

Abolition of user fees: the Uganda paradox

Juliet Nabyonga Orem,^{1*} Frederick Mugisha,² Christine Kirunga,³ Jean Macq⁴ and Bart Criel⁵

¹World Health Organization Uganda Office, Health Systems Unit, Kampala, Uganda, ²United Nations Population Fund Uganda Office, Kampala, Uganda, ³Ministry of Health, Kampala, Uganda, ⁴Université catholique de Louvain, Belgium and ⁵Institute of Tropical Medicine, Antwerp, Belgium

*Corresponding author. WHO Uganda Office, P.O. Box 24578, Kampala, Uganda. E-mail: nabyongaj@ug.afro.who.int; julienabyonga@yahoo.com

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Inadequate health financing is one of the major challenges health systems in low-income countries currently face. Health financing reforms are being implemented with an increasing interest in policies that abolish user fees.

Data from three nationally representative surveys conducted in Uganda in 1999/2000, 2002/03 and 2005/06 were used to investigate the impact of user fee abolition on the attainment of universal coverage objectives.

An increase in illness reporting was noted over the three surveys, especially among the poorer quintiles. An increase in utilization was registered in the period immediately following the abolition of user fees and was most pronounced in the poorest quintile. Overall, there was an increase in utilization in both public and private health care delivery sectors, but only at clinic and health centre level, not at hospitals.

Our study shows important changes in health-care-seeking behaviour. In 2002/03, the poorest population quintile started using government health centres more often than private clinics whereas in 1999/2000 private clinics were the main source of health care. The richest quintile has increasingly used private clinics. Overall, it appears that the private sector remains a significant source of health care. Following abolition of user fees, we note an increase in the use of lower levels of care with subsequent reductions in use of hospitals. Total annual average expenditures on health per household remained fairly stable between the 1999/2000 and 2002/03 surveys. There was, however, an increase of US\$21 in expenditure between the 2002/03 and 2005/06 surveys.

Abolition of user fees improved access to health services and efficiency in utilization. On the negative side is the fact that financial protection is yet to be achieved. Out-of-pocket expenditure remains high and mainly affects the poorer population quintiles. A dual system seems to have emerged where wealthier population groups are switching to the private sector.

Keywords Cost sharing, access, equity, utilization

KEY MESSAGES

- The abolition of cost sharing in Uganda has improved access to health services, and the poor have benefited the most.
- After user fee abolition, illness reporting increased, especially among poorer quintiles, and utilization increased in the period immediately after the abolition, particularly by the poorest quintile.
- The new policy has led to efficiency gains with increased use of lower-level government health centres and concomitant reductions in the use of hospital services, although the wealthier have increasingly switched to private clinics.
- However, financial protection is yet to be realized, as out-of-pocket expenditure remains worryingly high for the poor and the rich.

Introduction

Inadequate financing for health by governments of low-income countries, and heavy reliance on out-of-pocket (OOP) payments at the point of use, are noted as some of the major challenges to the attainment of the Millennium Development Goals (MDGs) (James *et al.* 2005; Borghi *et al.* 2006). OOP expenditure on health remains significant, constituting over 40% of total health expenditure in 31 countries in sub-Saharan Africa (SSA) (WHO 2006). OOP expenditures, in the form of user fees, are a deterrent to seeking care and have been a subject of debate for decades. User fees have been noted to be a big hindrance to accessing health care especially for the poor (Mwabu *et al.* 1995; Collins *et al.* 1996; Van der Geest *et al.* 2000; Boyer *et al.* 2009), even if some have argued that this can be overcome once quality issues are adequately addressed (Costello 1997; Audibert and Mathonnat 2000). Evidence has shown that OOP payments for health care predispose households to incur catastrophic expenditure and eventually impoverishment (Wagstaff and van Doorslaer 2003; Khun and Manderson 2008). In light of this, the 2005 World Health Organisation (WHO) resolution on health financing urged member states to further develop their health financing systems to guarantee equitable access to good quality services, while providing protection against financial risk (WHO 2005). Similarly, the 2006 WHO health financing strategy for the African Region emphasized the need to raise additional resources, greater equity in health services financing and accessibility, efficient use of health resources and expanded coverage of health services, especially those targeting the poor (WHO 2006).

As a result, several developing countries have been undertaking health financing reforms, among which is the abolition of cost sharing. In the recent past, some countries have abolished user fees in public facilities: this has been the case in South Africa (for pregnant women and under-5s), Mali, Niger and Uganda with subsequent increases in utilization (Wilkinson *et al.* 2001; Burnham *et al.* 2004; Nabyonga *et al.* 2005; Ridde and Diarra 2009).

Earlier studies on abolition of cost sharing have focused largely on assessing increases in utilization. This paper explores, in the context of the Ugandan user fee abolition policy, whether it has contributed to improve equitable access to quality health services and enhanced financial protection. It further explores the changes in patterns of health care utilization and household health care expenditure especially for the poorer segments of the population. Few studies have looked at these aspects in the medium to long term, i.e. 3 to 6 years after abolishing the fees.

The analysis in this paper seeks to describe and contribute to better understanding of these changes.

The Uganda health system

The health system in Uganda is highly decentralized with the central level being responsible for policy formulation and oversight while the decentralized units are responsible for service delivery (MOH 2008a). Services are provided through public, private for-profit (PFP) and private not-for-profit (PNFP) sub-sectors (see Table 1). Services are delivered through a tiered system. National referral hospitals provide comprehensive specialist services and are also involved in teaching and research. Regional referral hospitals provide general preventive and curative services and specialist services, while general hospitals provide general preventive and curative services. Health centre IVs provide curative and preventive services, emergency surgery and blood transfusion services. Health centre IIIs and IIs, which are categorized as lower level health facilities, provide mainly ambulatory services.

In Uganda, low utilization of health services and poor health indicators (Statistics Department [Uganda] and Macro International Inc. 1996) were major concerns for a country that was pursuing poverty eradication measures. Uganda's 1997 Poverty Eradication Action Plan—a developmental framework aiming to halve the number of Ugandans defined as poor (living on less than US\$1 a day) by the year 2015—emphasized massive inputs into the social sectors, among which is health (MOFPED 2004). Health became a major priority following concerns that ill health was a major contributory factor to poverty. Within the health sector, a new Health Policy and a Health Sector Strategic Plan were developed and were both launched in August 2000 to be implemented within a sector-wide approach (SWAp) (MOH 1999a; MOH 2000). At around the same time, efforts were made to bring services nearer to the people through a decentralization reform with decentralized units (districts) having the autonomy to raise revenue locally for their activities (Government of Uganda 1997).

Despite these reforms, health services were still underfunded. Poor quality of services resulting from shortages of drugs and other supplies, and low and irregular salaries led to poor attendance in public health facilities. The country's decentralization policy, and the autonomy that followed it, gave many of the districts the window of opportunity to introduce cost sharing and generate local revenue for health services. Without

Table 1 Number of health facilities by level and ownership 2004 and 2006

Level of facility	Ownership							
	Government		PNFP		Private		Total	
	2004	2006	2004	2006	2004	2006	2004	2006
Hospitals	55	57	42	46	4	8	101	111
Health centre IV	151	155	12	12	2	1	165	161
Health centre III	718	762	164	186	22	7	904	955
Health centre II	1055	1332	388	415	830	261	2273	2008
Total	1979	2301	606	659	858	277	3443	3237

PNFP: Private not-for-profit.

Source: Mid-term review report of the Health Sector Strategic Plan II (MOH 2008a).

Table 2 Investments in the health system

Financial year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Government per capita expenditure in health (US\$)	3.05	6.0	7.6	7.9	7.8	9.98	7.84	8.2	12.7
Allocation to health as a % of total government budget	7.5	7.5	7.6	7.9	9.7	8.9	9.6	9.6	8.3
GDP per capita at 2002 constant prices (US\$)	302.9	300.3	293.1	291.1	291.4	304.2	295.9	366.9	391.9

Source: Annual health sector performance reports (MOH 2001; MOH 2006; MOH 2007; MOH 2008b; MOH 2009a); 2004/05–2008/09 health expenditure data, MOH; 2009 statistical abstract, Gross Domestic Product (GDP) data, Uganda Bureau of Statistics.

clear guidelines from the central Ministries of Health and Finance to support this at the district level, user fees were introduced in an *ad hoc* manner with charges being determined largely by service delivery levels. User fees provided revenue that could readily be used to provide incentives to health workers (top ups), to purchase medicines and to ensure cleanness of the health facility. Although a report by Ministry of Health in 1999 stated that cost sharing was an expression of the people's participation in the functioning and management of health facilities (MOH 1999b), its equity impact in terms of service utilization and as a viable source of health financing continued to be hotly debated.

In 2001, the government of Uganda abolished user fees at public health centres and hospitals. At hospital level, the government allowed a dual system: a paying private wing for those who can afford it and a free wing for those who are not in a position to pay. The decision to abolish user fees was taken amidst concerns that ill-health and high costs related to accessing services were hindrances to the realization of poverty eradication goals (MOFPED 2004). The policy was meant to improve access to health services among other things, especially for the poor who could not access health care because of its cost. The expectation was that more people would use the public health services and that OOP expenditure for health care would decrease. This was expected to occur across the population, but especially among the poor.

System-wide measures were put in place by the government to minimize the effects of this policy change. An immediate release of funds (US\$526 315; US\$0.02 per capita) for the purchase of drugs was provided,¹ alongside revision of the procurement guidelines, to minimize delays in the delivery of drugs to lower levels. There was an increase in the health sector allocation to compensate for the loss in revenue from user fees, and more flexibility in the utilization of funds which allowed districts to channel funds to areas previously supported by user

fees. Wages for health workers were increased in the 2001/02 financial year by 14–63% across the different cadres of workers and, in addition, management of health workers' pay roll was greatly improved, to ensure better human resources management.

The Government of Uganda continued to increase investments in the health sector, though modestly, so as to improve physical access and quality of care in health facilities. Government per capita expenditure on health increased from US\$3.07 in 2000/01 to US\$7.6 in 2001/02 to US\$9.98 in 2005/06 (see Table 2); per capita expenditure on medicines increased from US\$0.8 per capita in 2000/01 to US\$1.2 per capita in 2002/03, to US\$1.7 in 2006/07, while physical access (i.e. proportion of the population living within a 5 km radius of a health facility) improved from 57% in 2001/02 to 72% in 2005/06. Percentage of approved posts filled by trained staff in the health sector improved from 33% in 1999/00 to 69% in 2004/05 (MOH 2006; MOH 2007; MOH 2008b; MOH 2008c; MOH 2009a). Over the same period, the country experienced a growth in GDP per capita from US\$303 in 2000/01 to US\$367 in 2007/08 (Uganda Bureau of Statistics 2009).

Methods

Data sources

The data used in this paper are based on three datasets of the Uganda National Household Surveys. The Uganda Bureau of Statistics conducted nationally representative surveys from August 1999 to July 2000 (1999/2000 survey), from May 2002 to April 2003 (2002/03 survey), and from May 2005 to April 2006 (2005/06 survey). The surveys are composed of several modules looking into socio-economic, agricultural and community activities. Health-seeking behaviour and household consumption expenditure are captured in the socio-economic module.

Sampling design

In the 1999/2000 survey, the sampling design was a stratified two-stage sampling design except in some districts where the sample was selected in three stages due to lack of an enumeration area frame. In the case of districts with a two-stage sampling design, the first stage sampling unit was the enumeration area of the 1991 population census, and the second stage sampling unit was the household. For districts with a three-stage design, the sampling units were, at the first stage, the parish; at the second stage, the LC 1 (village); and at the third stage, the household.

In the 2002/03 survey, the Uganda National Household Surveys sample was drawn through a stratified two-stage sampling design. The sampling frame used for selection of first stage units was the list of enumeration areas with the number of households based on the cartographic work of the 2002 population and housing census. A total of 972 enumeration areas (565 in rural and 407 in urban areas) were covered. In order to select the second stage units, which are the households, a listing exercise using listing schedules was done in all selected enumeration areas.

In the 2005/06 survey, a two-stage sampling design was used to draw the sample. At the first stage, enumeration areas were drawn with probability proportional to size, and at the second stage, households (which are the ultimate sampling units) were drawn using simple random sampling. The sample of enumeration areas for the Uganda National Household Surveys 2005/06 was selected using the Uganda Population and Housing Census Frame for 2002. Initially, a total of 600 enumeration areas was selected. These enumeration areas were allocated to each region on the basis of the population size of the region. However, in the Northern region, the number of enumeration areas drawn was doubled. The extra enumeration areas were to be held in reserve to allow for enumeration area attrition due to insecurity. After this sample was drawn, it was realized that the sample size in 10 districts needed to be increased to about 30 enumeration areas in each district to have an adequate sample size for separate analysis.

Sample size

In all the three surveys, the size required for a sample was determined by taking into consideration several factors, the three most important being: the degree of precision desired for the survey estimates, the cost and operational limitations, and the efficiency of the design. The sample sizes were 10 696 households with 57 385 individuals, 9711 households with 50 504 individuals, and 7426 households with 39 322 individuals in the 1999/2000, 2002/03 and 2005/06 surveys, respectively.

In this paper, the household sample size used for each survey was, respectively, 10 696 households with 56 969 individuals (99.2% of the initial sample), 9711 households with 49 562 individuals (98.1% of the initial sample) and 7426 households with 39 310 individuals (99.9%) for 1999/2000, 2002/03 and 2005/06.

Data manipulation and analysis

We started with identifying those household members who reported an illness in the last 30 days. This criterion was

consistently used in all three surveys. In all surveys, illness was reported as having suffered an illness or injury in the 30 days prior to the survey. In a few cases responses were either missing or the response was unknown (0.8%, 1.9% and <0.1% for the 1999/2000, 2002/03 and 2005/06 surveys, respectively). These household members were excluded from further analysis.

Household members who reported having had an illness or being injured in the 30 days prior to the survey date were asked whether any health worker (doctor, nurse, pharmacist or traditional healer) was consulted for the illness or injury. A patient was considered 'to have consulted' only if they sought help outside the home which was not provided by family members or friends. In the 1999/2000 and the 2002/03 surveys, this included use of hospitals (public and privately owned), private clinics, health centres, drug shops, pharmacies and traditional doctors. In the 2005/06 survey, this included use of community health workers, HOMAPAK² drug distributors, ordinary shops,³ drug shops, pharmacies, private clinics, health centres, hospitals (public and privately owned) and traditional healers. However, HOMAPAK community distributors were not included in the analysis because they were few and only reported in the 2005/06 survey. Ordinary shops selling medicines, drug shops and pharmacies have been lumped together. Household members who experienced an illness and who did not seek health care were asked why this was the case. In all the three surveys, coding was made to fit into any of the following options: a mild illness, facilities that are too far, facilities that are too costly or any other reason.

Data on health care expenditure are provided per household and are not specifically related to an illness or injury episode. Health care expenditure is shaped by consultation fees, prices of medicines, hospital or clinic charges, traditional doctor fees and the accompanying remedies provided, and any other expenses in the previous 30 days for the three surveys. In all cases, the health care expenditures are at 2000 constant prices based on the consumer price index. Total household expenditure was used to compute quintiles.

Basic tables and cross-tabulations of means and sums were used as the main approach to data analysis. Tests for statistical significance were also done where appropriate.

Limitations of the study

Given the importance and the specificity of the PNFP sub-sector in the Ugandan health system, and given the policy in Uganda to partially subsidize the PNFP health care delivery sub-sector, it would have been desirable in the analysis to make a distinction between the PNFP and the rest of the private sector. This was unfortunately not possible because of the initial design of the surveys.

It would also have been desirable to distinguish 'drug shops' from 'pharmacists' given the differences in technical expertise between the two. However, this was not possible because of data limitations.

Results

The first aspect of our analysis is the frequency of reported illness. In Figure 1 we present the percentage of the population

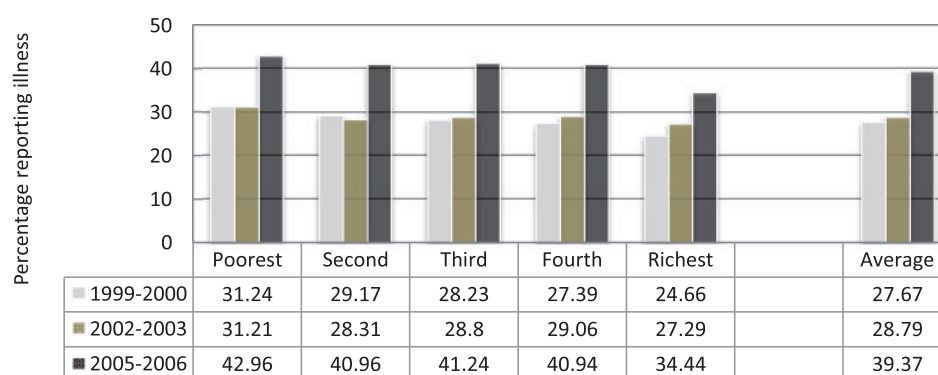


Figure 1 Percentage of the population reporting an illness episode 30 days prior to the survey. *Source:* Uganda National Household Surveys 1999/2000, 2002/03, 2005/06.

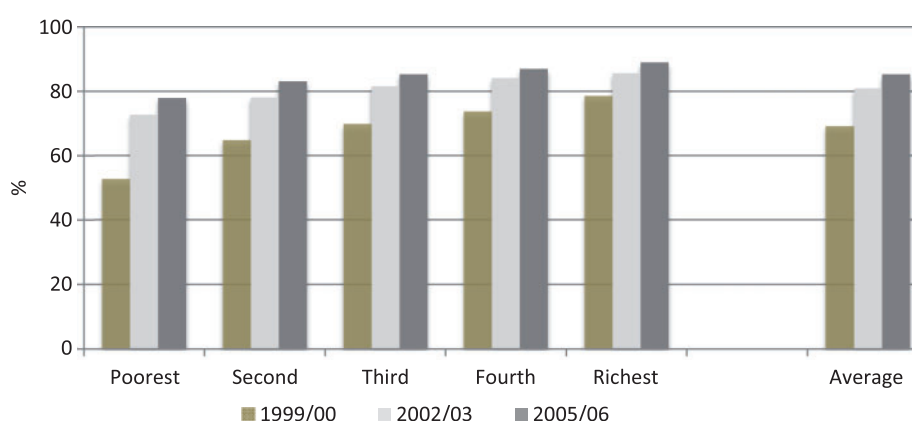


Figure 2 Percentage of population that consulted following an illness episode. *Source:* Uganda National Household Surveys 1999/2000, 2002/03, 2005/06.

in the different surveys reporting an illness or injury in the 30 days prior to the survey. The overall population is broken down into quintiles. It appears that a smaller percentage of individuals from households in the richest quintile reported an illness compared with those individuals from the poorest quintiles (see Figure 1). In all quintiles a higher proportion of the population reported an illness in 2005/06 compared with earlier surveys. The overall increase between 2002/03 and 2005/06 was 37%. This was much higher than the increase between 1999/2000 and 2002/03 when it was only 4%. When looking at the poorest quintile, there was an increase of 38% between the 2002/03 and 2005/06 surveys. There was no increase between the 1999/2000 and 2002/03 surveys. The increase in reported illness incidence between 2002/03 and 2005/06 is statistically significant ($P < 0.01$) both for the richest and poorest quintiles.

A second aspect of the analysis was whether the population seeks health care. The percentage of the population that consulted formal health services⁴ following an illness episode is shown in Figure 2. Comparing the population in the richest quintile with the population in the other quintiles, it appears that households in the richest quintile consulted more often than other categories for all the periods studied.

Overall, the highest increase in consultation was between the 1999/2000 and 2002/03 surveys (17%). There was only a 5%

increase between the 2002/03 and 2005/06 surveys. This increase was most pronounced in the poorest quintile: an increase of 38% between 1999/2000 and 2002/03; and an increase of 7% between 2002/03 and 2005/06. Corresponding figures for the richest quintile were 9% and 4%, respectively. Considering the entire period covered by the surveys, the increase in consultation was highest among the poorest 25% of the population. This increase was statistically significant for all quintiles ($P < 0.01$). However, the statistical significance was highest among the poorest 20%. The gradient between the poorest and richest quintiles for consultation was greater between the 1999/2000 and 2002/03 surveys, than it was between the 2002/03 and 2005/06 surveys.

In a third aspect of our analysis we explored where individuals did consult. Figure 3 indicates where the first consultation took place for those who experienced an illness episode and who decided to consult a health provider. Overall, there was an increase in utilization of health services in both the public and private sector, more specifically in government health centres and in private clinics.

Looking at the overall picture, and comparing private and government health facilities, the private sector remains the most frequently used source of health care. Clinics and health centres are used more often than hospitals. Clinics and health

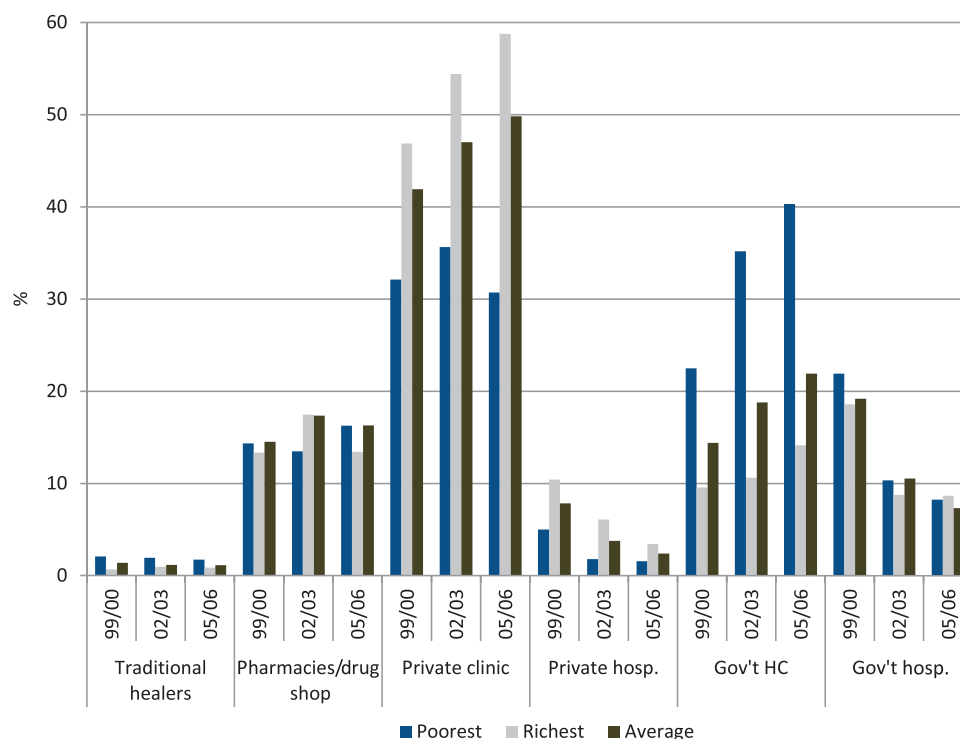


Figure 3 Place of first consultation. Source: Uganda National Household Surveys 1999/2000, 2002/03, 2005/06.

centres registered increases in utilization while for hospitals the reverse trend was noted. In the 1999/2000 survey, public hospitals were used more frequently than health centres. Following the abolition of cost sharing, however, we note a change in utilization whereby health centres are used more often than hospitals. Private hospitals registered a consistent decreasing trend in utilization; a 52% reduction between the 1999/2000 and 2002/03 surveys and a 37% reduction between the 2002/03 and 2005/06 surveys. Traditional healers play only a marginal role.

The decrease in utilization of government and private hospitals is statistically significant ($P < 0.001$). The increase in utilization of government health centres was statistically significant between 1999/2000 and 2002/03 ($P < 0.001$), while the increase between 2002/03 and 2005/06 was not ($P = 0.15$). The utilization of pharmacies/drug shops shows an uneven pattern. In the case of traditional healers, there is a statistically significant decline.

Comparing private clinics and government health centers, the poorest quintile consulted private clinics more often in 1999/2000. This pattern changed dramatically in 2002/03 where we see the poorest quintile using government health centres more than private clinics. On the other hand, the richest quintile utilized private clinics more than government health centres in all the surveys. Both the poorest and richest quintiles registered decreasing trends in utilization of hospitals. Use of private hospitals is lowest among the poorest quintile.

The decrease in utilization of government and private hospitals for the poorest and richest quintiles in the period covered by the three surveys is statistically significant ($P < 0.001$). The increase in utilization of government health

centres was statistically significant across the surveys for the poorest quintile ($P < 0.001$), but not for the richest quintile ($P = 0.25$ between 1999/2000 and 2002/03; $P = 0.01$ between 2002/03 and 2005/06). The increase in utilization of private clinics among the poorest quintile between 1999/2000 and 2002/03 was not statistically significant ($P = 0.15$), while the decrease between 2002/03 and 2005/06 was also not statistically significant ($P = 0.08$). The increases in use of private clinics between all the surveys for the richest 20% were statistically significant ($P < 0.01$).

We computed concentration indices for the general use of health services when sick, and specifically for use of government health centres. The results are presented in Table 3. The concentration indices show a disproportionate concentration of general use of health services among the rich, but a disproportionate concentration of use of government health centres among the poor. That means that, in general, people from rich households seek health care more often when ill than those from poor households. However, the opposite is true for the use of government health centres. People from poor households seek health care from government health centres more often than those from rich households.

A fourth aspect of the analysis is an investigation of the extent to which 'cost' is a hindrance to seeking health care. Table 4 presents the relative importance of the reasons for not seeking care. Throughout the different surveys 'available facilities being costly' became less important as a reason for not seeking health care. This is especially true for the richest quintiles where 'mild illness' became the leading reason for not seeking health care. The decrease between 1999/2000 and 2002/

Table 3 Concentration indices for utilization

	General use of services			Use of government health centres		
	1999/2000	2002/03	2005/06	1999/2000	2002/03	2005/06
Concentration index (CI)	0.0735	0.0322	0.0246	-0.1449	-0.2205	-0.2159
Variance (CI)	0.0005	0.0001	0.0001	0.0018	0.0026	0.0027
Standard Error (CI)	0.0223	0.0080	0.0071	0.0427	0.0513	0.0522
t-test (CI)	3.29	4.04	3.47	-3.40	-4.30	-4.14

Table 4 Reasons for not consulting, in percentages

Wealth quintiles	Illness mild			Facilities are too far			Available facilities are costly			Other		
	99/00	02/03	05/06	99/00	02/03	05/06	99/00	02/03	05/06	99/00	02/03	05/06
Poorest	19.14	29.68	32.77	13.65	20.51	14.32	62.03	41.32	35.19	5.18	8.5	17.72
Second	29.62	38.35	36.27	11.91	17.98	10.29	55.61	37.88	40.93	2.87	5.8	12.5
Third	37.17	35.03	45.27	12.63	19.56	10.7	44.83	36.29	31.09	5.37	9.11	12.94
Fourth	37.49	44.87	51.21	12.98	20.51	7.00	47.34	27.00	27.29	2.20	7.62	14.49
Richest	58.74	51.38	64.11	4.85	12.53	3.37	32.01	27.31	19.02	4.40	8.78	13.5
Total	34.76	38.83	45.16	11.52	18.46	9.38	49.66	34.78	31.19	4.06	7.93	14.27

Source: Uganda National Household Surveys 1999/2000, 2002/03, 2005/06.

03 was much higher for the poorest quintile at 33.4% compared with 14.7% for the richest quintile. However, between the 2002/03 and 2005/06 surveys, the decrease was much higher for the richest quintile at 30% compared with 15% among the poorest quintile. All the reductions across the surveys are statistically significant ($P < 0.001$). Overall, 'facilities being too far', as a reason for not seeking care initially, increased by 60% between the 1999/2000 and 2002/03 surveys, but decreased by 49% between 2002/03 and 2005/06. We note that the decrease between 2002/03 and 2005/06 was higher for the richest quintile at 73% compared with the poorest quintile at 30%.

A fifth aspect considered in the analysis is household (OOP) expenditure on health care. Household OOP expenditure was annualized and converted into US\$ in 2000 prices. Total annual average expenditures on health per household remained fairly stable between the 1999/2000 and 2002/03 surveys. There was, however, an increase of US\$21 between the 2002/03 and 2005/06 surveys (see Figure 4). Expenditure categories include consultation, expenses on medicine, hospital/clinic charges, traditional healer and others. The surveys made a distinction between consultation and other charges at hospital or clinic level. It is not clear from the surveys whether there is an overlap between these categories, although other charges at hospital and clinic include expenditure for laboratory services and additional supplies⁵ like syringes, intravenous fluids (IV fluids), gloves and cotton wool. The highest increase in the expenditure categories between the 2002/03 and 2005/06 surveys was in the category of hospital/clinic expenses: expenditure increased by US\$42.

Table 5 provides details of household expenditure on health care according to wealth quintiles across the various categories. Household expenditure on health care increased for all quintiles between 2002/03 and 2005/06. This increase was similar across quintiles, ranging from 7% among the poorest quintile to 30% among the richest quintile. Hospital/clinic charges experienced

the greatest increase compared with other items of expenditure; an increase of 56%.

In the 1999/2000 survey, traditional healers, who on the whole play a relatively marginal role in health care provision, accounted for the highest expenditure. Looking at the 1999/2000 survey, other than expenditure in the traditional sector, it appears that consultation fees accounted for the highest amount of expenditure. However, this pattern changes in the subsequent surveys, where the highest expenditure is on hospital/clinic charges.

Discussion

Improving financial protection, especially for the poor, requires more than abolishing fees for health services. System-wide investments must be put in place to improve the quality of services, their accessibility, to ensure efficient use of health resources and sustainability of the gains in the medium to long term.

Reported illness

Our data point to a striking increase in illness reporting, which was more marked between the 2002/03 and 2005/06 surveys than between the 1999/2000 and 2002/03 surveys. We emphasize the fact that the definition of illness has been consistently the same in all three surveys. Several reasons could account for this marked increase. First, we suspect a rise in awareness on health issues within the population as a result of several efforts. At the community level, village health teams in several districts were put in place in the 2002/03 financial year (MOH 2000), involving a team of 10 people for every village who provide health messages and support the community in various health aspects. Second, the education sector also registered increases

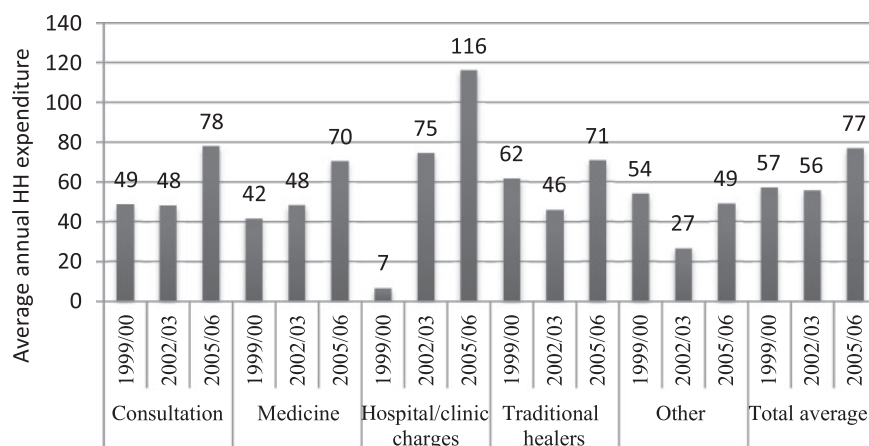


Figure 4 Annual average household expenditures in US\$, 2000 prices, Uganda. *Source:* Uganda National Household Surveys 1999/2000, 2002/03, 2005/06. The category 'other' includes expenditure on hotel services when admitted and transport costs to health facilities.

Table 5 Annual average household expenditures in US\$, 2000 prices

Wealth quintile	Consultation fees			Medicines			Hospital/clinic charges			Traditional doctors			Others			Total annual average		
	99/00	02/03	05/06	99/00	02/03	05/06	99/00	02/03	05/06	99/00	02/03	05/06	99/00	02/03	05/06	99/00	02/03	05/06
Poorest	6	13	12	13	14	17	2	24	25	17	18	15	11	3	18	15	17	18
Second	10	31	25	20	20	28	3	35	39	29	24	26	46	16	20	25	24	29
Third	15	34	31	31	31	45	5	44	71	35	24	59	45	10	31	39	35	48
Fourth	19	71	74	44	54	70	7	75	103	73	51	79	60	9	44	58	61	72
Richest	138	72	151	91	114	171	14	157	241	160	97	148	89	73	76	128	124	162
Total	49	48	78	42	48	70	7	75	116	62	46	71	54	27	49	57	56	77

Source: Uganda National Household Surveys 1999/2000, 2002/03, 2005/06.

The category 'other' includes expenditure on hotel services when admitted and transport costs to health facilities.

Household size for each survey was respectively was 5 (5.36509), 5 (5.363814) and 6 (5.787879) persons in 1999/2000, 2002/03 and 2005/06.

in enrolment under the universal primary education programme since 1997. Moreover, in the last 5 years a universal secondary education programme was started (Grogan 2006). An increase in literacy levels in itself can raise the degree of health awareness and thus modify health-seeking behaviour. Third, a true increase in disease incidence may yet be another explanation; however, no epidemic of a national scale has been registered over the period of the survey (MOH 2009b). It seems plausible therefore that the increase in the proportion of individuals reporting an illness in the 30 days prior to the survey is due to improvement in awareness and health-seeking behaviour rather than in an increase in illness incidence. Another explanation, however, could be that as the reduction in prices at government facilities increased use and people adjusted to the reality of easier access, they became more likely to treat symptoms of illness as significant and potentially needing treatment, so leading to an increase in self-reporting of illness.

Patterns of utilization of health services

The results show that although the poor declare a higher illness incidence, they consult formal health services less than the

richer quintiles. Similarly, earlier studies found that the poor and vulnerable groups experienced a higher burden of disease but had less access to health services than those less poor (Kiwanuka *et al.* 2008). The significant use of the private sector by all quintiles as seen in our analysis, before as well as after abolition of user fees, has also been documented in other studies (Pariyo *et al.* 2009; Rutebemberwa *et al.* 2009). The highest increase between surveys in the use of the private sector was registered in the richest quintile. This finding was also reported in other studies (World Bank *et al.* 2008). Several explanations have been reported for this: private health services have been reported to offer better quality services (Seiber and Robinson 2007; Rutebemberwa *et al.* 2009) and to have more 'competent staff' (Seiber and Robinson 2007; Kiwanuka *et al.* 2008).

Abolition of cost sharing attained the objective of improving access to health care services. Indeed, utilization of health services increased soon after the policy change between the 1999/2000 and the 2002/03 surveys. The increase in illness reporting for all quintiles was highest between the 2002/03 and the 2005/06 surveys, but the highest increase in utilization occurred between the 1999/2000 and the 2002/03 surveys, coinciding with the time user fees were abolished. This finding

is in line with the routine monitoring of the sector that has registered a per capita increase in utilization from 0.4 in 1999/2000 to 0.6 in 2000/01 (MOH 2001). Although increases were higher in the public sector, the private sector also registered modest increases but not for the poorest quintile. A similar finding has been documented in earlier studies as well (Xu *et al.* 2006). Poorer quintiles registered the highest increase in utilization of government health centres and for the poorest quintile there was a reduction in utilization of private clinics between 2002/03 and 2005/06. This suggests that the policy change may have contributed to increase the population's use of government first-line health services, i.e. health centres. The reduction in utilization of hospitals could be looked upon as an efficiency gain, encouraging people to seek care at lower level units where costs are lower. In the 1999/2000 survey, expenditure for care provided by traditional healers accounted for the highest expenditure yet had the lowest utilization, pointing to very high charges in this sub-sector which, by definition, remains largely unregulated.

Expenditure patterns

The declining trend in cost being given as a reason for not seeking care is noted, although it remains significant. Expenditure on health care by households is still significant, with important increases noted between the second and third surveys (2002/03 and the 2005/06). Overall, our data point to an average increase of US\$21 (in 2000 prices) in OOP expenditure per household between 2002/03 and 2005/06. World Bank data point to an increase of US\$6 in average cost per utilization over the same period (World Bank *et al.* 2008). Similarly, Basaza *et al.* (2010) found that OOP expenditure remains an important feature of health care financing in Uganda, despite the blanket abolition of user fees in government facilities. The lower increase in expenditure between 2002/03 and 2005/06 among the poorest quintile may imply lower capacity to pay. This is further supported by the fact that 'costly facilities' is cited more often by the poorest quintile than by other quintiles as a reason for not seeking care.

Similarly the World Bank study showed that although the poor spent a lower percentage of their consumption expenditure on health, the incidence of catastrophic spending was highest in the lowest quintile (World Bank *et al.* 2008). This may largely be accounted for by health system gaps and lack of basic inputs with subsequent failure of health facilities to provide optimal services. Surveys have shown that lack of essential supplies has adversely affected service delivery especially at the lower levels. For example, the percentage of health centre IIs experiencing stock-outs of essential medicines has been close to 80% for the last 3 years, compared with the national average of close to 70% (MOH 2006; MOH 2007; MOH 2008b; MOH 2009a). Only 52% of health centre IIs were able to provide antenatal care (MOH and Macro International Inc. 2008) and only 55% were in a position to offer child immunization with all equipment available (MOH and Macro International Inc. 2008). The lack of inputs into service delivery has led to patients having to purchase supplies and medicines from the private sector. This is further supported by our results that point to excessively high increases in hospital/clinic expenses.

Investment in the health system is still inadequate

Although efforts were put in place to strengthen the health system and improve quality of care, investments remain far from adequate. Funding for the sector remains very low. The government's per capita expenditure on health has only increased marginally from US\$7.6 in 2001/02 to US\$9.98 in 2005/06. It was US\$8 in 2006/07, US\$8.2 in 2007/08 and US\$13 in 2008/09, while allocation to health as a percentage of total government budget remained around 9% over the same period. This falls far below the estimated per capita requirement of US\$41 (MOH 2009c) and below the Abuja target of 15% of government budget allocated to health (OAU 2001). Per capita expenditure on medicines and essential supplies remains low, at only US\$0.8 in 2000/01, US\$1.2 in 2002/03 and US\$1.7 in 2006/07. This is far below the estimated per capita requirement of US\$3.5 [excluding antiretrovirals (ARVs), artemisinin combination therapies (ACTs) and insecticide-treated bed nets (ITNs)]. As a result, stock-outs of essential medicines in health facilities have remained above 60% for the last 7 years (MOH 2001; MOH 2006; MOH 2007; MOH 2008b; MOH 2009a). Only 69% of approved posts are filled by trained personnel and in some districts nursing assistants form close to 50% of the health workforce.

The quality of services offered in government facilities has remained low (Uganda Bureau of Statistics 2004). This is perhaps one of the reasons why better-off quintiles have shifted to using more private sector services, and the poor are having to spend on commodities, supplies and private clinics because of stock-outs in government health facilities. Other studies have also noted that if the poor are to benefit from free services, investments should be made in improving the quality of services (Van der Geest *et al.* 2000). Similarly, Gilson and McIntyre (2005) emphasize the need for careful action in the removal of user fees if it is to bear positive and sustainable results.

On the other hand, informal payments have been increasingly reported in public health facilities. The national service delivery survey reported that over 30% of women who attended antenatal care in public facilities paid informal fees (Uganda Bureau of Statistics 2004). This could be a result of the low salaries—although salaries were increased soon after the abolition of fees, there has not been further increase since then. Earlier studies also showed continued health worker disgruntlements after the pay increases, which could have resulted from the loss of a source of resources—user fees—that were readily available as needed (Nabyonga-Orem *et al.* 2008). It cannot be excluded that the amounts of fees collected were significantly higher than reported, implying a real net decrease in health workers' income that is not adequately compensated for by salary increases. This real loss in revenue could contribute to explain why informal charges have persisted.

Conclusion

The abolition of cost sharing in Uganda has improved access to health services over time. The poor have benefited the most. The new policy also led to efficiency gains with increased use of lower-level government health centres and concomitant reductions in the use of hospital services. Financial protection, however, is yet to be realized. OOP expenses remain worryingly

high for the poor and the rich. Households continue to bear a large burden in the financing of health services. A dual system of service delivery is emerging with the rich largely switching to the private sector. Use of the private sector is significant in a context where regulatory frameworks are sorely lacking.

Abolition of cost sharing is a means and not an end in itself. Hence, the debate on whether it is a successful policy or not needs to keep track of the objectives to be attained. There is a need to significantly increase investment in the health sector and address system gaps in service delivery if the poor are to have more effective financial risk protection. There is also a need to build effective partnerships with the private sector, still an important source of health care. The design of a regulatory framework should ensure quality and control pricing.

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Conflict of interest

None declared.

Endnotes

- ¹ This represents an additional US\$0.02 per capita for drugs (current public per capita drug expenditure is US\$1.2).
- ² Home-based treatment of malaria using a pack of antimalarials.
- ³ These are shops selling other merchandise but also have a section for selling medicines.
- ⁴ Formal health services include services provided outside the home, by a health provider.
- ⁵ When all these supplies are out of stock in the health facility, patients are asked to buy from private pharmacies.
- ⁶ This is Government of Uganda funding including donor budget support and donor projects in the Medium-Term Expenditure Framework.

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