

User fees, health staff incentives, and service utilization in Kabarole District, Uganda

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Objective To determine the impact of user fees on the utilization of health services in a community-based cost-sharing scheme in Kabarole District, western Uganda.

Methods Of the 38 government health units that had introduced user-fee financing schemes, 11 were included in the study. Outpatient utilization was assessed as the median number of visits per month before and after cost sharing began.

Findings After the introduction of cost sharing, overall utilization of general outpatient services, assessed by combining the data from all the participating units, dropped by 21.3%. Utilization increased, however, in facilities located in remote areas, while it decreased in those located in urban or semi-urban areas. The increased utilization in remote facilities was considered to be largely attributable to health workers' incentive payments derived from cost-sharing revenues.

Conclusions Incentive payments led the health workers to offer improved services. Other factors may also have been influential, such as an improved drug supply to health facilities and increased public identification with community projects in remote areas.

Keywords Fees and charges; Employee incentive plans; Cost sharing; Community health centers/utilization; Health; Health care surveys; Uganda (*source: MeSH*).

Mots clés Tarifs et honoraires; Plan pour améliorer efficacité et productivité; Partage coût; Centre public santé/utilisation; Enquête système de santé; Ouganda (*source: INSERM*).

Palabras clave Honorarios y precios; Planes para motivación del personal; Seguro de costos compartidos; Centros comunitarios de salud/utilización; Encuestas de atención de la salud; Uganda (*fuentes: BIREME*).

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Introduction

One of the consequences of the disruption following the conflict in Uganda was that the salaries of health workers were often irregularly paid; indeed, delays of over six months were common (1). Furthermore, the salaries were very low, e.g. US\$ 50 for a physician, US\$ 30 for a medical assistant, and US\$ 10 for a nurse. These workers therefore sought additional sources of income and could not spend enough time on health care. The situation was particularly pronounced in remote areas, where opportunities

for supplementary employment were comparatively limited. This resulted in the suboptimal utilization of health services: attendance rates ranged from 0.1 to 0.3 visits per head per year (1). Because of these circumstances a user-fee system was introduced in Kabarole District as a staff incentive mechanism, although there was an underlying concern that this step might actually reduce utilization further. In Ghana, for example, a significant drop in the utilization of health facilities was reported in 1985 after user fees were substantially increased (2). In Kenya, the number of male visitors to sexually transmitted disease clinics in the public sector fell by 40% after user charges for outpatient clinics were introduced in 1989 (3). Studies in many other developing countries have shown comparable effects (4–8). Similar conclusions have been drawn from studies in industrialized countries (9–11).

The introduction of user fees usually involves a top-down approach in which government introduces fees for health services. Few examples have been reported where cost sharing began as a community initiative and resulted in increased funds going directly to the suppliers of services. In El Salvador, however, autonomous community health boards

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created decentralized funds based on community-initiated user fees for ambulatory care (12). We are unaware of comparable instances in sub-Saharan Africa. We have found no published information on cost-sharing revenues being used for the development of human resources, including the payment of incentives to staff receiving very low salaries. Here we present the results of a community-based cost-sharing scheme that was developed and implemented by communities themselves in Uganda's Kabarole District. Our principal aims were to investigate the impact of user fees on the utilization of outpatient health services and to discover how staff perceived an incentive programme.

Kabarole District cost-sharing scheme

Kabarole District facilitated the introduction of cost sharing among government health units on the basis of the ability of communities to pay for services. The process of introducing cost sharing was supported by the locally elected representatives of the village local councils and implemented by health unit management committees. The communities were represented on these committees by several people. The relationships between the committees and the respective communities were generally good.

The cost-sharing initiative was driven by the communities. The role of the district health management team and the district administration was to inform communities about their options and to help them to begin pilot projects if they decided to initiate cost sharing. The first step was always a public information session in the catchment area of a health care facility. The members of the district health management team and representatives of the district administration discussed the options and implications of cost sharing in this forum. The political representatives at village and subcounty level were particularly involved in this process. The local councils, elected by the communities, usually had their trust. After the initial information session, several public meetings in the respective communities were held by the local councils and the chiefs, and all community members were invited to attend. The district health office indicated that most meetings were well attended, and the area chiefs gave a similar report on the basis of observations made by district representatives. It was made clear to the communities that no timelines, deadlines, or model prototypes were being laid down for decision-making and that they should follow their own processes for arriving at decisions. The final decisions were reached in the villages by building agreement in accordance with traditional patterns that had worked quite well in the past and were still widely used for other community issues. Each community moved at its own pace. In most communities the decision-making process for cost sharing lasted at least four to six months.

Each health unit management committee was composed of six to eight members, including the

following: local council 1 (consisting of elected representatives at the village level), chief, community members appointed by the local council, and a health professional, usually the senior medical assistant in the health facility. Public meetings were held at which the committee gave an account of its work and explained how the cost-sharing funds were spent. Elected community members thus represented the community and were directly accountable to the public and to the elected political representatives at subcounty level.

The fees were determined by the health unit management committees in consultation with the local civic leadership (local council) and were ratified at public meetings. They were usually between 50 and 500 Ugandan shillings (US\$ 0.05–0.50) for one consultation, including drugs. The money collected was locally managed and used under the responsibility of the management committees and the local councils. The budgets for these funds were thus under local control. Most of the funds were usually spent on supplementing low salaries, i.e. on staff incentives. Exemption schemes for poor people were established through the local council system.

Methods

The sample of dispensaries and health centres was selected from 38 peripheral government health facilities in Kabarole District. A two-stage selection process was used: firstly, all government health units that had introduced cost-sharing schemes at least a year before the start of the study were selected; secondly, all the facilities that met certain other criteria were finally included. These criteria were: a medical assistant was in charge of each facility; and, during the period under investigation, there had been no staff transfers, no obvious drug shortages, and no record of a major disease outbreak in the catchment area. These restrictions were applied in order to control for confounding factors that might influence the utilization rates of general outpatients at peripheral health facilities and to make the sample health units as comparable with one another as possible. Health facilities were classified as urban/semi-urban if the nearest settlement had a population of 5000 or more, or as rural if the nearest settlement was of fewer than 2000 people.

Utilization was defined as the number of outpatient visits during a given period. Inpatient days were not investigated. The number of outpatient visits for each month during the period assigned for a health facility, i.e. a year or more, was compiled from clinical record books and attendance registers maintained by all government health facilities as part of the state health information system. These data were tracked for a year or more, depending on the starting dates of the cost-sharing schemes, and were checked against the monthly reports on outpatient visits submitted by the people in charge of the health facilities to the district health department. If

discrepancies occurred they were examined and corrected. The median monthly outpatient utilization was calculated for the two periods of observation, i.e. before and after the introduction of cost sharing. Medians were used instead of means because the number of monthly outpatient visits was not distributed normally. In each facility, medians were determined for overall and malaria-related outpatient visits. Malaria, the most frequent cause of morbidity and mortality in Kabarole District, was selected in order to investigate the impact of user fees on the disease-specific utilization of services involving outpatient visits.

Shortages of drugs were verified by consulting the records of the country's essential drugs programme, supported by the Danish International Development Agency. Information on staff transfers was obtained by questioning health staff and consulting records in the district health department. Data on disease outbreaks were gathered by examining clinical record books, interviewing health staff, and making inquiries of the district health director. The people in charge of the selected health units gave details of how the funds collected were spent and were asked how the incentive payments supplemented their income and influenced their work. In all health units the level and regularity of incentive payments to health staff were determined.

The data were collected in 1993. A data collection sheet was used which made it possible to first, display and calculate the median monthly number of general outpatient visits and outpatient visits of malaria patients for each health facility; second, record drug shortages in the health facilities; third, record staff transfers during the period of observation. A brief structured questionnaire was used in interviews with health staff.

The monthly outpatient visits for each health facility before and after the introduction of cost sharing were entered into Stata 5.0. The normality of the distribution of the monthly number of outpatient

visits was determined by displaying the data and applying the Shapiro-Wilk test. The medians of the monthly outpatient visits before and after the introduction of cost sharing were determined by means of the respective Stata commands. The median numbers of outpatient visits were compared by applying the non-parametric Mann-Whitney U test with a significance level of 0.05. The study was approved by the Ugandan Ministry of Health and the district health director.

Results

Health units included in the analysis

All 38 government health facilities had introduced cost sharing and 28 of them had started to collect user fees more than a year before the study. Eleven government health units met the criteria for inclusion in the final analysis. They were well distributed, representing all six counties in the district. Four of them were health centres in urban or semi-urban areas and/or on main roads and close to the district capital, while seven were dispensaries in rural and remote areas. All 11 facilities correctly maintained clinical record books and daily attendance registers and each was run by a medical assistant. The records of the essential drugs programme showed that regular deliveries of drug kits were made. No transfers of professional staff were reported and/or recorded.

Utilization rates

The mean observation period was 25.7 months (range 16–39 months) before and after cost sharing started. Utilization by outpatients is shown in Table 1. There was a decrease in overall utilization from 759 183 visits to 597 411 visits after cost sharing was introduced. However, whereas utilization declined in five units, it increased in six. Four of the units where utilization declined were in urban or semi-urban townships of higher socioeconomic status than the

Table 1. Overall utilization of outpatient health services in 11 health units, Kabarole District, Uganda

Health unit	Location of health unit	Before cost sharing		After cost sharing		% change
		Total no. of cases	Median no. of cases per month	Total no. of cases	Median no. of cases per month	
Butiiti	Rural	27 271	1240	38 663	1333	+7.0
Kamwenge	Urban	180 497	6942	119 806	4792	-30.9
Kasule	Rural	22 607	1413	53 901	1540	+9.0
Kicheche	Rural	23 473	1118	99 455	2842	+154.0
Kisomoro	Urban	44 888	1795	29 116	1200	-33.1
Kyegegwa	Rural	23 276	685	13 674	760	+11.8
Nyabani	Rural	61 747	2129	32 379	1408	-33.9
Nyamabuga	Rural	27 167	1430	61 638	1868	+30.6
Rwimi	Urban	154 619	5947	62 739	2510	-57.8
Rukunyu	Rural	50 596	1946	55 175	2122	+9.0
Ruteete	Semi-urban	143 042	3668	30 865	2572	-22.9
Total		759 183	–	597 411	–	-21.3

six units showing an increase in utilization. The units that registered an increase in utilization were located in rural areas of low socioeconomic status.

Between the same periods the number of outpatient visits linked to malaria fell from 188 950 to 165 449. The trend in median monthly outpatient visits attributable to malaria was similar to that for general outpatient visits, i.e. in units where the number of general outpatients increased there was an increase in the number of outpatients diagnosed as having malaria, and vice versa.

As data on gender were not available in all the selected health facilities a systematic analysis of utilization by males and females was not possible. However, information from three units suggested that males and females were equally affected by the changes in utilization.

Differential rates, depending on location

The changes in outpatient utilization which occurred after the introduction of cost sharing are shown in Table 2. After user fees were introduced, utilization decreased in all four urban or semi-urban centres, whereas it dropped in only one of the seven rural health units. Generally, therefore, utilization increased in rural health facilities and decreased in urban or semi-urban health centres after cost recovery schemes were introduced by the communities. This was also true when malaria cases were considered separately. The opposite trends for rural facilities and urban or semi-urban facilities were significantly different according to the Mann-Whitney U test, both overall ($P = 0.041$) and for malaria cases alone ($P = 0.024$).

Incentive payments for health workers

In all 11 units, most of the user-fee revenues were dedicated to incentive payments for the health workers. Except in one unit the incentive payments were made regularly on the last day of the month. They were substantial, ranging from 50% to 150% of the salaries, and were the main financial support covering the daily living costs of staff, 80% of whom reported delays in salary payment ranging from two to ten months. Most of the health workers (90%) reported that they had become more motivated as a consequence of receiving regular incentive payments from the cost-sharing fund. They were spending more time at work than previously and felt that the quality of service delivery they offered to their patients had improved.

Discussion

The overall reduced utilization of services after the introduction of cost sharing amounted to 21.3% for all cases and 12% for malaria cases. These values were smaller than those reported in comparable circumstances from other countries: 40% for patients with sexually transmitted diseases in Kenya (3), 34% for general outpatients in Swaziland (5), and 75% for

Table 2. **Changes in utilization of outpatient health services after introduction of cost sharing**

Location of health unit	Monthly median utilization	
	All outpatients	Malaria patients
Urban/semi-urban	-40.6%	-43.5%
Rural	+20.7%	+27.5%

general outpatients in Ghana (2). Whereas in Ghana the reduction in outpatient utilization was greater in rural clinics than in urban ones, in Kabarole there was an increase in utilization by outpatients at health facilities in the more remote areas while in urban and semi-urban settings there was a decrease.

An increase in outpatient visits to rural health facilities after cost sharing began was also observed in Cameroon (13), where the introduction of user fees in local health centres led to increased drug availability. As a result, people used these facilities instead of seeking alternative sources of care with higher indirect costs. Furthermore, the introduction of user fees increased utilization by the poorest segment of the population, which appeared to benefit most from the improved local availability of drugs. This corresponded in some measure with the findings in Kabarole, where people in remote areas, who were usually poorer than those in urban settings, used the services more. Thus the introduction of incentive payments through user fees leads to a cycle of gains: improved services help to meet the population's needs and generate increased revenue; the latter, in turn, makes further staff incentive payments possible.

Limitations of the study

First, we could not investigate the relationship between user fees and the number of outpatient visits in health facilities that had not introduced cost sharing because all 38 government health facilities had introduced user-fee schemes at the time of the study, i.e. there were no controls. The observed changes in utilization might therefore have been attributable to factors other than the cost-sharing scheme.

Second, we did not investigate the relationship between drug supply and the utilization of health services in detail. Third, the quality of service delivery in the selected health facilities might have influenced utilization but was not assessed in detail.

Fourth, the periods before and after cost sharing might have differed in some dimensions that affected health utilization trends differently. A direct comparison of the two periods might therefore have shortcomings, especially with regard to the absence of utilization data from control health facilities, i.e. those with no user fees.

Our data did not allow a more detailed analysis of health workers' perceptions of the cost-sharing schemes or satisfactory explanations of the observed trends in outpatient utilization. However, almost all

the health workers in the survey said that the incentive payments were substantial and led to an increase in their motivation and consequently to an improvement in the services offered. This clearly suggested that incentive payments played a role in improving the quality of the services. Increased drug availability, as observed in the Cameroon study, could have played a role in Kabarole and could have increased utilization, since some rural health units reportedly used part of the cost-sharing revenues to buy supplementary drugs. We do not know why outpatient utilization dropped in the urban health facilities. A shift of health service utilization from government to private providers might have occurred after user fees were introduced in state health facilities. The absence of detailed information on the utilization of private services made it impossible to check this possibility.

Why did utilization increase in rural areas?

The increase in outpatient utilization after the introduction of cost sharing in rural areas of Kabarole District was possibly associated with the following factors. First, a community initiative was promoted rather than a government cost-sharing programme. Second, local people were empowered to decide how the financing schemes should function and how much should be charged. Third, the communities gave substantial support to health staff in local health facilities. Fourth, the communities in rural areas had more ownership of cost-sharing schemes than did those in urban areas. Remarkably, staff incentive payments continued even when the salaries provided by the state were raised.

The results of another study in Kabarole District lend support to the above suggestions (14). Focus groups of consumers associated cost sharing with improved quantity and quality of services and thought that payments to staff were the most important feature of the cost-sharing schemes. These schemes were more often considered successful by rural participants than by urban ones. Rural people, moreover, showed a better under-

standing of their cost-sharing projects than did people in urban areas.

It is a matter of great concern that utilization decreased in urban settings, where the model may not be appropriate. We do not know how the utilization of outpatient services would have changed without cost sharing. Our study design was not ideal but was the best possible way of assessing the impact of user fees in Kabarole District.

Conclusions

The results suggest that the most important factors for successful cost sharing in a developing country are: first, the approach to the implementation of cost recovery schemes, i.e. community-based, bottom-up rather than government-regulated, top-down; second, local control of the funds collected as user fees; third, local use of the revenues generated, e.g. for staff incentive payments and the purchase of drugs and supplies.

The message that cost sharing may increase the utilization of health services under special circumstances is important. Further research is needed in order to define these circumstances more precisely and explore the differences between the rural and urban situations. ■

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Conflicts of interest: none declared.

Résumé

Participation financière des usagers, mesures d'incitation à l'intention du personnel de santé et utilisation des services dans le district de Kabarole (Ouganda)

Objectif Déterminer l'impact de la participation financière des usagers sur l'utilisation des services de santé dans le cadre d'un système de partage des coûts au niveau de la communauté dans le district de Kabarole (ouest de l'Ouganda).

Méthodes L'étude a porté sur 11 services de santé du secteur public sur les 38 qui ont adopté un système de financement avec partage des coûts. L'utilisation des services de santé ambulatoires généraux a été évaluée, avant et après la mise en place du système de partage des coûts, par le nombre médian de consultations par mois.

Résultats Après l'introduction du partage des coûts, l'utilisation globale des services ambulatoires généraux, évaluée en regroupant les données de l'ensemble des

services participant à l'étude, a chuté de 21,3 %. Elle a néanmoins augmenté dans les services desservant des zones reculées tandis qu'elle diminuait dans les zones urbaines ou semi-urbaines. On a estimé que l'utilisation accrue des services de santé dans les zones reculées était en grande partie imputable aux incitations financières versées aux agents de santé grâce aux revenus générés par le partage des coûts.

Conclusion Les incitations financières ont amené les agents de santé à améliorer leurs services. D'autres facteurs ont pu également jouer un rôle, par exemple l'amélioration de l'approvisionnement en médicaments des établissements de santé et une meilleure adhésion du public aux projets communautaires dans les zones reculées.

Resumen

Pago de tarifas por los usuarios, incentivos para el personal sanitario y utilización de los servicios en el distrito de Kabarole (Uganda)

Objetivo Determinar el impacto de la imposición de tarifas a los usuarios por la utilización de los servicios de salud en el contexto de un plan comunitario de compartición de costos aplicado en el distrito de Kabarole, en el oeste de Uganda.

Métodos Se incluyó en el estudio a 11 de las 38 unidades de salud públicas que habían aplicado planes de financiación mediante tarifas pagadas por los usuarios. La utilización de los servicios por los pacientes ambulatorios se evaluó determinando la mediana del número de visitas mensuales antes y después de empezar a aplicar el plan.

Resultados Tras la introducción de la compartición de costos, la utilización global de los servicios ambulatorios generales, determinada combinando los datos de todas

las unidades participantes, cayó un 21,3%. Ahora bien, la utilización aumentó en los servicios ubicados en zonas remotas, mientras que disminuyó en los situados en zonas urbanas o semiurbanas. La mayor utilización observada en los primeros se atribuyó en gran medida a las bonificaciones de que se benefició el personal sanitario gracias a lo recaudado mediante la compartición de costos.

Conclusión Las bonificaciones indujeron a los agentes de salud a ofrecer mejores servicios. También pueden haber influido otros factores, como un mejor suministro de medicamentos a los servicios de salud y una mayor identificación del público con los proyectos comunitarios en las zonas remotas.

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