]
Quintile 3	18.8%	8.29%	24%	3%	15%
	[16.8–20.8%]	[8.27–8.32%]	[22–25%]	[2–3%]	[12–18%]

Quintile 4	17.6%	16.41%	22%	20%	28%
	[15.6– 19.6%]	[16.38– 16.44%]	[19– 23%]	[18– 22%]	[24– 33%]
Quintile 5 (richest)	120.3%	70.90%	11%	77%	53%
	[18.2– 22.4%]	[70.86– 70.94%]	[10– 12%]	[75– 79%]	[47– 57%]

How affordable are premiums?^a

Too high	35%	–	–
	[32.5– 37.7%]		
Moderate	61%	–	–
	[58.1– 63.4%]		
Low	4%	–	–
	[3.0– 5.2%]		

Reasons for not enrolling in insurance^b

Affordability of premiums	72%	75.5%	38%
	[69.9– 75.0%]	[74.9– 76.2%]	[35– 40%]
Unaware of insurance	1.5%	8.0%	10%
	[0.8– 2.1%]	[7.6– 8.4%]	[8– 12%]
Benefits are not adequate	1.9%	7.5%	19%
	[1.1– 2.7%]	[7.2– 7.9%]	[16– 20%]
Covered elsewhere (by government or employer)	6.3%	23.5%	–
	[4.9– 7.6%]	[22.9– 24.1%]	

Not employed	–	36.5%	2%
		[35.8–37.2%]	[1–3%]
Percentage of those eligible for fee exemptions that pay out-of-pocket payments (outpatient care)	–		43%
			[40–45%]

Notes: NHIS = National Health Insurance Scheme; NHIF = National Health Insurance Fund; CHF = Community Health Insurance Fund; Others = private insurance, social health insurance benefit (provided by the National Health Insurance Fund) and VIBINDO (a group of vendors who have agreed together to contribute small proportional of their income for health needs).

^aOnly members of the scheme were considered.

^bMultiple responses allowed and ‘other reasons’ excluded, therefore sum of row does not total 100%.

Confidence intervals in block parentheses.

In Ghana, poorer households are supposed to pay premiums that are lower in absolute terms than their wealthier counterparts, but our data revealed little variation within districts between higher and lower income households. Difficulties in identifying income levels often resulted in the charging of a flat premium payment. Further, in some districts, such as Berekum (semi-urban), premiums increased rapidly (from US\$5 in 2004 to US\$11 in 2008), while there was no change in other districts, producing inter-district differences in premium levels, unrelated to the ability of district residents to pay.

About 35% (CI: 32.5–37.7%) of NHIS members surveyed in Ghana thought that the premiums were too high and nearly half (CI: 42.0–47.3%) wanted them reduced (Table 3); such concerns were less prevalent in Tanzania. Despite this, FGD respondents in both countries generally perceived the premium to cost less than the user fees paid for all visits ‘when you calculate per year’ in the absence of insurance.

“The money one will get to register is our problem. But when you are not a member and you go to the hospital, you are charged more than you would have used to become a member.” (FGD, rural area, Ghana)

South Africa

In South Africa the contribution pattern to private medical schemes was found to be progressive overall as contributions are only made by wealthier groups, but only these groups benefit from these funds. However, among those enrolled, contributions were regressive as premiums are not income-related.

Understanding the burden of OOP payments

OOP payments comprise user fees charged at public sector facilities and direct payments to private providers. OOP payments are highest in Ghana, accounting for about 40% of total health care expenditure, followed by Tanzania at nearly 26% and South Africa at about 18% (<http://www.who.int/nha/country/en/>). All three countries have exemption and waiver policies for public sector services¹ to protect poor and vulnerable households from paying out-of-pocket, yet OOP payments persist and are regressive (Table 1). In Tanzania, for example, 43% (CI: 40–45%) of those who qualified for exemption were making payments (Table 3), and key informants indicated that waivers for the poor were not being granted systematically. In Ghana, over 25% (CI: 26.7–31.4%) of those insured did not know about the NHIS exemption mechanisms; those who may have been eligible for an exemption from the premium would therefore not have benefited. Flat-rate user fees in Ghana and Tanzania also contributed to regressive OOP payments.

Limited health insurance coverage of lower-income informal sector groups compounded the regressivity of OOP payments in all three countries. Affordability and acceptability reasons prevented higher levels of enrolment. These included: insufficient funds to pay the ‘too high’ premiums, reported by 35% (CI: 32.5–37.7%) of the insured and 72% (CI: 69.9–75.0%) of the uninsured in Ghana, and 38% (CI: 35–40%) in Tanzania (Table 3) and supported by the FGDs; and perceived poor quality care in the public sector, which provides care for low-income insurance members.

“The quality of services at the public facilities is not very good and discourages many of us from joining the CHF. No diagnostic equipment and a frequent drug shortage which means the majority have to get those services outside the facility.” (FGD, rural area, Tanzania)

Staff attitudes emerged as a particular concern and were commonly cited in the Ghanaian interviews and FGDs as a reason for not enrolling. Distrust in the CHF management, which affected enrolment, was also expressed by respondents in Tanzania. This was exacerbated by a limited understanding of the concept of risk pooling, and of how CHF contributions are used at the facility.

Limited benefit packages either deterred people from joining insurance schemes or, for members, exacerbated OOP payments. For example, in Tanzania, the CHF does not cover inpatient care in most districts, yet this “*is the most expensive, that's why we don't join*”. Similarly in South Africa, insurers often impose co-payments on scheme members (usually formal sector workers) for services outside the prescribed minimum benefit (PMB) package and do not cover many services outside the PMBs.

Patients, whether insured or not, also paid out-of-pocket to purchase drugs in private pharmacies due to unavailability (stock-outs) in public sector facilities (especially in Ghana and Tanzania), or in some cases, limited understanding of their entitlements. In Tanzania, National Health Insurance Fund (NHIF) members reported dissatisfaction with the communication system, particularly not receiving updates of changes to the benefit package.

Factors influencing the distribution of health care benefits

In all three countries, poor people are not benefiting from, or accessing, health services to the same extent as wealthier groups, and when they do, they are mainly using lower-cost, nearby primary care public facilities. Affordability, availability and acceptability barriers were found to influence the resultant pro-rich distribution ([Table 1](#)) of overall health care benefit.

Affordability

High costs associated with seeking health care, especially in relation to drugs, laboratory tests and transport, emerged as a key access barrier for poorer groups. In South Africa, for example, 31% of those in the poorest quintile, compared with 6% of the wealthiest, reported not seeking care when sick due to transport costs. Transport costs were especially burdensome for people in rural areas, seriously ill patients and those seeking chronic, regular care.

“I have diabetes and I have to travel to [mission hospital] every month at my own cost despite being insured, am travelling to get drugs which are not available at the dispensary, which I can't manage that regularly.” (FGD, rural area, Tanzania)

Sometimes (especially in emergencies), poor families would resort to borrowing from friends, family members or money lenders. Alternatively they would sell assets, delay care or, as reported in Ghana, barter. Borrowing, particularly when interest is charged, was reported by respondents in Ghana and Tanzania to have devastating effects on already-poor families by instigating a vicious cycle of indebtedness.

“I went for 6 bags of maize and when I went to replace them after the harvest ... he said I should add 3 bags of maize. So I ended up returning 9 bags of maize. At the time I borrowed from him, a bag cost US\$9, when he came for the 9 bags each maize bag cost US\$18. His profit was more than US\$71.” (FGD, rural area, Ghana)

“You go and borrow from your neighbor if you don't have, but normally this requires interest to be paid. If you don't want to borrow, then you sell crops or other assets you have like furniture.” (FGD, rural area, Tanzania)

Availability

Availability includes the location of a facility, opening hours, drug supplies, number and type of health workers, and range and quality of services provided (Thiede *et al.* 2007). In all three countries, higher-order public and private hospitals are mostly located in urban areas, making their access difficult for the poorest groups living in remote areas. These groups were more likely to use closer, primary-level facilities found in sub-districts; however, even these could be difficult to reach:

“You travel about 9 miles before you get to the health facility. When you are sick and have to travel 9 miles, if God is not on your side, you may die ...” (IDI, rural area, Ghana)

The shortage of health professionals and a lack of diagnostic equipment at public primary facilities was also a concern, especially in Tanzania and Ghana, due to the potential for misdiagnosis and resulting expenditure on unnecessary drugs, as well as high opportunity costs of waiting for care.

“Here, we don't have many doctors. Sometimes, one doctor has to look after all of us, you wait and they may tell you to return the next day.” (IDI, rural area, Ghana)

Respondents in Tanzania expressed concerns about the skills of staff at lower-level facilities to deal with certain health problems:

“... they are expected to provide services even if they don't have enough skills ... leading to wrong prescriptions due to lack of skills.” (FGD, rural area, Tanzania)

Many people mentioned being referred onwards because the services they needed were not available at their first port of call. However, in all the countries, there was reportedly low adherence to referral requirements among poor groups *“because it is expensive and they don't go”*. Rural areas

also have a limited range of service providers with a predominance of primary-level public facilities and, in Tanzania, faith-based providers.

In the three countries, our data highlighted that drugs were more likely to be out of stock in public, rather than private, facilities. In South Africa half of the poorest respondents rated drug availability as the most or second most important aspect of quality of care within public clinics, compared with only a fifth of the wealthiest respondents. However, unlike their wealthier counterparts, this group still largely accessed care at public facilities due to affordability constraints.

Unpredictable opening hours also affected service availability. In Ghana, health facilities are officially open 24 hours every day but, to the frustration of respondents, often were not, particularly in small rural facilities. In Tanzania, opening hours were also presented as a problem at lower levels of care. In South Africa, patients reported instances of being turned away for 'being late', even if they got to facilities within opening hours. Additionally, providers working in clinics explained that they often 'reserved' afternoons for administrative work, informally discouraging patient attendance then, and adding to negative public perceptions about public sector care.

Acceptability

Staff attitudes emerged as one of the main factors affecting service acceptability, along with perceived quality of care. In all three countries, patients indicated that negative attitudes were a deterrent from public service use, while positive attitudes attracted wealthier people to private facilities, where staff 'consult patients politely'.

"[I stopped going to public sector antenatal care because] the nurse that was helping us had an attitude, when we asked her something she treated us like children or comics. She was so impatient with us ... shouting all the time." (IDI, urban area, South Africa)

"The nurses here have taken the health facility as their property. Sometimes when you go there with an emergency in the evening, they tell you they are sleeping ..." (IDI, urban area, Ghana)

Negative staff attitudes and unacceptable patient-provider interactions were linked by providers and managers to heavy workloads, staff shortages and lack of resources. A shortage of skilled staff, leading to unskilled providers treating patients, was also raised as a concern by patients in Tanzania. Trust in staff capacity to effectively diagnose was similarly seen to affect service acceptability, exacerbated by the shortage of diagnostic equipment at primary level public facilities, and reinforcing the reasons for using referral or private facilities by those who could afford them.

Discussion

In Tanzania, Ghana and South Africa, complex factors interact through each health system and individuals/households to sustain a pro-rich distribution of health care benefits and a continued heavy reliance on regressive OOP payments and voluntary insurance contributions, borne disproportionately by the poorest groups. As in many low- and middle-income countries, overcoming inequitable access barriers to health care presents a particular policy challenge in these three countries ([Schneider and Diop 2001](#); [McIntyre et al. 2006](#); [Olujimi 2007](#); [Goudge et al. 2009](#); [Nonvignon et al. 2010](#)).

Expanding the breadth, depth and height of insurance coverage ([Mathauer 2009](#)) is one means of reducing OOP payments and financial barriers to care seeking, and increasing service use among the poor. However, increasing enrolment in insurance schemes among the informal sector, the poor and those most in need is a challenge reported in many settings ([Ekman 2004](#); [Murthy and Klugman 2004](#); [McIntyre et al. 2008](#)). While, in theory, the poor could be exempted from premium contributions, in practice, this is a challenging and costly process and requires tax funding to partially or fully subsidize insurance membership for these groups. Further, in our study, a limited understanding of the concept of risk pooling affected people's willingness to join insurance schemes in all three countries, as did the limited benefit package in Tanzania. It is clearly important to offer a benefit package that is attractive to the population, and which includes higher cost services, particularly inpatient care, while also ensuring the ongoing affordability of premiums. Contribution levels, ability to pay and perceived quality of care have been similarly reported to determine enrolment in community-based health insurance in Senegal ([Preker 2004](#)) and Burkina Faso ([Dong et al. 2003](#)) and social health insurance in Kenya ([Mathauer et al. 2008](#)).

Improved tax funding for health care, whether in combination with health insurance contributions by those with the ability to pay or as the sole means of increasing prepayment for health care, is clearly of importance. However, this is challenging as low- and middle-income countries have limited tax bases. However, some (including South Africa) have managed to achieve large tax revenue increases through improved tax compliance and revenue collection efficiency ([EQUINET 2009](#)). Additionally, a number of African countries have succeeded in increasing the allocation of tax funds to the health sector ([EQUINET 2009](#)), in line with the commitment by African heads of state in the Abuja Declaration to devote at least 15% of general tax revenue to spending on health services ([African Union 2006](#)).

Health care financing reforms are underway in each of the three countries and these are expected to impact on financing and benefit incidence

patterns. In Tanzania, the drive is towards an expansion of the NHIF and CHF (cf. <http://www.nhif.or.tz/>). Furthermore, it is expected that the benefit package available to CHF members will expand to cover inpatient care. In South Africa, the proposed tax-funded NHI plans to provide cover to the entire population (cf. <http://www.doh.gov.za/>). In Ghana, the NHIS is seeking to cover all Ghanaians through a one-time payment for those from the informal sector, who will no longer have to pay annual membership contributions (cf. <http://www.nhis.gov.gh>). Making available a relatively comprehensive benefit package to the informal poor, through the expansion of insurance coverage (Tanzania, Ghana) that is likely to require subsidies from general tax revenue, or largely through tax funding (South Africa), will help to limit OOP payments among this group. In Tanzania, cross-subsidization of the CHF by the NHIF, or greater tax support, to fund expansion of benefits would be required to subsidize the costs of the informal sector poor and keep premiums affordable.

However, changes in financing mechanisms will not automatically translate into access improvements. Explicit efforts to improve the availability, affordability and acceptability of health services, especially in the public sector, will be required. These may include improving the geographic distribution of health facilities, ensuring the routine availability of essential medicines in all facilities through improved drug procurement and distribution systems ([Ministry of Health and Social Welfare 2008](#)), providing patient transport to referral facilities, and better understanding and addressing the root causes of staff morale, attitude problems and system mistrust ([Gilson 2007](#)).

Conclusion

Despite good policy intentions and state commitment to equity, regressive financing mechanisms persist in Tanzania, Ghana and South Africa; and drug and staff shortages, long distances and high travel costs, perceptions and experiences of poor quality services, and an often better-resourced private sector, contribute to the creation of inequitable access barriers to health care. The poorest groups experience these constraints most acutely.

Changing the way in which health services are funded, particularly in moving away from OOP payments towards prepayment financing mechanisms, is a vital step towards addressing these inequities. However, this alone will not guarantee a pro-poor distribution of benefits. Funded mechanisms for exempting the poor are also necessary. Additionally, poor groups face constraints not just in terms of paying for medical costs but also covering transport costs, especially to higher-level facilities, and purchasing drugs. The cost of care can drive poor households deeper into poverty ([Xu et](#)

al. 2003), and delay the likelihood of them seeking care when sick ([Makinen et al. 2000](#); [Wagstaff 2002](#)). Innovative mechanisms for financing these costs will be needed to address the access imbalances. For example, transport to referral facilities could be included in the benefit package and drugs purchased outside of accredited facilities could be reimbursed by insurance schemes.

Addressing drug procurement and distribution problems is also a critical issue in many African countries, as is properly equipping and staffing health facilities. Unless providers and patients are confident about the care they are able to give and receive, they are unlikely to support the system. To ensure equity, a more holistic approach is therefore needed, where measures are put in place to provide both financial protection and equitable access to needed care for all.

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Conflict of interest

The authors declare that there are no conflicts of interest.

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Endnote

¹ In Tanzania, exemptions grant free care in public facilities to priority populations groups such as under-5 children, pregnant women and for selected diseases/conditions, e.g. typhoid, chronic illness, AIDS, tuberculosis and leprosy, epidemics. In Ghana, the NHIS

exempts those under 18 (if the parents are insured), the aged (70+), the indigent and (a recent addition) pregnant women from paying their insurance premium. The South African health system features free health care for vulnerable groups (particularly pregnant women, children <6 years, the disabled and the elderly) and free primary care services for all without insurance. All countries have a system of waivers for the poor, which grant free care in public facilities based on ability to pay.

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