Contents

Editorial: Universal health coverage in the African Region. .............................................. 1
Matshidiso Moeti

An introduction to the African Health Economics and Policy Association
and its collaboration with WHO ................................................................. 2
Chris Atim, Laurent Musango

1. The critical role of health financing in progressing universal health
coverage ........................................................................................................ 3
Laurent Musango, Martin Ota

2. Impact of performance-based financing on health-care quality and
utilization in urban areas of Cameroon .................................................. 10
Omer Zang, Sebastien Djienouassi, Gaston Sorgho, Jean Claude Taptue

3. Institutions and structural quality of care in the Ghanaian health system .... 15
Eugenia Ampotu, Justice Nonvignon

4. Solidarity in community-based health insurance in Senegal:
Rhetoric or reality? ..................................................................................... 20
Philipa Mdlovsky, Pascal Ndiaye

5. Financing flows through private providers of HIV services in
sub-Saharan Africa .................................................................................... 27
Sean Callahan, Sharon Nakhimovskv

6. Early evidence from results-based financing in rural Zimbabwe ............. 32
Frank van de Looij, Dudzai Mureyi, Chenjerai Sisimayi, Jaap Koot, Portia Manangazira, Nyasha Musuka

7. Piloting a performance-based financing scheme in Chad: Early results
and lessons learned .................................................................................... 37
Joel Arthur Kiendrèbéogo, Olivier Barthès, Matthieu Antony, Louis Rusa

8. Estimating willingness to pay for maternal health services: The Kenya
reproductive health voucher programme ................................................. 43
Lucy Kanya, Francis Obare, Benjamin Bellows, Brian Mdawida, Charlotte Warren, Ian Askew

9. Fondements de la résilience et de la pérennité de la mutuelle de santé
Fandène, Sénégal .......................................................................................... 51
Aboubakry Gollock, Slim Haddad, Pierre Fournier

10. Increasing equity among community-based health insurance members
in Rwanda ..................................................................................................... 58
Joséphine Nyinawankunsi, Thérèse Kunda, Cédric Ndizeye, Uzaib Saya

11. L’impact des modalités d’allocation des ressources dans les mécanismes
d’exemption sur l’équité : Plan Sésame, Sénégal ...................................... 63
Maymouna Ba, Fahdi Dkhimi, Alfred Ndiaye

News and events ......................................................................................... 67

Abstracts ..................................................................................................... 69

Corrections to Issue 19 (March 2015)
In the article on Routine immunization in the WHO African Region: Progress, challenges and way forward (page
2): the following authors should be included: Shingai Machingaidze, Charles S Wiysonge and Gregory D Hussey
(Vaccines for Africa Initiative, Institute of Infectious Disease and Molecular Medicine, University of Cape Town,
Cape Town, South Africa). On page 4, the following general reference should be added: Machingaidze S, Wiysonge
Universal health coverage in the African Region

Complex and emerging health challenges in the African Region, linked to rapid urbanization, globalization and public health emergencies of international concern, have coalesced to demand more innovative approaches to the planning and implementation of health services in the African Region and at country level.

Universal health coverage (UHC) aims to provide health care and financial protection to all people in a given country with three related objectives: equity in access – everyone who needs health services should get them, and not simply those who can pay for them; quality of health services – good enough to improve the health of those receiving the services; and financial-risk protection – ensuring that the cost of health care does not put people at risk of financial hardship. It is a powerful concept in public health, and one of the key areas of progress in health in the African Region.

Universal health coverage is one of the strategic priorities of the World Health Organization. When I addressed the 136th Session of the WHO Executive Board in Geneva in January 2015, at the time of my appointment as Regional Director for the African Region, I made the commitment to “work very hard in driving progress towards equity and universal health coverage in our Region”. This commitment is embodied in the Africa Health Transformation Programme 2015–2020: A vision for UHC, a strategy that will guide the work of our Regional Office during the next five years.

Some countries in the Region are already implementing strategies to improve access and coverage of health services, while others have made commitments to take measures towards UHC. As countries in the Region move towards UHC, it is vital to understand the challenges and constraints they are facing, identify skills shortages and capacity-building needs, and also learn from their experiences.

This special issue of the African Health Monitor has a dual objective: firstly, it offers an overview of research on the subject of UHC in Africa; and secondly, it provides wider dissemination of research results presented and discussed in African scientific meetings. All the articles of this special issue originated from presentations made during the African Health Economics and Policy Association (AfHEA) 3rd biennial scientific conference held in Nairobi in March 2014. Eleven of the 188 presentations made at the conference were selected by a joint team of WHO staff and AfHEA members and expanded into full papers for publication in the Monitor. With their focus on UHC, they cover themes such as performance-based financing, equity and quality of care, community-based health insurance and health vouchers, and the impact of allocation of resources in the context of exemption. The articles also describe the achievements and challenges countries face when implementing reforms and introducing policies and strategies towards UHC.

Universal health coverage in the African Region – the subject of this special issue of the Monitor – is a high priority and I call on all policy-makers, researchers, academics and health workers to read this issue and provide suggestions for future work in support of UHC in the Region. I take this opportunity to encourage Member States to implement, monitor and evaluate the progress of UHC in their respective countries, as well as to conduct research to provide evidence and disseminate best practice. Finally, I commend the AfHEA for their initiative in organizing their biennial scientific conference and would encourage WHO partners to provide support to the AfHEA and other African health associations fostering research in public health in the Region.

Dr Matshidiso Moeti
WHO Regional Director for Africa
An introduction to the African Health Economics and Policy Association and its collaboration with WHO

Chris Atim; Laurent Musango
Corresponding author: Laurent Musango, e-mail: musangol@who.int

The African Health Economics and Policy Association (AfHEA) is a bilingual (English and French) apolitical and not-for-profit association launched in Accra, Ghana, in March 2009, where its headquarters are located. The overall mission of AfHEA is to contribute to the promotion and strengthening of the use of health economics and health policy analysis to achieve equitable and efficient health systems and improved health outcomes in Africa, especially for the most vulnerable populations. AfHEA has more than 200 members from African countries working in the health economics, health financing and health policy fields. One of the key mandates of AfHEA is to build the capacity of young researchers in its main focus areas. And this capacity building is an area in which the WHO African Region has been a key partner.

AfHEA holds a scientific conference every two years. Since its inception in 2009, AfHEA has held three scientific conferences; in Ghana (2009), Senegal (2011) and Kenya (2014). AfHEA’s conferences bring together both young and established researchers and professionals working in its key theme areas from Africa and across the globe to share knowledge, identify existing research gaps and network.

The most recent scientific conference, in March 2014 in Nairobi, Kenya, had the theme “The Post-2015 African Health Agenda and UHC: Opportunities and Challenges.” This theme was influenced by the WHO 2010 World Health Report – Health Systems Financing: The path to universal coverage which called upon countries to move towards universal health coverage (UHC). However, moving towards UHC requires technical capacity, which is lacking in a majority of African countries. In 2012–2013, AfHEA, in collaboration with the WHO African Region, implemented a survey that sought to find out what countries in Africa are doing in the area of UHC; useful lessons that have been learnt by countries and which can be shared with other countries designing and implementing similar policies and programmes; the challenges and constraints countries are facing; and the critical areas of capacity development, skills shortages and requirements that need to be addressed.

The 2014 conference attracted around 260 participants from 42 countries from Africa and beyond. This was a 15% increase in attendance from the 2011 conference held in Saly, Senegal. Of the 260 participants, just over a third were female. The participants were drawn from different types of organizations and institutions including: academic, research, ministries of health, government agencies, development partners and others.

The main objectives of the third AfHEA conference were to:

- Actively define the research agenda and identify successes and research gaps regarding UHC in Africa post-2015;
- Ensure a minimum of 30 African countries and 200 participants from Africa (both francophone and anglophone) attend the conference;
- Ensure attendance from at least 15 globally recognized experts on African health economics and policy;
- Present at least 80 abstracts;
- Publish all abstracts and posters of the conference both in hard copy and electronically; and
- Translate outputs from the AfHEA conference into policy notes to disseminate to decision makers.

And the overarching goals of the conference (as with previous ones) were to:

- Provide an opportunity for policy makers, development partners and researchers to interact on the theme of the conference;
- Build the capacities of younger researchers who would be able to interact with senior and more experienced colleagues and obtain feedback and mentorship on abstracts and presentations; and
- Contribute to informing and developing health financing policy in Africa.

Following the conference, AfHEA has collaborated with WHO-AFRO to publish 11 of the papers presented at the conference in this special issue of WHO’s African Health Monitor. The aim of this activity has been to further build the capacity of the authors in writing and publishing high-quality research papers. The authors of the selected papers received technical guidance and support from AfHEA and WHO-AFRO’s established researchers to ensure that the papers were of high quality and met WHO standards. WHO-AFRO also wishes to acknowledge the financial support provided by DFID for the preparation of this publication.

The fruitful collaboration between AfHEA and WHO-AFRO will continue in future as both organizations work together to find local solutions to the unique challenges facing Africa’s health sector.

i African Health Economics and Policy Association
ii Regional Adviser for Health Financing and Social Protection, WHO Regional Office for Africa, Brazzaville, Congo

---

An introduction to the African Health Economics and Policy Association and its collaboration with WHO
The critical role of health financing in progressing universal health coverage

Laurent Musango, Martin Otai
Corresponding author: Laurent Musango, e-mail: musangol@who.int

Universal health coverage has been defined as the ability of all people who need health services to receive them without incurring financial hardship, thereby achieving equity in access. Universal health coverage consists of two interrelated components:

- **Coverage with quality health services**, including promotion, prevention, treatment, rehabilitation and palliation; and
- **Coverage with financial protection**, for everyone.

The former captures the aspiration that all people should obtain the good quality health services they need, while the latter aims to ensure that they do not suffer financial hardship linked to paying for these services.

For all countries, moving towards UHC is a process of progressive realization on several fronts: the range of available services; health services of sufficient quality to achieve the desired outcomes; the proportion of costs of those services covered; and the proportion of the population covered with specific focus on equity.

Progressing towards the goal of UHC requires countries to advance in terms of health system inputs, outputs and coverage.
of good quality services in all population groups while ensuring solidarity through financial protection against catastrophic OOP health payments. It is necessary to pool resources and to eliminate direct payments at the point of service in order to provide quality services equitably.

UHC is much desired and progress in its implementation will result in improving health outcomes and tackling poverty, by increasing access to, and coverage of, quality health services, and by reducing the suffering associated with payment for health services. Health financing is central to providing the different components of health systems needed to make progress in UHC. However, there are several constraints militating against the financial resources for health that are essential to implementation of UHC in the African Region. This article describes those constraints and potential measures to circumvent those challenges.

Constraints in implementation of universal health coverage

Insufficient financial resources

The high-level Taskforce on Innovative International Financing for Health Systems estimated that in 2009 a low-income country needed to spend on average US$ 44 per capita, and US$ 60 as a target for 2015, to strengthen its health system and to provide an essential package of health services. In 2012 the data show that 26 countries were on or above US$44 per capita while 19 were below that amount (Figure 1).

Unexpectedly, there is no positive correlation between health expenditure and health indicators – r²=0.17 for the maternal mortality rate (MMR) and 0.018 for the under-five mortality rate (U5MR). In addition, the countries with an average expenditure on health of more than US$60 per capita do not have improved health indicators; probably due to inefficiency in the utilization of the available resources including the prioritization of high-impact interventions. For example, Mauritania, Côte d’Ivoire and Sierra Leone are spending US$ 50–100 per capita on health, but their MMRs are 300, 700 and 1 100 per 100 000 live births, respectively. Algeria, Botswana and South Africa have low rates of MMR, <200 deaths per 100 000 live births, but they are spending respectively US$ 250, 380 and 650 per capita. This situation is similar for the U5MR (Figure 2). Spending in investment and supply will not show outcome impact (reduction of mortality and morbidity), but investing in primary health care and high-impact interventions may show a quick outcome impact.

Apart from per capita expenditure, governments can also allocate more money for health from domestic sources. In this regard, the 2001 Abuja Declaration urges African Union states to allocate “at least 15%” of national budgets to the health sector”. Despite this landmark decision, only six countries had implemented this by 2012 (Liberia, Rwanda, Swaziland, Zambia, Malawi and Togo). Considering both the Abuja and high-level Task Force targets, only Liberia, Rwanda Swaziland and Zambia have met both (Table 1).

Heavy reliance on out-of-pocket health expenditure

The public health facilities rely heavily on funds obtained through prepayment schemes and OOP spending of patients as a source of health-care financing to meet operational costs. Evidence shows that when OOP payments are below 20% as a proportion of THE, the incidence of financial catastrophe caused by OOP health expenses is negligible. However, this was not the case for 35 countries (79%) of the 47 countries in the African Region in 2012 where OOP expenditure was more than 20% of THE. Indeed, in 21 (45%) countries, the OOP was more than 40% of THE, which presumes that households are exposed to impoverishment caused by catastrophic health expenditure (Figure 3).
The incidence and intensity of catastrophic health expenditure and impoverishment due to health payments are shown in Figure 4. A recent survey on financial protection in seven African countries showed that the incidence of catastrophic health expenditure ranged from 6.8% in Mauritania to 0.42 in Seychelles. Impoverishment due to health payments was highest (2.7%) in Kenya and lowest (0.15%) in South Africa.7–12

It is very clear that the burden of OOP payments is high in the African Region, and households are becoming poor and many more are being trapped in poverty due to health-care payments. African Members States should urgently consider alternative health financing mechanisms that offer financial risk protection to the population. Such approaches, as clearly stated in the WHO 2010 report, should encourage risk pooling and income cross-subsidization.1

Some African countries are doing relatively well in the implementation of the WHO 2010 recommendations and five of the best practices documented13 are described in Table 2.

### Inefficiency in management of health systems

Implementation of prepayment mechanisms will not have much positive impact if not executed simultaneously.
with efficiency measures. Improving provider performance and contracting in service delivery have not been optimally explored to ascertain whether they offer efficiency savings. The capacity required to design and implement them is lacking. The legal and regulatory frameworks are inadequately reinforced and as a result inappropriate procurement, irrational use of medicines, inappropriate staff mix and deployment, coupled with a lack of performance incentives, are not uncommon. There are also weak policies related to allocation and timely disbursement of funds to end users. This may lead to overuse and overfunding of certain health services and avoidable wastages especially due to pilferage. WHO estimates that globally, 20–40% of all health spending is wasted through inefficiency.1

Governance and accountability

African leaders are taking the decision to implement UHC. Some countries in the African Region are already implementing strategies to improve access to and coverage of health services (Botswana, Gabon, Ghana and Rwanda) while many others (Benin, Burundi, Congo, Côte d’Ivoire, Democratic Republic of the Congo, Kenya, Malawi, Mali, Mauritius, Namibia, Nigeria, Senegal, Seychelles, Sierra Leone, Togo, Uganda and United Republic of Tanzania) have made commitments to take measures towards achieving UHC.

However, implementation of UHC requires putting in place a clear policy and plan with a monitoring and evaluation (M&E) framework to guide the implementation and to measure progress. It also calls for government stewardship to coordinate the different stakeholders. Although mobilizing sufficient financial resources and obtaining long-term commitments are obviously crucial requirements, design details, the formulation process, and implementation plans also need careful consideration.
Harnessing stakeholder contributions in health financing

The health arena in the African Region contains many actors, dispersed efforts and unclear results in relation to impact on priority health problems. Most health systems in the African Region are pluralistic; services are delivered by public and non-state providers, including private for-profit and private not-for-profit actors. Communities also play a role in mobilizing resources for health and service delivery. In addition, improving health outcomes requires the effort of more than the health sector alone. Harnessing the contribution of the multiplicity of actors remains a challenge due to lack of implementation of appropriate frameworks and instruments. Roles and mandates of the different stakeholders are not explicitly spelt out. In addition, the capacity of government officials in negotiation, comprehensive planning and monitoring needs to be strengthened.

Research including monitoring and evaluation

Monitoring and operational research systems are still weak, making it hard to evaluate achievement, identify gaps and implement appropriate solutions to make progress. Although several countries have undertaken national health accounts (NHA) to inform policy making and guide priority setting when developing national health strategies and operational plans, it is not yet institutionalized in several countries. As countries move forward, they will need to track their own progress and make adjustments to their strategies and plans on health financing as necessary. Some progress has been made in the Region in recent years – 33 countries participated in orientation and capacity-building workshops for the revised System of Health Accounts (SHA) in 2011. As a result 60% of those countries are using (or preparing to use) SHA, which is the global standard for tracking resources, adopted by various UN agencies such as UNAIDS and UNFPA, as well as by the Global Fund for AIDS, Tuberculosis and Malaria. This means that they are producing health accounts with disease expenditures including expenditures on women’s, children’s and adolescents’ health. They are also in the process of institutionalizing SHA so that accounts are produced annually for expenditure of the previous year, with results published on time for budget development and policy planning.
To date, 11 countries are producing or have already produced at least two consecutive SHA 2011 health accounts reports with disease expenditures. Another 10 countries are in the process of producing their first SHA 2011 with disease expenditures, including expenditure on women’s, children’s and adolescents’ health (Figure 6).

To show how UHC is making progress, in addition to the NHA mentioned above, the use of the framework of monitoring progress towards UHC at country and global levels, elaborated and published jointly by WHO and the World Bank, will be useful in measuring progress at country and regional level. Baseline studies using this framework to assess capacity to successfully apply the framework for monitoring progress towards UHC have already been conducted for Ethiopia, Ghana, Kenya, South Africa and the United Republic of Tanzania. Botswana, Côte d’Ivoire, Lesotho, Namibia, Uganda, Seychelles and Swaziland are in the process of producing their baseline assessments on progress towards UHC using the same framework.¹⁴,¹⁵
Key requirements for strengthening health financing to improve UHC

- Support for assessing the current situation in relation to health financing and UHC: financial and technical support to country teams analysing the current state of UHC, how the health financing system currently operates, and technical options for change that would enable progress towards UHC.

- Facilitate inclusive policy dialogue for health financing strategy development: Development or revision of countries’ policies and strategies for health financing systems will ideally involve multistakeholders – all ministries involved in the provision or financing of health services (including the ministries of finance, labour and social affairs), subnational governments, civil society, private sector etc. Existing platforms should be used wherever they operate well – for example, active donor groups often exist at country level (sometimes separately for health financing issues) and could be used as the facilitation mechanism; regional partnerships such as Harmonization for Health in Africa (HHA) could facilitate these exchanges in some countries; while global partnerships such as Providing for Health (P4H) would be able to encourage these country dialogues in other settings. In addition, WHO will facilitate dialogue and interaction with the national health planning process where this is occurring.

- Scale-up policy advice to countries: This should occur during the evaluation of health financing options, and then in the provision of technical support during the rollout of plans and strategies, and the monitoring and feedback stages. Again, existing partnerships would be used where they work well and have the expertise in health financing for UHC.

- Facilitate innovation and learning-by-doing at country level: It is important that countries are able to innovate, monitor and evaluate as they move forward so that they can modify their own strategies rapidly when necessary. Other countries could also benefit from sharing experiences. Innovation with learning-by-doing is required in almost all of the specific health financing reforms that might be instituted – linked to raising more money, reducing financial barriers and increasing financial risk protection, and improving efficiency and equity. External partners as well as governments would need to provide sufficient finance to rollout innovations, but also to fund recipient-country nationals or institutions to undertake independent reviews of achievements. They would also need to provide technical inputs on design and implementation of this type of “research” in some settings.

- Provide support to countries seeking to improve transparency and accountability: It is important to assess the way health funds are raised and used. This would require among other things strengthening the country’s ability to: a) track financial resources allocated to and spent on health, including government, non-government and external resources (institutionalized in the NHAs); b) identify how resources are used and who benefits from them; and c) identify areas in which more “value for money” could be obtained by improving efficiency and equity.

Conclusion

UHC is obviously an ambitious endeavour but making progress on it will be of immense benefit, particularly to the African Region as it will be associated with improved access to health services, financial protection to all citizens of a particular country and improved health outcomes. The development of robust health financing policies, strategies and sustainable financing mechanisms are central to the implementation of the key components of UHC. These strategies will require that the various sectors and stakeholders within and outside the health sector play their roles. Countries need to take responsibility, ownership and lead the processes involved. WHO will convene the necessary forums and provide the technical support to facilitate the acceleration of the processes needed for UHC.

References


6. Taskforce on Innovative International Financing for Health Systems. More money for health, and more health for the money; to achieve the health MDGs, to save the lives of millions of women and children, and to help babies in low-income settings have a safer start to life. London 2009.


Impact of performance-based financing on health-care quality and utilization in urban areas of Cameroon

Omer Zang,1 Sebastien Djienouassi,1 Gaston Sorgho,1 Jean Claude Taptue2
Corresponding author: Omer Zang, e-mail: zang_omer@yahoo.fr

Performance-based financing has attracted considerable interest from governments and aid agencies in low-income countries as a means to increase productivity and quality of health-care providers. Supply-side PBF is an instrument that links financing to pre-determined results, with payment made upon verification that the agreed results have actually been delivered by the health facility. In Africa alone, more than 35 countries, including Cameroon, are implementing or are in the process of introducing payment methods that reward performance.1 Many impact studies, with varying degrees of rigour, have been or are being carried out in various settings on PBF and other similar financial incentives aimed at health workers. Randomized experiments were carried out in order to monitor health worker attendance in India and incentivized service quality by physicians in the Philippines. Results showed that in India, the monitoring system was initially extremely effective but became ineffective after 18 months due to administration laxity. In the Philippines, service quality-based incentives had significant effects.2,3

In Africa, to date, only two experimental studies of the impact of PBF on health service provision and utilization have been completed, in Rwanda and the...
Democratic Republic of the Congo. In Rwanda, PBF proved an efficient way to increase health service quality and utilization, resulting in improved child health outcomes. In the Democratic Republic of the Congo, Elise Huillery et al (2013) found that financial incentives improved effort from health workers to increase targeted service provision, but demand for health services was not responsive to these incentives. Most other studies using non-credible comparison groups or comparing simple before and after situations advocate PBF as a way to increase accountability, efficiency, quality and quantity of service delivery. Loevinsohn and Harding (2005) reviewed ten studies on the effect of contracting with non-state entities, including non-governmental organizations (NGOs), as a way to improve health-care delivery, and concluded that contracting for the delivery of primary care can be very effective and that improvements can be rapid.

Given the rising popularity of this financing strategy, robust evidence about its effects is still needed. One way of improving the robustness of the evidence might be, when an experimental design was not prepared, the use of multiple quasi-experimental methods to assess the impact.

Cameroon has made little progress towards achieving the Millennium Development Goals (MDGs). In fact, with a few exceptions such as immunization, most key indicators of maternal and child health and nutrition have stagnated or worsened since 1990. The mortality rate in under-five-year-olds rose in Cameroon in the 1990s and has stagnated since 1998. Analysis of the health system of Cameroon indicates that linking health district functioning to accountability, efficiency, quality and quantity of service delivery, results in various quasi-experimental impact evaluation methods.

Method

Within the framework of the quasi-experimental impact evaluation study of Cameroon’s PBF project in the Littoral region, a baseline survey was conducted in January 2011 and follow-up survey in February 2013. Three quasi-experimental impact evaluation methods were applied for this study.

Study area

Cameroon is a central African country with a population of almost 22 million as estimated in 2014. Cameroon’s health system is organized into 10 regions, 189 health districts and around 1 700 health centers. As assessed in 2012 by its Ministry of Health, the country has 1 888 public health facilities.7,21,22

The objective of the study reported in this article is to estimate the impact of a PBF pilot project on quality and utilization of health care in an urban setting and cross-check the results with various quasi-experimental impact evaluation methods.
Power calculations were conducted assuming antenatal care and full immunization coverage as results of interest to assess the validity of the overall sample size. They concluded that for a level of power of 80–90%, a sample size of 1 000 households was enough to allow any impact on utilization to be detected. Power calculations were not conducted for health facilities sampling.

Table 1 shows the sample sizes of baseline and endline surveys. Among 1 000 households surveyed, 62.5% were located in urban areas. Out of the 40 sampled delimited health zones investigated, 25 were urban.

Three questionnaires were designed for the PBF-LT surveys and served as guidelines for households and main health facilities of delimited health zones data collection. The household questionnaire collected data on the household composition; some characteristics of under-five-year-old children; some household characteristics – including their assets, income and expenses, sickness episodes; under-one-year-old children immunization; characteristics of the latest pregnancy of the household; and attitudes of women of reproductive age to contraception. The health facility questionnaire focused on health facility identification; catchment area population size; facility expenses and income; and personnel payment. A health facility quality checklist served to collect quality scores on the following components: structural quality; outpatient care; maternity; family planning; vaccination and antenatal care protocols; laboratory; and drug and supply availability (safety stock measured by the monthly average consumption). Each component of the quality checklist had a maximum score ranging from 3 to 12 points and included a series of items that “quality verifiers” should observe during the survey.

The overall quality score summed up all component scores included in the checklist for a given facility. The maximum value was 68 points (see Table 3).

Cameroon’s National Committee on Ethics and Human Health provided ethical clearance for all the surveys related to the process of impact evaluation of the PBF on health in Cameroon.

Impact evaluation quasi-experimental methods

The study used the propensity score matching method technique (PSM), the double difference or difference-in-difference method (DD) and a mix of these two methods as a third impact evaluation approach.

The basic idea behind propensity score matching is to match each participant with an identical nonparticipant and then measure the average difference in the outcome variable between participants and nonparticipants.24–26 The balancing property test is captured by the area of common support. It represents the propensity scores within the range of the lowest and highest estimated values in the treatment group. With the propensity scores generated, the outcomes of interest between the treatment group and the matched control group are then compared to see whether the intervention affects the outcome of interest. This is possible by estimating the average treatment effect on the treated (ATT) of the programme participation, using kernel-based matching – identified as the most robust method. The method is usually accompanied with bootstrapping of standard errors.24,25 The matching method is meant to reduce bias by choosing the treatment and comparison groups on the basis of observable characteristics.26

The double difference method uses panel data, collected from a baseline survey before the programme was implemented and after the programme has been operating for some time. The DD method can be implemented using a regression on panel or pseudo-panel data:28

\[ Y_{it} = a + bTt + \beta T_i + \delta_i + \epsilon_{it} \]

where T is the treatment variable, t is the time dummy, and b is the coefficient of the interaction of T and t. b gives the estimate of the impact of the treatment on the outcome Y.

The health outcomes the intervention targets considered in the impact modelling are: overall quality score and its main components; human resources availability (physicians, nurses, nurses’ aides and unqualified staff); and health service coverage (outpatient consultation, under-one-year-old children vaccinated on time, unwanted pregnancy, modern contraceptive method utilization, institutional delivery, two or more antenatal care visits, and pregnant women antitetanic vaccination).

All coefficients of the model are expected to be positive as the assumption behind the PBF intervention is that it should increase either the health-care quality score, staff availability or health service coverage.

For this study, in the case of health facilities, panel data were used; and in the case of households, pseudo-panel data were used as only the same delimited health zones were considered for the baseline and endline surveys – but not the same households. The DD method is popular in non-experimental evaluations. A basic assumption behind the simple implementation of the DD method is that other covariates do not change over a few years.28,29

The DD method can be refined in a number of ways. One way is by using PSM with the baseline data to make sure that the comparison group is similar to the treatment group and then applying double differences to the matched sample (DD-PSM). This way, the observable heterogeneity in the initial conditions can be dealt with.30

<table>
<thead>
<tr>
<th>Households</th>
<th></th>
<th>Health facilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>Urban</td>
<td>Total</td>
<td>Rural</td>
</tr>
<tr>
<td>Treated</td>
<td>150</td>
<td>250</td>
<td>400</td>
</tr>
<tr>
<td>Control</td>
<td>225</td>
<td>375</td>
<td>600</td>
</tr>
<tr>
<td>Total</td>
<td>375</td>
<td>625</td>
<td>1000</td>
</tr>
</tbody>
</table>

Source: PBF-LT surveys
Limitations of the study

Some methodological limits can be observed in the sampling strategy used for the data collected for this study. Power calculations were not made to figure out beforehand whether the sample size was large enough to be able to capture any impact. Only post-sampling power calculations were made with the constraint of 1,000 household sampling size and concluded favourably. Nevertheless, the data used still remain potentially more robust than many studies of the same type using routine data and smaller sample sizes.

Results

The findings relate to the quality of care at the health facility, including human resource aspects, and curative, maternal and children health service utilization. All results are presented in Table 3.

Quality of care

- The three methods have very similar differences on overall average quality score impact (DD: 20.2/68, p<0.01; ATT: 22.4, p<0.01; and DD-PSM: 19.2, p<0.01).
- There is a positive impact score of about 5/12 points on the institutional quality of care (DD: 5.3, p<0.01; ATT: 4.9, p<0.01; and DD-PSM: 5.1, p<0.01).
- The impact score on outpatient care quality is positively significant and close to 3/11 points (DD: 2.9, p<0.01; ATT: 2.7, p<0.01; and DD-PSM: 2.6, p<0.01).
- The maternity quality score could also register a significant and positive impact score ranging from 3.6/12 to 5.3/12 points across the methods (DD: 3.6, p<0.01; ATT: 5.3, p<0.01; and DD-PSM: 3.7, p<0.01).
- On family planning quality score, a positive and significant impact is recorded with a magnitude of about 2.5/8 points (DD: 2.5, p<0.01; ATT: 2.6, p<0.05; and DD-PSM: 2.3, p<0.01).
- Vaccination and antennal care quality are measured under the same component in the quality checklist and record a 2/7-point score impact (DD: 2.0, p<0.05; ATT: 2.0, p<0.05; and DD-PSM: 1.9, p<0.05).
- Among the three methods, laboratory quality impact score is positive and significant only with difference-in-difference with a 1/5-point impact difference at 0.1 margin of error (DD: 1.021, p<0.1).
- On drug availability, only simple difference method could be positive and significant with a 3/10-point impact difference at 0.1 margin of error (ATT: 3.0, p<0.01).
- Impact on pharmaceutical supply availability score (1/3 point score) is positive and significant in all three methods with various levels of significance (DD: 1.0, p<0.05; ATT: 1.0, p<0.1; and DD-PSM: 1.0, p<0.1).
- Human resource is also a key aspect of the quality of care at the health facility. All three methods show a non-significant coefficient on physician presence at the health centre. No significant impact is either found on other human resource availability: nurses, nurses’ aides and unqualified staff.

Health service utilization

All health service utilization indicators’ coefficients, measured by coverage percentages, are not significant with the exception of modern contraceptive methods (0.085 coverage rate-difference) for which only the kernel PSM method yields a significant coefficient (ATT: 0.085, p<0.01).

Discussion

It is considered that PBF could impact on the quality of health-care service provided by contracted facilities through a positive influence on quality of most of the components as assessed in the study. This may be driven by improved staff motivation through financial bonuses as shown by an experimental evaluation of financial incentives on staff in the Philippines. Meanwhile, laboratory and drug availability showed mitigated levels of impact significance. No significant impact either was found on health personnel availability. Moreover, all health

Table 2. Post matching mean comparison tests

| Variable                          | Treated  | Control | % bias | T   | p>|.05 |
|-----------------------------------|----------|---------|--------|-----|-----|
| Square catchment area population size | 2.1e+08 | 2.0e+08 | 2.9    | 0.14| 0.888|
| Square number of qualified staff  | 131.34   | 129.81  | 0.2    | -1.18| 0.244|
| Population x qualified staff      | 1.5e+05 | 1.5e+05 | 2.2    | -0.86| 0.395|
| Catchment area population size    | 13318    | 12912   | 5.6    | -0.01| 0.989|
| Number of qualified staff         | 10.219   | 10.259  | -0.4   | -1.57| 0.120|

Source: PBF-LT surveys
service utilization, measured by coverage rates, was not significantly impacted by the intervention, with the exception of modern contraceptive methods. Actually, it should be noted that, with the exception of contraception, coverage at baseline of all other health services targeted in this study were already very high at the outset, leaving little room for improvement. Comparable results on service utilization were found in the Democratic Republic of the Congo and, to some extent, in Rwanda.4,6

Conclusion

The pilot study indicates that the implementation of PBF in an urban area of Cameroon could significantly and positively impact on key aspects of clinical care quality without really leveraging more utilization of health services. These findings demonstrate that within the framework of PBF, the context (urban/rural) and the list of indicators matter as underpinning factors of future impact. In urban settings, the quality of care seems to be the most likely area for improvement as there may be little room to improve health service utilization in many settings.

Acknowledgments

We wish to acknowledge the support of the World Bank. Meanwhile, all errors remain ours, and the opinions expressed in this paper are ours alone and should not be attributed to the institutions with which we are associated for this work. We are grateful to André Ariane Bita Fouda who played a significant role as the regional delegate for public health for the project’s implementation. We thank Celestin Kimanuka for coordinating the data collection process along with Simon Mbuya. And special thanks also to Endaomjuw Benga, the national coordinator of the Health Sector Support Investment Project; and to Paul Jacob Roby, the coordinator of the main experimental impact evaluation of the project into the three other regions financed by the World Bank. Finally, we gratefully acknowledge the staff and patients of the health facilities as well as the households for the time and information they provided.

References

SUMMARY—Structural quality in the provision of health care refers to the availability of physical and human resources. The undersupply of such resources in health facilities leads to understaffing, outpatient and inpatient overcrowding and undersupply of tools needed for the provision of adequate health care. The provision of these resources is very much correlated with institutional factors, specifically governance and agent incentives. The aim of this study is to explore the effect of institutional factors on structural quality in public health facilities in the Ghanaian health system. New survey data on 62 public health facilities across three regions in Ghana were used. Principal component analysis was used to create three indices for structural quality: overcrowding, personnel and equipment. Three regressions were run for the quality indices on institutional factors. The results showed that regional hospitals were the most overcrowded and had the worst personnel shortages, but had the best performing equipment. Internal governance was found to be more important in reducing overcrowding than external governance. The opposite was the case for the equipment index. Personnel shortage was mild in facilities with opportunities for professional development. The study highlighted the importance of good coordination of facility administration with workers as well as with government in improving quality.

Voir page 69 pour le résumé en version française.
Ver a página 69 para o sumário em versão portuguese.

Institutions and structural quality of care in the Ghanaian health system

Eugenia Amporfu, Justice Nonvignon
Corresponding author: Eugenia Amporfu, e-mail: eamporfu@gmail.com

Structural quality of health care refers to the availability of the physical and human resources required for the provision of care. Measures of structural quality include health facilities’ physical equipment, and measures related to staff expertise and staff coordination and organization. Even though this type of quality may not by itself ensure improved outcomes, it is important because it focuses on the availability of all inputs necessary for the provision of care, without which better health outcomes may not exist. The definition of structural quality used in this study focused on the adequate supply and functional state of resources used for the provision of health care. Structural quality, then, ensures access to health care, which is necessary for the achievement of universal health coverage.

Universal health coverage is achieved for a given economy when all residents, regardless of income, are able to have access to adequate health care without suffering financial hardship. One of the important factors for achieving universal health coverage is access to technologies for the diagnoses and treatment of illness. The availability of these inputs for the provision of health care represents structural quality. Government intervention in the health-care market affects structural quality. In Ghana, for example, the government owns more than 50% all the health facilities in the country. The government is responsible
for the availability of all physical and human resources in public facilities. The structural quality of health-care provision in the public sector is therefore subject to public norms and institutions. This study uses malaria outpatient data to explore the role of institutional factors in structural quality in Ghanaian public health facilities.

Malaria data were focused on for two reasons. First, malaria is the most common disease in Ghana accounting for more than 40% of outpatient cases and about 48% of under-five-year-olds’ hospital admissions. Thus, changes in the structural quality of the treatment of malaria are likely to affect a large percentage of the population. Secondly, malaria was chosen to rule out the possible variation in structural quality as a result of variation of diseases and hence make comparison of quality possible across health facilities.

Measuring structural quality

The measures of structural quality used for this study were adequate supply of furniture and human resources as well as the functional state of equipment used for treatment. These measures are closely linked to health outcomes of treatment. The adequacy of furniture supply was measured by the facility’s ability to provide enough seats for all outpatients and beds for inpatients. Patients who do not get seats at outpatients may have to sit on the floor or stand and inpatients who do not get beds may have to lie on the floor or sit in a chair. In addition to causing discomfort, sitting or lying on the floor can increase the probability of contracting germs and hence worsen a patient’s health status. The equipment includes tools used for diagnoses as well as treatment of malaria. The correct functioning of these tools is important for proper treatment and enhanced outcomes. The supply of doctors and nurses is necessary to ensure access to treatment. A well-equipped health facility that is not staffed adequately with experts is not capable of providing adequate care to patients.

Institutional factors

The institutional factors relevant in this study were mainly the model of governance used by the government for the various health facilities and the administration of the health facilities for the workers. Specifically, the focus was on the extent of decentralization in decision making at the facility level as well as the flow of information between the government and health facilities and the administration of health facilities and health workers. Teaching hospitals in Ghana have more autonomy than other facilities in hiring and capital expenditure. Unlike the other types of hospital governed by the Ghana Health Service (GHS), teaching hospitals do not require approval from GHS for hiring and capital expenditure. Teaching hospitals, then, enjoy significant decentralization. Teaching hospitals are also referral facilities to regional hospitals, which are referral facilities for district hospitals, and in turn health centres. Hospital type then has institutional implications. In addition, institutional factors also covered the procurement process and incentives for health workers. These factors were measured through relevance and quality of procured items, opportunities for professional development through further studies and learning on the job, hiring procedure, and workers’ view of information flow.

Method

Data

The data used for the study came from a survey of health facilities in three of the ten administrative regions in Ghana. The selected regions have the three teaching hospitals in the country. The selected health facilities for each region included one teaching hospital, one regional hospital, district hospitals and health centres. The respondents for the survey were patients, health workers and facility administrators. Health workers and administrators provided information on the institutional factors described above but the unit of observation was patients. Thus health workers responses were averaged for the facilities in which they worked. The survey, which was done in 2010, was funded by the African Economic Research Consortium and ethically approved by the Ghana Health Service on clearance ID: GHS-ERC:01/1/10. Information in the survey included patient and health facility characteristics, as well as institutional factors. The unit of observation was patients and the sample size, after the removal of all missing variables, was reduced from 2 852 to 2 451 patients. There was no information on the patient population serviced by the selected facilities and so convenience sampling was used.

Empirical specification

The regression equation used for the study is:

$$Y_i = \beta + aC_i + \gamma H_i + \pi S_i + e_i$$

Where $Y_i$ is the dependent variable(s), $C_i$ is a vector of variables on the patients’ characteristics, $H_i$ represents a vector of characteristics of the health facility in which the patient received care, and $S_i$ is a vector of variables on institutional factors as described above. The patient characteristics included age, gender, education and employment. Facility characteristics focused on facility type and the region in which it was located. The facility types were: teaching hospital, regional hospital, district hospital and health centre; and the regions: Ashanti, Greater Accra and Northern. Both the facility types and regions were coded as dummy variables with health centre and Northern region as the control variables.

There were five indicators for structural quality: outpatient overcrowding, inpatient overcrowding, functional state of equipment, doctor shortage and nurse shortage. Facilities without inpatients were coded as having no inpatient overcrowding. All indicators were dummy variables and were coded as one if the problem (e.g. nurse shortage) existed and zero otherwise. The coding for personnel shortage was first in the form of dummy variables and second as a ratio of available personnel in a facility to the required number of personnel.

Principal component analysis, explained below, was used to create quality indices from the five indicators. The indices were used as dependent variables for the regressions. The independent variables for the regressions differed only by the institutional factors as different institutional factors were relevant for different indices.
Principal component analysis was used to reduce the number of regressions for structural quality, and to create quality indices. Generally, principal component analysis is used to reduce a large number of apparent independent variables to a smaller number of uncorrelated variables referred to as principal components. The indicators of structural quality again were doctor shortage, nurse shortage, the functional state of equipment, outpatient overcrowding and inpatient overcrowding. In general, doctors are scarcer than nurses and so facilities with nurse shortages are also likely to have a shortage of doctors. Poorly functioning equipment/instrument can delay service and hence worsen any existing personnel shortage. overcrowding (outpatient and/or inpatient) leads to overuse of equipment and hence weakens their functional state. Thus all indicators could be correlated. The principal component analysis involves the computation of independent composite variables called principal components. A principal component is the sum of the product of each indicator with its weight:

$$PC_i = a_1 I_1 + a_2 I_2 + ... + a_k I_k$$

Where $a$ represents the weight placed on each indicator and $I$ represents an indicator. Since there are five indicators in this study $k$ equals five. The principal components that were created from the five indicators were used in this study as structural quality indices.

Results

Principal component analysis results

The results of the principal component analysis that used the ratios for personnel shortage had very large positive weights and hence created large and positive personnel indices. However, a dependent variable with only positive values is likely to cause biased estimation as some of the predicted values of the estimation can be negative. A typical solution in such a case is to transform the variable into natural logs. However, such a transformation in the current study could create difficulty with the interpretation of the results. The analysis then used dummy variables for all quality indicators.

The literature typically reports only the principal components with eigenvalues greater than one which in this case applies to the first two principal components only (1.484 and 1.385) but these explained only 57.4% of the variation in the current data and so the third component, with an eigenvalue of 0.972, which is close to 1 was also reported to increase the variance. The first three principal components together explained 76.817% of the variation in the five indicators. The results are reported in Table 1.

Table 1. Component matrix

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient overcrowding</td>
<td>.830</td>
<td>.185</td>
<td>.064</td>
</tr>
<tr>
<td>Functional state of equipment</td>
<td>-.336</td>
<td>.086</td>
<td>.928</td>
</tr>
<tr>
<td>Nurse shortage</td>
<td>-.107</td>
<td>.814</td>
<td>-.124</td>
</tr>
<tr>
<td>Outpatient overcrowding</td>
<td>.809</td>
<td>.080</td>
<td>.301</td>
</tr>
<tr>
<td>Doctor shortage</td>
<td>-.124</td>
<td>.821</td>
<td>-.018</td>
</tr>
</tbody>
</table>

The first principal component had large positive weight for inpatient and outpatient overcrowding and small (in absolute value) negative weight for functional state of equipment. Facilities that got high positive scores for this index thus had a serious space and bed shortage problem and those with large negative (in absolute value) scores had poorly functioning equipment. Thus scores which are close to zero represented good functional state of equipment and no or low doctor and nurse shortages. The first principal component then was referred to in the study as the overcrowding index. The second principal component had only positive weights with the largest for doctor and nurse shortages and the lowest for functional state of equipment and outpatient overcrowding. Thus, a high score for this index represents a high shortage of personnel, hence called the personnel index. The third principal component had a large positive weight for functional state of equipment and negative for personnel shortage. The facilities with poor functional state of equipment then would score high in this principal component. The principal component was therefore called the equipment index. The three components were used as structural quality indices for the regression.

For each observation, the dependent variable equalled the quality index of the facility in which service was provided for
### Table 2. Results on structural quality indices

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Overcrowding index</th>
<th>Personnel index</th>
<th>Equipment index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>P-value</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Constant</td>
<td>-16.060</td>
<td>0.005</td>
<td>0.923</td>
</tr>
<tr>
<td><strong>C. Patient characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.01</td>
<td>0.853</td>
<td>0.000</td>
</tr>
<tr>
<td>Gender (Female=1)</td>
<td>2.401</td>
<td>0.108</td>
<td>0.033</td>
</tr>
<tr>
<td>Primary education</td>
<td>6.071</td>
<td>0.045</td>
<td>-0.036</td>
</tr>
<tr>
<td>Junior secondary school</td>
<td>-1.298</td>
<td>0.502</td>
<td>0.036</td>
</tr>
<tr>
<td>Senior secondary school</td>
<td>-0.283</td>
<td>0.909</td>
<td>0.074</td>
</tr>
<tr>
<td>Tertiary education</td>
<td>4.098</td>
<td>0.209</td>
<td>-0.004</td>
</tr>
<tr>
<td>Employed in formal sector</td>
<td>7.520</td>
<td>0.008</td>
<td>0.245</td>
</tr>
<tr>
<td>Informal sector employed</td>
<td>2.661</td>
<td>0.217</td>
<td>0.099</td>
</tr>
<tr>
<td>Farmer</td>
<td>-3.883</td>
<td>0.159</td>
<td>0.181</td>
</tr>
<tr>
<td><strong>H. Health facilities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater Accra region</td>
<td>5.182</td>
<td>0.069</td>
<td>-0.508</td>
</tr>
<tr>
<td>Ashanti region</td>
<td>-10.975</td>
<td>0.000</td>
<td>0.259</td>
</tr>
<tr>
<td>Teaching hospital</td>
<td>-15.948</td>
<td>0.006</td>
<td>-0.295</td>
</tr>
<tr>
<td>Regional hospital</td>
<td>22.683</td>
<td>0.000</td>
<td>0.015</td>
</tr>
<tr>
<td>District hospital</td>
<td>-13.994</td>
<td>0.000</td>
<td>0.185</td>
</tr>
<tr>
<td>Number of nurses</td>
<td>-0.076</td>
<td>0.041</td>
<td>0.000</td>
</tr>
<tr>
<td>Number of doctors</td>
<td>0.252</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td><strong>S. Institutional factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers’ view of information flow</td>
<td>-32.986</td>
<td>0.000</td>
<td>0.129</td>
</tr>
<tr>
<td>Learning on the job</td>
<td>-0.125</td>
<td>0.000</td>
<td>-0.085</td>
</tr>
<tr>
<td>Professional development</td>
<td>18.771</td>
<td>0.000</td>
<td>-0.706</td>
</tr>
<tr>
<td>Quality of items procured</td>
<td>12.265</td>
<td>0.000</td>
<td>-0.175</td>
</tr>
<tr>
<td>Relevance of procurement</td>
<td>-0.099</td>
<td>0.000</td>
<td>-0.053</td>
</tr>
<tr>
<td>Hiring procedure</td>
<td>0.396</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>-0.174</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Information between government and health facility</td>
<td>-0.099</td>
<td>0.000</td>
<td>0.141</td>
</tr>
<tr>
<td>Information between facility administration and workers</td>
<td>-9.035</td>
<td>0.005</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The patient. To ensure the results were unbiased and precise, specification tests (RESET) as well as the White’s general heteroskedasticity tests were run and the results showed no specification problem. The ordinary least squares estimation method was used for the estimation of the structural quality regressions.

**Regression results**

With the exception of the formal sector and primary education, patient characteristics did not affect the overcrowding index. The results show that patients with primary education and/or working in the formal sector are likely to receive care in overcrowded facilities. While there was no statistically significant difference in overcrowding between the Greater Accra region and the Northern region (the control variable), the Ashanti region was the least overcrowded. Regional hospitals were highly overcrowded (coefficient: 22.683) relative to health centres, while teaching and district hospitals were less overcrowded than the health centres.

The institutional factors were all significant with the exception of the flow of information between government and facilities. The flow of information between health workers and administration reduced overcrowding. Improvement in quality and relevance of procurement increased overcrowding. The patient characteristics that affect the personnel index were, occupation of patients, level of secondary education. All were positively correlated with the index. A t-test for the equality of the coefficients of the Greater Accra and Ashanti regions showed that Greater Accra has the least personnel shortage problem followed by the Ashanti region and hence personnel shortage is most serious in the Northern region. The coefficient of teaching hospitals was negative implying that personnel shortage was more serious in health centres than teaching hospitals. While there was no statistically significant difference between health centres and regional hospitals, district hospitals were more likely to have personnel shortages than health centres.

The institutional factors showed that facilities with good information flow between administration and health-care workers were likely to have personnel shortage problems. As expected, personnel shortage was higher in facilities in which understaffing was likely to result from hiring procedures. However, facilities that provide opportunities for personnel development, and/or those in which health workers have high job satisfaction were associated with low personnel shortages.

The results on the equipment index show that age, gender, secondary education levels and employment in the formal sector have no correlation with the equipment index. The higher education and other employment coefficients were all negative and significant implying that patients with higher education and are employed are likely to receive care in facilities with good equipment. The facility characteristics coefficients show no significant difference between the functional state of equipment in the Ashanti and Northern regions but a significantly poorer functional state of equipment in the Greater Accra region relative to those in the Northern region. The equipment of teaching and district hospitals was found to be in a poorer functioning state while that of the regional hospitals was better than that of health centres.

The results on institutional factors show that after controlling for quality and relevance of procurement, facilities with a good flow of information were associated with equipment in a poor functional state. The functional state of equipment in facilities that are favoured by government policies was also good.

**Discussion**

The results on overcrowding across regions imply that the problem of overcrowding is less severe in the
Ashanti region than other regions, and in teaching and district hospitals than regional hospitals. These are interesting results because the Ashanti region is the most populous region with the largest number of people per health facility. The Ashanti region then, in spite of its large population, was better able to accommodate its patients, both at outpatient and inpatient levels, than the other regions. Teaching and district hospitals may have large number of patients regardless of the region in which they were located. The results here imply that these hospital types had more furniture to accommodate patients than health centres which might have smaller numbers of patients.

The results on institutional factors also imply that any government policy that could favour facilities did not have any significant impact on the problem of overcrowding. Results on the other institutional factors show that good coordination between health workers and the administration reduced overcrowding in the facilities, implying that the solution to overcrowding could be better solved internally than at the government level. The positive relationship between the overcrowding index and the quality and relevance of procurement could be that facilities that were able to procure quality items were able to attract more patients and hence become overcrowded.

Relating the result on district hospitals to the overcrowding index implies that even though personnel shortage was a problem at the district hospital level, district hospitals had enough furniture to accommodate patients to reduce overcrowding.

The reason for the negative effect of information flow on personnel shortage could be that good flow of information improves performance, all things being equal, and this could increase the number of patients and hence lead to a shortage of personnel. Such a result is important because personnel development enhances workers’ productivity and hence improves job satisfaction. The implication is that when job satisfaction increases, workers are able to increase efforts such that any problem caused by personnel shortage is mitigated.

In the case of the equipment index, good information flow could motivate workers to put in extra effort in performance which might lead to overuse of equipment. Also, the results imply that involving health-care workers in the procurement procedure may not necessarily imply good functional state of equipment but it is the relevance and quality of the product as well as the skill of the workers and the involvement of the government that ensure good functioning equipment. Teaching hospitals performed well in all three indices while regional hospitals performed poorly in all three. Since the teaching hospital variable also represents decentralization, the result could mean that decentralization is quality improving for large referral health facilities.

Limitations of the study

The use of convenience sampling could have the disadvantage of making the data less representative of the population. To minimize such an effect, the number of patients interviewed for the larger facilities was always greater than for the smaller facilities. Another limitation is that the data lacked information on patient income, which is likely to affect their choice of health facility and hence the corresponding quality index.

Conclusion

The study has shown that institutional factors relating to governance play a very important role in affecting the availability of physical and personnel inputs needed for the provision of health care. Specifically, decentralization and good coordination between facility administrator and health workers are very important factors affecting structural quality. The study recommends decentralization of regional health facilities and improvement of information flow and coordination between administrators and health workers.

Acknowledgement

The authors would like to acknowledge the financial contribution of the African Economic Research Consortium for the collection of data.

References

SUMMARY—Continued low rates of enrolment in community-based health insurance (CBHI) suggest that in many countries strategies proposed for scaling up have not been well-designed or successfully implemented. One reason may be a lack of systematic incorporation of social and political context into CBHI policy. In this study, solidarity in CBHI is analysed from a sociological perspective in order to answer the following research questions: What are local definitions and perceptions of solidarity in CBHI? To what extent are these borne out in practice? Three case studies of Senegalese CBHI schemes using specific criteria were studied. Transcripts of interviews with 64 CBHI stakeholders were analysed using inductive coding. A conceptual framework of four dimensions of solidarity (health risk, vertical equity, scale and source) was developed to interpret the results. The results suggest that the concept of solidarity in CBHI is complex. Each dimension and source of solidarity was either not borne out in practice or highly contested, with views diverging between stakeholders and the target population. Yet continued low rates of CBHI enrolment suggest these strategies have not been successful. Mladovsky and Mossialos have argued that an underlying reason for poor CBHI policy design and implementation may be a lack of systematic incorporation of social and political contexts into analysis. This echoes a wider call for the greater incorporation of social science perspectives into health policy and systems research.

In this study two of the main strategies for expanding CBHI coverage (public funding to subsidize premiums for the poor; and increased revenue collection from the “healthy and wealthy” to enhance cross-subsidization and risk pooling) are analysed from a sociological perspective. Specifically, the following research questions are addressed: What are local definitions and perceptions of solidarity in CBHI? To what extent are these borne out in practice?

Community-based health insurance aims to provide financial protection from the cost of seeking health care through prepayment of premiums by community members. It is typically not-for-profit and aims to be community owned and controlled. In most low- and middle-income countries (LMIC), population coverage of CBHI remains low. Health systems literature proposes the following strategies to improve coverage: public funding to subsidize premiums for the poor; promoting increased revenue collection from the “healthy and wealthy” so as to enhance cross-subsidization and risk pooling; improved CBHI management; and improved purchasing to enhance quality of care. Yet continued low rates of CBHI enrolment suggest these strategies have not been successful. Mladovsky and Mossialos have argued that an underlying reason for poor CBHI policy design and implementation may be a lack of systematic incorporation of social and political contexts into analysis. This echoes a wider call for the greater incorporation of social science perspectives into health policy and systems research.

In this study two of the main strategies for expanding CBHI coverage (public funding to subsidize premiums for the poor; and increased revenue collection from the “healthy and wealthy” to enhance cross-subsidization and risk pooling) are analysed from a sociological perspective. Specifically, the following research questions are addressed: What are local definitions and perceptions of solidarity in CBHI? To what extent are these borne out in practice?

Community-based health insurance aims to provide financial protection from the cost of seeking health care through prepayment of premiums by community members. It is typically not-for-profit and aims to be community owned and controlled. In most low- and middle-income countries (LMIC), population coverage of CBHI remains low. Health systems literature proposes the following strategies to improve coverage: public funding to subsidize premiums for the poor; promoting increased revenue collection from the “healthy and wealthy” so as to enhance cross-subsidization and risk pooling; improved CBHI management; and improved purchasing to enhance quality of care. Yet continued low rates of CBHI enrolment suggest these strategies have not been successful. Mladovsky and Mossialos have argued that an underlying reason for poor CBHI policy design and implementation may be a lack of systematic incorporation of social and political contexts into analysis. This echoes a wider call for the greater incorporation of social science perspectives into health policy and systems research.

In this study two of the main strategies for expanding CBHI coverage (public funding to subsidize premiums for the poor; and increased revenue collection from the “healthy and wealthy” to enhance cross-subsidization and risk pooling) are analysed from a sociological perspective. Specifically, the following research questions are addressed: What are local definitions and perceptions of solidarity in CBHI? To what extent are these borne out in practice?
The study focuses on Senegal. Senegal’s health system operates according to cost recovery through user charges. Private expenditure on health as a percentage of total health expenditure is 41.7%; 78.5% of that is spent directly out-of-pocket. Since 1997, successive governments have viewed CBHI as a key mechanism for achieving universal coverage. Senegal has witnessed a rapid increase in the number of CBHI schemes (mutuelles de santé), increasing from 19 to 130 between 1997 and 2006. However, coverage in Senegal remains 4% of the population at most. A policy of exemptions from user charges is also in place, but these initiatives have experienced difficulties with implementation and have hardly been evaluated.

**Methods**

A multiple case study design was used. Three Senegalese regions (out of 10) were selected for inclusion in the study: Thiès, Diourbel and Dakar. This ensured the inclusion of a range of geographic contexts in the study. The three regions had a relatively high number of CBHI schemes (Table 1), meaning the study focused on settings where CBHI was at a relatively advanced stage and a diverse set of stakeholders had had the opportunity to develop.

In each of the three regions, one case study (CBHI scheme) was selected. Local documentation and knowledge of local experts were used to identify the three cases according to a set of key criteria (Box 1). Only schemes which had achieved a basic measure of success (above average enrolment and duration) were included. This ensured that schemes were not experiencing fundamental and irreversible supply-side failures. Another objective was to select schemes with high drop-out. The rationale was to focus on contexts where there was potentially the most to gain from a policy intervention. Drop-out from CBHI is not only a major obstacle to increasing population coverage in Senegal but also elsewhere in sub-Saharan Africa. Soppante, Ndondol and Wer Ak Werle (WAW) were the three schemes selected (Table 2).

**Table 1. Number of CBHI schemes in Senegal by region**

<table>
<thead>
<tr>
<th>Region</th>
<th>CBHI schemes in 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dakar</td>
<td>44</td>
</tr>
<tr>
<td>Thiès</td>
<td>39</td>
</tr>
<tr>
<td>Kaolack</td>
<td>11</td>
</tr>
<tr>
<td>Diourbel</td>
<td>10</td>
</tr>
<tr>
<td>St Louis</td>
<td>9</td>
</tr>
<tr>
<td>Louga</td>
<td>8</td>
</tr>
<tr>
<td>Ziguinchar</td>
<td>8</td>
</tr>
<tr>
<td>Tambacounda</td>
<td>5</td>
</tr>
<tr>
<td>Fatick</td>
<td>4</td>
</tr>
<tr>
<td>Kolda</td>
<td>1</td>
</tr>
<tr>
<td>Senegal total</td>
<td>139</td>
</tr>
</tbody>
</table>

**Box 1**

**Case study selection criteria**

CBHI schemes, which varied according to the following contextual characteristics, were selected:

- Geographic zone;
- The type of economic sector of the target population.

Further selection focused on the level of development of CBHI schemes. Only CBHI schemes which met the following core criteria were considered for selection in the study:

- The CBHI schemes had enrolled a greater than average number of households (the average number of households enrolled in a CBHI scheme was 329 (Hygea, 2004) (this affected population coverage). In Senegal, enrolment in CBHI is typically on a household basis. A representative of the household enrols in the CBHI scheme and purchases a membership card on which a certain number (typically 12) other household members may be registered. The premium is then paid monthly.
- The schemes had a relatively high proportion of members who had ceased paying the monthly premium and whose insurance policy had therefore expired (the national average rate was 47% in 2004 (Hygea, 2004) (this also affected population coverage).
- The CBHI schemes were currently operational and had been established for a minimum of eight years.
- Variation in the tier of the health system contracted by the scheme (this affected the scope of coverage, i.e. the benefit package).

All interviews were recorded and transcribed using verbatim transcription. Inductive coding was performed in Nvivo. Segments of interview text were coded by one author. As new codes emerged all transcripts that had been previously coded were read again and the new code added where appropriate. During the coding process, periodic meetings were held between the authors to review codes. Towards the end of the process, no new codes were added, at which point it was concluded that all major themes had been identified. Stakeholder validation was performed by presenting preliminary results to approximately 50 national and local Senegalese CBHI stakeholders in Dakar in 2011. Ethical approval for the research was obtained from the Senegalese Ministry of Health.
Results

A total of 88 codes were identified in the coding analysis. The codes pertaining to solidarity were selected for further analysis in this paper. Results pertaining to related codes, such as trust, voluntarism and altruism are not discussed here (see 11 for a more extensive analysis). The interviewee identifiers indicate which scheme and stakeholder the quotation derives from (S = Soppante, N = Ndondol, W = Wer Ak Werle (WAW)).

Table 2. Characteristics of the selected cases

<table>
<thead>
<tr>
<th>Scheme characteristics</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of CBHI scheme</td>
<td>Number of households ever enrolled</td>
</tr>
<tr>
<td>Soppante</td>
<td>986</td>
</tr>
<tr>
<td>Ndondol</td>
<td>464</td>
</tr>
<tr>
<td>Wer Ak Werle (WAW)</td>
<td>678</td>
</tr>
</tbody>
</table>

Table 3. Stakeholders interviewed

<table>
<thead>
<tr>
<th>Type of stakeholder</th>
<th>Number of individuals interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Soppante</td>
</tr>
<tr>
<td>Health service providers</td>
<td>8</td>
</tr>
<tr>
<td>Staff of the CBHI scheme</td>
<td>4</td>
</tr>
<tr>
<td>Local leaders (religious, traditional, political, associations, local NGOs)</td>
<td>3</td>
</tr>
<tr>
<td>Donors, international organizations</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

Most stakeholders in all three cases viewed the cross-subsidization of resources from healthy to sick people to be not only a form of risk pooling but also an expression of solidarity (Box 2, S3). Several stakeholders said the solidarity inherent in CBHI contributed to fighting poverty and promoting community development. Many stakeholders viewed CBHI to be part of a wider local community social structure of associations which promoted solidarity (Box 2, N4).

Each scheme sought to draw on different sources of solidarity. Soppante was founded by individuals who had previously been leaders of a local Catholic CBHI scheme. The church mandated that only Catholics were eligible for membership of the Catholic scheme. The founders of Soppante objected to the church-based model of CBHI on the grounds that it prevented scaling up solidarity between different religious groups. They therefore left the Catholic scheme in order to create Soppante, which was open to all residents of a large geographic zone (Box 2, S19). Meanwhile, stakeholders in WAW had sought to mobilize existing solidarity structures by integrating the scheme into a women’s microfinance and income generation association (Box 2, W12). The scheme had enrolled a large number of women from this association and noted that poverty did not prevent them from enrolling in WAW (Box 2, W8b). In fact, men and women who were not in GMS groups were not in GMS groups from the scheme (Box 2, W8b). The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. These stakeholders argued that the CBHI premium was affordable and noted that poverty did not prevent the majority of the population from enrolling in CBHI (Box 2, W8a). The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. These stakeholders argued that the CBHI premium was affordable and noted that poverty did not prevent the majority of the population from enrolling in CBHI (Box 2, W8a). The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. These stakeholders argued that the CBHI premium was affordable and noted that poverty did not prevent the majority of the population from enrolling in CBHI (Box 2, W8a). The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. These stakeholders argued that the CBHI premium was affordable and noted that poverty did not prevent the majority of the population from enrolling in CBHI (Box 2, W8a). The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. These stakeholders argued that the CBHI premium was affordable and noted that poverty did not prevent the majority of the population from enrolling in CBHI (Box 2, W8a). The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. The alternative explanation that poverty was the main reason for drop-out and lack of enrolment, frequently put forward by households in the target population, was rejected by several stakeholders. Most CBHI stakeholders, however, did not receive some very poor households
Discussion

The following discussion uses sociological theory to analyse the stakeholders’ discourse on the role of solidarity in CBHI. Furthermore, quantitative data from the same field site published elsewhere are contrasted with stakeholders’ perceptions of solidarity. It is argued that incoherence on the issue of solidarity was an important source of the underlying weakness of CBHI and prevented the development of clear strategies to increase population coverage.

Overall, the results reveal that in general, most stakeholders in the three case studies viewed CBHI to be a solidarity mechanism. The idea that solidarity increases population coverage ostensibly echoes the ethos of solidarity that is deeply rooted in social health insurance in western Europe and its 19th-century antecedent, mutual aid societies, on which the model of CBHI in West Africa is based. Indeed, international development agencies as well as Catholic missionaries were crucial to the transfer of the European model to CBHI in Senegal (and elsewhere) and it is likely that the Senegalese discourse around solidarity in CBHI partly has its roots in this process. The Senegalese discourse on solidarity in CBHI also appears to reflect the current broader international policy focus on strengthening solidarity in African health financing systems through social health protection.

Yet quantitative data from the study suggest that scheme members did not view CBHI as a solidarity mechanism, were unable to afford the premium, acknowledging that this situation undermined solidarity. This led some stakeholders to argue that CBHI schemes needed premium subsidies from local government. In all three cases, the CBHI scheme leaders had lobbied local government for subsidies but had not been successful at the time of fieldwork. Different stakeholders had different explanations for this. A local government official claimed it was because there were insufficient funds. However, several (non-governmental) stakeholders believed the reason was rather the lack of political capital to be gained from supporting CBHI. There was also a belief among some stakeholders that politicians did not uphold the values which they saw CBHI to embody, including solidarity (Box 2, W8).

**Box 2**

Selected stakeholder quotations on solidarity in CBHI

<table>
<thead>
<tr>
<th>Quote</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>N4</td>
<td>Solidarity is ... rooted in our customs ... There are our women who have their groups; we have our dahiras (Muslim associations). Now we need to interest people in this other form of solidarity, CBHI. (Local community association leader)</td>
</tr>
<tr>
<td>W8</td>
<td>Some people don’t have much solidarity and so they say to themselves: “I’m not going to fall ill so why should I continue paying the premium? I am just paying for other people” (Local community association leader)</td>
</tr>
<tr>
<td>W7</td>
<td>Some tell me (their lack of enrolment) is because of the (financial) crisis ... I don’t follow this, because they often contribute CFA 1 000 per week for events, ceremonies and other things in the neighbourhood so why not CFA 1 000 per month (for the CBHI premium)? (CBHI scheme leader)</td>
</tr>
<tr>
<td>S19</td>
<td>The church CBHI schemes were quite restrictive; they were reserved for Catholics ... which excludes a large part of the population. This principle is contrary to the philosophy CBHI. It is in this context that Soppante was born. (Provider of technical assistance to CBHI schemes)</td>
</tr>
<tr>
<td>S10</td>
<td>Some CBHI members quit the scheme because they ... had not paid their premium ... Note that in dahiras there is solidarity between members. If a member is faced with a lack of revenue, we take a certain amount out of the central fund to help them. In contrast, in CBHI, when you need treatment, you can only benefit if you present your membership book. (Local community association leader)</td>
</tr>
<tr>
<td>W8a</td>
<td>Some people don’t have much solidarity and so they say to themselves: “I’m not going to fall ill so why should I continue paying the premium? I am just paying for other people” (Local community association leader)</td>
</tr>
<tr>
<td>W8b</td>
<td>CBHI must be there for everyone and not everybody is in a women’s group ... (Local community association leader)</td>
</tr>
<tr>
<td>W12</td>
<td>We experimented with several approaches. We moved from an individual prepayment system to family enrolment in CBHI and over the last four years this has evolved into CBHI based on (women’s) groups ... When you adopt a family model, without realizing it you are breaking solidarity mechanisms at the community level. (Provider of technical assistance to CBHI schemes)</td>
</tr>
</tbody>
</table>

Note: The CFA (Central and Western African Franc) has a fixed exchange rate to the euro: CFA 100 = €0.152449 (1 = CFA 655.957). Équité et mutualité au Sénégal (Equity and mutuality in Senegal). IDRC/CRDI, Université de Montréal and Hygea, Dakar.
as less than half of all current and ex-
members of all three schemes stated
they believe “solidarity” is an advantage
of the scheme (there are no significant
differences between current and ex-
members in terms of holding this view).
The divergence in opinion may indicate
a lack of understanding among the
target population of the redistributive
principles of CBHI. It may also indicate
that stakeholders understand solidarity
differently to the target population,
as there may have been a variety of
interpretations of “solidarity” at play
in the Senegalese case studies. In order
to understand these issues better, we
developed a conceptual framework
consisting of four dimensions of
solidarity in CBHI that emerged from
the study: health risk, vertical equity, scale
and source.

Health risk
The first dimension constitutes
Senegalese stakeholders’ focus on cross-
subsidization of the sick by the healthy.
They believed that this solidarity should
be an important motivating factor for
people to enrol in CBHI. This “health
risk” dimension presents solidarity as a
potential mechanism for overcoming a
classic market failure in private health
insurance, adverse selection (where
high-risk sick individuals are more likely
to buy health insurance than low-risk
healthy individuals). Quantitative studies
of CBHI in sub-Saharan Africa confirm
that adverse selection is an issue in some
contexts, although not in others.

The results of this study reveal that
several stakeholders expressed concern
that “health risk” solidarity was weak
in the target population, observing that
CBHI members often gave not falling sick
as a reason for dropping out of CBHI.
In practice, stakeholders’ fears seem to
have been well-founded: current member
households were twice as likely to have
had an illness, accident or injury, and
nearly twice as likely to have a disability,
than ex-member households. This
undermines the idea that CBHI drew
on high levels of solidarity in terms of
the cross-subsidization of the sick by
the healthy.

Vertical equity
The second dimension of solidarity
identified in the results of this study is the
cross-subsidization from wealthy to poor;
this is termed “vertical equity” in the
health economics literature. In practice,
vertical equity is likely to overlap with
the “health risk” dimension of solidarity
(because poor health is associated with
poverty) but in the interviews, people
clearly distinguished between these
two dimensions of solidarity. Vertical
equity is achieved in some social health
insurance and mutualities in Europe
where contributions are progressive (the
proportion of income paid increases
as income increases). In contrast, flat
rate premiums in CBHI meant that the
very design of CBHI was regressive.
This is typical of CBHI more widely.
The regressive of CBHI made it more
likely for wealthier households to enrol in
CBHI compared with poorer households
(because wealthier households paid a
relatively smaller premium than poorer
households, in terms of payment as a
percentage of total household wealth,
income or expenditure), both in the
present study and more widely in
Senegal and elsewhere.

A policy of progressive CBHI premiums
was not an explicit objective of the
stakeholders. However, the stakeholders
who sought government subsidies to
cover the premiums of the poor did
implicitly support the notion of vertical
equity. Current CBHI members also
seemed to support this dimension of
solidarity: they reported having more
solidarity than ex-members in relation
to their views on whether the scheme
should cover poorer households, being
more likely to agree that members of
the scheme should sponsor families who
are very poor; members should support
families who are very poor by increasing
the amount of their contribution; and
families who are very poor should be
members of the scheme without paying.

It is important to note that studies from
other sub-Saharan African countries
have found that while progressive health
financing has widespread support, large
segments of the population (particularly
the relatively wealthy) are not in favour
of this principle, suggesting that
this dimension of solidarity in CBHI
may be difficult to achieve in practice in
these contexts. Furthermore, crucially,
as in many other LMIC, the difficulty
of identifying poor households due to
inadequate targeting mechanisms and the
large size of the informal sector is likely
to pose a further challenge to achieving
vertical equity through progressive
premiums or subsidies.

Another issue is whether establishing
progressive premiums payment and/or
government subsidies for CBHI
would be cost-effective; a study from
Cambodia and the Lao People’s
Democratic Republic suggests not, since
it found that the same level of access
for the poor could have been achieved
with a lower subsidy if the subsidy was
used as a direct reimbursement of user
charges to the provider rather than
through the CBHI scheme. Taking a
political perspective, however, the efforts
of CBHI leaders to gain demand-side
subsidies may have had the advantage
of mobilizing users’ participation and
possibly empowerment.

Source
The fourth dimension of solidarity relates to
the source of solidarity. The sociologist
Durkheim proposed that while kinship
networks are the most fundamental and
universal solidarity mechanism, solidarity
changes as a society becomes more
complex. In traditional societies, solidarity
is based mainly on shared identity, social
sanctions and authority of the collective
and is typically organized around kinship
affiliations (this is termed “mechanical
solidarity” by Durkheim). In larger
more complex industrialized societies,
solidarity is instead based on integration
of specialized economic and political organizations and emphasizes equality among individuals, social interdependence and modern legal structures such as civil, commercial law (termed “organic solidarity” by Durkheim). Since CBHI extends cross-subsidization beyond kinship ties, it should be interpreted as a mechanism for promoting “organic solidarity”. Supporting this idea is the fact that CBHI has emerged in the context of a general increase in numbers of community associations in Senegal,32 a trend which is arguably indicative of the social transition described by Durkheim. Indeed, the results of studies of poor urban populations in Senegal find that high levels of social and cultural heterogeneity caused by large flows of rural to urban migration have resulted in a plethora of associations emerging to replace traditional social safety nets.33 These include rotating credit associations (ROSCAs)34 and dahiras (groups which form part of the Muslim brotherhoods) which primarily have a spiritual purpose but also bring many economic and political advantages to their members.35,33 The quantitative results of this study suggest that the more individuals experienced and presumably benefited from this type of modern associational “organic” solidarity, the more they were willing and able to invest further in similar solidarity structures, as members of CBHI were statistically significantly more likely to be enrolled in another community association than non-members, controlling for wealth and other socioeconomic variables.15

More recent sociological literature can be used to further distinguish between four different sources of organic solidarity: cultural similarity, concrete social networks, functional integration (i.e. interdependence based on flows of goods or services), and mutual engagement in the public sphere.36 Most stakeholders advocated CBHI risk pooling based on cultural similarity or concrete social networks (e.g. schemes for Catholic parishioners or networks of women, as in the case of WAW), since, as discussed, this type of solidarity was already flourishing in Senegal. These stakeholders hoped that by merging with other community associations, CBHI would tap into existing, popular, essential forms of solidarity. This argument is founded on the commonly held idea that cultural similarity and concrete social networks “trump” other sources of solidarity.36

However, a counter argument was raised by other stakeholders and community members that providing health insurance through community associations promoted too narrow a form of solidarity and excluded people who did not already belong to any community groups. As such, the idea that CBHI promotes or constitutes solidarity was again problematized. The alternative approach would be an increased focus on functional integration. This could include promoting social health insurance in the formal sector and national professional associations in the informal sector at the national level, with alternative financing arrangements for those who belong to neither group. This could be enhanced by mutual engagement in the public sphere, for example by launching national public campaigns promoting risk pooling and cross-subsidization. This would be similar to the approach taken in Ghana where CBHI was replaced with a national health insurance scheme (NHIS) with premium subsidies for certain vulnerable groups.

In sum, the concept of solidarity in CBHI was complex, with stakeholders’ discourse incorporating four dimensions and four sources of solidarity. Each dimension and source of solidarity was either viewed as desirable but not borne out in practice, or highly contested with views diverging between stakeholders and the target population. Furthermore, although the research used an open-ended interview technique and an inductive approach to coding the interview transcripts, it is possible that other dimensions of solidarity were at play that were not captured by the interviews. Future research would benefit from considering ethnography in order to allow a more
comprehensive understanding of solidarity in CBHI. Implications of the study for CBHI policy and for universal health coverage more widely are discussed in the next section.

Conclusions

In all three schemes there were serious contradictions and inconsistencies within stakeholders’ discourse about solidarity; and between stakeholders’ discourse about solidarity on one hand and the target population’s views and behaviours as regards solidarity on the other. In practice, the four dimensions of solidarity (health risk, vertical equity, scale and source) were at best only partially mobilized in the context of CBHI. These contradictions, inconsistencies and conflicts help explain the inability of CBHI to expand coverage. Because solidarity was used as a catch-all phrase, rarely unpacked in the way we have done in this paper, stakeholders were able to continue using the rhetoric of solidarity, despite the lack of implementation on the ground.

As such, this study raises a number of previously overlooked policy and implementation challenges for expanding CBHI coverage in Senegal, and perhaps elsewhere. Policy-makers need to engage in a more rigorous public discussion of solidarity as regards CBHI and universal health coverage policy more widely, in order to move towards policies which both resonate with and meet the expectations of the people they aim to serve.

There is a need to reform CBHI so that it becomes a coherent solidarity mechanism, which both provides financial protection and resonates with and meets the expectations of the people it aims to serve.

From a methodological perspective, the results suggest that studying values among stakeholders in multiple case studies can greatly enhance research into health financing. Adopting a similar methodological approach may be a useful complement to traditional health systems analysis to understand the challenges faced by not only CBHI but universal health coverage policies more widely. ❄️

References

Financing flows through private providers of HIV services in sub-Saharan Africa

Over the past decade, the public health community has made significant strides in tackling the global HIV epidemic. Donor-funded programmes, including the President’s Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund for AIDS, Tuberculosis and Malaria have marshalled unprecedented resources to combat the disease. Supplementing domestic funding with this support, national HIV programmes helped 12.9 million people access life-saving antiretroviral therapy (ART) by the end of 2013. While the number of PLHIV increased from 32.1 million in 2005 to 35 million in 2013, rates of new infections and AIDS-related deaths have declined.¹

Much remains to be done. The vast majority of PLHIV live in low- and middle-income countries, and almost two thirds face barriers to accessing ART services.² Moreover, just as HIV funding needs rise with the number of PLHIV receiving routine care, donor funding has stagnated in many of these countries, forcing their governments to develop innovative ways to raise domestic financing and increase efficiency. Engaging private hospitals and clinics into the government’s HIV response can increase access to ART and other HIV services in a sustainable way. Private hospitals and clinics alone make up half of the health facilities in many sub-Saharan African countries and can be the preferred option for PLHIV receiving care for reasons concerning privacy and convenience, among others.³ Recognizing the potential for leveraging the resources private providers offer to increase access to HIV care, many sub-Saharan governments have pursued public-private partnership opportunities, for example, subcontracting out delivery of key services, strengthening referrals between public and private facilities, and using government funds to pay for care at private facilities.

In order to develop effective partnerships with private providers, governments must understand the role these facilities can play in the HIV response. However, in many countries governments have little information to foster such understanding. This article attempts to help address this knowledge gap by tracing the flow of spending on HIV from the sources of financing, through financing agents, and finally to private providers of HIV goods and services in four sub-Saharan African countries. By highlighting these flows, authors seek to demonstrate the scope and magnitude of the private sector’s contribution to the HIV response as well as identify potential ways donors and governments can better leverage resources these private providers offer.

Methodology

Data on past HIV spending can support efforts to understand the private sector’s role in the HIV response and improve the sustainability of HIV programmes.⁴ As part of the USAID-funded Strengthening Health Outcomes through the Private Sector (SHOPS) project, authors used HIV spending data compiled according to national health accounts (NHA) – the global standard for health resource tracking. National health accounts track the flow of health spending in a country. This flow begins with an entity that provides the funds (source), which may be the ministry of finance, employers (parastatals and private sector), an external partner or household, before moving to an agent (manager), such as the ministry of health, health insurance

SUMMARY—Fully leveraging the potential of private actors to manage health finance and provide health services is an important strategy for sustaining national HIV responses and increasing access to services in developing countries. Authors used health and HIV resource tracking data from Côte d’Ivoire, Kenya, Malawi and Namibia to assess the sustainability of these countries’ HIV financing and compare the magnitude and origin of resources flowing to private HIV providers, paying particular attention to the financial burden falling on people living with HIV (PLHIV). Findings indicate that the HIV responses in all four countries face sustainability challenges as well as a gap in financial coverage for PLHIV seeking care at private providers. Despite donors’ stated interests in private sector engagement and public-private partnerships, findings also indicate that very little of their funding actually reaches those providers, which are instead largely financed by PLHIV paying out-of-pocket. In light of these findings, donors and government actors in these countries should consider ways of making private providers of HIV services a more integral part of publicly led efforts to build a sustainable, country-driven response to the HIV epidemic.

Voir page 70 pour le résumé en version française. Ver a página 70 para a sumário em versão portuguesa.
programmes, or a non-governmental organization (NGO). Managers spend the funds at health-care providers. National health accounts identify the amount of funds spent at each type of provider (public or private, health clinic or hospital), as well as the types of health goods and services consumed there. While the general NHA tracks total health spending, HIV subaccounts detail spending on HIV. Authors selected four sub-Saharan African countries (Côte d’Ivoire, Kenya, Malawi and Namibia) to include in this analysis because they have high quality NHA and HIV subaccounts data, represent a range of geographic regions, socioeconomic levels and have high numbers of PLHIV and HIV prevalence rates.

For this analysis, the private health sector includes for-profit and non-profit actors. Notwithstanding variation across countries, for-profit actors included private health insurance companies, privately owned medical facilities, companies with employee health programmes and private pharmacies. Non-profit actors included faith-based organizations, charities, NGOs, non-profit health facilities and community-based organizations.

Cross-country analysis was limited by some variability in data collection methods across the selected countries, most particularly in their approach to estimating out-of-pocket spending by PLHIV, as well as the limited number of quality NHA studies completed. Despite these limitations, these NHA data still offer the most accurate estimation of health expenditure flows in developing countries and provide valuable information to inform decisions about resource allocation and strategic planning, increase transparency, track progress toward spending goals, and strengthen civil society’s advocacy efforts.

Results

Côte d’Ivoire

In 2008, Côte d’Ivoire’s HIV response was highly dependent on international donors. Some 87% of the country’s HIV spending originated with donors — a ratio that is 74 percentage points higher than donors’ share of general health expenditures. In contrast, the Côte d’Ivoire Government provided only 7% of HIV funds. Households, private businesses and other private entities contributed the smallest proportion of HIV funds, amounting to 5% of HIV expenditure combined (Figure 1).

While donor and government spending together effectively subsidized HIV care, findings suggest some gaps in financial coverage for PLHIV remain. At an aggregate level, PLHIV out-of-pocket expenditure accounted for only 3% of HIV spending — much lower than in the health sector overall, where 66% of expenditures were spent out-of-pocket. However 74% of out-of-pocket spending on HIV occurred at private pharmacies and health facilities indicating that PLHIV still purchase HIV goods and services in the private sector despite the availability of free services in the public sector.

Only 5% of all HIV spending in 2008 went to for-profit providers. Donors allocated some funding for HIV to for-profit hospitals and clinics through NGOs. Although NGOs accounted for 99% of spending at for-profit facilities, this amount was only 2% of all NGO spending on HIV. No funding from the Côte d’Ivoire Government went to for-profit facilities.

Table 1. Selection criteria for sample countries

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Côte d’Ivoire</th>
<th>Kenya</th>
<th>Malawi</th>
<th>Namibia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (2010)</td>
<td>19,378,000</td>
<td>40,513,000</td>
<td>15,370,000</td>
<td>2,283,000</td>
</tr>
<tr>
<td>Income group (World Bank)</td>
<td>Lower middle</td>
<td>Low</td>
<td>Low</td>
<td>Upper middle</td>
</tr>
<tr>
<td>Geographic location</td>
<td>West Africa</td>
<td>East Africa</td>
<td>Southeast Africa</td>
<td>Southern Africa</td>
</tr>
<tr>
<td>Adult HIV prevalence (%)</td>
<td>2.7%</td>
<td>6%</td>
<td>10.3%</td>
<td>14.3%</td>
</tr>
<tr>
<td>No. of PLHIV on ART</td>
<td>120,000</td>
<td>699,000</td>
<td>510,000</td>
<td>120,000</td>
</tr>
</tbody>
</table>

Figure 1. Source and agents of HIV financing in Côte d’Ivoire (2008)
Kenya

Between 2006 and 2010, Kenya’s HIV response became less dependent on donor funding and saw insurance coverage of HIV services increase. In 2010, donors accounted for 51% of HIV funding, proportionately greater than their share of general health funding (35%) but 19 percentage points lower than in 2006 (Figure 2). During the same period, insurance spending – including both private insurance companies and the National Hospital Insurance Fund (NHIF) – increased tenfold as coverage spread and HIV services were incorporated into insurance schemes’ benefit packages. Despite donor and government subsidies and increased risk pooling through insurance, out-of-pocket spending by PLHIV accounted for 19% of HIV spending in 2010.

About a quarter of all HIV spending went to private for-profit facilities in Kenya in 2010 – significantly more than in most sub-Saharan African countries. Financiers of this funding included the NHIF and private insurance, together accounting for a third of all HIV resources spent at these facilities (US$ 16.4 million). Insurance mechanisms spent an additional US$ 6.4 million for HIV services at not-for-profit facilities.

As the Kenyan Government accounts for approximately 11% of funding managed by private health insurance, it is likely that government funds were spent at for-profit facilities. PLHIV were the main financier of HIV services at for-profit facilities in 2010, accounting for 71% of all facility resources. PLHIV spending at for-profit facilities also accounted for more than half (54%) of their out-of-pocket spending.

Malawi

As in Côte d’Ivoire, Malawi’s HIV response is highly dependent on donors. In 2009, donors accounted for 83% of the US$ 181.5 million spent on HIV, which was 22 percentage points greater than their share of general health funding. Between 2003 and 2009, growth in donor spending on HIV increased at a much greater rate than growth in domestic financing. This increase exacerbated Malawi’s reliance on donor HIV funding yet effectively expanding the reach of the HIV response by funding more services for PLHIV. Even though increased donor funding along with government HIV funding kept out-of-pocket payments by PLHIV at 4% of HIV financing in 2009, the absolute amount of out-of-pocket payments by PLHIV increased by 300% between 2003 and 2009, even when accounting for inflation. Private actors only provided 3% of HIV spending in 2009, and managed about 7% (Figure 3)

HIV spending at non-profit facilities increased from US$ 1.8 million in 2003 to US$ 17.2 million in 2009 and became increasingly reliant on donors. Some 76% of spending at facilities associated with the Christian Health Association of Malawi (CHAM) in 2009 came from donors, an increase of 48 percentage points since 2003. Donors channelled funding for HIV to non-profit (primarily CHAM) facilities through three different routes: public agencies, donors and international partners, and direct payments to CHAM. Between 2003 and 2009, spending on HIV at for-profit facilities increased from US$ 1.0 million to US$ 3.5 million. Very little of this funding originated with the Government of Malawi or donors. Despite donor and government subsidies, growth in HIV spending at for-profit facilities primarily came from PLHIV spending out-of-pocket. This trend shows that PLHIV purchased HIV goods and services at for-profit facilities despite the availability of subsidized and free care at public facilities and indicates that there is possibly a growing gap in financial coverage for PLHIV.
Namibia

A middle-income country with high prevalence of HIV, Namibia has a highly donor dependent HIV response in an otherwise domestic-funding driven health system. Specifically, in 2009, donors accounted for 51% of HIV funding in Namibia, 29 percentage points more than their share of general health spending (Figure 4). The Government of Namibia provided 45% of total HIV expenditures. Donor and government spending effectively subsidized health care, as indicated by low levels of out-of-pocket spending on health (6% of total health spending) and HIV (3% of total HIV spending). Private business spending at private health insurance companies accounted for less than 1% of HIV spending.

Of the US$ 130.9 million spent on HIV at all health facilities in 2009, the majority (88%) went to public facilities, while for-profit facilities only accounted for 7%. For-profit facility HIV funds came primarily from PLHIV (76%), public employee insurance (20%) and private insurance companies (4%). Public employee insurance, which is funded by the government (85%) and household contributions (15%), is also one of the main sources of funding at private pharmacies (51%). It is the only channel through which government money reaches private health facilities. Most HIV funds managed by private insurance companies were spent at for-profit facilities (65%) or private pharmacies (31%). Around 40% of out-of-pocket spending on HIV occurred at for-profit facilities, indicating that PLHIV still use private facilities despite the availability of free and subsidized services in the public sector. In contrast, NGOs, which were the second largest financing agent for HIV spending (29%), spent most of their HIV funding (94%) at public health programmes and providers of health-care administration.

Figure 4. Source and agents of HIV financing in Namibia (2009)

Discussion

Even though many governments have increased funding allocations for HIV programming, most of the countries in this analysis still rely heavily on donor funding. Across the board, all four countries saw donors contribute a greater portion of funding for HIV than for general health. In Kenya, even though public and private entities have increased their spending on HIV, donors still accounted for more than half of HIV funding in 2010. Donors provided 87% of Côte d’Ivoire’s HIV expenditures in 2008, but only 13% of general health spending. Between 2003 and 2009, HIV spending in Malawi increased by over 560%, largely resulting from increased focus on HIV by donors who provided 83% of HIV funds in 2009. Similarly, more than half of Namibia’s HIV funding came from donors in 2008.

Increased donor investment helped scale up prevention programmes and get more PLHIV on treatment. Donor dependency, however, undermines the sustainability of these programmes and leaves them vulnerable to changes in donor priorities. These findings highlight the importance for governments and donors to increase country ownership and link funding to long-term sustainability strategies for countries’ HIV programmes. PEPFAR, the Global Fund, the World Bank and other major donors have all identified private sector engagement and public-private partnerships as a key strategy to expand access to HIV services in a sustainable, country-driven way. Example efforts include engaging private companies for workplace programmes, contracting providers to deliver HIV services, and supporting the development of affordable, comprehensive prepaid health financing mechanisms. However, results of this analysis show that real support for private sector development may not match these stated intentions. For example, in Namibia very little donor money actually made it to private facilities; in Malawi a much larger percentage of donor funding reached private (mainly non-profit/CHAM) facilities. Going forward, donors should monitor how funding for HIV treatment is spent at the facility level to ensure that their
spending aligns with their stated strategic intentions.

Incorporating private providers and the HIV services they provide into public HIV programmes or insurance mechanisms may help donors and governments manage financial risk to households. In all four countries, out-of-pocket payments by PLHIV as a percentage of total HIV spending were lower than contributions of households for general health. These findings indicate that donor and government investments have helped reduced the burden on PLHIV to finance their HIV care but that more needs to be done, especially to protect poor PLHIV from financial hardship. Out-of-pocket payments tend to be highest at private-for-profit facilities, which are often clients’ preferred choice despite the availability of subsidized services in public sector facilities in all four countries. In Kenya, out-of-pocket spending by PLHIV at for-profit facilities decreased as a share of spending at for-profit facilities with increased spending by insurance mechanisms, but still accounted for the majority of HIV spending at these facilities. In Malawi, out-of-pocket spending by PLHIV at for-profit facilities grew from 32 to 64% of the HIV expenditures at these facilities between 2003 and 2009.

Integrating private for-profit facilities comprehensively within government and donor-sponsored HIV programmes could ensure more consistent financial risk protection to PLHIV regardless of where they prefer to seek care. Namibia has already demonstrated one way to do this. In 2008, more than half of HIV spending by government employee insurance programmes occurred at for-profit facilities.

Another strategy is to promote health insurance coverage of HIV services, particularly in countries like Namibia and Kenya with a growing, vibrant health insurance market. NHA and insurance coverage data show the need for affordable health insurance products. Private insurance in Kenya managed more HIV spending than NHIF in 2010, but covered almost two million fewer people. Those covered are primarily formal sector workers, indicating that insurance-managed funding benefits a small, wealthy subset of the Kenyan population. To mitigate this inequity, health insurance companies can develop low-cost products that are affordable for a greater percentage of the population. Governments and donors may need to work together to promote risk-pooling mechanisms for PLHIV. Tracking how these new financing mechanisms decrease the financial burden on PLHIV will inform further reforms to improve coverage of PLHIV in insurance schemes. Stakeholders should also ensure that risk-pooling mechanisms are reliable and efficient to reduce administrative burdens on both payers and providers.

More regular and accurate estimates of HIV service use and spending at private facilities can inform strategies to engage the private sector. Key to developing effective strategies is accurate data. More high quality trend data in all countries can also strengthen the power of future analysis to track the development of HIV financing flows through private providers. Health sector stakeholders should make a concerted effort to systematically track resource flows through the private sector to more accurately measure its contribution to the HIV response and incorporate it into strategic planning.

Conclusions

Private providers of HIV services are important partners in national HIV responses. In many developing countries, their size and geographic spread can help reduce geographic barriers to accessing care, and PLHIV often prefer them given shorter wait times and perceived greater discretion. This study argues that greater integration of these partners into the government-led HIV responses in Côte d’Ivoire, Kenya, Malawi and Namibia can support efforts to sustainably increase access to services and improve financial protection of vulnerable populations.

Acknowledgements

The authors acknowledge the financial support of USAID/PEPFAR in funding this research. The authors thank Caroline Quijada, Ilana Ron, Harluz Zeleke, Elizabeth Corley and Jennifer Mine-Minowski for their technical support, and Chloe Revuz and Eric MacChesney for their support in designing infographics for this analysis.

References


3. The methodology for conducting NHA was updated in 2011. The NHA data used in this analysis were generated before the update.

4. HIV/AIDS NHA subaccounts capture both health and non-health related HIV/AIDS spending. HIV spending estimates used in this analysis only include spending on activities that aim to improve, maintain or prevent deterioration of health. They do not include non-health programmes such as those focused on orphans and vulnerable children.


General references


Due to economic turmoil in the last decade, government funding to the public health system in Zimbabwe reduced considerably. As a result, many health-care workers emigrated or sought employment in other sectors, the infrastructure dilapidated and health indicators deteriorated. Maternal mortality rose from 390 to 790 per 100,000 live births. Out-of-pocket expenditure as a percentage of total health expenditure rose to 50.4%.

However, since 2009, the Ministry of Health and Child Care (MoHCC) has made considerable progress in revitalizing the health system and its policy has gradually moved from organizing emergency service delivery to health system strengthening, as shown by the Health Investment Case and its National Strategic Plan. Through the Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZIMASSET) and the country’s new strategic plan for economic transformation anchored within results-based management (RBM) principles, the government has committed to strengthen the health system and improve key health indicators and has projected a cumulative growth of 22.5% in the health sector between 2013 and 2018.

To support the MoHCC in its efforts to further strengthen the health system, the World Bank committed a grant of US$15 million to a results-based financing (RBF) project aimed at increasing utilization of quality maternal, neonatal and child health (MNCH) services, primarily through the abolishment of user fees. The RBF project pays health facilities – rural health centres (RHCs) and district hospitals – for outputs/results rather than inputs. The larger the volume of output (high utilization), the larger the payment a facility receives. This is the hallmark of RBF, where income is linked to levels of output.

Abolishment of user fees and thus increased service utilization is the primary goal of the RBF project in Zimbabwe. To this effect, RBF payments compensate for income forgone due to the abolishment of user fees. Motivating providers to increase output and improve service delivery is the secondary goal of RBF. For this purpose, a portion of the RBF payments can be invested in improving providers’ working conditions and paying staff incentives. In Zimbabwe RBF started as a two-district pilot in July 2011 and was scaled up in March 2012 to 18 rural districts covering a total population of 4.1 million.

The rural public health-care system in Zimbabwe follows a typical district health-care model with a district hospital being a referral centre, and RHCs providing primary health care. Each district is managed by a district health executive (DHE). The DHEs and district hospitals in a given province are in turn supervised by a provincial health executive (PHE).

For general oversight over the RBF project, a multi-stakeholder RBF National Steering Committee (NSC) and district steering committees (DSCs) in each of the implementing districts were established. Health facilities are contracted to offer a set of RBF-incentivized services and DHEs/PHEs are contracted to supervise RHCs and district hospitals. Community-based organizations (CBOs) are contracted for community sensitization activities and assessment of user satisfaction. A National Purchasing Agency (NPA) executes specific RBF activities, i.e. contracting all the actors in the project (health facilities, DHEs/
PHEs and CBOs), verification of results and disbursement of payments to the contracted parties for verified results. In Zimbabwe the Catholic Organization for Relief and Development Aid (Cordaid), was contracted by the World Bank (according to the Bank’s contracting procedures) to perform the NPA tasks in Zimbabwe. This is a temporary measure, as the Government of Zimbabwe, being in arrears, could not be directly engaged by the bank. An independent agency, the University of Zimbabwe, is contracted to perform counter verification, i.e. verifying whether the NPA, DHEs, PHEs and CBOs are correctly performing their tasks as verifiers and supervisors. The separation of functions of purchaser, provider, verifier, counter-verifier, client tracing, quality assessor and regulator, is meant to ensure integrity at each stage of the RBF cycle.

Contracted health institutions, which need to meet minimum criteria before being contracted, receive a quarterly payment from the NPA based on the quantity of RBF-incentivized services provided and the quality of these services. The vast majority of these incentivized services are related to MNCH. However, to avoid a focus on MNCH only, “outpatient consultation” (first visit only) was added as an incentivized service too. Inequity is mitigated by awarding additional ‘remoteness’ bonuses to facilities which serve relatively geographically inaccessible populations – to top up their earned RBF incomes.

To discourage facilities from focusing merely on volume of services, the quarterly payments to facilities also take quality scores into account. Each quarter, DHEs and PHEs conduct supervisory visits to RHCs and district hospitals respectively and use a standardized quality checklist to assess quality indicators and award scores. CBOs also conduct surveys among health service users and their responses determine the client-perceived quality score for each facility. A facility’s overall quality score is then calculated from both the CBO score and DHE/PHE score and determines the amount in quality bonus a facility accrues, on top of the service quantity earnings.

Health facilities, together with their health centre committees (HCCs), write annual plans which are approved by the DHE (or PHE for hospitals). RBF health facilities hold their own deposit accounts and are autonomous in how they spend the money earned for purposes that are consistent with the contents of their operational plans (plans they make annually and that are approved by the DHE). Since January 2013, facilities can use 25% of their earnings to award staff bonuses.

The aim of this article is to describe and attempt to explain, the effects of RBF in rural Zimbabwe.

Methods

The RBF project in Zimbabwe runs in 18 districts across 8 provinces. However, for evaluation purposes, only two RBF districts per province were chosen and matched with two non-RBF (control) districts of similar socio-economic, geographic and health utilization characteristics, thus creating 16 pairs of districts for comparison. Intervention (RBF) and control districts were compared for differences in service utilization trends for both RBF-incentivized and non-incentivized services. The control districts continued to receive similar support from government, vertical programmes and donors as they received before. Data for the comparison of the trends in service utilization for RBF-incentivized and non-incentivized services were obtained from the health management information system from March 2011 to June 2013.

Descriptive statistics (percentage increases) were used for analyses of patient volumes. In addition a segmented linear regression was done and the time series was adjusted for auto-correlation. The findings from the statistical analysis were triangulated with findings from qualitative research, which derived data from:

- Document reviews of relevant policy documents, (training) manuals and progress reports;
- Financial data from the NPA on total programme spending and disbursements to facilities;
- Semi-structured interviews with officials from one hospital and two randomly selected health centres in each of the study districts (RBF and control districts), as well as the DHEs, DSCs and PHEs;
- Focus group discussions with at least four HCCs and four CBOs in each district; and
- Stakeholder interviews with officials from MoHCC, NSC, NPA and other relevant parties, including international donor organizations present in Zimbabwe.

Qualitative research took place in February and March 2013. All findings
were discussed with relevant stakeholders during a national workshop and joint conclusions from the assessment were arrived at.

**Results**

For the majority of indicators the analysis revealed that service utilization in the RBF-districts has increased since March 2012. Compared with non-RBF districts, RBF districts show relatively higher growth rates (Table 1). Exceptions are prevention of mother-to-child transmission (PMTCT) and primary immunization course completed. A graphical presentation of the trends also shows increased growth rates in RBF districts after the start of the intervention. This is particularly evident for antenatal care (ANC) visits (Figure 1).

Table 2 provides insight into the statistical significance of the findings. It compares growth rates (month-on-month volume changes) of the different indicators before and after the intervention and shows the sudden volume changes as a result of the intervention.

Table 2 shows that there is a significant change in volume of normal deliveries as a result of the intervention. After the start of the intervention a significant positive trend was found for ANC 4+ visits, high-risk perinatal referrals and growth monitoring, whereas no significant trends were found in the control districts. Finally, one can observe significant positive trends before the intervention for OPD new consultations, syphilis RPR test and IPT2. These trends are not significant after the intervention.

Moreover, the study found indications that the reliability of data entered into the national health management information system (HMIS) improved in RBF districts (Figure 2). In the RBF scheme, facilities incur deductions in payments when there is a discrepancy between the data they declare to the national HMIS and the data which are verified by the NPA. Income forgone as a result of these discrepancies also decreased in the RBF districts (Figure 3).

Quality of services was only measured in the RBF districts and data collection only started at the beginning of the

---

### Table 1. Comparison between trends in RBF and control districts for selected incentivized indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change in volumes (%) points; n=387</td>
<td>Change in volumes (%) points; n=398</td>
</tr>
<tr>
<td>ANC 4+ visits</td>
<td>44.6%</td>
<td>0.8%</td>
</tr>
<tr>
<td>OPD new consultations</td>
<td>19.9%</td>
<td>12.5%</td>
</tr>
<tr>
<td>HIV VCT in ANC</td>
<td>3.5%</td>
<td>-12.2%</td>
</tr>
<tr>
<td>ARVs to HIV+ pregnant women (PMTCT)</td>
<td>5.6%</td>
<td>37.1%</td>
</tr>
<tr>
<td>Tetanus TT2+</td>
<td>7.7%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Syphilis RPR test</td>
<td>18.4%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>IPT (x 2 doses)</td>
<td>21.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Normal deliveries</td>
<td>20.2%</td>
<td>17.6%</td>
</tr>
<tr>
<td>High-risk perinatal referrals</td>
<td>78.1%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Family planning, short-term methods</td>
<td>33.0%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Primary course completed</td>
<td>-18.7%</td>
<td>-6.5%</td>
</tr>
<tr>
<td>Growth monitoring</td>
<td>96.7%</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

---

![Figure 1. ANC 4+ visits, in RBF and control districts](image)

**Figure 1. ANC 4+ visits, in RBF and control districts**

Source: Zimbabwe National HMIS

---

### Table 2. Month-on-month increase before and after the intervention (March 2011 to June 2013)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Pre-slope</th>
<th>P-value</th>
<th>Intervention</th>
<th>P-value</th>
<th>Post-slope</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RBF</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANC 4+ visits</td>
<td>85.6</td>
<td>0.129</td>
<td>-78.8</td>
<td>0.858</td>
<td>160.2**</td>
<td>&lt;0.01**</td>
</tr>
<tr>
<td>OPD new consultations</td>
<td>1115.2*</td>
<td>0.007*</td>
<td>739.8</td>
<td>0.809</td>
<td>127.5</td>
<td>0.96</td>
</tr>
<tr>
<td>HIV VCT in ANC</td>
<td>125.5</td>
<td>0.107</td>
<td>705.8</td>
<td>0.272</td>
<td>-43.7</td>
<td>0.379</td>
</tr>
<tr>
<td>Tetanus TT2+</td>
<td>24.2</td>
<td>0.903</td>
<td>535.9</td>
<td>0.618</td>
<td>-5.9</td>
<td>0.968</td>
</tr>
<tr>
<td>Syphilis RPR test</td>
<td>298.6*</td>
<td>&lt;0.01**</td>
<td>1481.8</td>
<td>0.078</td>
<td>-16.4</td>
<td>0.784</td>
</tr>
<tr>
<td>IPT2 (2 doses)</td>
<td>252.4*</td>
<td>0.01*</td>
<td>-140.1</td>
<td>0.76</td>
<td>22.6</td>
<td>0.629</td>
</tr>
<tr>
<td>Normal deliveries</td>
<td>-18.9</td>
<td>0.522</td>
<td>738.2*</td>
<td>0.01*</td>
<td>27.7</td>
<td>0.158</td>
</tr>
<tr>
<td>High-risk perinatal referrals</td>
<td>2.9</td>
<td>0.767</td>
<td>-156.8</td>
<td>0.089</td>
<td>50.1**</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Family planning, short-term methods</td>
<td>-185.3</td>
<td>0.892</td>
<td>-3055.6</td>
<td>0.702</td>
<td>776.2</td>
<td>0.445</td>
</tr>
<tr>
<td>Primary course completed</td>
<td>-3.2</td>
<td>0.977</td>
<td>-438.6</td>
<td>0.867</td>
<td>-46.6</td>
<td>0.529</td>
</tr>
<tr>
<td>Growth monitoring</td>
<td>-222.8</td>
<td>0.875</td>
<td>9144.9</td>
<td>0.459</td>
<td>2412*</td>
<td>0.016*</td>
</tr>
<tr>
<td><strong>Non-RBF</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANC 4+ visits</td>
<td>92.4</td>
<td>0.139</td>
<td>-452.8</td>
<td>0.39</td>
<td>9.6</td>
<td>0.815</td>
</tr>
<tr>
<td>OPD new consultations</td>
<td>4745.2*</td>
<td>0.019*</td>
<td>12427.4</td>
<td>0.468</td>
<td>437.4</td>
<td>0.727</td>
</tr>
<tr>
<td>HIV VCT in ANC</td>
<td>67.6</td>
<td>0.197</td>
<td>-469.5</td>
<td>0.32</td>
<td>-10</td>
<td>0.763</td>
</tr>
<tr>
<td>Tetanus TT2+</td>
<td>-44.3</td>
<td>0.812</td>
<td>-473.5</td>
<td>0.67</td>
<td>40.3</td>
<td>0.769</td>
</tr>
<tr>
<td>Syphilis RPR test</td>
<td>288.1*</td>
<td>&lt;0.01</td>
<td>159.32</td>
<td>0.842</td>
<td>-18.8</td>
<td>0.752</td>
</tr>
<tr>
<td>IPT2 (2 doses)</td>
<td>289.7**</td>
<td>&lt;0.01**</td>
<td>-445.4</td>
<td>0.593</td>
<td>-13</td>
<td>0.484</td>
</tr>
<tr>
<td>Normal deliveries</td>
<td>-30.4</td>
<td>0.496</td>
<td>-207.4</td>
<td>0.525</td>
<td>45.8</td>
<td>0.054</td>
</tr>
<tr>
<td>High-risk perinatal referrals</td>
<td>2.2</td>
<td>0.693</td>
<td>-83.8</td>
<td>0.72</td>
<td>1.98</td>
<td>0.595</td>
</tr>
<tr>
<td>Family planning, short-term methods</td>
<td>-135</td>
<td>0.892</td>
<td>-5281.5</td>
<td>0.531</td>
<td>271.8</td>
<td>0.687</td>
</tr>
<tr>
<td>Primary course completed</td>
<td>-48.9</td>
<td>0.461</td>
<td>78.3</td>
<td>0.896</td>
<td>23.2</td>
<td>0.586</td>
</tr>
<tr>
<td>Growth monitoring</td>
<td>426.1</td>
<td>0.497</td>
<td>1480.9</td>
<td>0.794</td>
<td>247.8</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Pre-slope/post-slope: month-on-month changes in volumes before or after the intervention, if p-value <0.05 then changes significant either positive (+ve coefficient) or negative (-ve coefficient)

**Intervention**: the change in level, sudden increase (again check for significance)

*= P<0.05
**= P<0.01
intervention. Therefore no comparison with control districts or the trend before the intervention could be made. However, quality scores show a slight increase since the start of the intervention in the RBF districts. The focus group discussions and interviews confirm the observed quality increments. Respondents also indicated that the satisfaction surveys by CBOs have a strong impact on the attitude of staff. The direct feedback on their behaviour (and the financial incentive related to the CBO score) has sensitized staff to the importance of client-friendly behaviour. Waiting times are reported to have reduced and nurses are perceived as being more responsive to emergencies.

All health facilities in the RBF districts have stopped charging fees for MNCH services, in line with the goals of the project. This was confirmed through the CBO client-satisfaction surveys and the external counter verification. According to health workers interviewed, subsidies provided through RBF payments are four to ten times the amount of previously received amounts from patient fees for MNCH services. However, the total value of salaries, equipment, drug kits and other contributions from government and donors still constitutes the majority of the financing of health institutions.

The RBF subsidies go towards a wide range of uses: rehabilitation of the infrastructure, purchase of sundries, medicines and medical and surgical supplies, food for patients, payment of utility bills, hiring of locum and casual staff, transport and ambulance services. In some cases the RBF subsidies were used to pay for staff to obtain training in certain procedures e.g. insertion and removal of long-term contraceptive devices.

As shown in Figures 4 and 5, the trends in utilization of services, for which no RBF incentives are provided, show remarkable similarities between RBF and non-RBF districts, before and after the intervention; an indication that the validity of comparisons between intervention and control districts is high and that differences in the performance of the indicators for which RBF incentives were awarded are likely due to the incentives.
Discussion

The results from the comparisons between RBF and non-RBF districts reveal a rising trend in utilization services in RBF districts. For some MNCH services (deliveries, ANC, high-risk perinatal referrals and growth monitoring) these trends are statistically significant. In the RBF districts, the reliability of HMIS data and quality of care increased since the introduction of RBF. The study also points at externalities that influence behaviour of health service providers. Utilization figures for OPD, syphilis RPR test and IPT2 show a positive trend before the intervention in both RBF and control districts, while this trend is no longer significant after the intervention. This may for instance be caused by stock-outs of drugs and supplies.

Literature about the mechanisms through which RBF contributes to better performance is limited. This is also referred to as “the black box of RBF implementation”. It is generally imagined however, that the pecuniary incentives which are earned by providers and are contingent and proportional to their productivity, motivate them to perform better. The qualitative study revealed practices in RBF districts which are not being followed in control districts. In this section, the ways in which these could be contributing to improved performance are discussed.

- First, because the contracting approach clarifies what is expected of actors in terms of results, the use of RBF contracts stipulating the obligations of the NPA, health facilities, DHEs/PHEs and CBOs has enabled the DHEs/PHEs to execute their supervisory role by removing role ambiguity and ensures that communities’ opinions are regularly collected through CBO-conducted surveys.
- The relative autonomy enjoyed by health facilities in RBF districts is not a characteristic of governance in non-RBF districts. With active involvement of staff and HCCs, RBF facilities take responsibility for operational planning and implementation. In the non-RBF (control) districts, operational planning was a paper exercise because facilities had no control over the user fees they collected; they relinquished them to the DHE. Due to lack of funding to execute the planned activities, the same plans are submitted every year. Facility staff in RBF districts also have increased (not absolute) autonomy over procurement. So it is likely that they are able to demonstrate allocative efficiency and innovation, by acquiring supplies which are necessary to solve specific operational problems at their particular facilities.
- Community involvement has always been a strong aspect of the Zimbabwean public health system, premised on the primary health care concept and philosophy. With RBF funds, HCCs have been re-activated and are committed and take ownership of the health services. In addition, the patient satisfaction surveys by CBOs, which were a feature in RBF districts only, gave communities a voice and likely motivated health service providers to take the preoccupations of the community into account in their operational planning.
- Financial incentives, such as applied in the Zimbabwean RBF project, have been argued to crowd out intrinsic motivation of health workers. However, achievements in the first nine months of the scaled up RBF project in Zimbabwe (March 2012 to December 2012) must be attributed to intrinsic motivation of staff and HCCs since, as alluded to earlier in this paper, personal incentives for frontline health workers in RHCs and district hospitals were only introduced after in 2013.
- A major contributing element to the success of an RBF intervention concerns the efforts made in relation to training and capacity building. In the first two years of the programme around 10% of the total project budget was invested in training for national level decision makers, district staff and facility staff.

Conclusion

In general, the RBF programme in rural Zimbabwe has shown positive intermediate results. It has succeeded in the removal of user fees for MNCH services, a finding confirmed through client satisfaction surveys, as well as compensating health institutions for the foregone income. Utilization figures increased in districts which implemented RBF, indicating that accessibility has effectively increased.

While the results are inadequate for a conclusion regarding the statistical significance of the overall impact of the RBF project in Zimbabwe, this research found several elements only prevalent in the intervention districts, that may have contributed to the positive results in service utilization and quality improvements in RBF districts since the project commenced. These are:

- Use of contracts to clarify what is expected of each actor for payments to be made;
- Community involvement in the provision and planning of health services;
- Autonomy for primary health care facilities in planning and procurement; and
- Intrinsic motivation of staff, demonstrated by improved utilization statistics even before personal staff incentives were introduced in the project.

References

Piloting a performance-based financing scheme in Chad: Early results and lessons learned

Joël Arthur Kiendrébéogo,1 Olivier Barthès,1 Matthieu Antony,1 Louis Rusai2
Corresponding author: Joël Arthur Kiendrébéogo, e-mail: jarkien@gmail.com

Performance-based financing schemes for health facilities have been attracting increasing attention in most sub-Saharan Africa countries and some experts believe that the strategy could serve as an entry point to address several structural weaknesses constraining health systems. In October 2011 Chad adopted this strategy as a pilot project for 20 months with the overarching objective to improve uptake and quality of health care. Based on the quantitative data made available by the PBF data verification process and on qualitative data collected specifically, the present study aims to document the experience gained from field implementation in order to present the early results of the scheme and reflect on the drivers of behavioural change within facilities and in the wider health system. This could supply valuable lessons for a possible future PBF scheme in Chad and provide a perspective on scaling up. It could also stimulate critical reflections from stakeholders and be helpful for other countries facing similar challenges.

Context

From a health and demographic perspective, Chad is a complex and difficult environment. The country’s health indicators are very low, particularly those related to maternal, newborn and child health. According to the Multiple Indicator Cluster Survey (MICS, 2010), under five mortality ratio was 175%, infant mortality ratio 106%, contraceptive prevalence 4.8% and skilled birth attendance 22.7%. Chad’s maternal mortality ratio is one of the worst in the world, at 1 100 per 100 000 live births in 2010.

The PBF scheme included four regions (out of 23 in the country) and eight districts (out of 72) with two districts per region. There were a total of nine district hospitals and 102 primary health centres (PHCs). The population covered was estimated at 1 650 000 (Chad’s total population estimate is 11 million). The selection of areas for the project was based on three criteria:

- Districts where maternal and child health performance indicators were below the national average;
- The poorest districts, according to national levels of poverty; and
- Districts where support from donors was less important.

Two of the regions were located in the north of the country (Batha and Guéra, with 46 PHCs in total) and two in the south (Mandoul and Tandjilé, with 56 PHCs in total), with completely different characteristics. Population density is higher in the south and health facilities, particularly faith-based ones which are usually credited with better organization and management, are more numerous. By contrast, populations in the north are more scattered and nomadic, spending a good part of the year outside their enumeration area. Moreover, there are geographical accessibility issues with long distances from villages to nearest facilities, with some PHCs being more than 200 km from the district hospital. Low levels of education and sociocultural constraints are also more marked in the north.

The project was designed to be consistent with the National Health Policy elaborated for the period 2007–2015, which identified some problems in health-care provision, particularly: low coverage — health facilities in difficult locations, low technical equipment,
lack of infrastructure and maintenance, poor organization and underfunding of health services, poor management and procurement of essential generic drugs, vaccines and contraceptives, lack of communication, poor referral system, low quality of care etc. The PBF project aimed to directly address some of these issues to improve service organization and increase accessibility and quality of care. The services covered were mainly within the ‘minimum package of activities’ (essential package of care) of primary health centres; and the ‘complementary package of activities’ of district hospitals. The indicators chosen and purchased quantitatively (unit prices given) at PHCs and district hospitals level are shown in tables 1 and 2.

Health facilities (both PHCs and district hospitals) were also assessed according to quality of services, mainly via resources indicators. There were also indicators related to: environmental hygiene of health facilities; confidentiality of consultation rooms; availability of unexpired and well stored drugs (including contraceptives and vaccines) and medical consumables; availability and functionality of materials and equipment (thermometer, sphygmomanometer, stethoscope, delivery table and boxes, surgery box, sterilizers, baby scales, measuring rods etc.); records well completed and tidy; accurate filling of partographs etc. Regulators, especially regional health management teams and district health management teams were also taken into account. They were assessed by indicators such as: planning of activities (availability of action plans); supervision of health facilities; promptness and completeness in the transmission of data from health information system; regular holding of statutory meetings etc.

The project was managed on a daily basis by an independent performance purchasing agency (PPA) whose mission was twofold: implementation of the project in the pilot areas and ensuring transfer of skills to the Ministry of Health to allow it to manage future PBF projects. In order to avoid conflicts of interest and to improve verification of results and transparency, the Chad PBF scheme strived for a full separation of functions between key actors:

- • Fundholder – The Word Bank;
- • PPA;
- • Regulator – the Ministry of Health (MoH); and
- • Providers including health and supporting staff as well as health facility management committees.

Methods

This study adopted both quantitative and qualitative methods for data collection and analysis. Quantitative data relate to the period between October 2011 and March 2013 (18 months) and were derived from the PBF verification processes, compiled in Chad’s results-based financing web portal (www.fbrchad.org). Quantitative analysis mainly focused on trends in health service utilization during that period, as well as on the quality of health-care and administrative services. All health facilities involved in the PBF scheme were taken into account. Information for the qualitative component of this research was collected over one month (February–March 2013). Qualitative data were based on a series of key informant interviews (KII), as well as focus group discussions (FGD). Key informants included officials from the MoH at central and regional level, district health management teams (DHMT), district hospitals health workers and administrative staff, PHCs staff and their management committees, and community-based associations. All DHMT and district hospitals involved in the project were taken into account whereas half of the PHCs were considered and sampled randomly. Key informants were interviewed with different questionnaires and data were collected in three ways:

- • Face-to-face interviews with 52 heads of PHCs;
- • Self-administered questionnaires for officials from the MoH at central level (n=1) and regional level (n=24), for DHMT members (n=29), for district hospitals health workers and administrative staff (n=59); and
- • 41 focus group discussions with PHC management committees and community-based associations.

<table>
<thead>
<tr>
<th>Table 1. Quantitative indicators purchased at the PHC level and their unit prices in Chad PBF pilot scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator</td>
</tr>
<tr>
<td>Curative services</td>
</tr>
<tr>
<td>New curative consultations for children over five years (zone A** and outside zone B***</td>
</tr>
<tr>
<td>New curative consultations for children over five years (zone B)</td>
</tr>
<tr>
<td>New curative consultations for children under five years (zone A and outside zone B)</td>
</tr>
<tr>
<td>New curative consultations for children under five years (zone B)</td>
</tr>
<tr>
<td>STI cases treated</td>
</tr>
<tr>
<td>Preventive services</td>
</tr>
<tr>
<td>Children preventive consultation</td>
</tr>
<tr>
<td>Pentavalent 3</td>
</tr>
<tr>
<td>Anti-measles vaccination</td>
</tr>
<tr>
<td>Tetanus vaccination (2+)</td>
</tr>
<tr>
<td>Pregnant woman counselled and screened positive for HIV and transferred to district hospital</td>
</tr>
<tr>
<td>Reproductive health</td>
</tr>
<tr>
<td>First prenatal consultation</td>
</tr>
<tr>
<td>Third prenatal consultation</td>
</tr>
<tr>
<td>Eutocic delivery</td>
</tr>
<tr>
<td>Number of users of modern contraceptive methods: new and former clients</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2. Quantitative indicators purchased at the district hospital level and their unit prices in Chad PBF pilot scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator</td>
</tr>
<tr>
<td>New curative consultation referred or with emergency signs seen by a doctor</td>
</tr>
<tr>
<td>Major surgery</td>
</tr>
<tr>
<td>Minor surgery</td>
</tr>
<tr>
<td>Eutocic delivery</td>
</tr>
<tr>
<td>Caesarean</td>
</tr>
<tr>
<td>Dystocic delivery</td>
</tr>
<tr>
<td>Voluntary test for HIV</td>
</tr>
<tr>
<td>Days of hospitalization</td>
</tr>
<tr>
<td>HIV positive pregnant women under prophylactic ART</td>
</tr>
<tr>
<td>Number of new cases treated with HAART</td>
</tr>
<tr>
<td>Number of patients taking HAART and followed every six months</td>
</tr>
<tr>
<td>Screening for TB by smear positive</td>
</tr>
<tr>
<td>Number of users of modern contraceptive methods: IUDs and implants</td>
</tr>
<tr>
<td>Patients counter referral</td>
</tr>
</tbody>
</table>

*Chad uses CFA franc; exchange rate used: US$ 1 = 500 CFA franc
**Zone A: area located within 5 km of the health facility
***Zone B: area located 5–10 km from the health facility

* Chad uses CFA franc; exchange rate used: US$ 1 = 500 CFA franc
Notes were taken during interviews and we gradually noticed saturation of data, namely the information collected was less and less new. All interviews were conducted in French. Data were complemented by direct observations in the field as all four authors were part of the project implementation, and by a document review, focusing on documents produced as part of the project, such as expert reports, quarterly progress reports, handbook of procedures for PBF implementation in Chad etc. Qualitative data were treated and analysed manually, using a content analysis with an inductive approach. We used Stata 11 and Excel 2007 to carry out descriptive statistics for the quantitative data to monitor trends in some key indicators. The main limitations of the data available and the analysis processes are presented in the discussion section.

Quantitative results

Utilization of health services

The findings show that access to health facilities increased generally for all indicators, even if significant differences were sometimes observed between facilities. Key indicators selected from indicators purchased in PHCs are shown below. For all results the target population was used as the denominator. Considering all PHCs involved in the pilot scheme, the proportion of children immunized by pentavalent 3 increased from 50% to 95%, and for vaccination against measles it rose from 48% to 91% (Figure 1). Facility-based deliveries (including caesarean sections) increased from 17% to 40% (Figure 2), whilst modern contraceptive prevalence rose from 1.2% to 6.9% (not shown here). Conversely, some indicators remained almost stationary, with a noticeable seasonal effect. That was the case for new case of curative consultations for under five in PHCs, which remained between 40% and 60% on average, with peaks of 90% to 115% between July and October, i.e. during rainy season both in 2012 and 2013 (Figure 3). Similarly the third antenatal visit ranged on average between 18% and 25% with peaks around 30% to 40% between January and April both in 2012 and 2013 (Figure 4). In all cases, results demonstrated a clear difference between regions, with those in the south presenting higher indicators.

Figure 1. Evolution of monthly coverage rate for pentavalent and measles immunization (average figures calculated from data from all PHCs involved in the project)

Figure 2. Evolution of monthly coverage rate for assisted deliveries (average figures calculated from data from all PHCs involved in the project)

Figure 3. Evolution of monthly coverage rates for new curative consultations for under 5 (average figures calculated from data from all PHCs involved in the project)

Figure 4. Evolution of monthly coverage rate for third antenatal visit (average figures calculated from data from all PHCs involved in the project)
(as shown in figures 2, 3 and 4 where data have been disaggregated). But it is worth mentioning that PBF failed to revive indicators relating to HIV-related services, which generally were not provided in PHCs before the PBF scheme.

**Quality of care**

Quality checklists were developed to assess quality of care and they include items such as health facilities environment and hygiene, cleanliness of treatment and waiting rooms, availability and functionality of medical and technical equipment for care, sterilization procedures, biomedical waste management, existence of standard treatment protocols, proper filling and management of patient records, medicines procurement and management etc. Quality was assessed quarterly by the DHMTs and the PPA, and points were given for each item which were then converted into percentage scores. Over the pilot duration PHCs were assessed for quality five times and the average score, including all facilities, increased from 42% (at first verification round) to 67% (at the last one) as shown in Figure 5. However, these aggregate numbers hide huge disparities between facilities, with quality scores ranging from 33.16% to 92.74% in the last quarter when PHCs were considered individually. Quality of care in district hospitals also improved with each evaluation and while crude figures were better in the south, progress made was more important in the north (figures 6 and 7).

**Qualitative results**

During the key informant interviews and the focus group discussions, several changes that occurred in the behaviour of providers and the functioning of the system emerged, as observed and attested by key stakeholders. Some of these changes are summarized below, focusing on those that relate with the initial theory of change underlying the PBF scheme.

**Improvements in ways of “doing things” at facility level**

Informants in interviews and group discussions highlighted a series of changes in the way things are done at facility level. One of these changes was reflected by improvements in staff motivation accompanied by increased attendance and punctuality of health staff. Several reports confirmed this.

“Since the introduction of PBF staff enjoy working and are no longer absent as was the case before; with PBF you work a lot but you win a lot too; we are encouraged by the money we earn compared to our efforts and our results” (KII, health worker in PHC).

“During strikes we did not close the doors, instead we took the opportunity” (FGD, member of a health centre management committee).

“Since the project was implemented there has not been one resignation, which was not the case before; instead we tend to reinforce staff by hiring locally” (KII, district hospital manager).

“Before PBF implementation we were only two in the health centre; now we have hired a nurse and two community health workers; we are now five and work with renewed commitment” (KII, head of PHC).
Secondly, as encouraged during the PBF training and “coaching”, entrepreneurial initiatives by health staff also sprang up, boosted by the greater autonomy health facilities enjoyed in using their funds. These included incentives to patients who accessed facilities (gifts to mothers such as loincloths, baby clothes, soap, tea, sweets for children), reduction in or exemptions from user fees for some services, financial motivation for traditional birth attendants who encouraged mothers to deliver in health centres.

With funds received from the PBF scheme some PHCs also improved working conditions for staff, as well as hospitality and confidentiality for patients. For example, some built delivery rooms, buildings for immunization and prenatal visits, or shelters for pregnant women awaiting consultations. Some also purchased curtains to increase patients’ privacy, as well as other medical equipment for consultations, delivery tables, sterilizers, surgical devices etc. to improve services. Many health facilities’ premises were repainted, gardens were landscaped and grounds were kept clean.

“Though there is still some ways to go in terms of mindset, things have improved a lot in the area of hygiene in general. Cleanliness is ensured everywhere, making patients wonder why there is such cleanliness in structures which, only yesterday, were filled with flies and other insects” (KII, a member of a DHMT).

**Improvements in health facilities management**

Prior to the implementation of the PBF scheme, most PHCs did not have action or business plans and this could impede good governance. Those involved in the project were required to have such a document, which enabled a basic of consensus on the activities to be carried out. It was a requirement for contract with the PPA.

“Now expenditures are made according to the business plan and the signed contract, after a meeting of health-care providers and health centre committee” (KII, head of a PHC).

PBF also greatly improved the presence, as well as the filling in and archiving of local health information tools, such as facility registers for activities and funds. Some registers, which had not been used for many years, began being used again.

“Prior to PBF some registers such as those related to patient referrals or minor surgery did not exist; this is not the case now, thanks to recommendations made during verifications!” (KII, the superintendent of a district hospital).

In fact, this register existed since 1988 according to a Chad health system expert, but its use had been discontinued.

Moreover, monthly financial reports of PHCs were usually poor or not filled in at all before PBF. As the scheme required to have and use such registers (quality checklist), PBF contributed, in some part, to correcting this situation. Management of drugs, their availability and storage also improved in many health facilities.

“Prior to PBF we stored drugs in cartons, but with money earned we purchased medicine cabinets. In addition, PBF funds enabled us to purchase enough drugs, so shortages are now rare” (FGD, manager of a pharmaceutical depot).

**Improvements in health system regulation**

Performance contracts were signed with regulators at intermediate and peripheral levels (i.e. regional services and DHMTs). These contracts were assessed, and regions/DHMTs paid, by using checklists targeting their routine duties, such as planning and monitoring of activities, health facility supervision, effective analysis of health information, completeness and promptness in data transmission, regular holding of statutory meetings etc. Evaluations were made quarterly by the purchasing agency. Such evaluations found that substantial efforts in improvement were made also at this level. Initially, most of these activities were rarely, if at all, carried out, while that was no longer the case after introduction of PBF.

**Discussion**

Our results must be interpreted carefully. One of the limitations of our data and analyses is that they are based on trends during the implementation of the project only, as data relating to the same indicators before the project are not available. Thus a before and after analysis is not possible. Moreover, we have to bear in mind that this study is not an impact evaluation with control and intervention groups, and therefore it is not possible to tease out the impact of other factors, such as concurrent activities of NGOs intervening in the targeted health districts. The project period was also too short to capture all relevant effects or to ascertain longer term trends and lasting changes. Furthermore, the reliability of target population data when assessing coverage rates for services utilization is also a limitation of the study, especially in the northern regions (Batha and Guera).

Let us add that regarding quality of care, checklists used to assess it had limitations because they mainly focused on structural indicators, with less emphasis on processes and outcomes ones. Finally, it is worth mentioning that baseline studies had not been conducted, so thorough comparisons with indicators prior to the project’s start are not possible. However, we believe that more than their value, it is the evolution of the indicators that matters. The limitations of our data analysis remain substantial, but these elements do not detract from the relevance of our study and its contribution to the main objective of presenting data that often go unused, and drawing preliminary lessons from this pilot scheme.

Our findings show relatively positive evolution in indicators of access and quality of health services. These positive results resonate with the findings of our qualitative interviews. Indeed, the qualitative investigation provides some help in explaining the trends in the indicators. They also confirm elements of the PBF theory of change which is built partly on the neoclassical theory of “Homo economicus” maximizing its utility. These important changes could
also be linked to the large growth margins of most health indicators which were originally very low in Chad (increasing marginal returns). Indeed, in many health facilities, consultations were extremely low because patients were dissatisfied; so there was room for greater workloads, especially when there was a financial motivation. Peaks observed between July and October for “new cases of curative consultations for under five” were consistent with the rainy season, and its set of endemic and epidemic diseases (malaria, gastroenteritis, acute respiratory infections etc.), while those observed between January and April for “third antenatal visit” correlated with the end of farm activities, meaning women were much freer to come to health facilities. However, what is most interesting to note are the vast performance disparities between regions (and sometimes between health centres in the same district even if we didn’t show disaggregated data).

The first issue (disparities between regions) highlights an initial important lesson of our study, which is that context matters a great deal. The same intervention implemented in two different contexts (geographic, climatic, socioeconomic and cultural etc.) will not have the same consequences with regard to health outcomes. Secondly, disparities between PHCs located in the same district could be mostly explained, based on our direct observations, by differences in staffing, in health workers’ qualification and in lack of leadership from managers. Indeed, generally, PBF in Chad worked better in faith-based facilities and where heads were actually qualified and demonstrated strong leadership.

Our results also highlighted the pilot’s effect on better governance and management of health institutions. But despite these positive signs, more effort is needed to make decision making happen on a more empirical and rational basis. We noted that in a large number of health facilities, development of business plans was neither rigorous nor actually effective, owing to weak management capacity, overall lack of human resources and low levels of community participation. But in health facilities with some potential in relation to these elements, PBF easily revived local initiatives even though there is still a long way to go to establish effective autonomy. Overall, management of the local health information systems also improved even though registers were not always tailored to both health facility and community verification requirements. Thus, more appropriate tools need to be devised, under the national health information system, in order to facilitate these verification activities while avoiding duplication. Another issue that requires close attention is better linking of PBF with other financing mechanisms, especially fee exemptions for emergency care in hospitals (decreed since 2007 and ongoing at the time of the study). A decision (that was not yet effective) had also been made to extend comprehensive free care to all pregnant women and children under five. The implementation of these policies consists only in the provision of drugs to health facilities, without any effort to take into account real needs in drug supply and changes at other levels (increased workload, loss of revenues for staff etc.), which obviously raises major management challenges.

Some of the difficulties highlighted in this article are structural and require system-wide actions. However, it seems clear from our study that the introduction of the PBF scheme in health facilities, even if at pilot stage and poorly regulated, creates almost instantly a positive momentum as well as enthusiasm and buy-in from most local players, highlighted by our qualitative results. It is precisely this that makes PBF so innovative.

Conclusion

As currently occurring in numerous sub-Saharan African countries, a PBF scheme for health facilities was introduced in Chad as a pilot project. Our analysis, based on data collected through the PBF system, as well as interviews and focus group discussions, show that the PBF scheme began to bear fruit after only 18 months of implementation. It induced some strengthening of the health system and good practices quickly took root. Moreover, early results show improving trends for some of the indicators observed. However, results remain disparate across regions and districts and between health facilities. This confirms that PBF does not operate mechanically and similarly in all contexts, but rather acts as a catalyst to address issues when some key conditions are met. Our study presents some limitations, but the changes highlighted stress, more than ever, the need for rigorous impact evaluations and for open and evidence-based discussion in order to tailor the design of PBF schemes to specific contexts and policy needs, and to better inform policy-making decisions on PBF schemes, both at pilot stage and when considering their rollout countrywide.

Acknowledgements
Feedback was provided by Allison Gamble Kelley (health economist) and Maria Paola Bertone (health policy, planning and financing specialist). We thank key informants for their participation, especially the head of the Direction de l’Organisation des Services de Santé (DOSS) (Dr Dadjim Blague) and his staff, who were in charge of PBF at the MoH, as well as the four health region managers. We also thank Agence Européenne pour le Développement et la Santé (AEDES) and Centre de Support en Santé Internationale (CSSI) for their technical and logistical support. Funding was received from the World Bank, through Projet Population et Lutte contre le SIDA phase 2 (PPLS2). We thank its coordinator (Mahamat Saleh) and his staff for their multifaceted support.

References
Estimating willingness to pay for maternal health services: The Kenya reproductive health voucher programme

Lucy Kanya, Francis Obare, Benjamin Bellows, Brian Mdawida, Charlotte Warren, Ian Askew
Corresponding author: Lucy Kanya, e-mail: lucy.kanya@brunel.ac.uk

Investing in health is fundamental to any poverty reduction strategy as healthy individuals are key to the economic productivity of any country. Both high and low-income countries finance health care using a mixture of five possible sources: taxes, social insurance contributions, private insurance premiums, community financing and direct out-of-pocket payments through, for instance, user fees and patients’ direct payment to private providers. Faced with serious economic challenges, many governments in developing countries introduced user fees for health care as part of a sector-wide approach to cost recovery and revenue generation. However, available evidence suggests that some service price levels discourage health service utilization by the poor and drive individuals into poverty.

Increasingly, governments in low-income countries and other purchasers of health-care services are experimenting with combinations of demand and supply side financing mechanisms such as the use of output-based aid (OBA) voucher subsidies. While supply-side investments aim at supporting the health system issues through initiatives such as capital investments, demand side financing structures target the health system user, driving them to utilize health facility based services. Such mechanisms include health voucher programmes which place purchasing power directly in the hands of potential health-care users, giving them choice of health-care service providers and services. The strategies, mostly targeting the poor, have been used to improve uptake of health-care services in developing countries. While vouchers...
are not issued free of charge, the cost is minimal with substantial benefits to the voucher holder, thus heavily subsidizing the cost of health care. However, there have been concerns about the potential impact of subsidies such as vouchers on adoption of pricing mechanisms when the subsidy is withdrawn. The concerns arise from the fact that in health, like many other fields, decision makers are often faced with the challenge of balancing the need for equitable access to services especially for vulnerable low-income populations and the desire to avoid setting prices that are too low to sustain programmes, which could lead to over-reliance on external funding. It is therefore imperative to price health-care services and products and charge those that can afford to pay a partial or full cost, which is then used to subsidize the cost of care for those who cannot afford to pay for them.

Setting optimal pricing levels for health-care services can be informed by individuals’ monetary valuation of the benefits derived from the interventions. However, health interventions are not subject to the normal economic market for goods and services, making it difficult to value benefits that can be derived from them. Among the methodologies used to elicit individuals’ monetary valuations of programme benefits include WTP studies. The theoretical foundations of WTP as a measure of commodity and service value are rooted in consumer demand theory. Individual WTP values point to consumer choice behaviour or preferences with regard to particular goods or services. WTP studies in the health sector build on the quality adjusted life year (QALY) measurement to elicit a dollar value from people for a good that is not subject to market pricing mechanisms. Individual preferences are weighted on money, health and time, with immediate and higher impact interventions expected to be valued higher than interventions where the outcome is expected at a future date or deemed to have a lower impact.

A number of possible scenarios have been identified in the literature regarding the possible influence of health-care subsidies on individuals’ monetary valuation of benefits. For instance, where the service has been obtained, beneficiaries are likely to be more willing to pay for subsequent use because they have experienced the true value of the service – the learning effect. Subsidy beneficiaries may also anchor around the subsidy price and would be unwilling to pay more for the intervention later. The price of the subsidy in this case acts as the reference point on which the stated WTP preferences are conditioned. In other cases, subsidies create an endowment effect whereby individuals’ stated WTP preferences are based on their experiences with the subsidized service or intervention (whether positive or negative). In the case of positive experiences, the stated WTP value is expected to be higher while for negative experiences, the stated WTP value is expected to be lower. In the case of cost-free subsidies (such as childhood immunizations in many settings), beneficiaries easily develop an entitlement effect and are unwilling to pay any amount for the intervention later.

Although output-based aid voucher programmes are increasingly being implemented in developing countries to improve the uptake of health-care services especially among economically disadvantaged populations, there is limited understanding of how and the extent to which they influence beneficiaries’ monetary valuation of the subsidized services when the voucher is withdrawn. This article examines individuals’ WTP for RH services in Kenya. It specifically compares the likelihood that individuals were willing to pay and the amount they would be willing to pay for ANC, delivery, PNC and FP services among voucher and non-voucher clients. Information on WTP values for health-care services is useful for predicting utilization or demand for an intervention, services or commodities. When obtained before the rollout of a health intervention, an analysis of WTP values can also be used to determine the need for a subsidy. In particular, if the stated WTP is less than the real cost of the intervention, then a subsidy would be needed to ensure equitable access to the services while higher stated WTP values may indicate the ability of the specific population group to pay for the services and may be used in pricing level decisions.

**Maternal health indicators in Kenya**

Although the year set for achieving the Millennium Development Goal (MDG) targets is upon us, Kenya is far from attaining its indicators on maternal and child health. According to the Kenya Demographic and Health Survey (KDHS), maternal mortality increased from 414 in 2003 to 488 in 2008–09. Despite several interventions to improve health outcomes, skilled birth attendance (SBA) – which is recognized as a key strategy in addressing maternal mortality – is still low at 44%. Moreover, although 92% of expectant women receive ANC from a health-care provider, only 44% of births are delivered in a health facility. Only 47% of mothers seek PNC after delivery. In the case of health-care services, the contraceptive prevalence rate is 46%. Factors that contribute to the low uptake of the health-care services in Kenya and similar settings include poverty, availability and spread of health facilities, low literacy, shortage of staff and supplies, health-care provider attitudes and sociocultural practices. Uptake of RH services remains low especially among individuals from poor households.

**Health-care financing in Kenya**

Different policy instruments have been utilized by successive governments to finance health care in the country. From a predominantly tax-funded system in 1963, a variety of cost recovery mechanisms including full cost (user fees) and registration fees have been used together with exemption mechanisms to cushion vulnerable segments of the population from finance-related barriers to accessing health care. There is a national health insurance scheme that initially targeted the formal sector but successively opened up to include the informal sector. There are also private health insurance schemes while the government recently commissioned a social health insurance scheme. Under Article 43(1) (a) of the Constitution of Kenya, every person has the right to the highest attainable standard of health, which includes the right to health-care services, including RH care. The full realization of this right has, however, been hampered by
stunted economic growth coupled with competing financial needs against a fixed budget.

As a signatory to the Abuja Declaration, Kenya committed itself to allocating at least 15% of the national budget to the health sector.40 However, more than a decade after signing the declaration, government funding for health care has remained consistently below 5%.41 In 2009–10, the government contributed 30% of the health budget, households and other private sources contributed 54%, while donors contributed 16%. However, the total health expenditure for RH accounted for 14% of total health spending and 1% of GDP in 2009–10, a level that has remained unchanged since 2005–2006.42 Public and private sectors (including households) were the primary sources of RH care financing during the period of analysis with contributions of 40% and 38% respectively.42 Household financing of health care is largely through formal and informal out-of-pocket payments, which have been linked to poor uptake of facility services, hence poor maternal health outcomes. It is against this backdrop that the Government of Kenya began implementing the RH vouchers programme (described in detail in the next section) in selected regions of the country. The government further declared a policy of free maternal health services (ANC, delivery and PNC) in all public health facilities in 2013.43 Following the policy shift, public health facilities have reported influxes in the numbers of maternal delivery.44

The reproductive health vouchers programme in Kenya

Through funding from the German Development Bank (KfW), an output-based aid (OBA) RH voucher programme has been implemented by the Government of Kenya since 2006. The OBA concept represents a demand-side approach to financing health care by subsidizing health-care clients directly and dispensing money to health facilities only when services are actually provided. The programme, described in detail elsewhere,13,45–47 is implemented in select sites within three districts (now counties): (Kisumu, Kitui and Kiambu) and two urban slums (Viwandani and Korogocho) in Nairobi since 2006. The programme was expanded to one additional county (Kilifi) in 2011. The objective of the programme is to significantly reduce maternal and neonatal morbidity and mortality by increasing the number of health facility deliveries and improving access to appropriate RH services for the poor through incentives for increased demand and improved service provision.4,48,49

Using a non-standard poverty-grading tool, community-based distributors appointed by the voucher management agency screen self-selecting pregnant women and potential FP clients, who, if eligible, purchase a safe motherhood or FP voucher respectively at a minimal fee or are given for free if living in extreme poverty. The safe motherhood voucher costs KSh 200 (US$ 2.50) and covers four ANC visits, normal or surgical delivery, pregnancy complications and PNC for the mother and baby up to six weeks. The FP voucher costs KSh 100 (US$1.25) and covers long-term and permanent methods (contraceptive implants, intrauterine contraceptive device and voluntary tubal ligation). A third voucher for gender-based violence recovery (GBVR) services is issued for free at selected health facilities to gender-based violence (GBV) survivors. The voucher covers consultation, counselling services, laboratory examinations and treatment of conditions arising from GBV.

Beneficiaries present the vouchers for services at the more than 150 accredited health (voucher) facilities comprising public, private for-profit and private not-for-profit. Following service provision, facilities submit invoices to the voucher management agency for payment against pre-agreed reimbursement rates. The RH voucher programme has been evaluated on several facets including its impact on access to services,60 impact on quality of care41 and the economic costs of providing the different RH programme services (unpublished work).

Evaluation of the programme has shown improved service utilization among the target population.49,50

Methods

Data

Data for this analysis and paper was collected during exit interviews with clients seeking ANC, PNC and FP services in selected health facilities in Kenya. The study was conducted between July and October 2012 as part of a larger project that evaluated the impact of reproductive vouchers programmes in five countries (Kenya, Uganda, United Republic of Tanzania, Cambodia and Bangladesh).

A total of 33 health facilities were randomly sampled from among those that were accredited to provide services to voucher beneficiaries. The sampling was stratified by programme site (Kisumu, Kitui, Kiambu, Kilifi and Nairobi), facility level (hospital, health centre/maternity/nursing home and dispensary/clinic) and facility type of ownership (public, private, faith-based and NGO). A further 18 health facilities were sampled from adjacent non-voucher sites (Makueni, Nyandarua and Uasin Gishu counties) for comparison. Health facilities in the comparison sites were selected on the basis of how comparable they were to those sampled from voucher sites in terms of level and type of ownership. In the absence of pre-implementation data, the study authors chose to compare voucher and non-voucher clients in an effort to separate the effect of the voucher programme on stated WTP values.

The study targeted expectant women making the first (under 24 weeks) and last (36 weeks or more) ANC visit; postpartum women seeking PNC services within 48 hours, two weeks, and four to six weeks after delivery; and women seeking FP services. As part of the larger programme evaluation, the women were first observed during consultation with the providers to determine the quality of care they received. The observations were conducted by trained nurses who were deployed outside the study area. Quality of care assessments were conducted using a different tool to the one used to capture stated WTP values. The detailed methodology and results of the quality of care assessments are not presented in this article but covered in detail in a separate focused paper.51
WTP data were captured using a structured questionnaire administered during exit interviews. Following the observations described above, clients were interviewed after consultation sessions by trained research assistants. The structured questionnaires used during the exit interviews captured information on the clients’ background characteristics (including age, education level, marital status and household income); childbearing experiences and intentions; perceptions about the services received; accessibility to the facility (mode and time of travel); out-of-pocket expenditure and WTP for the services including a stated WTP value for the different RH services; as well as awareness, use and perceptions about the vouchers. PNC clients were also asked about their experiences during delivery.

Written informed consent was obtained from all participants before conducting the observations and interviews. The interviews were conducted in English, Swahili (the national language) or the local language depending on which one a participant was comfortable with. Ethical approval for the study was obtained from the Population Council Institutional Review Board (Protocol No. 174) and the Kenya Medical Research Institute (Protocol No. 174).

Analysis

Analysis involved descriptive statistics (means and percentages) as well as estimation of multivariate regression models. We compared the proportions of voucher and non-voucher clients who indicated that they were willing to pay for ANC, delivery, PNC and FP services and tested whether there were any significant differences between the two groups. We further compared the average amount of money that voucher and non-voucher clients were willing to pay for the services and tested whether differences, if any, were statistically significant. Voucher clients in this case referred to those who had ever used FP or safe motherhood vouchers even if they did not use it on the day of the interview.

Multivariate regression analysis, on the other hand, involved estimation of logistic and ordinary least squares regression models for the likelihood of WTP and the amount of money clients were willing to pay for services respectively. A total of eight models were estimated. The first four models examined differences in the likelihood of WTP for the services (ANC, delivery, PNC and FP) among voucher and non-voucher clients. The results are presented as odds ratios. The next set of four models examined differences in the amount voucher and non-voucher clients were willing to pay for the services. The results are presented as coefficient estimates. The models adjusted for clustering of individuals within the same facility. The basic form of the model is given by the following equation:

\[ Y_{ij} = \beta_0 + \beta_i X_{ij} + e_i \]

where \( Y_{ij} \) is the amount paid by individual \( i \) in facility \( j \), \( \beta_0 \) is the constant, \( X_{ij} \) is the vector of covariates including the indicator of whether one was a voucher client or not, \( \beta_i \) is the associated vector of fixed parameters and \( e_i \) is the error term for individuals identified from the same facility. The models controlled for age, highest education level, marital status at the time of interview, parity, household wealth index, type and level of facility. The definitions and measurement of variables included in the regression models are presented in Table 1.

Table 1. Definitions and measurement of variables included in regression analysis

<table>
<thead>
<tr>
<th>Variable definition</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome variables</strong></td>
<td></td>
</tr>
<tr>
<td>Willing to pay for services (ANC, delivery, PNC, FP)</td>
<td>0 = No 1 = Yes</td>
</tr>
<tr>
<td>Amounts clients are willing to pay</td>
<td>Continuous: Ranges from KSh 10 to KSh 88 for ANC; Ranges from KSh 88 to KSh 2000 for delivery care; Ranges from KSh 10 to KSh 8000 for PNC; Ranges from KSh 20 to KSh 10000 for FP</td>
</tr>
<tr>
<td><strong>Covariates</strong></td>
<td></td>
</tr>
<tr>
<td>Client type</td>
<td>0 = Non-voucher client 1 = Voucher client</td>
</tr>
<tr>
<td>Current age of the respondent</td>
<td>Continuous: Ranges from 15 to 44 for ANC clients; Ranges from 15 to 49 for delivery and PNC clients; Ranges from 17 to 49 for FP clients</td>
</tr>
<tr>
<td>Education level</td>
<td>0 = No schooling/pre-unit/primary 1 = Secondary and above</td>
</tr>
<tr>
<td>Current marital status</td>
<td>0 = Never/formerly married 1 = Married/living together</td>
</tr>
<tr>
<td>Household wealth index</td>
<td>0 = Other 80% 1 = Poorest 40%</td>
</tr>
<tr>
<td>Parity</td>
<td>Continuous: Ranges from 1 to 5 for ANC clients; Ranges from 1 to 7 for delivery, PNC and FP clients</td>
</tr>
<tr>
<td>Facility type</td>
<td>0 = Private 1 = Public</td>
</tr>
<tr>
<td>Facility level</td>
<td>1 = Hospital 2 = Health centre/maternity/nursing home 3 = Dispensary/clinic</td>
</tr>
</tbody>
</table>

Kenya shilling (KSh): US$ 1 = KSh 88

Results

Interviews were completed with 419 out of 432 ANC clients (97%), 554 out of 568 PNC clients (98%) and 212 out of 216 FP clients (98%).

Characteristics of women

Table 2 presents the distribution of ANC, PNC and FP clients that were successfully interviewed upon exit by background characteristics and use of voucher. There were no significant variations in the distribution of voucher and non-voucher clients seeking various services (ANC, PNC and FP) by age and marital status. However, voucher and non-voucher clients seeking ANC and PNC services significantly differed in terms of highest level of education, household wealth status, and the facility from where they were interviewed. In particular the highest proportion of voucher clients seeking ANC and PNC services had primary level education (57% and 68% respectively). By contrast, the highest proportion of non-voucher clients seeking these services had secondary and above level of education (57% and 52% respectively). Similarly, higher proportions of non-voucher compared to voucher clients...
seeking the services were from the two bottom quintiles. In addition, although the majority of clients were from public health facilities, a higher proportion of non-voucher compared to voucher clients was from these facilities.

Willingness to pay for services

Table 3 shows the distribution of voucher and non-voucher clients by WTP for RH services. There was no significant difference in the proportion of voucher and non-voucher clients that were willing to pay for ANC services (35% and 33% respectively; p=0.67). However, a significantly lower proportion of voucher compared with non-voucher clients were willing to pay significantly lower amounts for ANC (p<0.05), delivery (p<0.01) and PNC services (p<0.01) compared with non-voucher clients (Table 3). It is also worth noting that, on average, voucher clients were willing to pay lower amounts than the voucher price for ANC and FP services. By contrast, they were willing to pay almost three times higher for delivery than the voucher price and almost the same price for PNC as the voucher price (Table 3).

Results from the multivariate logistic regression analysis show that voucher clients were significantly less likely to express WTP for ANC, delivery and FP services compared with non-voucher clients (p<0.05 in each case; Table 4). There was, however, no significant difference between voucher and non-voucher clients in the likelihood of expressing WTP for PNC services. Other results from the analysis show that clients with secondary and above level of education were significantly more likely to report WTP for delivery services compared with those with lower levels of education (odds ratio: 1.65; p<0.01). In addition, contrary to what would be expected, women from the poorest 40% of households and those who sought services from dispensaries or clinics were significantly more likely to report WTP for ANC services compared with those from the other 60% households and those who sought services from hospitals respectively (p<0.05 in each

Table 2. Percentage distribution of voucher and non-voucher clients by background characteristics and services sought

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Antenatal care (%)</th>
<th>Delivery/postnatal care (%)</th>
<th>Family planning (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voucher clients</td>
<td>Non-voucher clients</td>
<td>Voucher clients</td>
</tr>
<tr>
<td>Age (years)</td>
<td>p=0.30</td>
<td>p=0.25</td>
<td>p=0.93</td>
</tr>
<tr>
<td>15–24</td>
<td>50.0</td>
<td>47.9</td>
<td>52.4</td>
</tr>
<tr>
<td>25–34</td>
<td>40.1</td>
<td>45.0</td>
<td>35.6</td>
</tr>
<tr>
<td>35 and above</td>
<td>8.8</td>
<td>7.1</td>
<td>10.3</td>
</tr>
<tr>
<td>Don’t know/missing</td>
<td>1.1</td>
<td>0.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Highest education level</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>No schooling/pre-unit</td>
<td>6.6</td>
<td>2.9</td>
<td>7.9</td>
</tr>
<tr>
<td>Primary</td>
<td>57.1</td>
<td>39.9</td>
<td>67.8</td>
</tr>
<tr>
<td>Secondary and above</td>
<td>36.3</td>
<td>57.1</td>
<td>24.3</td>
</tr>
<tr>
<td>Current marital status</td>
<td>p=0.78</td>
<td>p=0.62</td>
<td>p=0.67</td>
</tr>
<tr>
<td>Never married</td>
<td>15.4</td>
<td>13.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Married/living together</td>
<td>80.8</td>
<td>83.2</td>
<td>86.0</td>
</tr>
<tr>
<td>Formerly married</td>
<td>3.9</td>
<td>2.9</td>
<td>2.4</td>
</tr>
<tr>
<td>Parity</td>
<td>p=0.16</td>
<td>p=0.01</td>
<td>p=0.54</td>
</tr>
<tr>
<td>0</td>
<td>37.4</td>
<td>41.6</td>
<td>0.3</td>
</tr>
<tr>
<td>1–2</td>
<td>38.5</td>
<td>42.9</td>
<td>52.1</td>
</tr>
<tr>
<td>3–4</td>
<td>19.2</td>
<td>11.8</td>
<td>33.6</td>
</tr>
<tr>
<td>5 and above</td>
<td>5.0</td>
<td>3.8</td>
<td>14.0</td>
</tr>
<tr>
<td>Household wealth index</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Poorest quintile</td>
<td>11.0</td>
<td>34.5</td>
<td>8.2</td>
</tr>
<tr>
<td>Poorer quintile</td>
<td>19.8</td>
<td>20.2</td>
<td>21.2</td>
</tr>
<tr>
<td>Middle quintile</td>
<td>26.4</td>
<td>11.8</td>
<td>25.7</td>
</tr>
<tr>
<td>Richer quintile</td>
<td>19.8</td>
<td>18.1</td>
<td>25.7</td>
</tr>
<tr>
<td>Richest quintile</td>
<td>23.1</td>
<td>15.6</td>
<td>19.2</td>
</tr>
<tr>
<td>Facility type</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Private</td>
<td>37.9</td>
<td>19.8</td>
<td>40.4</td>
</tr>
<tr>
<td>Public</td>
<td>62.1</td>
<td>80.3</td>
<td>59.6</td>
</tr>
<tr>
<td>Facility level</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Hospital</td>
<td>50.6</td>
<td>60.1</td>
<td>59.5</td>
</tr>
<tr>
<td>Health centre/maternity/nursing home</td>
<td>46.2</td>
<td>38.7</td>
<td>39.7</td>
</tr>
<tr>
<td>Dispensary/clinic</td>
<td>3.3</td>
<td>1.3</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Number of women

182 238 292 262 53 159

Percentages may not total 100 due to rounding; p values are from chi-square tests of differences between voucher and non-voucher clients.
Table 3. Distribution of voucher and non-voucher clients by willingness to pay for reproductive health services

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Voucher clients</th>
<th>Non-voucher clients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proportions willing to pay</strong></td>
<td>Estimate</td>
<td>Number of cases</td>
</tr>
<tr>
<td>Antenatal care</td>
<td>35.2</td>
<td>182</td>
</tr>
<tr>
<td>Delivery care</td>
<td>33.6</td>
<td>292</td>
</tr>
<tr>
<td>Postnatal care</td>
<td>47.3</td>
<td>292</td>
</tr>
<tr>
<td>Family planning</td>
<td>24.5</td>
<td>53</td>
</tr>
</tbody>
</table>

**Mean amount clients are willing to pay (KSh)**
- Antenatal care: 67.53, 170
- Delivery care: 706.40, 267
- Postnatal care: 198.80, 275
- Family planning: 34.23, 52

**Median amount clients are willing to pay (KSh)**
- Antenatal care: 0.0, 170
- Delivery care: 0.0, 267
- Postnatal care: 10.0, 275
- Family planning: 0.0, 52

Kenya shilling (KSh): US$ 1 ≈ KSh 88; Differences between voucher and non-voucher clients are statistically significant at: *p<0.05; **p<0.01. Number of cases = number of individuals responding to the question. Estimates for the WTP values = absolute values in KSh.

Discussion and conclusion

This study explored WTP for RH services among poor women within the context of health and wealth benefits. The results show that voucher clients were willing to pay significantly higher amounts for ANC and FP services compared to non-voucher clients (p<0.01 in each case). There was, however, no significant difference between voucher and non-voucher clients in the amounts they were willing to pay for ANC and FP services. Other results show that women with secondary and above level of education were willing to pay significantly higher amounts for ANC compared with those with lower levels of education (p<0.05). In addition, women who sought services from public health facilities and dispensaries/clinics were willing to pay significantly lower amounts for PNC compared with those who sought services from private facilities and hospitals respectively (p<0.05 and p<0.01 respectively).

Table 4. Odds ratios from logistic regression models for the likelihood of willing to pay for reproductive health services among voucher and non-voucher clients

<table>
<thead>
<tr>
<th>Covariates</th>
<th>Antenatal care</th>
<th>Delivery care</th>
<th>Postnatal care</th>
<th>Family planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voucher client (yes = 1)</td>
<td>0.59* (0.31, 0.99)</td>
<td>0.32** (0.19, 0.54)</td>
<td>0.87 (0.42, 1.79)</td>
<td>0.26* (0.14, 0.94)</td>
</tr>
<tr>
<td>Age (single years)</td>
<td>0.96 (0.90, 1.03)</td>
<td>0.96 (0.92, 1.05)</td>
<td>0.95* (0.91, 0.99)</td>
<td>1.02 (0.97, 1.09)</td>
</tr>
<tr>
<td>Highest education level</td>
<td>1.51 (0.99, 2.29)</td>
<td>1.65** (1.16, 2.35)</td>
<td>1.35 (0.91, 2.01)</td>
<td>0.91 (0.50, 1.67)</td>
</tr>
<tr>
<td>Current marital status</td>
<td>0.99 (0.49, 2.03)</td>
<td>0.82 (0.45, 1.47)</td>
<td>0.89 (0.51, 1.57)</td>
<td>1.08 (0.50, 2.36)</td>
</tr>
<tr>
<td>Parity (continuous)</td>
<td>1.19 (0.97, 1.47)</td>
<td>1.02 (0.83, 1.25)</td>
<td>1.19 (0.99, 1.42)</td>
<td>0.78 (0.62, 1.01)</td>
</tr>
<tr>
<td>Household wealth index</td>
<td>1.62* (1.03, 2.67)</td>
<td>1.16 (0.96, 2.86)</td>
<td>1.57 (0.97, 2.52)</td>
<td>0.78 (0.38, 1.62)</td>
</tr>
<tr>
<td>Facility type (public = 1)</td>
<td>1.13 (0.53, 2.42)</td>
<td>0.72 (0.38, 1.39)</td>
<td>0.47 (0.21, 1.08)</td>
<td>0.62 (0.28, 1.37)</td>
</tr>
<tr>
<td>Facility level (ref = hospital)</td>
<td>0.48* (0.24, 0.96)</td>
<td>0.87 (0.46, 1.67)</td>
<td>0.55 (0.26, 1.15)</td>
<td>0.92 (0.45, 1.89)</td>
</tr>
<tr>
<td>Dispensary/clinic</td>
<td>1.92* (1.01, 3.62)</td>
<td>0.64 (0.10, 4.26)</td>
<td>0.55 (0.10, 3.17)</td>
<td>0.57 (0.20, 1.60)</td>
</tr>
</tbody>
</table>

Number of cases: 305, 426, 458, 203

Table 5. Coefficient estimates from ordinary least squares regression models for the amount clients are willing to pay for reproductive health services

<table>
<thead>
<tr>
<th>Covariates</th>
<th>Antenatal care</th>
<th>Delivery care</th>
<th>Postnatal care</th>
<th>Family planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voucher client (yes = 1)</td>
<td>-52.12 (-118.65, 14.40)</td>
<td>-814.26** (-1395.06, -273.45)</td>
<td>-290.20** (-486.21, -94.19)</td>
<td>-13.02 (-45.27, 19.24)</td>
</tr>
<tr>
<td>Age (single years)</td>
<td>-4.47 (-10.37, 0.89)</td>
<td>93.73 (11.55, 199.01)</td>
<td>-4.03 (0.79, 18.26)</td>
<td>0.41 (-1.93, 2.78)</td>
</tr>
<tr>
<td>Highest education level</td>
<td>66.81* (13.48, 120.14)</td>
<td>241.54 (364.80, 947.09)</td>
<td>224.16 (6.80, 456.40)</td>
<td>0.56 (-29.95, 27.89)</td>
</tr>
<tr>
<td>Current marital status</td>
<td>-4.87 (-63.27, 73.52)</td>
<td>-642.79 (1501.00, 215.42)</td>
<td>-11.67 (-224.99, 201.66)</td>
<td>-16.83 (-68.40, 34.79)</td>
</tr>
<tr>
<td>Parity (continuous)</td>
<td>14.33 (5.04, 33.70)</td>
<td>-286.33 (-671.86, 111.20)</td>
<td>25.37 (-229.98, 74.72)</td>
<td>-5.44 (-19.42, 8.56)</td>
</tr>
<tr>
<td>Household wealth index</td>
<td>13.40 (4.19, 75.94)</td>
<td>495.06 (273.61, 1363.73)</td>
<td>-73.84 (-244.62, 97.34)</td>
<td>-19.22 (-42.59, 4.14)</td>
</tr>
<tr>
<td>Facility type (public = 1)</td>
<td>-33.03 (-123.60, 57.55)</td>
<td>-582.69 (-1344.04, 178.65)</td>
<td>-246.38** (-492.34, -4.42)</td>
<td>-24.75 (-57.95, 28.46)</td>
</tr>
<tr>
<td>Facility level (ref = hospital)</td>
<td>-64.26 (-130.95, 2.38)</td>
<td>45.44 (640.70, 731.85)</td>
<td>-129.44 (-325.57, 76.70)</td>
<td>-8.26 (-39.78, 23.26)</td>
</tr>
<tr>
<td>Dispensary/clinic</td>
<td>1.92* (1.01, 3.62)</td>
<td>0.64 (0.10, 4.26)</td>
<td>0.55 (0.10, 3.17)</td>
<td>0.57 (0.20, 1.60)</td>
</tr>
</tbody>
</table>

Number of cases: 305, 426, 458, 203

Ref: reference category; *p<0.05; **p<0.01
a voucher programme and comparable non-voucher sites. In addition to estimating average WTP values for the RH services, this study explored the effect of the subsidy (voucher/voucher price) on WTP for similar services in future.

A key finding of this study was that clients are willing to pay a positive price for the four reproductive health services: ANC, delivery, PNC and FP. This finding mirrors findings in other studies on the effect of vouchers on utilization of facility based RH services in which the voucher is associated with improvements in quality of care and perceived benefit of attending facility based services leading to the increased utilization of facility based services.12,48,50

A second finding from these results was that experiencing the services – learning effect of the voucher subsidy impacts differently for the different RH services. A negative effect of the voucher was observed in the lower proportions of voucher clients compared with non-voucher clients, willing to pay for ANC, delivery and FP services while the voucher positively impacts on WTP for PNC services with more voucher than non-voucher clients expressing WTP for the services in future. In the design of the voucher programme before 2014, clients were expected to access PNC services using the safe motherhood voucher. However, the facility reimbursement policy for PNC services offered was not clear as this was lumped into delivery services and thus many facilities did not consider PNC services after delivery and discharge to be part of the voucher benefits. It is possible therefore that voucher clients paid to access PNC services for services offered post discharge. Anecdotal evidence collected from voucher clients in the process of the wider programme evaluation points to poor attitudes towards voucher paying clients at voucher facilities, compared with regular fee-paying clients. These clients intimated that at some of the facilities, providers felt that the voucher programme had led to an influx of clients in their facilities increasing their workload yet they were not compensated for the extra workload. This was observed more in the public facilities where facility earnings from the voucher programme did not directly impact financially on the service providers. Some of the service providers in such facilities gave preferential treatment to the fee-paying clients, with voucher clients attended to after these had been served. Poor provider attitudes to clients have been documented in other studies as a leading cause of non-utilization of health facilities.34 These contributed to the clients’ decision to conceal the voucher, using it only if they were in an emergency situation.32 Such experiences would lead to the low stated WTP values for these services when offered in the context of a voucher programme. The low stated WTP values could also be attributed to normalization of services such as ANC and delivery in majority of the communities within the study area, as shown in other studies.34,38

In these, pregnancy is not associated with any dangers and thus facility attendance is reserved for emergencies. The learning effect also influences the WTP amounts with voucher clients willing to pay less for ANC, delivery services and PNC services. Data on the FP service clients are very limited and the resulting analysis is not sufficiently convincing.

A third major finding is the effect of the current voucher price on the stated WTP amounts for all the services – the reference point effect. Overall, voucher clients are less likely to express WTP for ANC, delivery and FP services, compared with non-voucher clients. This could also be tied to the above finding on the effect of previous experiences with services offered using the voucher. With a cost price of KSh 200 for the safe motherhood voucher, voucher clients are willing to pay lower than this price for ANC and FP services but almost three times this price for delivery services. Normalization of ANC and FP services could contribute to this. In this, delivery is associated with higher health risks compared with ANC and FP and thus higher WTP values are stated for this. The voucher price does not have an effect on WTP price for PNC services.

The study findings concur with findings in other studies where subsidies have been shown to have a learning effect on stated WTP for the services.13-15,18 The same studies have also pointed to the potential negative effect of the subsidy cost as used as a reference point, on stated WTP amounts. Findings from this and similar studies can be used to set minimum price levels for health commodities and services, allowing those in the society who can pay a non-zero price to access health care to do so. Interventions aimed at addressing disrespectful and abusive care towards clients, which includes discrimination on the basis of their
References

17. Foret G, Foret J. Willingness to pay for services would aid in redesigning payment mechanisms.

Acknowledgements

The reproductive health voucher programme is implemented by the Government of Kenya with major funding from the German Development Bank (KfW). The evaluation project was funded by the Bill & Melinda Gates Foundation and implemented by the Population Council in collaboration with the National Council for Population and Development (NCPD), the Ministry of Health and PriceWaterhouseCoopers. The project obtained ethical and research clearance from the Institutional Review Board of the Population Council, the Ethics Review Committee of the Kenya Medical Research Institute (KEMRI), the National Council for Science and Technology (NCST) and the Ministry of Health. The opinions expressed in this paper are, however, solely those of the authors and do not necessarily reflect the views of the funding or implementing agencies.

To generate further evidence for resource allocation and pricing decisions, variations of the different methods of eliciting WTP values should be conducted on the same sample as has been suggested by Foret 17. This further helps to validate the stated WTP values. In addition, an in-depth evaluation of the reasons for the stated WTP values and non-WTP for services would aid in redesigning payment mechanisms.

acknowledgements

The reproductive health voucher programme is implemented by the Government of Kenya with major funding from the German Development Bank (KfW). The evaluation project was funded by the Bill & Melinda Gates Foundation and implemented by the Population Council in collaboration with the National Council for Population and Development (NCPD), the Ministry of Health and PriceWaterhouseCoopers. The project obtained ethical and research clearance from the Institutional Review Board of the Population Council, the Ethics Review Committee of the Kenya Medical Research Institute (KEMRI), the National Council for Science and Technology (NCST) and the Ministry of Health. The opinions expressed in this paper are, however, solely those of the authors and do not necessarily reflect the views of the funding or implementing agencies.

to generate further evidence for resource allocation and pricing decisions, variations of the different methods of eliciting WTP values should be conducted on the same sample as has been suggested by Foret 17. This further helps to validate the stated WTP values. In addition, an in-depth evaluation of the reasons for the stated WTP values and non-WTP for services would aid in redesigning payment mechanisms.

socioeconomic background, are ongoing in the country. 53 It is hoped that these will reduce the perceived discrimination of voucher clients on the basis of ownership of the voucher, encouraging equal treatment for equal need.

As has been the case with other studies 18,19,54 findings from this WTP study could help project the market size for RH services if these were priced.
Fondements de la résilience et de la pérennité de la mutuelle de santé Fandène, Sénégal

Aboubakry Gollock,1 Slim Haddad,2 Pierre Fournier3

Auteur correspondant : Aboubakry Gollock, e-mail : aboubakry.gollock@umontreal.ca

Les mutuelles de santé (MS) sont des régimes de prépaiement volontaire à base communautaire qui offrent une assurance contre les risques maladie aux membres en contrepartie d’une cotisation périodique. Leur principal objectif est de limiter les effets pervers des paiements directs de services de santé sur les populations. Elles ciblent principalement le secteur informel et le monde rural. Au Sénégal, elles occupent une place importante dans la stratégie nationale de la couverture maladie universelle (CMU) dont l’un des objectifs est de faire passer le taux de couverture de ces organisations de 13,6 % en 2012 à 65,5 % en 2017.

Des études montrent cependant qu’elles sont confrontées à des risques de pérennité financière et organisationnelle. L’ampleur des problèmes auxquels font face ces organisations occulte souvent les expériences qui peuvent être considérées comme des succès relatifs.

Par ailleurs, la recherche sur les MS se limite (trop) souvent aux aspects techniques et financiers liés à leur montage et néglige les facteurs humains et relationnels qui pourraient contribuer à façonner leur performance et attrait auprès de leur population cible. Les valeurs et préférences des utilisateurs ainsi que l’environnement structurel et socioculturel des MS sont peu étudiées. La confiance, la réciprocité, la solidarité et l’entre-aide, la cohésion des groupes cibles, les perceptions par rapport à l’intégrité des acteurs et les expériences antérieures ont été abordées mais souvent sous l’angle de leur incidence sur la décision des populations à s’enrôler ou non dans les MS. Leurs effets sur la résilience et pérennité des MS n’ont que peu été investigués dans ces recherches.

En définitive, il existe peu de données probantes qui nous permettent de comprendre pourquoi certaines de ces organisations sont très vulnérables aux chocs alors que d’autres, bien que peu nombreuses, sont à la fois résilientes et pérennes. Et, dans quelle mesure les aspects humains et relationnels qui régissent la création et le développement des MS influencent-ils les performances respectives dans ces domaines ?

L’objectif de cette recherche est d’analyser les fondements économiques, sociaux et culturels de la résilience et de la pérennité de la plus ancienne mutuelle de santé communautaire rurale du Sénégal (la MS de Fandène) et de tirer les leçons de son expérience pour la CMU.

Pourquoi la MS de Fandène ?

La MS de Fandène a été créée en 1988 par les habitants du village du même nom. C’est une initiative endogène ; elle n’a bénéficié de l’appui d’aucun bailleur de fonds étranger lors de sa création. Sa population cible est composée principalement d’agriculteurs et de travailleurs du secteur informel. En 2012, elle comptait 602 membres pour 3 925 bénéficiaires sur une population d’environ 5 000 habitants. Ce qui fait de ce village l’une des zones où le taux de couverture contre le risque maladie est le plus élevé au Sénégal.
Depuis sa création, elle a été confrontée à plusieurs chocs endogène et exogène inhérents à l’existence de la plupart des MS en Afrique.

Le premier choc a été la crise interne de 1997 : tentatives d’accaparement de la MS par des responsables à des fins de promotion individuelle, manquements dans la gestion, divergences d’orientation dans la conduite de la stratégie de croissance de la MS.

En 2004, elle a fait face à un deuxième choc : hausse des coûts de prises en charge des membres suite à la modification brute et sans concertation de la grille tarifaire de l’hôpital Saint-Jean de Dieu (HSJDD) : l’unique prestataire de santé privé avec qui la MS a signé une convention.

En 2006, elle a été confrontée à un troisième choc : effets pervers de la politique de gratuité des soins accordée aux personnes âgées de 60 ans et plus au Sénégal (Plan Sésame). En effet, la mise en œuvre de cette politique nationale peu articulée avec les initiatives mutualistes avait engendré chez certaines MS des déperditions, la baisse des adhésions et des incitations à cotiser chez les personnes âgées, des déséquilibres financiers, l’exacerbation des problèmes de sélection adverse, l’effritement de la confiance entre les mutualistes, etc.14

Enfin, depuis 2012, elle fait face aux conséquences du retrait d’une organisation non gouvernementale (ONG) qui enrôlait, payait les cotisations aux conséquences du retrait d’une organisation non gouvernementale (ONG) qui enrôlait, payait les cotisations, réserves, coûts de hospitalisations, analyses, chirurgie, radios) ont été utilisées à des fins de triangulation.

Méthodes et données

Notre recherche qualitative est basée sur une étude de cas unique. Les trois instruments de collecte de données mobilisés sont les entretiens individuels semi-dirigés, les focus groupes et l’analyse documentaire.

La collecte s’est déroulée en 2012 et 2013. Celle de 2012 s’est focalisée sur les hommes et femmes (membres et ex-membres) de la MS âgés de 60 ans et plus (dépositaires de la mémoire de l’organisation) et les responsables de la MS. Celle de 2013 avait pour objectifs de :

- Approfondir les discussions, diversifier les sources d’informations en élargissant la population cible de l’étude (jeunes, adultes hommes et femmes âgées de 30 à 59 ans) ;
- Recueillir des données administratives et financières supplémentaires sur la MS ; et
- Documenter des faits qui n’avaient pas été suffisamment investigués lors du premier passage.

Les personnes qui ont participé aux entretiens individuels n’ont pas été invitées aux focus groupes.

Les données administratives de la MS mises à notre disposition (registre de suivi des membres, cotisations, réserves, coûts de hospitalisations, analyses, chirurgie, radios) ont été utilisées à des fins de triangulation.

Ces différentes techniques de collecte des données nous ont permis d’atteindre la saturation de l’information.

Le tableau 1 résume les périodes de collectes, le nombre d’entrevues et focus groupes, leur durée, les lieux où ils se sont tenus ainsi que certains sigles utilisés pour le codage des transcriptions.

Le tableau 2 synthétise les thèmes abordés lors des entretiens individuels et des groupes de discussion.

Les données recueillies (wolof et français) ont été retranscrites en français. Le codage des thèmes a été réalisé à l’aide du logiciel QDA Miner tout en nous donnant une flexibilité pour prendre en compte des nouveaux thèmes émergents.15 Une analyse thématique des contenus a été réalisée.

Résultats

Conditions de création comme déterminants de l’appropriation et de la résilience la MS

La forte appropriation de la MS par ses membres trouverait son fondement dans les facteurs qui avaient motivé sa création et le caractère endogène de l’initiative. Le traumatisme collectif lié aux problèmes d’accès financier et géographique aux soins consécutif à la mise en œuvre des politiques d’ajustement structurel

Tableau 1. Processus de collecte (entretiens individuel et focus groups)

<table>
<thead>
<tr>
<th>Périodes de collecte</th>
<th>Cibles</th>
<th>Mode collecte</th>
<th>Nombre de participants</th>
<th>Codifications</th>
<th>Durée moyenne</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Membres et non membres (60 ans et plus)</td>
<td>Entretiens individuels avec les femmes âgées</td>
<td>5</td>
<td>PAFN (N=1 à 5)</td>
<td>60 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entretiens individuels avec les hommes âgés</td>
<td>6</td>
<td>PAHN (N=1 à 6)</td>
<td>45 min</td>
</tr>
<tr>
<td></td>
<td>Responsables</td>
<td>1 focus group</td>
<td>5</td>
<td>FGRN (N=1 à 5)</td>
<td>1h 30</td>
</tr>
<tr>
<td>2013</td>
<td>Membres hommes (30-60 ans)</td>
<td>Entretiens individuels avec les femmes âgées</td>
<td>7</td>
<td>EIHN (N=1 à 7)</td>
<td>50 min</td>
</tr>
<tr>
<td></td>
<td>Membres femmes (30-60 ans)</td>
<td>Entretiens individuels avec femmes</td>
<td>8</td>
<td>EIFN (N=1 à 8)</td>
<td>1h 10</td>
</tr>
<tr>
<td></td>
<td>Responsables de la MS</td>
<td>1 focus group avec femmes membres</td>
<td>9</td>
<td>FGFRN (N=1 à 9)</td>
<td>2h 35</td>
</tr>
<tr>
<td></td>
<td>Jeunes (18-30 ans)</td>
<td>Entretiens individuels avec responsables MS</td>
<td>2</td>
<td>EIRN (N=1 à 2)</td>
<td>45 min</td>
</tr>
<tr>
<td></td>
<td>De Fandène (résident à Dakar)</td>
<td>Ressortissants</td>
<td>3</td>
<td>EIREN (N=1 à 3)</td>
<td>1h</td>
</tr>
</tbody>
</table>
qui avait motivé les populations à créer la MS est encore vif dans la mémoire collective des populations de Fandène. Il continue à influencer les rapports entre les mutualistes et à régir leur perception par rapport aux interventions des pouvoirs publics.

Aussi le fait que la création de la MS ait été initiée et portée conjointement par l’église et par l’association des jeunes de Fandène (étudiants, des cadres du village) a favorisé son ancrage social. Ces composantes de la communauté ont joué un rôle décisif dans la sensibilisation, le plaidoyer et l’enrôlement des habitants dans la MS.

Un autre aspect important du démarrage, qui a favorisé l’appropriation de la MS par la communauté, est le consensus qui s’est dégagé dès sa création sur ses grandes orientations. Les populations s’accordèrent sur le paquet de services que la MS devait offrir et qu’elles estimaient comme étant adéquats pour les couvrir contre le risque maladie. L’accent a été mis sur les dépenses de soins plus susceptibles de constituer une barrière financière à l’accès aux soins ou de faire basculer les membres dans la pauvreté (hospitalisations, analyses, chirurgies etc.). « Ce ne sont pas les petites dépenses au poste (de santé) qui posaient les plus grands problèmes donc les gens ne voyaient pas la nécessité de créer une MS pour ça » (PAF4).

Il y eut aussi consensus sur le choix du prestataire conventionné et la durée d’une période de carence (un an) entre la date de création de la MS et le début des prestations.

### Caractéristiques de la population cible et valeurs favorables à la résilience de la MS

La MS de Fandène est caractérisée par une relative homogénéité de sa population cible. La majorité de ses membres s’identifie à une même ethnie (sérère), une même religion (chrétienne), une même histoire, une même lignée, un même village. L’importance que les membres de la MS du village accordent à l’intérêt collectif et la nécessité de s’unir pour faire face aux problèmes de santé de la communauté apparaissent bien dans les propos. « sans les autres, on ne peut pas ici faire grande chose, une seule main ne peut pas applaudir » (FGJ9). L’écart de revenu serait relativement faible au sein de la population. Tous ces facteurs ont favorisé la mobilisation des villageois autour des valeurs mutualistes de solidarité et d’entre-aide communautaire. « Le pauvre s’appauvrit quand il est seul, mais unis les pauvres s’enrichissent. Nous nous sommes unis autour de la MS pour nous enrichir » (EIH7).

L’attachement à certaines valeurs comme la fidélité et la dignité a été évoquée par plusieurs participants pour motiver des choix qui ont contribué à rendre la MS plus résiliente à certains chocs. C’est le cas des membres qui ont décidé de garder leurs enfants dans la MS, malgré des propositions d’une autre ONG d’enrôler gratuitement ceux-ci dans une autre MS suite au retrait de leur partenaire traditionnel. « J’ai un devoir de fidélité envers cette mutuelle et envers les gens avec qui je suis. Je reste avec mes enfants à Fandène même s’ils doivent payer » (EIF8). Des personnes âgées de 60 ans et plus ont évoqué des valeurs pour expliquer leur choix de rester membres de la MS malgré la mise en place du Plan SéSAME qui leur offrait la gratuité des soins dans les établissements publics de santé. « Pour moi, c’est un manque de dignité, tu es avec des gens dans une organisation, parce qu’il y a SéSAME tu t’en vas » (PAH5).

Aussi les liens sociaux de la population cible de la MS favorisent une forme de réciprocité qui a des effets qui dépassent l’échange bilatéral. La réciprocité serait ici plus large et ses effets plus diffus donc facilement perceptibles dans toute la communauté. Ainsi, les actions menées par un individu au profit de la MS rendent indirectement à l’autre membre une aide à une personne, celle-ci et sa famille se considèrent redevables envers toute la communauté. « Ici puisque nous sommes presque tous de la même famille. Tout ce qu’une personne fait en bien bénéficie indirectement à l’autre » (FGJ10). Ce qui renforcerait la bonne perception par rapport aux services rendus par la MS et la nécessité de pérenniser la MS chez les membres.

### Relation avec le prestataire de santé conventionné

La MS de Fandène et ses membres entretiennent des relations particulières avec l’HSJD’d. « Ils nous ont soutenus depuis le début et ça nous le retenons jusqu’à présent ! » (PAF5). Il existait diverses liens (confessionnels, parenté)
entre la population cible de la mutuelle, les fondateurs de l'hôpital (église) et une partie du personnel de santé. L'ancien directeur de l'hôpital et certains membres du personnel sont originaires du village et/ou avaient des liens de parenté avec les villageois. Ce qui a contribué à renforcer le partenariat entre les parties. Les participants à l'étude ont tenu cependant à souligner que les raisons les plus importantes de leur attachement à ce prestataire sont liées à la qualité du service (qualité de l'accueil, professionnalisme du personnel de santé, absence de tracasseries administratives, gratuité des médicaments au cours de l'hospitalisation avant le changement de la grille tarifaire, etc.). « Il y a la qualité là-bas, ils sont plus respectueux donc on a plus confiance au personnel de santé qui est là-bas » (EIF6).

Aussi, des participants ont évoqué le fait que les membres sont conscients que sans la couverture totale ou partielle des coûts des prestations sanitaires par la MS, les tarifs des services qu’applique l’HSJDD seraient hors de portée des bourses de la plupart des ménages de l’Andène. « Le jour où il n’y aura plus de mutuelle ici, les gens n’iront plus à Saint-Jean. Ça, tout le monde le sait ici » (EIH4). La continuité de la MS serait perçue ainsi comme une condition à l’accès aux services de qualité qu’offre l’HSJDD.

Confiance et conscience critique

Les flexibilités accordées aux membres (avances de fonds en cas d’hospitalisation, les pratiques de certains membres consistant à payer à l’avance plusieurs mensualités de cotisation) sont des indicateurs de l’atmosphère de confiance. Elle favorise un sentiment de redevabilité des bénéficiaires envers la MS et son appropriation. Les responsables de la MS qui ont pris les rênes du bureau après la crise de 1997 bénéficient de la confiance et de l’estime des mutualistes. « Nous avons confiance en eux, il n’y a aucun doute sur leur honnêteté » (EIH5).

Cette confiance entre les membres et envers les gestionnaires de la MS contraste avec leur défaillance vers la pérennité des politiques publiques et des interventions de certains bailleurs de fonds extérieurs visant à prendre en charge leurs besoins de santé. Cette défaillance pousse certains membres à adopter des comportements attentistes ou même à opter pour la non utilisation de services gratuits dont le recours est jugé, à terme, défavorable à la pérennisation de la MS. « Ce qu’ils (pouvoirs publics) nous proposent (la gratuité des soins) c’est bien pour moi mais si tout le monde y va ça tua notre mutuelle … je ne suis pas sûr que ça va continuer donc autant faire de telle sorte que la MS continue en restant membre» (PAH5).

L’adoption de comportements semblables expliquerait la moindre vulnérabilité de la MS de l’Andène aux effets pervers de certaines interventions ou retraits d’ONG. En effet, la tendance de certaines ONG à imposer leur vision, le caractère déstructurant de leurs interventions sur certaines initiatives communautaires locales, leurs stratégies d’implantation et de retrait, leur manière d’impliquer les populations dans l’élaboration et la mise en œuvre des projets, la méconnaissance des réalités socio-culturelles du terrain de certaines d’entre elles ont été décriés par plusieurs participants. « … Il ne faut pas que leur aide vienne gâter les formes de solidarité qui sont là » (PAH6).

Gouvernance

L’Assemblée Générale (AG) de la MS de l’Andène dispose d’importants pouvoirs et les exerce de manière effective. Les gestionnaires de la MS ont peu de marge de manœuvre pour changer les grandes orientations stratégiques de l’organisation (par exemple, l’élargissement de la MS à d’autres communautés, la négociation de nouvelles conventions avec d’autres prestataires). « Le bureau procède par projet de décision. Ils (responsables) n’ont pas le droit de prendre des décisions qui engage l’avenir de la MS que soit l’urgence. Ils proposent et consultent l’AG. Les gens en discutent, adoptent ou refusent » (FGF5).

La reddition des comptes est une règle inaliénable. « Lors des AG, les responsables de la MS ne se font pas prier pour dire aux gens là où chaque centime de la MS est passé » (FGF5). Le contrôle social plus traditionnel s’exerce parallèlement à celui du contrôle budgétaire moderne. « Tout ce qu’une personne fait dans le village sera su » (EIF8).

La participation à la vie de la MS revêt pour certains une grande importance. « Je ne rate pas d’AG. Je tiens à être là quand on prend les décisions et faire valoir mes positions» (PAH1). Cette exercice du droit de donner son avis contribuerait à la vitalité démocratique dans la MS et serait, selon certains, la principale raison de l’adhésion des membres aux décisions et à leur mise en œuvre. « Les gens adhèrent aux décisions parce qu’ils savent que leurs avis sont pris en compte » (EIF4).

Les femmes sont représentées dans les organes décisionnaires de la MS et participent activement à la vie de la MS. Elles sont le lien entre la MS et les familles pour la collecte des cotisations et les campagnes de sensibilisation. « Le jour de la collecte des cotisations, on ne voit défiler ici quasiment que des femmes. Elles ont fait de la MS leur affaire » (EIR1). Elles auraient un avantage comparatif sur les hommes au niveau de l’information sur le fonctionnement de la MS, ce qui rend leur présence aux réunions nécessaire. « Quand la mutuelle a des problèmes, nous sommes les premières à être au courant….C’est normal qu’ils (les hommes) tiennent à notre présence aux réunions pour en savoir davantage » (FGF3). Le fait que la trésorière soit une femme ne serait pas étranger à la place centrale qu’occupent les femmes dans la MS.

La question du prolongement des rapports de force existants dans la communauté et ses éventuels effets sur le processus de prise de décision au sein de la MS n’a pas été approfondie lors de nos entretiens. Cependant, les commentaires de certains participants laissent apparaître le caractère horizontal des rapports sociaux dans la répartition des pouvoirs au sein de la MS. « Nous sommes tous membres au même pied d’égalité, nous payons les mêmes cotisations, nous avons les mêmes soins quand nous allons à l’hôpital, nous avons le même droit à la parole » (EIH4).

Faiblesses de la MS

Les propos recueillis durant les entrevues mettent en évidence certaines faiblesses (réelles ou potentielles) de la MS.

La contractualisation avec un seul prestataire (hôpital privé) et le refus de certains membres d’aller se soigner dans
Les établissements publics (moins chers) posent des risques d’inefficacité dans l’utilisation des ressources de la MS et d’augmentation des co-paiements chez les membres. À ce niveau, la gouvernance de la MS est problématique. En effet, les responsables de la MS nous ont confié n’avoir aucun pouvoir sur la décision d’établir des contrats avec les structures de santé publiques. C’est une prérogative de l’AG. Cette décision n’a jusqu’alors pas reçu l’adhésion de la majorité. Les initiatives prises par les responsables visant à inciter les membres à s’orienter vers le public (remboursements sur présentation de factures reçues suite aux visites dans les établissements publics de santé) en s’appuyant sur la convention cadre de la coordination régionale des MS de la région se sont soldées au mieux par des résultats mitigés.

Les membres ont jusque-là opté pour un enfermement stratégique de la MS qui restreint sa clientèle cible à la communauté de l’Andène et la condamne à demeurer de taille modeste. Les responsables de la MS reçoivent des demandes d’adhésion de personnes qui vivent aux alentours de l’Andène mais l’AG est encore réticente à toute idée de l’élargir à certains arrivants éloignés du village. « J’ai des sollicitations de personnes en dehors du village qui veulent venir mais je n’ai aucun pouvoir dans ce domaine, c’est à l’AG de décider » (EIR1).

Les principales raisons évoquées par les membres pour justifier leurs positions sont :

- Les échecs qu’auraient connus certaines MS dans ce domaine. « Nous savons ce que l’élargissement à outrance a couté à la mutuelle X, ils sont au bord de la faillite » (FGF5).
- Certains membres ne sont pas convaincus de la corrélation positive entre le nombre de membres d’une MS et sa performance. « Ce n’est pas en réunissant beaucoup de mancheux qui n’ont rien de commun qu’on fait avancer le décorticage d’une récolte » (PAF1).
- Le désir de garder le contrôle économique et social sur leur MS.
- Les appréhensions quant au niveau d’appropriation et de priorité qu’accorderaient les « nouveaux arrivants » à la MS. « Ici les gens connaissent l’intérêt de la MS à tel point qu’ils en font une obligation, nous ne sommes pas sûr que ça sera le cas de ceux qui viendront après » (FGF3).
- Les problèmes de sélection adverse et d’aléas moral et de recouvrement des cotisations et dettes que pourrait poser l’élargissement de la MS.

Bien que minoritaires, des voix discordantes se sont élevées durant nos entrevues individuelles et focus groupes pour relever que l’attitude des « récalcitrants à l’élargissement » de la MS témoigne d’un « manque d’ouverture ». Ils estiment que le plupart des arguments de ces derniers sont basés sur des « préjugés ». « Si on ne donne pas aux gens la chance d’adhérer, comment peut-on savoir qu’ils sont de bons mutualistes ou pas » (EIH7).

La MS est confrontée à des faiblesses structurelles auxquelles font face la plupart des mutuelles : l’égalité des cotisations, la solidarité, le maintien de l’équité du système et d’attractivité et de disponibilité de ressources humaines de qualité pour la gestion de la MS.

Une autre source de faiblesse est liée aux conséquences que pourrait engendrer la confrontation d’un des mécanismes de solidarité. Les avances de fonds pour couvrir les dépenses des membres en cas d’hospitalisation prolongée. Bien qu’avantageuses à plusieurs points de vues, ce dispositif pourrait pousser les mutualistes, notamment les plus pauvres, à rentrer dans un cycle durable d’endettement duquel certains auront du mal à s’extirper.

Discussion

La discussion des principaux résultats est faite sous le prisme des enseignements qui peuvent en être tirés pour la mise en œuvre de la stratégie sénégalaise de CMU.

Implication des communautés dans la création des mutuelles de santé

L’expérience de l’Andème montre que le fait que l’initiative de sa création soit endogène (portée par les membres de la communauté et des leaders communautaires) a été décisive dans la réussite de sa mise en place, l’adhésion des populations, la résilience et la pérennité de l’initiative. Ce résultat confirme les conclusions de Dubois pour qui la participation de personnes influentes impacte positivement sur l’adhésion aux MS. À l’inverse, il ne semble pas aller dans le même sens qu’une étude réalisée dans la région de Thiès selon laquelle il y a un très faible pourcentage des membres qui adhèrent en raison de la participation d’un leader communautaire.

Le rôle que jouent (ou que pourraient jouer) les guides religieux et coutumiers dans la création des MS en Afrique de l’Ouest, l’impact de leurs interventions sur leur pérennité, résilience et pérennité et in fine sur l’atteinte des objectifs de la stratégie nationale d’extension de la CMU devrait davantage être investigué compte tenu de la place centrale qu’occupent ces leaders dans ces pays.

Les cercles vertueux

La confiance dans ses différentes dimensions est un déterminant important de la réussite ou de l’échec des MS. Nos résultats montrent que la confiance relativement élevée qui règne entre les différents acteurs (membres, responsables, professionnels de santé de l’HSJDD) a contribué à installer la mutuelle dans un cercle vertueux. Elle a eu des effets positifs sur le développement de valeurs mutualistes (entre-aide, solidarité, sentiment d’être redevable, réciprocité etc.). Les interactions qui en ont résulté ont favorisé l’appropriation et l’ancrage social de la MS qui eux-mêmes favorisent sa résilience et sa pérennité. Ces dernières rétroagissent à leur tour positivement sur la confiance entre les acteurs et contribuent à renforcer la MS. Vue sous cet angle, l’expérience de la MS de l’Andème vient conforter la thèse de Fukuyama selon laquelle un niveau de confiance élevé entre individus serait propice à la multiplication des relations sociales qui, en rétroaction, alimenteraient le niveau même de confiance sociale et les performances des organisations.

Dans le domaine de la gouvernance, la MS de l’Andème a su mettre en place un dispositif qui favorise la participation des membres aux principales décisions et
orientations, une organisation basée sur le consensus et la transparence dans la gestion. L’avenir des membres à toute tentative d’accaparement de la mutuelle par un individu ou groupe, l’attachement des membres à l’autonomie de leur organisation ainsi que la perception de l’égalité en droits et en devoir chez les membres illustrent, à bien des égards, le caractère horizontal plutôt que vertical des liens sociaux qui régissent la marche de la MS. L’expérience de la MS de Fandène montre que la communauté où les relations sont davantage horizontales et démocratiques que hiérarchiques et autoritaires.

Le modèle de Fandène montre que la bonne gouvernance, la confiance interne et la participation seraient liées et leur interaction contribuerait à consolider l’appropriation et l’ancrage social et, par conséquent, sa résilience et sa pérennité.

La relative bonne gouvernance de la MS ne devrait cependant pas faire perdre de vue quelques-unes de ses failles et les problèmes que celles-ci engendrent. Parmi ceux-ci, il y a la faible marge de manœuvre du bureau exécutif dans la signature de convention avec des établissements publics de santé, le recrutement de nouveaux membres en dehors de Fandène et certains effets pervers du contrôle social et du capital social. Un optimum entre un bon contrôle politique de la MS par les membres d’une part, et une gestion rationnelle et efficiente (nécessitant les inputs des gestionnaires) d’autre part est nécessaire pour l’utilisation judicieuse des ressources et la consolidation des acquis de la MS. De même, le contrôle social en place prévient les comportements déviants (détournements des deniers de la MS, sélection adverse, aléa moral), mais le risque est que la communauté veuille aussi contrôler l’utilisation des services de l’hôpital des membres. Or, elle n’a pas les compétences nécessaires pour juger du caractère approprié ou non d’une utilisation des services de santé d’un membre. La conférencialité des dossiers médicaux doit être préservée. Sur ces aspects de la gouvernance de la MS, il faut s’assurer que les balises sont respectées pour que justement tout le monde ne sache pas tout surtout s’il s’agit de la santé des membres.

Confiance externe et passage à l’échelle

Nos résultats suggèrent une défiance de la MS par rapport à la pérennité des interventions de l’État et de certains bailleurs de fonds. Dans ces circonstances, l’une des clés du succès des politiques publiques d’extension de la CMU par la promotion des MS est la restauration ou la création de conditions pour des relations durables de confiance entre les pouvoirs publics, les partenaires techniques et financiers, d’une part, et les populations cibles des MS, d’autre part. Aussi, les pouvoirs publics devraient agir sur les leviers qui promeuvent la bonne gouvernance, la participation démocratique, l’autonomie des MS et la bonne articulation entre les politiques de gratuité et de promotion des MS et un bon équilibre entre le contrôle social et judiciaire pour favoriser la réussite de la stratégie de la CMU à travers les MS.

À Fandène, certains effets indésirables du capital social qui poussent les membres à être réticents voire hostiles à « jeter un pont vers l’extérieur (personnes ou groupes différents) »19. Les critères d’exclusion (explicites et implicites) à l’admission à la MS reflètent, à bien des égards, ce que certains auteurs qualifient de côté sombre du capital social, « the dark side of social capital ».20,21 L’enfermement stratégique de la MS ne semble pas encore avoir compromis la viabilité de la MS et semble même, sur certains plans, avoir favorisé la solidarité entre les membres, sa résilience et sa pérennité. Mais il la condamne à demeurer de taille modeste et à composer avec les avantages mais aussi les inconvénients d’une MS de taille modeste. Pour contribuer de façon décisive à la CMU, la MS devra élargir sa base d’adhésion à une échelle plus grande qu’un village tout en préservant les acquis qui lui ont permis d’être résiliente et pérenne.

Qualité des soins

La relation entre l’HSJDD et la MS est une autre donnée probante de la pertinence d’offrir des services de qualité dans les établissements publics de santé pour favoriser l’attractivité, l’appropriation des MS et étendre la CMU auprès des populations. L’offre de soins de qualité et des relations de confiance entre les membres d’une MS et le personnel du prestataire de santé conventionné ont été déterminantes dans l’appropriation, la résilience et la pérennité de l’organisation. Les membres de la MS ont délaissé les établissements publics de santé, notamment de première ligne, au profit
de cet hôpital privé pour des raisons principalement liées à la qualité des soins.

Notons cependant, que la perpétuation de tels comportements d’utilisation des soins parallèlement à la hausse des mutualistes (subordonnée à la mise en œuvre de la stratégie nationale d’extension de la CMU à travers les MS) risque de créer des dysfonctionnements au niveau des paliers supérieurs de la pyramide sanitaire. Par ailleurs, le cas de l’Fandène semble être symptomatique de certains effets pervers que l’assurance maladie peut provoquer sur l’efficience du financement de la santé.22 Wagstaﬀ et al22 soulignent que l’assurance maladie peut accroître les paiements directs ainsi que les risques de dépenses de santé catastrophiques en conduisant les ménages à rechercher plus fréquemment des soins, plus onéreux, auprès de prestataires de rang plus élevé dans la pyramide sanitaire.

Il serait nécessaire de mettre en place des balises pour favoriser l’utilisation des services de première ligne.

Les activités des bailleurs de fonds dans ce domaine devraient être mieux encadrées pour que leurs modes d’intervention et de retrait ne nuisent pas aux initiatives locales de santé.23 L’assurance maladie peut accroître les paiements directs ainsi que les risques de dépenses de santé catastrophiques en conduisant les ménages à rechercher plus fréquemment des soins, plus onéreux, auprès de prestataires de rang plus élevé dans la pyramide sanitaire.

La MS de l’Fandène a favorisé la solidarité et la mutualisation des risques et facilité l’accès des populations à des soins de qualité. Cependant, certaines de ses faiblesses mettent en exergue le fait qu’il sera difficile d’atteindre la CMU si l’adhésion aux MS reste volontaire, si la mutualisation des fonds se fait à des échelles et si les effets pervers de l’assurance maladie sur l’utilisation des services de santé des mutualistes ne sont pas maîtrisés. À terme, la CMU obligatoire et le financement des contributions des indigents par le gouvernement nous semblent être la voie la plus indiquée pour assurer une couverture adéquate, équitable et pérenne de la majorité de la population.

Néanmoins, le cas de l’Fandène montre que cette organisation a acquis au fil des années une crédibilité auprès de sa population cible. Cela fait d’elle un partenaire légitime de l’État auprès de ses membres pour la CMU. La question est de savoir quel est le meilleur dispositif à mettre en place pour assurer une meilleure contribution de ces organisations dans la transition vers la CMU obligatoire.

Remarques
Financement : Bourse postdoctorale dans le cadre du programme Teasdale Corti (Financement du centre de recherche pour le développement international du Canada, Initiative de recherche en santé Manduale).

Références
Central to the Government of Rwanda’s strategy to become a middle-income country by 2020, as per Vision 2020 as well as the Economic Development and Poverty Reduction Strategies from 2008 to 2018 (EDPRS and EDPRS 2), is the laudable goal of universal access to health care. The strategy of the Rwanda Ministry of Health (MINISANTE or MoH) to realize this goal is three-pronged within a revamped, decentralized system, and includes performance-based financing (PBF) to incentivize improved service delivery, quality improvement initiatives at the health-care delivery levels, and the implementation of wide-scale national health insurance to defray the cost of care for the poorest. The strategy is engendered through a series of laws covering various aspects of social health protection.¹

Rwanda’s CBHI scheme (commonly known as mutuelles de santé) is one of the largest public health insurance schemes in sub-Saharan Africa. CBHI schemes can be broadly defined as voluntary prepayment plans for health care that operate at a community level; in the case of Rwanda, CBHI is a national-level scheme. The Government of Rwanda (GoR) first scaled up its CBHI policy in 2004 after initial pilots in 1999 to cover patient costs for curative services. Today, it is heralded as one of the most successful in Africa, after expanding coverage from less than 7% of the population in 2003 to 91% in 2010.²³

Joséphine Nyinawankunsi,¹ Thérèse Kunda,² Cédric Ndizeye,³ Uzaib Saya³
Corresponding author: Thérèse Kunda, e-mail: tkunda@msh.org

Voir page 72 pour le résumé en version française.
Ver a página 72 para o sumário em versão portuguese.

SUMMARY—The community-based health insurance (CBHI) scheme launched by the Government of Rwanda (GoR), reached 91% of the population in 2010, starting from 7% in 2003. Initially, all CBHI members paid the same fees, regardless of their personal income, and the poorest citizens faced challenges in paying premiums (almost US$ 1.50 per person). A mechanism was thus urgently needed to guarantee access to health care for the most vulnerable and promote equity among members. The GoR decided to introduce a stratification system based on the socioeconomic status of the population, referred to as Ubudehe. Together with partners, including the Integrated Health Systems Strengthening Project (IHSSP), the GoR developed a national database that stratifies Rwandan citizens by income. To date, more than 10 million residents’ records, representing 96% of Rwanda’s population, have been entered into the database. This database helped identify the most vulnerable based on socioeconomic status (about 25% of the population). Identification of the poorest among the population has allowed an increase in CBHI funds due to identification of individuals who have a greater capacity to pay. The database thus improved the financial viability and management capacity of the CBHI scheme.
The decentralized health system in Rwanda consists of mutuelle sections in nearly all health facilities where members are entitled to a comprehensive list of curative and preventive services; CBHI in Rwanda focuses mostly on provision of services to people in the informal sector and aims at providing them equitable access to quality health services on payment of annual membership fees. Health facilities are then reimbursed for the services they have provided based on fee-for-service upon submission of monthly invoices, which are audited before payment and also by capitation whereby the provider receives a fixed amount for each enrolled member for a given annual reference period.

A change in mutuelle policy in April 2010 brought into focus universal and equitable access to quality health services for all, and introduced a new CBHI premium schedule using a system of stratification. To reach this goal, the policy was based on principles of solidarity and equity. Previously, contributions of households to “mutuelles” were not based on their ability to pay (they were based on a flat rate premium), and were therefore strongly regressive — considered by the World Health Organization as unfair, and to some degree excluded the poor in the informal sector. The 2010 mutuelle policy stated, “CBHI complements other existing social insurance systems, such as RAMA and MMI, in addition to other existing social insurance systems, to better target the poor. Between 2010 and 2011, at the request of the MoH and Rwanda Ministry of Local Government and Internal Affairs (MINALOC) and its Common Development Fund (CDF), the USAID-funded Integrated Health Systems Strengthening Project (IHSSP) designed a national income categorization database (based on ubudehe — the deep-rooted Rwandan practice and culture of collective action and mutual support to solve problems within a community) to store information on the population’s socioeconomic status.” Information on every Rwandan household was collected through the support of the CDF, which is a government-owned fund set up to support the implementation of decentralization policy, and also through the support of MINALOC’s Ubudehe Programme which is a GoR initiative to help Rwandans “create social capital, nurture citizenship and build a strong civil society.” In 2001, Ubudehe was reintroduced into Rwandan life by the Rwanda Ministry of Finance and Economic Planning (MINECOFIN) in partnership with MINALOC as a way to better involve communities in their development by setting up participatory problem-solving mechanisms. The Ubudehe Programme functions at the level of the decentralized administrative entity nearest to the recipients, at the cell or village level. CBHI is coordinated at the district level, where each of the 30 districts has a pooled-risk fund; each CBHI section has a health centre; and all villages have a CBHI mobilization committee. Monetary contributions from members are received at the community level, and used to reimburse health centres for services rendered. Each section covers a defined area and population, and includes one health centre where CBHI members are entitled to receive services from the minimum package of activities (MPA). Some 55% of premium contributions remain at the section level and 45% of each section’s premium contributions are paid to a district risk pool and are used to reimburse district hospitals for services provided to members under the comprehensive package of activities (CPA). Finally, 10% of these contributions into the district risk pool are transferred to a national risk pool to cover services provided at the referral hospital level. For indigent populations (classified as Category 1 in the CBHI system), the Government of Rwanda and development partners pay insurance premiums to the appropriate section risk pool and their co-payments are waived. Service providers at health centres are paid on a fee-for-service basis upon submission of monthly invoices, which are audited before payment.

One of the most important aspects in Ubudehe is assigning all Rwandan households into one of six categories, based on income and assets. Results have shown that the Ubudehe Programme appears to be largely relevant and consistent with the policies of the Rwandan Government.

This article describes the operationalization of national policies that introduced stratified premiums based on Rwandans’ ability to pay to better target the

---

**Figure 1. Structure of CBHI**

Source: Rwanda MoH, CBHI Policy, 2010
IHSSP supported the stratification and data-entry process for a database containing over nine million records classifying all Rwandan households into socioeconomic categories. These data were subsequently used in CBHI membership management processes and various other government programmes. The *Ubudehe* database was also updated with spreadsheets from each of Rwanda’s 14,000 villages. The goal of this exercise was to derive a contribution system for CBHI that assures equity and solidarity among its members, as well as improved financial viability for the CBHI scheme so as to protect the poor from the burden of covering the rich at the same level. Additionally, this database has proved to be a tool that planners and actors in other development programmes could use to increase equity, particularly in targeting the poorest part of the Rwandan population for improved social protection.

The goal of the CBHI scheme is to cover the 95% of the population in the informal sector, with a specific focus on those in rural areas. As mentioned above, a critical element of Rwanda’s CBHI structure is the involvement of and linkages between each level of the health system, (see Figure 1). These linkages have facilitated the success of the programme in improving access among citizens, but the 2010 policy change in the health system, in 2009 the MoH worked closely with the IHSSP to re-design the insurance system’s payment structure. In the revised scheme, the population of Rwanda pays into the system on a sliding scale, based on their household assets. The highest and middle groups pay an annual fee by household: 7,000 RWF (US$ 10.50) and 3,000 RWF (US$ 4.50), respectively – plus a small co-payment at health centres and are responsible for 10% of the cost of care at referral facilities. The 25% of Rwandans with the fewest assets do not pay for their insurance and are not charged for health services at any public facility. The government believed that this system would ease the financial burden enough so that all Rwandans could access health services, and at the same time raise sufficient funds to finance quality service delivery throughout Rwandan facilities.

Before the new scheme could be implemented, the ministry had to determine the financial status of each household, a difficult prospect in a country where as much as 90% of the labour force works in subsistence agriculture and the informal economy. MINALOC had data on the assets held by each of the country’s 1.8 million households, but records were all on paper. To use the information, it would need to be computerized.

In collaboration with the MoH, IHSSP designed and built a database to house the information and recruited a data entry team of 500 people who worked in shifts, 16 hours a day. The intensive process took just three months, and, by January 2011, 90% of the data had been entered into the system and households were assigned to the lowest, middle or highest economic bracket.

Because the management of the CBHI system is so well decentralized – there is a CBHI office in each health centre in charge of enrolment for the facility’s catchment area – Rwandans enrolled in the new system rapidly. By September 2012, 90% of Rwandans eligible for CBHI were enrolled. Soon, Rwandans were not just enrolled in the health insurance plan, they were using it.

The National Income Categorization Database (NICD) was used to enable local government authorities at the sector level to collect data on income categories of Rwandans by household. Data for this exercise were collected in two phases at the village level, during which individuals’ identities were confirmed against their official identity cards. These data were subsequently compiled at the sector and cell levels, and entered into online databases at the district levels.

At the request of the MoH, IHSSP also used this database to conduct various data analyses, and supported the upgrade and maintenance of PBF and

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrolment in CBHI (%)</th>
<th>Utilization rate (OPD utilization)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>2004</td>
<td>27%</td>
<td>10%</td>
</tr>
<tr>
<td>2005</td>
<td>44%</td>
<td>25%</td>
</tr>
<tr>
<td>2006</td>
<td>73%</td>
<td>40%</td>
</tr>
<tr>
<td>2007</td>
<td>75%</td>
<td>45%</td>
</tr>
<tr>
<td>2008</td>
<td>85%</td>
<td>50%</td>
</tr>
<tr>
<td>2009</td>
<td>86%</td>
<td>55%</td>
</tr>
<tr>
<td>2010</td>
<td>91%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Source: CBHI Annual Report, MoH, 2011
CBHI application systems. The Health Management Information System (HMIS) team assisted the ministry in the introduction, customization and rollout of the District Health Information System 2 (DHIS-2), which is the new Rwandan HMIS system, and ensured that it is fully functional and used successfully.

Validations of these data were conducted in 2011 on a sample of one sector per province and also in Kigali City. The main objective of this activity was to corroborate the data and to evaluate if the population agreed with attributed categories in relation to the new policy of “mutuelle de santé” scheme of payment.

A Delphi method was employed during these validation meetings, during which missing households were identified and attributed to their respective category. Multiple administrative structures were involved in this exercise, including those at the central (such as MoH and MINALOC), district, sector and cell levels. At the village level, community leaders participated in the organization of meetings with community members. In each of the five sectors, all cells were considered for validation, but in each cell, only two villages were taken into account. In total, the validation exercise was conducted in 48 villages. From the Ubudehe social stratification database, it was confirmed that these villages comprised 6,224 households and 27,789 individuals. In order to correct and confirm the Ubudehe categories, in-person visits were made by the supervising team to households that disagreed with the attributed category.

Once the data were collected at the household level, they were categorized into CBHI categories so as to form the basis of premiums payable to the CBHI system.

Results

Data were entered into a web-accessible social stratification database containing the records of nearly nine million Rwandans. The database was jointly coordinated by MINALOC through the community-based collective action programme (Ubudehe), and MoH through the CBHI scheme. Data were gathered across all 30 districts, from almost 14,747 villages (99.3%) – 8.9 million people across Rwanda (86.10% of the total 10.3 million population).9 In recent years, this has increased to almost 96% of the whole population.

As shown in Figure 3, a majority of the population stratified through this exercise in 2010–11, or 42.4% of the total population sampled in the stratification exercise, belonged to Ubudehe Category III (“the poor”), followed by 21.9% from Category IV (“resourceful poor”) and 19.5% from Category II (“very poor”) of the total population.

Consequently, the implementation of the new CBHI policy was made possible with more than 86% of the population that had their socioeconomic information available.

As a result of the categorization of Rwandans according to ability to pay based on their Ubudehe categories, citizens began to pay premiums on a sliding scale based on their household assets. From a flat premium of 1,000 RWF per person (or 2,500 RWF per household), the pricing of the CBHI premiums evolved to a system based on the household’s Ubudehe category or their proxy ability to pay (Table 1).

Table 1. Ubudehe population and CBHI categories

<table>
<thead>
<tr>
<th>Ubudehe population</th>
<th>CBHI</th>
<th>Premium per household per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubudehe I &amp; II</td>
<td>Category 1</td>
<td>2,000 RWF</td>
</tr>
<tr>
<td>Ubudehe III &amp; IV</td>
<td>Category 2</td>
<td>3,000 RWF</td>
</tr>
<tr>
<td>Ubudehe V &amp; VI</td>
<td>Category 3</td>
<td>7,000 RWF</td>
</tr>
</tbody>
</table>

The wealthiest and middle groups (classified as categories 3 and 2 of CBHI, respectively) began to pay an annual fee of 7,000 RWF (US$ 10.50) or 3,000 RWF (US$ 4.50) per person, respectively. As depicted in Figure 3, 65% of the population was categorized into CBHI Category 2 as a result of the Ubudehe stratification.

Discussion

This stratification exercise based on the Ubudehe system has formed the basis of premiums payable to the CBHI scheme. The premium structures were based on the household’s Ubudehe category (as the proxy for ability to pay). As a result of this MoH and MINALOC-led process, there now exist Ubudehe databases maintained by the local administration officials in each sector, keeping track of the socioeconomic status of every household in Rwanda and their relevant Ubudehe categories. Having a better estimate of the total population in the informal
sector has myriad impacts on the financial sustainability of the CBHI scheme, particularly one that is driven through a prepayment premium mechanism as in Rwanda. Further, validations of the data have allowed administrators to corroborate categories of individuals with the information available in databases, and local sections and cells can easily access these data through an integrated HMIS system. Needless to say, this process has various implications for the financial sustainability of CBHI sections, as well as improved governance for sectors.

The categorization according to the Ubudehe system has thus allowed for an equitable redistribution that considers individual capacity to pay. In particular, Rwandans with fewest assets (amounting to 25% of the overall population, or those in CBHI Category 1) are easily identified, as premiums for this group are paid by the government and development partners. These beneficiaries are not supposed to pay the health centre fee or the hospital co-payments. CBHI beneficiaries in other categories also pay a small fixed fee at health centres (which goes towards CBHI administration costs), and contribute a co-payment of 10% of the total CBHI bill to the district and referral hospitals. These individuals are obligated to pay the annual premium and this is primarily enforced through peer sensitization and pressure using ibimina – groups of several households led by one inhabitant. They typically collect and deliver premiums to cooperatives or bank accounts on behalf of members. This avoids long queues at the point of payment, and the peer pressure is constructive in reminding members of the benefits of mutuelles and the need to pay premiums. In the past, enforcement has been based on requiring a mutuelle membership card when accessing other government services, such as a passport. A final enforcement mechanism is that Ubudehe is a process at the village-level for community decision making.Ubudehe incorporates a “poverty-mapping” process, which has a systematic methodology and allocates each household to one of six ordinal income and poverty-related categories differentiated by well-defined qualitative criteria.

Conclusions

Using evidence from a decentralized, village-level wealth ranking system or Ubudehe has ensured the principles of cross-subsidies from the wealthier to the less wealthy within the national CBHI scheme. In particular, re-organizing the CBHI categories according to these criteria now allows for a more robust examination of income-related inequalities, particularly related to equity in utilization of health services and financial protection across CBHI categories. Forthcoming studies conducted through several partners will discuss the implications of this Ubudehe-based categorization of CBHI premiums, and will provide recommendations on how to ensure the financial sustainability of the CBHI scheme. The mutuelles have now moved under the Rwanda Social Security Board with the aim of ensuring better management, and to ensure a split in the provider-purchaser role of the MoH to ensure accountability and transparency, as well as a cross-subsidy between the formal and informal sectors. As a result, there is further potential for the Ubudehe-based CBHI categories to provide improved evidence in targeting a greater share of the “needy” population.

References

5. Ubudehe is a process at the village-level for community decision making. Ubudehe incorporates a “poverty-mapping” process, which has a systematic methodology and allocates each household to one of six ordinal income and poverty-related categories differentiated by well-defined qualitative criteria.
L’impact des modalités d’allocation des ressources dans les mécanismes d’exemption sur l’équité : Plan SéSAME, Sénégal

Maymouna Ba,1 Fahdi Dkhimi,2 Alfred Ndiaye1
Auteur correspondant : Maymouna Ba, e-mail : bamaymouna@yahoo.fr

Au début des années 2000, de plus en plus de pays à faibles ou moyens revenus se sont engagés dans des réformes de financement de la santé orientées vers des mécanismes de subventions ou d’exemption des paiements.1,2,3 Ceux-ci ont ciblé certaines catégories dites vulnérables (femmes, enfants, personnes âgées, etc.) ou ont porté sur certains types de soins en raison de leur coût exorbitant (céasarienne). Ces réformes sont sous-tendues par un paradigme d’équité développé au niveau international, paradigme découlant des barrières financières qui ont beaucoup réduit les recours aux soins pour les pauvres.2

Cependant, si de telles réformes ont entrainé une plus grande utilisation des services de santé, elles n’ont paradoxalement pas eu un impact significatif sur l’accès aux soins pour les personnes pauvres. En effet, ces mesures peinent encore à réduire les inégalités économiques en termes d’accès aux soins.3 En somme, il existe d’autres facteurs liés à l’environnement social ou institutionnel de ces mécanismes et qui concourent à limiter leur portée, en désavantageant les populations qui en ont le plus besoin.

La question du financement, notamment son insuffisance, est souvent présentée comme un élément déterminant des faibles performances de ces politiques d’exemption.3,5 Le succès limité de ces mécanismes peut trouver aussi son explication dans les modalités de financement adoptées, dont l’impact réel est encore peu exploré. Cet article compte combler cette lacune. À partir d’une étude sur le Plan SéSAME, mécanisme de gratuité des soins pour les personnes âgées mis en œuvre au Sénégal en 2006, il met le focus sur les formes d’allocations des ressources et ses effets sur l’accès équitable aux services proposés.

Méthodologie

Les résultats présentés ici s’appuient sur une analyse de documents (politiques nationales, documents de procédures, rapports d’évaluation, documents légaux : arrêtés, décrets, notes circulaires). Cette analyse de documents a été suivie d’une enquête qui a été conduite entre mars 2012 et juillet 2013. Des entretiens ont été menés auprès de 54 acteurs de la santé de profils divers : décideurs, prestataires de soins, leaders d’associations et représentants d’organismes internationaux … Une enquête-ménage a été effectuée dans quatre sites sélectionnés de manière raisonnée. Ils correspondent à des régions administratives (Dakar, Diourbel, Matam et Tambacounda) et incluent des zones urbaines et rurales. L’échantillon, de type aléatoire proportionnel, est constitué de 2 933 ménages comprenant chacun au moins une personne âgée. Cet effectif est réparti proportionnellement à l’effectif des personnes âgées résidant dans chaque site.

Le traitement des données d’entretien a été fait avec le logiciel NVivo suivant la méthode de codage déductif. Les données quantitatives ont été analysées avec le logiciel SPSS (analyse régressive). Le recours à cet ensemble de méthodes mixtes nous a permis de retracer les flux financiers, puis d’analyser, à partir des discours des détenteurs d’enjeux, les raisons liées au choix du mode de financement, et enfin, d’évaluer l’équité.
dans la couverture d'accès aux services du Plan Sésame.

Résultats

Le Plan Sésame a pour objectif d’assurer l’accès à des soins gratuits pour tous les sénégalais âgés de 60 ans et plus qui représentent 5,2 % de la population totale (Agence National de Statistique et de la Démographie, 2011). Les catégories dépouvrues de couverture sociale formelle, qui représentent 70 % des personnes âgées, représentent la cible principale de cette politique. Le mécanisme concerne aussi celles qui disposent déjà de protection sociale de santé, notamment les retraités du secteur formel, organisés sous la tutelle de l’Institut de Prévoyance Retraite du Sénégal (IPRES – l’organisme qui gère les retraités issus du secteur privé) et du Fonds de Retraite (FNR – fonds qui gère le système de couverture sociale des fonctionnaires et qui est financé par le budget de l’État et octroie une prise en charge s’élevant à 80 % des frais de consultation et d’hospitalisation) pour lesquels il vient en complément de la partie non couverte. Le Plan Sésame concernent la plupart des prestations offertes dans les services publics de santé et incluent tous les niveaux de soins : postes de santé, centres de santé et hôpitaux.

Les contours d’un mécanisme de financement passif

Les fonds du Plan Sésame sont alloués sous forme d’avance budgétaire aux hôpitaux nationaux et régionaux d’une part, et de dotation de médicaments pour les centres et postes de santé d’autre part. Ces deux modes de financement sont justifiés par le fait que ces structures de santé ont des statuts différents. En effet, les fonds initialement pourvus se sont vite épuisés, aucun financement dédié n’ayant été prévu pour assurer la régularité des allocations.7 L’analyse du corpus de données établit que dans les faits, après la première année, les hôpitaux ne fonctionnaient plus sur préfinancement mais plutôt sur un système de recouvrement.8

L’allocation des ressources du Plan Sésame, devenue donc passive en cours de mise en œuvre et entachée par une irrégularité des paiements, a finalement induit l’accumulation d’une dette de l’État envers les établissements publics de santé. En 2009, cette dette était estimée à 4 milliards de francs CFA.9 Dès lors, du fait des difficultés de recouvrement des prestations effectuées, la plupart des structures de santé appliquaient le Plan Sésame de manière aléatoire :

« On n’a plus les moyens de suivre cette demande-là. […] On continue à prendre selon nos possibilités, mais si une personne âgée vient ici et qu’on n’a pas d’intrants pour la prendre en charge, on ne la prendra pas en charge », nous confie un Directeur d’hôpital en milieu rural.

Ce problème de financement découle en grande partie du peu de préparation dont a fait l’objet ce mécanisme (absence d’étude de faisabilité, de stratégie claire de financement, d’expérience pilote...). Beaucoup d’acteurs interrogés pensent d’ailleurs que la mise en place du Plan Sésame a été quelque peu précipitée, du fait de contraintes liées à la décision politique. Le démarrage rapide, à un an d’une élection présidentielle, laissait penser que des motivations politiques étaient sous-jacentes.


Un financement hybride ou l’introduction d’iniquités sociales

Les fonds du Plan Sésame proviennent de deux sources : l’État et l’IPRES. La part de l’État est dévolue aux fonctionnaires retraités du secteur public et aux personnes âgées dépouvrues de couverture formelle. Quant à la contribution de l’IPRES (qui représentait 30 % du fonds initial – le fonds de démarrage s’élevait à 1 milliard), elle est dévolue à ses propres pensionnaires (tous issus du secteur privé) et directement versée aux hôpitaux.

Ce système de financement, qui ne repose pas sur une mutualisation des fonds, pose dès le départ un problème d’harmonisation de la gestion financière du Plan Sésame. En effet, il s’avère que l’IPRES a continué à fonctionner sur la base de préfinancements plus ou moins réguliers aux hôpitaux, au moment où les fonds provenant de l’État n’étaient plus alloués de manière systématique. En plus, la Pharmacie Nationale d’Approvisionnement (PNA), qui n’arrivait plus à rentrer dans ses fonds, avait arrêté d’approvisionner les districts en médicaments.

On assiste ainsi à une dualité dans la gestion financière, avec toutefois une gestion moins tatillonne pour l’IPRES. Ce dernier a passé une convention de préfinancement avec les hôpitaux et a mis en place un manuel de procédures opérationnelles. Il a dédié au Plan Sésame un budget basé sur une estimation des coûts. Quant au ministère, il n’avait même pas une unité de gestion fonctionnelle. Ainsi, l’IPRES a obtenu de meilleurs
résultats dans la prise en charge de ses membres au sein des structures de santé.

Dans l’esprit de beaucoup d’acteurs, il existait deux « Plan Sésame » : un Plan Sésame État qui fonctionnait de manière aléatoire sur la base d’un paiement à l’acte et un « Plan Sésame IPRES » basé sur des conventions de préfinancement aux hôpitaux. Cette dualité dans le financement avait une conséquence manifeste : d’un côté, une bonne partie des personnes âgées étaient éconduites des structures de santé qui attendaient des ressources publiques, de l’autre, des membres de l’IPRES continuaient à recevoir des soins exemptés dans les mêmes structures, au titre du Plan Sésame. Cet accès inégal pour les personnes âgées aux soins de santé est bien exprimé par un acteur :

« Ceux qui sont affiliés à l’IPRES sont correctement pris en charge car il y a le recouvrement. Ils sont recourrus même par anticipation. Il y a même un acompte versé aux hôpitaux par l’IPRES. Le problème concerne les autres personnes. »

Ce financement à deux vitesses a donc introduit des différences de traitement au profit des retraités de l’IPRES. La modalité d’achat de services a donc grandement favorisé une catégorie qui n’était pas la cible première de cette politique de gratuité.

Un secteur primaire largement désavantage

L’analyse de documents montre que le niveau primaire a effectué moins de prestations et donc reçu peu de financement. En effet, de 2006 à 2009, le niveau primaire (district) a absorbé moins de 10 % des dépenses effectuées dans le cadre du Plan Sésame, contrairement aux EPS du niveau secondaire (hôpitaux régionaux) et tertiaire (hôpitaux nationaux). En effet, cela est dû, en partie, au fait que les centres et postes de santé subissent de plein fouet les contrécouts de l’irrégularité des remboursements en nature. Contrairement aux hôpitaux qui jouissent d’une autonomie financière plus importante, les structures du niveau primaire supportent moins les retards dans l’approvisionnement des médicaments.

Les postes de santé, qui se trouvent au niveau inférieur de la pyramide, ont été les plus lésés par ce mode d’allocation des ressources. Ils n’ont pas eu les capacités d’appliquer le Plan Sésame sans une garantie d’un recouvrement adéquat des coûts et n’ont pas voulu se substituer aux défauts de l’État, comme l’explique si bien cet infirmière chef de poste (ICP) milieu rural :

« Je n’ai jamais appliqué le Plan Sésame au niveau du poste […] J’ai avec moi les papiers pour les références mais quand ils viennent en consultation, je ne vais pas leur donner gratuitement les médicaments. Ça, je ne le fais pas. »

Ce fait est d’autant plus contradictoire que le Plan Sésame promeut le référencement et que l’enquête-ménage a montré que le poste de santé demeurait le service de santé le plus fréquenté par les personnes âgées (notamment en milieu rural où il concerne 45,4 % des fréquentations, contre 20,3 % des recours en milieu urbain). Finalement, ce sont les personnes ayant un accès plus facile aux hôpitaux qui ont le plus bénéficié et le plus utilisé le Plan Sésame. Cette catégorie de personnes âgées correspond plus à celle évoluant dans le secteur informel et résidant en milieu urbain. Finalement, l’essentiel des prestations a été fourni par les hôpitaux qui ont capté la plupart des ressources allouées au titre du Plan Sésame. Quand aux postes de santé, ils n’ont pas réussi à mettre en œuvre normalement le Plan Sésame.

Quand le mécanisme d’achat de services engage un processus d’exclusion

Le manque de mutualisation des fonds, associé à une allocation passive induisant de facto un hôpital centrise, a, dès le départ, constitué le socle de l’exclusion d’une certaine catégorie de personnes âgées. Cela a bien entendu des conséquences sur les résultats obtenus par le Plan Sésame. L’enquête-ménage montre que ce sont finalement les personnes âgées résidant en milieu urbain et les retraités du secteur formel qui ont le plus bénéficié du Plan. Aussi, le quartile de population le plus aisé a une probabilité significativement plus élevée d’accéder aux ressources du Plan Sésame que le quartile le plus pauvre.

Finalement, le mode de financement du Plan Sésame, choisit d’abord pour la « souplesse » qu’il présente, a peu tenu compte des principes d’équité. En termes d’allocations des ressources, les inégalités de niveau de soins qui en découlent ont induit des différences d’accès, au détriment des personnes âgées n’ayant pas un accès facile aux hôpitaux, celles vivant en zone rurale notamment.

Discussion

Des études menées sur d’autres programmes de gratuité montrent que le fonctionnement des mécanismes portent en germes les éléments de leurs faibles
Le Plan Sésame, par une absence de stratégies claires en ce qui concerne le mode de financement, a ainsi enclenché des processus d’iniquités dès sa phase de design. Les modalités d’allocation des ressources, non basées sur le principe d’équité, font que de nombreux bénéficiaires potentiels (en particulier les plus pauvres) se trouvent exclus de ce programme dès son entame.

Conclusion

Dans le cadre du Plan Sésame, la modalité passive d’achat de services génère une dissymétrie dans l’allocation de ressources, au détriment des régions rurales et des soins primaires de santé. Cette dissymétrie explique en partie la distribution significativement inégale des ressources allouées au Plan Sésame au profit des groupes les plus aisés. L’achat passif de services semble exacerber les inégalités d’accès aux soins et entraver le processus de décentralisation sanitaire. Cet exemple montre l’importance de discuter de la question de l’équité dans les modalités d’achat de services dès la phase de design d’une politique de financement.

Tableau 1. Déterminants de l’accès aux services de santé et de l’exemption au Plan Sésame

<table>
<thead>
<tr>
<th>Variables</th>
<th>Odd’s ratio</th>
<th>Erreur standard</th>
<th>Interval de confiance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informé – Plan Sésame</td>
<td>1,500</td>
<td>(0,156)***</td>
<td>1,223</td>
</tr>
<tr>
<td>Chef de ménage</td>
<td>1,204</td>
<td>(0,146)</td>
<td>0,946</td>
</tr>
<tr>
<td>Homme</td>
<td>0,939</td>
<td>(0,109)</td>
<td>0,748</td>
</tr>
<tr>
<td>Wolof</td>
<td>1,058</td>
<td>(0,108)</td>
<td>0,896</td>
</tr>
<tr>
<td>Éducation</td>
<td>0,978</td>
<td>(0,123)</td>
<td>0,765</td>
</tr>
<tr>
<td>Urbain</td>
<td>0,979</td>
<td>(0,122)</td>
<td>0,767</td>
</tr>
<tr>
<td>Respect</td>
<td>1,169</td>
<td>(0,126)</td>
<td>0,946</td>
</tr>
<tr>
<td>Participation religion</td>
<td>1,066</td>
<td>(0,113)</td>
<td>0,896</td>
</tr>
<tr>
<td>Viètes – amis/parents</td>
<td>0,834</td>
<td>(0,084)***</td>
<td>0,685</td>
</tr>
<tr>
<td>Pas seul</td>
<td>1,124</td>
<td>(0,114)</td>
<td>0,921</td>
</tr>
<tr>
<td>Vote</td>
<td>0,885</td>
<td>(0,095)</td>
<td>0,707</td>
</tr>
<tr>
<td>Utilise media</td>
<td>0,864</td>
<td>(0,087)</td>
<td>0,709</td>
</tr>
<tr>
<td>Satisfait gouvernement</td>
<td>1,007</td>
<td>(0,117)</td>
<td>0,802</td>
</tr>
<tr>
<td>Membre parti politique</td>
<td>1,229</td>
<td>(0,193)</td>
<td>1,004</td>
</tr>
<tr>
<td>Carte pension</td>
<td>1,500</td>
<td>(0,215)***</td>
<td>1,220</td>
</tr>
<tr>
<td>Activité professionnelle</td>
<td>0,884</td>
<td>(0,099)</td>
<td>0,669</td>
</tr>
<tr>
<td>Secteur formel</td>
<td>1,031</td>
<td>(0,228)</td>
<td>0,869</td>
</tr>
<tr>
<td>Revenus réguliers</td>
<td>1,033</td>
<td>(0,107)</td>
<td>0,843</td>
</tr>
<tr>
<td>Ressources écart – q1</td>
<td>0,805</td>
<td>(0,124)</td>
<td>0,806</td>
</tr>
<tr>
<td>Ressources écart – q2</td>
<td>1,310</td>
<td>(0,207)</td>
<td>0,969</td>
</tr>
<tr>
<td>Ressources écart – q4</td>
<td>1,702</td>
<td>(0,271)***</td>
<td>1,246</td>
</tr>
<tr>
<td>Ressources écart – q5</td>
<td>1,358</td>
<td>(0,272)***</td>
<td>0,978</td>
</tr>
<tr>
<td>Observations</td>
<td>1,662</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Degré d’importance ES en parenthèses: *** p<0,01, ** p<0,05, * p<0,1

performances. Plus particulièrement, le sous-financement de ces mécanismes est souvent présenté comme une menace à leur pérennité et justifie le fait que beaucoup d’auteurs préconisent la disponibilité de ressources suffisantes et durables comme un préalable à la mise en place de ces programmes.

Notre analyse montre aussi l’importance des modalités d’allocation des ressources pour la viabilité de ces mécanismes. L’aspect lié à la mutualisation des fonds, par exemple, semble déterminant dans l’efficacité de la gestion financière. En effet, la mise en commun des fonds, qui est souvent présentée comme un préalable à la mise en place de ces programmes, peut, selon les textes, dépendre de pressions externes et est aussi le fruit d’opportunités politiques internes. L’empreinte qui accompagne l’application de ces décisions officielles ne favorise pas de mures réflexions et rend complexe leur opérationnalisation.

Le Plan Sésame, par une absence de stratégies claires en ce qui concerne le mode de financement, a ainsi enclenché des processus d’iniquités dès sa phase de design. Les modalités d’allocation des ressources, non basées sur le principe d’équité, font que de nombreux bénéficiaires potentiels (en particulier les plus pauvres) se trouvent exclus de ce programme dès son entame.

Conclusion

Dans le cadre du Plan Sésame, la modalité passive d’achat de services génère une dissymétrie dans l’allocation de ressources, au détriment des régions rurales et des soins primaires de santé. Cette dissymétrie explique en partie la distribution significativement inégale des ressources allouées au Plan Sésame au profit des groupes les plus aisés. L’achat passif de services semble exacerber les inégalités d’accès aux soins et entraver le processus de décentralisation sanitaire. Cet exemple montre l’importance de discuter de la question de l’équité dans les modalités d’achat de services dès la phase de design d’une politique de financement.

Remerciements

Les résultats présentés ici découlent d’une recherche financée par la Commission Européenne dans le cadre de son programme-cadre (FP7/2007 – Agrément No. 261440). Les opinions et conclusions présentées dans cet article sont de la seule responsabilité des auteurs et ne reflètent pas nécessairement le point de vue de la Commission.

Références

Renowned public health experts and leaders endorsing a vision for an Africa health transformation programme to enhance health in the African Region

An independent advisory group (IAG), comprising renowned public health experts and leaders, has endorsed the Africa Health Transformation Programme 2015–2020: A vision for universal health coverage, proposed by Dr Moeti, WHO Regional Director for Africa.

At its inaugural meeting, held in Johannesburg 4–5 May 2015, the IAG congratulated the Regional Director for convening the IAG and for her vision, calling it a step in the right direction and a testimony to her personal commitment to change the work of WHO in the Region.

In her opening remarks, Dr Moeti observed that addressing the health challenges in the African Region required rethinking the way the WHO Secretariat approaches the planning and implementation of health programmes and services in support of Member States. It is expected that the implementation of the transformation programme will address the unacceptable inequities and injustices in the Region’s health development.

“We are taking a once-in-a-generation opportunity to transform the future for Africa, to strengthen health and economic security globally, and to deliver on the goals for a new era of sustainable development”, said Dr Moeti.

The WHO Regional Office for Africa will lead the transformation in health and well-being based on five interrelated and overlapping priorities:

- Improving health security;
- Strengthening national health systems;
- Sustaining focus on health-related SDGs;
- Addressing the social determinants of health; and
- Transforming the WHO Regional Office for Africa into a responsive and results-driven organization.

The Regional Director told the participants that the strategy is bold and ambitious, but that it can be delivered. “We will deliver on our promise through our shared values of equity, dignity, transparency, integrity, professionalism and openness”, she added.

It was highlighted that the growing recognition of health as critical to the SDGs, the dividends of unprecedented economic growth, political stability and the birth of a new middle class, among other factors, could be translated into tangible human development benefits that can enable Africa to contribute to global health and economic security worldwide.

The IAG was set up by Dr Matshidiso Moeti to provide strategic and policy advice aimed at strengthening the work of WHO in the African Region to make better health a reality for people.

WHO and AUC take stock on joint efforts to improve collaboration

High-ranking officials from the African Union Commission (AUC) and WHO met in Brazzaville on 30 June to review their collaborative efforts to improve the health of people in Africa.

Among the issues discussed were the progress made so far in the WHO-AUC partnership; the establishment of the African Centre for Disease Control (African CDC) and ways of improving collaboration between it and WHO. The meeting also deliberated on how far African countries have implemented the agreed actions during the first AUC-WHO ministerial conference held in Luanda, Angola in April 2014.

Welcoming the delegates, Dr Mustapha Kaloko, the AUC Commissioner for Social Affairs, highlighted some of the achievements of the AUC-WHO partnership during the past three years, including the re-establishment of a WHO Liaison Office to the AUC, a joint ministerial meeting in Angola and the development of a joint work plan. He said although the collaboration is going well, both parties could further strengthen it by having a common position before consulting Member States on matters of mutual interest such as the establishment of the African CDC. Dr Kaloko further stressed the need for the AUC and WHO to work together to respond to emergencies as well as to coordinate the continent in speaking with one voice at international fora such as the World Health Assembly.

In his remarks, Dr Mustapha Kaloko, the AUC Commissioner for Social Affairs, highlighted some of the achievements of the AUC-WHO partnership during the past three years, including the re-establishment of a WHO Liaison Office to the AUC, a joint ministerial meeting in Angola and the development of a joint work plan. He said although the collaboration is going well, both parties could further strengthen it by having a common position before consulting Member States on matters of mutual interest such as the establishment of the African CDC. Dr Kaloko further stressed the need for the AUC and WHO to work together to respond to emergencies as well as to coordinate the continent in speaking with one voice at international fora such as the World Health Assembly.

The two-day bilateral meeting agreed on a revised joint work plan for the period 2015–2016, including preparations for the next joint ministerial meeting which is expected to take place in Tunis, Tunisia in April 2016.
Hundreds of leaders and public health experts from across Africa gathered, 6–7 May, to identify game-changing interventions to accelerate progress towards improving the lives of millions of women, children and adolescents. This consultation provided a roadmap – an updated Global Strategy for Women’s, Children’s and Adolescents’ Health – to end preventable deaths of women, newborns, children and adolescents by 2030, which will be launched alongside the new SDGs in September. This revised strategy builds on the Global Strategy for Women’s and Children’s Health, launched in 2010 by the United Nations Secretary-General.

“Over the last two decades, the world has made unprecedented progress in advancing women’s and children’s health. In 2013, 6.4 million fewer children died than in 1990, and in this same timeframe, deaths of women during pregnancy and childbirth were cut by almost half”, said Graça Machel, Chair of the Partnership for Maternal, Newborn and Child Health (PMNCH). “African leaders have been at the forefront of these efforts, as demonstrated by the Campaign on Accelerated Reduction of Maternal, Newborn and Child Mortality in Africa and the many commitments made to the original global strategy.”

Despite immense progress, the scale of the problem remains vast. As of 2013, 17 000 children under the age of five still die every day. Moreover, approximately 225 million women who want to prevent or delay pregnancy are not using modern contraceptives and each hour, 33 women die from preventable causes related to pregnancy and childbirth. Of half of maternal deaths occur in sub-Saharan Africa alone. To reach the global goals for women’s and children’s health by 2030, it is estimated that an additional US$ 5.24 is needed per person per year. Calls for increased funding stress the need for investments to be predictable and sustainable, as well as increasingly efficient.

“Healthy women and children are the bedrock of stable, productive societies”, said Dr Aaron Motsoaledi, Minister of Health of the Republic of South Africa. “Ensuring the health of every woman, child and adolescent will only become more urgent as the next generation grows. We are already grappling with the largest population of young people in history, and it is projected that in 35 years, Africa will be home to over a third of the world’s youth. Imagine if all of these young women and men could lead healthy lives and raise healthier families.”

This meeting – co-hosted by the South African National Department of Health and the United Nations Secretary-General’s Every Woman Every Child movement, with support from PMNCH and WHO – is part of a broad consultative process to update the original global strategy. It will focus on new and targeted solutions to address societal and structural barriers to health, such as education, legal entitlements for women and children, and nutrition. Given demographic shifts in Africa, the consultation will have a large youth component.

Universal health coverage is at the centre of health system reform efforts of many low- and middle-income countries. There has been much demand for UHC and health financing training courses, and both the World Bank and the World Health Organization have been providing training events in English. There is equally strong demand in numerous francophone countries. In response, the World Bank and World Health Organization have jointly organized their first WB-WHO course on UHC for francophone countries. The course objectives were to enhance country knowledge, skills and technical capacities as well as to support francophone counterparts in their UHC reform process.

The course took place in Dakar, Senegal, from 20–25 April. It attracted 113 participants and 16 country teams (Benin, Burkina Faso, Cameroon, Central Africa Republic, Chad, Congo, Côte d’Ivoire, Djibouti, Democratic Republic of the Congo, Guinea, Haiti, Madagascar, Mali, Mauritania, Niger and Senegal). Each country team consisted of six to eight members, and included high-level representatives from ministries of health, finance, labour, planning and/or social affairs and health insurance agencies. World Bank task team leaders and WHO country health systems officers also participated. Two guest speakers from Burundi and Gabon joined to share their experiences, as well as observers from the Agence Française de Développement, German BACKUP Initiative and Japan International Cooperation Association who also provided financial support for the course, which is gratefully acknowledged.

The five-day course consisted of the following sessions: an overview of the World Bank’s flagship approach to UHC; definition and objectives of UHC; the health financing situation in francophone countries; revenue collection; fiscal space; pooling; coverage of the informal sector; strategic purchasing; provider payment mechanisms; results-based financing; benefit package design; governance; human resources; monitoring UHC progress; and access to drugs.

Theme focused group work on community-based health insurance, social health insurance and “free health-care policies” allowed for further in-depth discussion. These sessions were complemented by group work within country teams to further reflect on individual country health financing strategies and outline proposals for health financing policy reforms to promote in their own country setting.

The course was highly appreciated with participants valuing the opportunity for learning and sharing experiences from across francophone countries. The Minister of Health from Madagascar, Professor Andranarivo, reported, “the course was extremely helpful and timely for Madagascar as we are initiating the formulation of a health financing strategy this month”. Dr Sossou, Deputy General Secretary of the Ministry of Health from Benin, stated, “beyond theoretical knowledge, the training course was an opportunity to leverage other countries’ experiences. Capitalizing is essential for Benin as we move on adjusting our health financing strategy before it gets approved by the Council of Ministers later this year”.

Moreover, the joint organization of the course sends out a powerful message with respect to a harmonized approach towards UHC by both the World Bank and WHO. The course has been a valuable experience and there is strong interest both among country participants as well as partners to continue and repeat this type of event. Both organizations are engaged to continue to collaborate by supporting countries in capacity building, evaluating the progress of the implementation of UHC, facilitating innovation and learning-by-doing at country level and sharing and disseminating best practices. The World Bank and WHO will try to expand such joint initiatives.
Abstracts

**The critical role of health nancing in progressing universal health coverage**

Le rôle crucial du financement de la santé dans les progrès vers la couverture sanitaire universelle

RÉSUMÉ — D’immenses progrès ont été accomplis au cours des quatrê dernières décennies en matière de développement de la vaccination dans la Région africaine. Associée à d’autres interventions de soins de santé primaires et de développement, la vaccination a eu un impact notable sur la réduction de la mortalité annuelle des enfants de moins de cinq ans. Cependant, selon des estimations, quatre pays de la Région africaine (Afrique du Sud, Éthiopie, Nigéria et République démocratique du Congo) abritent 22 % (soit 4,3 millions) de ces nourrissons non vaccinés dans le monde. Des défis restent à relever pour vacciner tous les enfants de la Région, et atteindre les quelque 20-30 % d’enfants qui échappent encore à la vaccination. En plus des vaccins disponibles de longue date (antidiphthérique-antitétanique-anticoquelucheux, antirougeoleux, antipoliomyélitique et antituberculée), des vaccins plus récents, tels que le vaccin anti-hépatite B, sont introduits dans la Région, mais leur utilisation et leur diffusion sont lentes et inégales au sein, et entre, des pays. Le nouveau plan stratégique régional pour la vaccination 2014-2020 vise à fournir des orientations politiques et programmatiques aux États Membres, conformément au Plan d’action mondial pour les vaccins 2011–2020, afin d’optimiser les services de vaccination et d’aider les pays à renforcer leurs programmes de vaccination.

**Impact of performance-based financing on health-care quality and utilization in urban areas of Cameroon**

Impact du financement basé sur la performance sur la qualité et l’utilisation des soins de santé dans les zones urbaines au Cameroun

RÉSUMÉ — Le présent article passe en revue un projet pilote conçu pour estimer l’impact du financement basé sur la performance (FBP) sur la qualité et l’utilisation des soins de santé dans un environnement essentiellement urbain, à savoir la Région du Littoral, au Cameroun. A cet effet, il utilise trois méthodes quasi expérimentales d’évaluation d’impact recourant notamment à l’appariement et à la différence-dans-la-différence. Les résultats montrent que le projet pilote sur le FBP a eu un impact positif et significatif sur la plupart des aspects essentiels des soins de qualité. Par contre, il n’a eu aucun impact sur tout autre indicateur d’utilisation des services de santé, à l’exception (du reste limitée) des méthodes contraceptives modernes. Ces conclusions donnent à penser que l’environnement et les indicateurs choisis revêtent une grande importance pour la réalisation d’un impact maximum. Toutefois, il convient également de noter que les améliorations dans l’utilisation des soins de santé dans les zones urbaines pourraient être limitées, en raison des niveaux élevés des données de référence. Enfin, les conclusions montrent que la qualité des soins semble être l’aspect le plus prometteur, en termes relèvement du FBP en milieu urbain.

**Institutions and structural quality of care in the Ghanaian health system**

Institutions et qualité structurelle des soins dans le système de santé ghéanéen

RÉSUMÉ — Par qualité structurelle de la dispensation des soins de santé, l’on entend la disponibilité des ressources matérielles et humaines. L’insuffisance de telles ressources au niveau des établissements de santé se traduit par le manque de personnels, le grand nombre de patients hospitalisés et en consultation externe, et le manque des outils nécessaires pour garantir une prestation appropriée des services de santé. Il y a un lien très étroit entre la disponibilité de ces ressources et les facteurs institutionnels, notamment la gouvernance et les incitations visant à encourager le personnel. L’objectif de la présente étude est de déterminer les effets des facteurs institutionnels sur la qualité structurelle des formations sanitaires publiques dans le système de santé ghéanéen. Les données émanant de nouvelles enquêtes couvrant 62 formations sanitaires publiques ont été utilisées pour établir trois indices pour la qualité structurelle, à savoir la surcharge, le personnel et les équipements. Trois hôpitaux étaient les plus confrontés à une très grande surcharge de travail et souffraient le plus de la pénurie de personnel, alors qu’ils disposaient pourtant des équipements les plus performants. Il a été établi que la performance interne revêtait une plus grande importance dans les efforts visant à réduire la surcharge, par rapport à la gouvernance externe. A l’opposé, il y avait le cas de l’indicateur relatif aux équipements. La pénurie de personnels était d’un niveau moindre dans les formations sanitaires offrant des possibilités de perfectionnement des compétences professionnelles. L’étude a mis en lumière l’importance d’une bonne coordination de l’administration des formations sanitaires avec les personnels de santé, tout comme avec l’administration, dans les efforts visant à améliorer la qualité.

**Institutions et qualité structurelle des soins dans le système de santé du Gana**

SUMÁRIO — O presente artigo analisa um projeto-piloto concebido para calcular o impacto do financiamento baseado no desempenho (sigla em inglês - FBP) sobre a qualidade e a utilização dos cuidados de saúde em zonas urbanas dos Camarões

SUMÁRIO — Do projeto piloto teve um impacto positivo e significativo na maioria dos aspectos essenciais da qualidade dos cuidados. Ao mesmo tempo, não houve impacto em quaisquer dos indicadores de utilização dos serviços de saúde, à exceção (limitada) de métodos contraceptivos modernos. Estas conclusões sugerem que o contexto e os indicadores escolhidos são importantes para se conseguir o máximo de impacto. No entanto, convém notar que as melhorias na utilização poderão ser limitadas em resultado dos valores de referência elevados. Por último, as conclusões indicam que a qualidade dos cuidados parece ser o aspecto mais promissor em termos de melhorias no que diz respeito aos contextos urbanos.

**Instituições e qualidade estrutural dos cuidados no sistema de saúde do Gana**

SUMÁRIO — A qualidade estrutural na prestação de cuidados de saúde diz respeito à disponibilidade de recursos físicos e humanos. A escassez destes recursos nas unidades de saúde conduz à falta de pessoal, sobrelotação dos serviços ambulatoriais e de internamento, e à falta de ferramentas necessárias para a prestação de cuidados de saúde adequados. A disponibilização destes recursos está estreitamente correlacionada com factores institucionais, mais concretamente governação e incentivos ao pessoal de saúde. Este estudo tem por finalidade explorar o efeito dos factores institucionais na qualidade estrutural nas unidades de saúde pública do sistema de saúde do Gana, para o qual foram utilizados novos dados de inquérito de 62 unidades de saúde pública de três regiões do Gana. Utilizou-se uma análise dos componentes principais para criar três índices de qualidade estrutural: sobrelotação, pessoal e equipamento. Foram efectuadas três regressões para índices de qualidade relativo aos factores institucionais. Os resultados mostraram que os hospitais nacionais eram os mais sobrelotados e tinham as maiores faltas de pessoal mas dispunham do melhor equipamento. Verificou-se que a governação interna era mais importante que a governação externa para reduzir a sobrelotação, sendo o contrário para o índice de equipamento. Nas unidades com oportunidades para o desenvolvimento profissional, a falta de pessoal era ligeira. O estudo realçou a importância da boa coordenação da administração das unidades de saúde com os trabalhadores, assim como com o governo, na melhoria da qualidade.
Solidarity in community-based health insurance in Senegal: Rhetoric or reality?

Résumé — La persistance de faibles taux de couverture par l’assurance-maladie à base communautaire (AMBC) donne à penser que les stratégies de mise à échelle, proposées par bon nombre de pays, n’ont pas été bien conçues ou alors n’ont pas été mises en œuvre avec succès. Une des raisons pouvant expliquer cette situation est le manque d’intégration systématique du contexte sociopolitique dans la politique de l’AMBC. Dans la présente étude, la solidarité dans l’AMBC est analysée du point de vue sociologique, afin de trouver des réponses aux questions suivantes dans le cadre des recherches : Quelles sont les définitions et les perceptions locales de la solidarité dans l’AMBC ? Dans quelle mesure ces définitions et perceptions locales relèvent-elles de la pratique ? Versant sur les régimes d’AMBC au Sénégal ont été examinées, en utilisant à cet effet des critères précis. Les transcriptions d’entretiens avec 64 acteurs de l’AMBC ont été analysées en utilisant le codage inductif. Un cadre conceptuel axé sur quatre dimensions de la solidarité (risque sanitaire, équité verticale, échelle et source) a été élaboré aux fins d’interprétation des résultats. Les résultats donnent à penser que le concept de solidarité dans l’AMBC est plutôt complexe. Chaque dimension ou source de la solidarité était soit non ancrée dans la pratique, soit fortement contextuée, les vues divergeant du reste à cet égard entre les parties prenantes et les populations cibles. Il y aurait donc lieu que les décideurs engagent des discussions publiques plus rigorouses sur le concept de solidarité dans le contexte de l’AMBC et plus généralement de la politique de couverture sanitaire universelle, afin d’évolver vers des politiques cadrant avec les attentes des populations qu’elles entendent desservir, tout en répondant à ces attentes.

Solidariedade no seguro de saúde de base comunitária no Senegal: retórica ou realidade?

RESUMO— Potenciar ao máximo os actores privados para gerir o financiamento e prestar serviços de saúde é uma importante estratégia para manter a resposta nacional ao VIH e aumentar o acesso aos serviços nos países em desenvolvimento. Os autores utilizaram dados de acompanhamento dos recursos para a saúde e o combate ao VIH na Côte d’Ivoire, Quénia, Malawi e Namíbia para avaliar a sustentabilidade do financiamento para o combate ao VIH nestes países e comparar a dimensão e a origem dos recursos dirigidos aos prestadores privados de serviços para o VIH, dando especial atenção ao fardo financeiro que recaí nas pessoas que vivem com o VIH (PVVIH). As conclusões indicam que as respostas para o VIH nestes países enfrentam desafios em matéria de sustentabilidade assim como uma lacuna na cobertura financeira para as PVVIH que procuram cuidados junto aos prestadores privados. Não obstante os interesses declarados dos doadores em envolverem-se com o sector privado e em parcerias público-privadas, as conclusões indicam igualmente que muito pouco do seu financiamento acaba por chegar a estes prestadores, que são, ao invés, maioritariamente financiados pelos pagamentos directos das PVVIH. À luz destas conclusões, os doadores e os actores governamentais nessas países deverão considerar formas de tornar os prestadores privados de serviços para o VIH numa parte mais integral dos esforços públicos para criar uma resposta sustentável e dirigida pelos países a epidemia do VIH.
Estimating willingness to pay for maternal health services: The Kenya reproductive health voucher programme

SUMMARY — Fandène mutual health scheme, Senegal

La pérennité de la mutuelle de santé Fandène, Sénégal

Reasons for the resilience and longevity of the Fandène mutual health scheme, Senegal

A estratégia senegalesa de cobertura universal de saúde visa, entre outras coisas, aumentar a taxa de penetração das associações mutualistas para 65,5% em 2017. O objetivo deste artigo é analisar os fundamentos da resiliência e da sustentabilidade da maioria das associações mutualistas comunitárias rural do Senegal (Fandène) e tirar lições da sua experiência para a cobertura universal de saúde. O artigo baseia-se num estudo de caso, constituído de pesquisas documentais, entrevistas individuais e grupos de reflexão, com os membros, ex-membros e responsáveis da associação mutualista entre 2012–2013, devido à sua experiência para a cobertura universal de saúde. O artigo busca explicar as condições da sua criação, as características da sua população-alvo, a necessidade de alargar, a governança, a transparência e a consciência crítica dos membros, assim como a qualidade dos seus serviços. A associação mutualista privilegiou a solidariedade e o acesso aos cuidados de saúde de qualidade, e conquistou, ao longo dos anos, uma legitimidade que faz dela uma parceira credível para a cobertura universal de saúde. Algumas das suas fragilidades revelam as dificuldades encontradas para...
a conséquence de la couverture universelle de santé par des incitations volontaires et des associations mutuelles de petite dimension. À long terme, la couverture universelle de santé obligatoire et l’assurance public seront plus indiqués pour garantir un couverture adaptée, équitable et soutenable des populations.

Increasing equity among community-based health insurance members in Rwanda

SUMMARY — Le taux de couverture du régime d’assurance-maladie à base communautaire (AMBC) lancé par le Gouvernement du Rwanda est passé à 91 % de la population en 2010, contre 7 % seulement en 2003. Initialement, tous les souscripteurs de l’AMBC payaient les mêmes primes, indépendamment de leurs revenus personnels, si bien que les citoyens les plus pauvres éprouvaient de difficultés à payer leurs primes (près de 1,50 dollar EU par personne). Il fallait donc d’urgence un mécanisme permettant de garantir l’accès aux soins de santé pour les couches les plus vulnérables, tout en œuvrant à la promotion de l’équité entre tous les assurés. Le Gouvernement du Rwanda a donc décidé d’introduire un système de stratification basé sur le statut socioéconomique de la population, soutenu par Ubudehe. En dépit de l’objectif de promotion de l’équité entre tous les assurés, le Gouvernement du Rwanda a développé une base de données classant les citoyens résidant, soit 96 % de la population du pays, avant de l’utiliser pour identifier les couches les plus vulnérables et promouvoir l’équité entre les membres. Le Gouvernement du Rwanda a donc introduit un système de stratification basé sur le statut socioéconomique de la population, soutenu par l’identification des couches les plus vulnérables. La base de données a été enregistrée dans la base de données de l’AMBC, facilitant ainsi l’identification des personnes les plus vulnérables à payer leurs primes de manière plus équitable.

Accroître l’équité parmi les souscripteurs de l’AMBC, à la faveur de l’identification des individus ayant un statut socioéconomique (environ 25 % de la population). L’identification des couches les plus vulnérables a permis d’améliorer la viabilité financière et les capacités de gestion du régime de l’AMBC.

Aumentar a equidade entre os membros do seguro de saúde de base comunitária no Ruanda

SUMÁRIO — O regime de seguro de saúde de base comunitária (CBHI) lançado pelo Governo do Ruanda, abrangeu 91% da população em 2010, começando com 7% em 2003. Inicialmente, todos os membros do CBHI pagavam as mesmas taxas, independentemente do seu rendimento pessoal, e os cidadãos mais pobres tinhavam dificuldade em pagar o seguro (quase 1,5 dólares americanos por pessoa). Como tal, era urgentemente necessário dispor de um mecanismo que garantisse o acesso aos cuidados de saúde para os mais vulneráveis e promovesse a equidade entre os membros. O Governo do Ruanda decidiu introduzir um sistema de estratificação baseado no estatuto socioeconómico da população, conhecido como Ubudehe. Em conjunto com os parceiros, incluindo o projecto de reforço dos sistemas integrados de saúde (sigla em inglês - IHHSSP), o Governo do Ruanda desenvolveu uma base de dados nacional que estratifica os seus cidadãos conforme o seu rendimento. Até à data, a base de dados conta já com 10 milhões de registo de residentes, o que representa 96% da população do Ruanda. Esta base de dados ajudou a identificar as pessoas mais vulneráveis com base no estatuto socioeconómico (cerca de 25% da população). A identificação dos mais pobres possibilitou um aumento dos fundos do CBHI graças à identificação dos indivíduos que têm uma maior capacidade para pagar. Por conseguinte, a base de dados melhorou a viabilidade financeira e a capacidade de gestão do regime do CBHI.

L’impact des modalités d’allocation des ressources dans les mécanismes d’exemption sur l’équité : Plan Sésame, Sénégal

SUMMARY — The majority of exemption policies in sub-Saharan Africa provide, de facto, for so-called passive resource allocation arrangements. Plan Sésame — an exemption mechanism adopted in Senegal in 2006 and targeting those aged over 60 years — is no exception to this rule. It is based on user fees as a service purchase method. This article examines the effects of the passive service purchase method on equitable access to care under Plan Sésame. The analysis is based on a household survey conducted in Senegal from May 2012 to July 2013. It uses a mixed methodology, combining review of policy documents, stakeholder analysis and a household survey. The findings show that Plan Sésame is characterized by hybrid funding, which advantages older persons in the formal sector who have greater access to hospitals. It is thus those people who capture the larger proportion of the budget allocated under the Plan. In sum, the most advantaged social groups and persons living in urban areas stand a greater chance of accessing Plan Sésame resources.

Modalidades de afectação de recursos nos mecanismos de isenção e o seu impacto sobre a equidade: Plano Sésamo, Senegal

SUMMARY — A major parte das políticas de isenção na África Subsariana aplicam, efectivamente, modalidades ditas passivas de afectação de recursos. O Plano Sésamo, um mecanismo de isenção adoptado no Senegal em 2006, destinado aos cidadão com idade igual ou superior a 60 anos, não foge à regra: baseia-se no pagamento directo como modalidade de aquisição de serviços. Este artigo pretende explorar o efeito desta modalidade passiva de aquisição de serviços na equidade do acesso aos cuidados do Plano Sésamo. A nossa análise assenta num inquérito realizado no Senegal entre Maio de 2012 e Julho de 2013. Utilizou-se uma metodologia mista incluindo uma revisão de documentos de política, uma análise das partes interessadas e um inquérito aos agregados familiares. Os resultados mostram que o Plano Sésamo caracteriza-se por um financiamento híbrido que privilegiou as pessoas idosas que recorrem ao sector formal e têm um melhor acesso aos hospitais, os quais captaram uma grande parte dos orçamentos afectados ao Plano Sésamo. Em suma, as camadas sociais mais favorecidas e as que residem nos meios urbanos têm mais oportunidades de acederem aos recursos do Plano Sésamo.
The African Health Monitor is a quarterly magazine of the World Health Organization Regional Office for Africa (WHOAFRO). It is a multilingual publication with peer reviewed articles in English, French and Portuguese.

The aim of the African Health Monitor is to promote and facilitate evidence-based policy and decisions to strengthen programmes for health promotion, protection and restoration in the African Region. In order to achieve its aim, the Monitor publishes articles that monitor health situations across the region, discuss trends and track progress toward the health-related Millennium Development Goals and other internationally agreed-upon goals. It disseminates relevant and scientifically rigorous public health information and interventions carried out in the Member States with the cooperation of AFRO technical programmes.

Comments on published articles and suggestions for new papers are welcome. Prospective authors should follow the Monitor style guidelines, which can be obtained by contacting the Editorial Office at afrgohssahm@who.int or by using this intranet link http://intranet.who.int/afro/ahm/index.shtml