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# Informal payments and the quality of health care: Mechanisms revealed by Tanzanian health workers

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#### ABSTRACT

Informal payments for health services are common in many transitional and developing countries. The aim of this paper is to investigate the nature of informal payments in the health sector of Tanzania and to identify mechanisms through which informal payments may affect the quality of health care. Our focus is on the effect of informal payments on health worker behaviours, in particular the interpersonal dynamics among health workers at their workplaces.

We organised eight focus groups with 58 health workers representing different cadres and levels of care in one rural and one urban district in Tanzania.

We found that health workers at all levels receive informal payments in a number of different contexts. Health workers sometimes share the payments received, but only partially, and more rarely within the cadre than across cadres. Our findings indicate that health workers are involved in 'rent-seeking' activities, such as creating artificial shortages and deliberately lowering the quality of service, in order to extract extra payments from patients or to bargain for a higher share of the payments received by their colleagues. The discussions revealed that many health workers think that the distribution of informal payments is grossly unfair.

The findings suggest that informal payments can impact negatively on the quality of health care through rent-seeking behaviours and through frustrations created by the unfair allocation of payments. Interestingly, the presence of corruption may also induce non-corrupt workers to reduce the quality of care. Positive impacts can occur because informal payments may induce health workers to increase their efforts, and maybe more so if there is competition among health workers about receiving the payments. Moreover, informal payments add to health workers' incomes and might thus contribute to retention of health workers within the health sector.

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#### 1. Introduction

Informal payments to the providers of health services are common in many transitional and developing countries. Informal payments, defined as cash or in-kind

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transfers to service providers in excess of official user fees, raise concerns both about the access to health care and the quality of the services provided [1].

A growing number of studies have documented the nature, the extent and the causes of informal payments in transitional economies [2–11]. Informal payments are also common in developing countries [12–16]. Tanzania is no exception, as documented for instance by Stringhini et al. [17] and a grey literature with numer-

**Table 1**Background statistics from research districts.

	Population	Infant mortality (per 1000)	Under-five mortality (per 1000)	Population below poverty line (%)	Female literacy (%)	Hospitals	Health centres	Dispensaries
Kisarawe	95,614	94	152	51	51	1	2	16
Temeke	771,500	84	134	29	83	3	4	94
Tanzania	-	95 <sup>*</sup>	162*	36	62	-	-	_

Source: Government of Tanzania [32] and Ministry of Health.

ous reports of informal payments for health services [18].

There is little evidence on the impact of informal payments on the utilisation of health services and the quality of clinical care. It is obvious, however, that informal payments, like all other payments, ceteris paribus will increase patients' costs and thus deter access and reduce their demand for care. Informal payments may thus induce patients to forego or delay care [12,5,9]. The demand-reducing effect of informal payments may, however, be smaller than the demand-reducing effect of formal user fees, because informal payments give greater opportunities for price discrimination, typically leading to lower payments for people with less ability to pay [4,5].

If informal charges increase the quality of health services, their net effect on demand is not necessarily negative [13]. The idea that user charges may improve service quality has been a rationale for the implementation of health sector user fees in many developing countries. In theory, therefore, charges may increase utilisation of the health services despite the increase in the price. The limited evidence available suggests, however, that user fees have reduced utilisation [19]. In theory, it is still possible, though, that user fees have had a positive impact on the quality of care (e.g. [20]).

The effects of informal payments on the quality of care are likely to differ from the effect of user charges. On the one hand, informal payments tend to a larger extent to find their way into the pockets of health workers rather than to the facility as such, and are thus less likely to improve infrastructure or the availability of supplies. On the other hand, this fact also implies that informal payments may give health workers stronger incentives to stay at their duty posts, thus improving the availability of staff [10]. Some have also noted that informal payments may have a negative impact on the quality of care, through artificial lowering of service standards, delays of treatment, or through giving "too much" service [7,13,21].

Quality of health care is a vague notion that can bear different meanings. The definition used by the WHO, developed by the US Institute of Medicine (IOM), is that quality is the degree to which health services for individuals and pop-

ulations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. More recent work by the IOM has defined the core concepts of quality to be safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. The first four concepts relate to the content of the services as such, while the two latter relates to the amount of resources used in the production of quality and the distribution of quality. In this paper, our focus is on the content of health services. Hence, we define quality as clinical quality (safety and effectiveness), patient-centeredness (courtesy), and timeliness.

This paper adds to the existing literature by discussing in greater detail how a system of informal payments may affect quality of care through the interactions that are taking place among workers in the health facilities. We provide examples of various types of informal payment that occur in the health sector in Tanzania, explore the ways in which these payments are allocated among workers, and their effect of health worker behaviours and the quality of health services. Our aim is to increase the understanding of behavioural dynamics at work in relation to informal payments in the health sector and to generate hypotheses that can be rigorously tested in future research.

# 2. Context and methodology

Tanzania is a low-income country with an estimated population of 42 million in 2008, life expectancy at birth of 56 years [22] and infant and under-five mortality of 68 and 112 per 1000 live births [23]. The health system originates from the concept of primary health care; there are around 4700 dispensaries serving the village level, 500 health centres serving the ward level, and 220 hospitals serving the district, regional and national levels. 70% of the population lives within a 5 km walking distance from a health facility. 64% of the health facilities is owned by the government; the remainder is run by voluntary agencies, private for profit and para-statal providers [24].

The number of physicians per capita is among the lowest in the world [25]. Most of the clinical work, especially in rural areas, is carried out by clinical officers with 3 years of clinical training. It is also common that nurses, and even assistants with little or no clinical training, carry out clinical work.

User fees were introduced in public health facilities from 1993, first in national hospitals and later on in facilities at all levels. User fees are normally charged for examinations, tests and drugs. Some services are exempted, such as antenatal care, deliveries, services for children below five years of age, and services related to

<sup>\*</sup> Data are based on the 2002 Census. The Demographic and Health Survey from 2004 reports lower levels but does not provide data at the district level.

<sup>&</sup>lt;sup>1</sup> Two surveys from Tanzania have reported that, respectively, 6% and 22% of the population have paid bribes to health workers over the last 12 months [33,34] and that the health sector, together with the police, are the sectors where people most often encounter corrupt practices. As this paper will show, however, many Tanzanians classify informal payments in the health sector as "gifts of appreciation", even though these payments are expected to buy additional services, at present or in the future.

certain chronic conditions (e.g. cancer, HIV/AIDS and diabetes).

This paper is based on a study carried out in June–July 2006 in two of the 124 districts of mainland Tanzania; Temeke district in Dar es Salaam region and Kisarawe district in Pwani region. Background statistics on the districts are summarised in Table 1.

We used focus group discussions (FGDs) with health workers in order to generate data on informal payments in health facilities and how these practices may affect the quality of care through the dynamics of health worker interactions. A quite open interview guide was used to inquire about practices of informal payments as well as other performance issues, such as clinical quality, courtesy and absenteeism. We asked what kind of performance issues health workers had experienced in each of these areas, what they believed were the underlying causes for weak performances, and what they thought could be done to make improvements. No a priori hypotheses about the relationship between informal payments and the quality of care guided the discussion. Data from the FGDs were supplemented by in-depth interviews with health workers from a couple of the facilities represented in the FGDs.

We held eight FGDs, four in each district, with a total of 58 participants. The groups were divided by cadre (doctors, clinical officers, nurses, medical assistants in different groups).<sup>2</sup> Participants confirmed that this division was crucial in order to allow them to talk freely, both about issues specific to their own cadre and about their relationships with other cadres.

Selection of health workers was administered by the district medical officer under the supervision of the research team. The officers were asked to pick eight health facilities, including both government and non-government facilities, at three levels of care (district hospital, health centres and dispensaries). From each of the eight facilities we asked them to randomly select four persons, one to each of the four FGDs.<sup>3</sup> However, since not all facilities employed workers from all four cadres, this rule could not be followed consistently. For instance, in our sample doctors will typically be employed at a hospital, sometimes at a health centre, but never at a dispensary. Most facilities were nevertheless represented in more than one of the FGDs. Participation was based on voluntary informed consent. Key characteristics of the participants are summarised in Table 2

FGDs were conducted in Swahili, recorded, transcribed and then translated to English. In general, the participants were eager to share their experiences during the discussions, despite the sensitive nature of the subject.

Data were analysed by deriving broad categories of themes on the basis of the information from the FDGs. These categories were further refined as the analysis devel-

**Table 2**Background information about participants.

	Total	Urban	Rural
Number of participants	58	28	30
Age (mean)	42 years	43 years	40 years
Female share	60%	71%	50%
Level of care			
Hospital	48%	41%	63%
Health centre	22%	22%	17%
Dispensary	28%	37%	20%
Years in health sector (mean)	19 years	19 years	19 years
Years in current position (mean)	10 years	9 years	10 years
Employer			
Government	74%	46%	100%
Private for profit	21%	43%	0%
Church based	5%	11%	0%

oped. Statements were contrasted and compared across cadres, across the urban/rural dichotomy and across health workers belonging to different types of health facilities.

# 3. Findings

#### 3.1. How informal payments are obtained

Informal payments are obtained in a number of different contexts: when patients want to bypass a queue, when drugs and other medical supplies are needed, when small services are requested, as well as in the case of major surgery. Informal payments sometimes take the form of gifts of appreciation and in some cases they are obtained even from clients who are not sick but request other types of service.

# 3.1.1. Offering to reduce waiting times

Many participants said that bribes are paid for helping patients to bypass a queue:

Suppose there's a queue and there are some patients who do not want to stand on the queue, as a result ... they can bribe them in order to let them in before their legal time arrives. [Medical assistant, urban]

A common tactic appears to be for the lower cadres to help patients bypass the queue by presenting the patient to the doctor as a relative:

S/he takes the patient ... and tells her/him that "I understand this doctor very well and I am sure s/he will help you, do you have money?", and then that staff comes and tells me that "excuse me doctor, I have a relative outside, can you please help me?" By knowing that the patient is a relative of my colleague I will attend her/him ... That person has already taken the money from the patient and when s/he went outside to call the patient s/he might have told the patient "I've already given the doctor his money so there's no problem" and so the patient come to me knowing that I took her/his money. [Clinical officer, urban]

...they [the medical assistants] just come and say that the patient is a relative while the truth is they have taken a bribe. [Doctor, rural]

<sup>&</sup>lt;sup>2</sup> In a few cases, a few lower cadre workers were admitted into the group of a higher cadre, but never the other way around. For instance, some clinical officers participated in the doctor's group in Kisarawe, because there were not enough doctors to make up a functioning focus group.

<sup>&</sup>lt;sup>3</sup> We are not sure that the random selection procedure was followed in practice in each and every case, but we were reassured that there was no reason to believe that the participants were selected strategically.

# 3.1.2. Charging for "free" services

In some cases, health workers may bluntly ask patients for a payment for the service provided:

One of my young sisters was admitted at ... [name of health facility] and every day when she wanted the bedpan the nurse demanded Tsh 1000. [Medical assistant, urban]

Patients may also be asked to pay for drugs that are supposed to be free:

...and the patient may not be able to refuse, and in the end s/he will agree to pay. [Doctor, urban]

#### 3.1.3. Pretending a shortage of drugs and supplies

A more sophisticated strategy is to pretend shortages of drugs and supplies and ask for money from the patients in order to "buy" the missing supplies in the private market:

...they pretend that there are drugs that are missing...
Because the patient wants the service s/he will end up asking "for how much are they sold?" and s/he can say they are sold for 3000 or 4000, so if you give me this money I can get them. Once s/he gets the money, s/he just takes the drugs and sends them to the patients ... S/he does not buy them, the drugs are there. [Nurses, urban]

When the pregnant women come from the clinic, they come even without some of the very key supplies needed. If such women go to the maternity ward, it becomes the happiest moments to the nurse, because she knows that that client is her source of income. . .It doesn't mean that the supplies are not there, but this is just a strategy of the health workers to gain an income. [Medical assistants, urban]

#### 3.1.4. Running a private pharmacy within the clinic

Some clinicians explained that they were running private pharmacies within the consultation room, despite the fact that there was a separate pharmacy outlet at the facility. The clinicians would then try to convince patients to buy directly from their store rather than from the facility's outlet, for instance by claiming to have better medication than in the facility outlet. A more indirect strategy mentioned is to send patients to search for drugs that do not exist:

There's another strategy where the doctor prescribes drugs that are not in the facility or . . . sometimes s/he might even use names that do not exist in order to make sure that the patient does not get the drug anywhere. And when the patient comes back, he . . . gives them medication that is just ordinary drugs. [Clinical officer, urban]

# 3.1.5. Reducing "baseline" quality

Participants also indicated that health workers may reduce the quality of service in order to create a situation where the client becomes (more) willing to pay. One example is when waiting times for operations are deliberately increased in order to induce patients to pay for more timely treatment, either within the public facility or by visiting the doctor's private facility<sup>4</sup>:

The tendency to postpone the dates for taking the patients to the operation theatre might be influenced by the goals of the doctors, the goals aimed at inducing the relatives of the patient to start thinking: "For how long should we wait for it,... we are at risk of losing our patient. It is better to raise the money that will enable us to take our patient to the private hospital of this doctor". [Nurses, urban]

A similar strategy is to provide extremely low quality in order to signal to the patient that unless you pay, the quality will be very low:

...if you go at the health facility you'll find a nurse with an angry look, who is just singing without showing any sense of care. ... Without giving something to this nurse you won't be assisted. [Nurse, urban]

#### 3.1.6. Receiving gifts

Informal payments are also made in the form of gifts of appreciation:

The most she can do is to say thank you sister for helping me get safe delivery, and she is to give you something. It might be 2000 and not more than 4000 Tsh. [Nurse, urban]

Although there is a strong element of gift-giving in such transfers, they may still be contested as corruption. A nurse would say: "It's a pity that the doctors regard it as corruption" [Nurse, urban]. Moreover, payments presented as gifts may involve expectations of better treatment in the future: "However, apart from paying it as his/her way of thanking, what gets into his/her mind is that next time when s/he comes s/he should be the first to be attended" [Doctor, rural]. Hence, what is presented as a gift may in reality contain an element of bribery.

# 3.2. Who gets what?

Health workers at all levels seem to be involved in informal economic activities, but they do not agree about which groups are getting the most out of it. As we might expect, there is a tendency to blame cadres other than their own for receiving most of the payments. While some point to the doctors as the main beneficiaries of the system, others point to the lower cadres, such as the assistants:

They offer bribes, ... but it only reaches a few crafty ones, mostly doctors ... [Medical assistants, rural]

...there are so many people who might be involved in the corruption. It might be the clinical officer or it may be the attendant. [Doctor, urban]

[Nurse assistants] are the main players involved with the corruption, and in fact they are the ones responsible for associating health staff with corruption. [Nurses, urban]

<sup>&</sup>lt;sup>4</sup> Informal payments are not necessarily involved if patients visit the doctor's private facility. However, the consequences for the patients will

be the same as if informal payments were made in order to get a more timely operation in a public facility. Participants gave several examples of doctors asking for bribes in order to reduce waiting times for operations in public hospitals.

It appears from the discussions that the amounts paid vary substantially from place to place, also depending on the type of service that is provided. Participants indicated that there is less corruption in non-government than in government facilities. Moreover, participants in the rural district noted that payments are smaller in the rural areas. In general, the amounts mentioned in the discussions ranged from five hundred up to a few thousand shillings for typical nurse-related work, while amounts up to 50,000 Tsh were mentioned in connection with surgery and other time-demanding work carried out by doctors (1000 Tsh = 0.8 USD). This suggests that doctors typically are involved in the largest transactions, but since the lower cadres encounter the patients on many more occasions, they may be able to extract a larger number of smaller bribes. This is not to say that nurses never get the big money, though. Several examples were given of nurses pretending that a corrupt doctor wanted money (either for services or for drugs) and then putting big money into their own pockets.

# 3.3. Fighting for a higher share of informal payments

Processes related to the distribution of informal payments amongst health workers can have important implications for the quality of the services, in particular if what each person gets depends on what he delivers. A key question is therefore what an individual health worker can do in order to increase his share of the payments. On this issue, several participants reported that health workers usually do not share what they have received from the patients:

If s/he gets it, it's his/hers and if you get it, it's yours. We don't distribute amongst ourselves what we get from bribery . . . That is why we lack companionship. [Medical assistant, rural]

A limited degree of sharing implies that there will be competition among health workers about being the one who receives payments. This may affect health worker behaviour, because "... the patient will decide to give money to the one who has a good heart and who can help you rather than the one who has a difficult heart." [Nurse, urban] Hence, in a situation where there is competition for informal payments from patients, health workers may be induced to improve the quality of the service.

Examples were also provided of informal payments being shared, but these examples all related to sharing across cadres. Some participants reported that workers from a lower cadre may approach a doctor and share what they have received without being asked to do so. Lower cadres can also sometimes claim their share of what a doctor has received:

If you go and ask that doctor "doctor, I have heard that you have received something from the patient and that you have included us in this deal...", then the doctor will tell you "don't worry, I will give you something for soda". [Nurse, rural]

The participants also reported cases of explicit cooperation across cadres in order to generate money:

Normally the doctors are in liaison with the lower cadres [on getting money from patients], though sometimes they may even make a deal with the nurse. [Nurses, urban]

Despite some sharing and cooperation, the main impression is that most health workers perceive the allocation of informal payments to be grossly unfair. Many participants reported strong disappointment because they were not receiving their due share:

Actually it hurts so much, especially in cases where you have noticed that your colleagues have got something while you are supposed to provide care without getting anything. [Nurse, rural]

The perceived unfairness of the distribution of informal payments was claimed by have a negative impact on the quality of service:

...you feel bad because you do the work and someone else benefits and satisfy her/his personal interests behind your back [by taking the bribe]. That affects our work, leads to poor service provision ... because you think that you're just contributing in completing someone's job. [Doctor, rural]

Such frustrations may have a stronger negative impact on service quality in strongly hierarchical health system, such as Tanzania's, because frustrations among lower cadre workers are more easily channelled towards the patients rather than upwards where they rightly belong:

...if I am not with good heart and have seen that a doctor has been bribed, but I have not received any share from it, I may, if supposed to give six tablets, give four.. if angry I may even give two tablets. [Medical assistant, rural]

Due to the lack of formal and informal rules about how payments are to be shared health workers engage in "bargaining processes" in order to increase their share. One way in which the lower cadres can bargain for a higher share of the payments is to reduce the quality of care in a situation where the doctor feels committed to high quality because s/he has received a bribe:

- ...when you tell the nurse that this is an emergency case so you should hurry up, you can find the nurse moving from one place to the other, and what she is thinking is that you as the doctor might have got money from the patient. [Doctor, urban]
- ... if the nurses know that a certain doctor has already received a bribe then [they] start to avoid or give less attention to that patient. [Doctor, rural]

A doctor who has received a bribe will often depend on a nurse for delivering the quality that the patient has paid for. Knowing this, the nurse can attempt to extract a higher share of the payments by holding back quality care. A doctor who feels an obligation to that patient might then be forced to share what s/he has received.

# 3.4. High quality as a sign of corruption

Several participants mentioned that giving proper attention to the needs of patients may easily be taken as a signal that the patient has paid something: "if you decide to take care of that patient to make sure that you get the proper diagnosis, then people will start to think that the doctor has received something" [Clinical officer, rural]. For example, a doctor who comes and sees a patient in the ward outside the ordinary ward round would immediately be suspected of bribery. And a nurse would say: "...when you devote time to take care of a patient, others think that you must have been bribed by that patient" [Nurse, urban]. Suspicions were also directed at medical assistants who provided high quality service: "...when a person like me tries to take care to the patient, others might give such remarks as 'are you pretending to be a mother from the church, what do you expect to get from what you're doing?" [Medical assistant, urban].

A similar situation may occur in the outpatient department. Clinicians explained that when there is a long queue outside, they simply have to rush in order to finish. It would not be possible to ask patients to come back the next day, one of the reasons being that patients might suspect the health workers of corruption:

...it's better to rush than tell them come back tomorrow, they may end up saying that the doctor wants something, that's why s/he has asked me to go back tomorrow. [Nurses, rural]

Interestingly, where the provision of quality services has become a sign of corrupt behaviour and attitudes, it may have implications for the quality of services provided by non-corrupt health workers. Those who do not want to be associated with corruption may be induced to reduce the quality of the service.

#### 4. Discussion

Our data reveals a variety of mechanisms through which informal payments may impact on the quality of health care. A more profound understanding of these mechanisms may improve knowledge of how quality may be enhanced within a system where informal payments are common practice. In addition, this knowledge may shed further light on the overall effect of informal payments on the quality of health care.

It is quite obvious that no patient will pay bribes to health workers without expecting that the payment will improve the chances of receiving (quality) care. It is less obvious that a system where bribery is common will deliver higher quality services on average than a system without such practices. In the corruption literature, there is an old controversy between those who maintain that corruption mainly "greases the wheels" and leads to more efficient outcomes [26–28] and those who emphasise that corruption is "sand in the machinery" and can cause large inefficiencies [29,30]. Our data points in both directions. The following mechanisms suggest that informal payments will reduce the quality of health services.

First, the prospects of receiving informal payments may induce health workers to engage in rent-seeking activi-

ties. When patients are willing to pay in order to bypass a queue, health workers will have an incentive to create a queue or to delay treatment (see also [7]). By reducing the time available for patient care (e.g. by having longer breaks), the patients' willingness to pay for the providers' time may increase at the margin. The "market-clearing" price will then increase, which may raise total incomes for the providers (in the same way as a monopolist may benefit from supplying a low quantity since the price per unit will then increase). While delayed treatment in itself represents a reduction in the quality of the service, it may also reduce the clinical quality, as timely treatment is often a precondition for effective cure.

Secondly, embezzlement strategies whereby health workers pretend shortages of drugs and supplies in order to extract money from patients are also likely to delay treatment. Moreover, the time and energy needed to convince patients about stock shortages will reduce the time available for other tasks, which may reduce the overall quality of the service. Note that these embezzlement strategies can work only when patients think that stock shortages are common, while at the same time a private market exists where the drugs and supplies are available.

Thirdly, health workers may reduce the level of quality in order to bargain for a larger share of what their colleagues have received. One example is when nurses withhold quality in order to put pressure on a doctor to share the bribes that s/he has received. Two preconditions need to be present in order for this mechanism to work. First, the doctor must depend on the nurse for the provision of the services that the patient has paid for ("joint production"). Secondly, the doctor must feel that receiving a bribe creates a responsibility for delivering a certain level of quality. In addition, these practices are not likely to emerge unless bribery is partly hidden. If the health workers possessed full knowledge about the payments received, it would seem more rational for a doctor who wants to maximise his incomes to share with the nurses right after receiving the payments, because quality would then be maintained at a higher level, which again could increase the patients' willingness to pay. The reported pattern of behaviour may therefore suggest that informal payments are partly hidden: the doctor does not know for sure whether the nurses know that he has received something, and s/he therefore holds back the money. The nurses, suspecting that the doctor has been paid, then start to withdraw care. This may, if the two preconditions above are met, force the doctor to reveal that he has been bribed.

Fourthly, when informal payments can be obtained there may be incentives for health workers to reduce the quality of care in order to signal that there is much to gain from paying. A certain level of quality will be provided even in the absence of any payments (at least in the Tanzanian context, outright refusal of patients seems to be very rare). This "threshold" quality level may be low or high, depending among other things on the professionalism and ethical standards of the health workers. A patient who wants quality care at minimum costs will not want to make informal payments unless quality exceeds this

threshold. The problem, of course, is that patients have limited information about the level of the threshold. Therefore, if a health worker is able to convince the patients that the threshold is low, these patients may become willing to pay more in order to receive a given level of service. One way of signalling that the threshold is low, is to provide low quality in the initial stages of a consultation (e.g. to receive the patient in an unfriendly manner, and to proceed very slowly with the work).

Fifthly, perceived unfairness in the allocation of informal payments amongst health workers may in itself influence the quality of health services. The literature suggests a strong link between worker efforts and the fairness of payment structures (see [31]). Our results suggest that health workers in Tanzania feel that they have a claim to receiving a certain share of the informal income, and that failures to meet their expectations create frustrations, envy, and reduced motivation. It is not obvious that such frustrations will lead to reduce service quality, but it is not unlikely, and our results clearly point in this direction.

Sixthly, in a system where high quality service is taken as a signal that bribes have been received, non-corrupt health workers may be induced to reduce their quality of care. Our results point in the direction that high quality care easily creates suspicions about corruption. When this is the case, non-corrupt persons wanting to maintain a high level of esteem can be discouraged from providing their "normal" level of care<sup>5</sup>. At the same time, of course, the fact that high quality is associated with bribery indicates that bribery has a positive effect on the quality of services delivered by corrupt health workers. The net effect will in this case depend on the share of the corrupt relative to the share of non-corrupt workers. Note that a non-corrupt health worker will experience lower welfare by working in an institution where corruption is prevalent, because he is bound to compromise in one way or the other. We might therefore expect non-corrupt workers to seek to move away from these institutions. This might be one explanation why the participants maintained that the level of corruption differs across facilities.

Informal payments may also have positive impacts on the quality of health services. First, informal payments can give health workers an incentive to increase their efforts by compensating for the personal costs involved in making the effort required to provide high quality service. If payments exceed the personal costs of high effort, the quality of care may increase.

Secondly, the prospects of receiving informal payments can create competition among health workers about being the one who gets the payments. Under certain circumstances, such competition may induce a higher level of quality. Our data suggests that although the receiver of informal payments may choose to share what s/he gets with other health workers, the sharing is only partial and does not benefit all. Furthermore, sharing appears to be more common between workers at different levels of care rather than among workers within the same cadre. The

limited sharing of received payments can easily create a situation where health workers, especially those who belong to the same cadre, compete in order to get the bribe.

Whether this competition induces higher quality is a more open question, though. In any case, we are talking only about quality as observed and perceived by the patients, which may or may not conform to accepted professional quality standards. Our data point in the direction that patients, if they have a choice, prefer to make payments to health workers who are relatively friendly. Competition to receive informal payments can therefore induce higher quality in the form of improved courtesy to patients. On the other hand, since provision of high quality services often requires a considerable degree of cooperation amongst staff, a competitive attitude amongst the health workers may undermine the cooperation that is needed for delivering services of high clinical quality.

We would expect the magnitude of the competition effect to depend on the number of health workers at the working place. A single provider will be in a monopoly situation and no competition will take place. If more workers arrive, the competitive pressure will increase. Hence, in a system where informal payments take place there may be an additional – positive or negative – effect on quality from increasing the number of health workers, due to increased competition among the workers in order to receive the payments.

Note that from the perspective of the health workers, a quality competition race leads to a kind of collectively irrational behaviour. The competition is clearly collectively irrational if it does not lead to larger total payments from the patients. But even if it does, the competition can still lead to "too high" quality in the sense that the additional money extracted do not fully compensate for the additional costs of exerting higher effort. In such cases, norms may develop that lead health workers to compete less aggressively. Statements about health workers who talk condescendingly about colleagues who provide high quality suggest that such norms may have developed in some facilities in Tanzania. In the presence of such norms, the potentially positive effect of competition on the level of quality is obviously reduced.

Thirdly, informal payments can prevent health workers from taking up alternative or second jobs, thus increasing the availability of health workers. This will enable health workers in understaffed facilities to spend more time with each patient, which might improve the quality of the service. This argument only makes sense if informal payments constitute a significant share of health workers' incomes. We did not systematically collect data on the amount of informal payments received by the health workers, but examples were reported where clinical officers received more from informal charges than what was on their ordinary salary slip. We do not have reason to conclude that this pattern is a general one, nor can we deny that it is. A recent study concludes that informal payments may contribute somewhat to retention of doctors but probably do not

<sup>&</sup>lt;sup>5</sup> See Ellingsen and Johannesson [35] for a discussion of the importance of social esteem for worker performance.

contribute much to the retention of other health workers [17].

#### 4.1. Policy implications

Our findings have implications both for policies aiming at a reduction or elimination of practices of informal payments and for policies with the more parsimonious goal of minimising the adverse effects of informal payments on the quality of care. It is important to stress, though, that our limited data do not enable us to make any specific policy recommendations.

A general recommendation for reducing the scope for corruption would be to increase the supply of scarce resources. In the health sector, increasing the number of health workers may have beneficial effects – beyond what is normally accounted for – due to a reduction in waiting times and therefore reduced possibilities to extract rents, leading to lower incentives to reallocate scarce resources towards patients with the highest willingness to pay.

Our findings suggest however that increased supply of scarce resources may have to be accompanied by other measures. In particular, increasing the supply of drugs may only lead to more money going into the pockets of health workers unless patients are informed that supplies have been increased. Embezzlement related to drug supply can continue as long as patients believe that there is a shortage. Information to patients may thus be a key component of anti-corruption campaigns.

Given that a system of informal payments is in place there may be reason for those in charge of health facilities to initiate discussions with the employees about perceived unfairness in the system. Our findings suggest that a reduction in the level of frustration due to allocations of informal payments perceived to be unfair might lead to improved quality of care. On the other hand, increased openness around systems of informal payments might undesirably give increased legitimacy to these practices. Moreover, increased openness about the system might strengthen cooperation among the health workers in extracting rents from patients, which may have a negative impact on quality.

Finally, since informally payments may constitute a significant share of the income of some health workers, salary compensation may be needed in order to avoid more absenteeism and quitting in the wake of efforts to eliminate informal payments.

# 5. Concluding remarks

Despite the sensitive nature of the subject, health workers willingly shared information about the practice of receiving informal payments and illuminated a number of mechanisms through which informal payments affects the quality of care. Many of the mechanisms – especially those related to the interpersonal dynamics among the health workers – could hardly have been revealed through interviews with patients.

The study has highlighted a number of ways in which informal payments reduce the quality of health services, though a positive impact is also conceivable. The mechanisms fall into two groups; economic and non-economic. The economic mechanisms all describe how providers by lowering quality may be able to 'grab' a larger share of the value added (i.e. the economic surplus) generated by the service. A higher share of the surplus may improve their income even though the total economic surplus always is diminished by a reduction in quality. The non-economic reasons for lowering quality relate to fairness considerations and issues of maintaining esteem. Further research is needed in order to quantify and importance of the various mechanisms.

On a final note, we would like to stress that even if it could be shown that informal payments had a positive impact on the quality of care, this alone would of course not be a convincing argument that one should not fight corruption in patient–provider relationships. Corruption in the health services may impose costs to society beyond those that have explored here. Moral concerns are obviously also of great importance in this context.

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#### References

- [1] Transparency International. Global corruption report 2006. London: Pluto Press; 2006.
- [2] Vian T, Grybosk K, Sinoimeri Z, Hall R. Informal payments in government health facilities in Albania: results of a qualitative study. Social Science and Medicine 2006;62:877–87.
- [3] Gaal P, Evetovits T, McKee M. Informal payment for health care: evidence from Hungary. Health Policy 2006;77:86–102.
- [4] Belli P, Gotsadze G, Shahriari H. Out-of-pocket and informal payments in health sector: evidence from Georgia. Health Policy 2004;70:109–23.
- [5] Falkingham J. Poverty, out-of-pocket payments and access to health care: evidence from Tajikistan. Social Science and Medicine 2004:58:247–58.
- [6] Ensor T. Informal payments for health care in transition economies. Social Science and Medicine 2004;58:237–46.
- [7] Balabanova D, McKee M. Understanding informal payments for health care: the example of Bulgaria. Health Policy 2002;62:243–73.
- [8] Thompson R, Witter S. Informal payments in transitional economies: implications for health sector reform. International Journal of Health Planning and Management 2000;15:169–87.
- [9] Lewis M. Who is paying for health care in Eastern Europe and Central Asia? In: Human development sector unit, Europe and Central Asia region. Washington, DC: The World Bank; 2000.
- [10] Chawla M, Berman P, Kawiorska D. Financing health services in Poland: new evidence on private expenditures. Health Economics 1998;7:337–46.
- [11] Delcheva E, Balabanova D, McKee M. Under-the-counter payments for health care: evidence from Bulgaria. Health Policy 1997;42:89–100.
- [12] Nahar S, Costello A. The hidden cost of 'free' maternity care in Dhaka, Bangladesh. Health Policy and Planning 1998;13:417– 22
- [13] McPake B, Asiimwe D, Mwesigye F, Ofumbi M, Ortenblad L, Streefland P, Turinde A. Informal economic activities of public health workers in Uganda: implications for quality and accessibility of care. Social Science and Medicine 1999;49:849–65.
- [14] Di Tella R, Savedoff W. Diagnosis corruption: fraud in Latin America's public hospitals. Washington, DC: Inter-American Development Bank: 2001.

- [15] Lindelow M, Serneels P. The performance of health workers in Ethiopia: results from qualitative research. Social Science and Medicine 2006;62:2225–35.
- [16] Lewis M. Governance and corruption in public health care systems. Center for Global Development; 2006 [working paper 78].
- [17] Stringhini S, Thomas S, Bidwell P, Mtui T, Mwisongo A. Understanding informal payments in health care: motivation of health workers in Tanzania. Human Resources for Health 2009;7:53.
- [18] Mamdani M, Bangser M. Poor people's experiences of health services in Tanzania: a literature review. Reproductive Health Matters 2004;12:138–53.
- [19] Palmer N, Mueller DH, Gilson L, Mills A, Haines A. Health financing to promote access in low income settings – how much do we know? Lancet 2004;364:1365–70.
- [20] Rose-Ackerman S. Corruption and government. Causes, consequences and reform. Cambridge/New York: Cambridge University Press; 1999.
- [21] Gaal P, McKee M. Fee-for-service or donation? Hungarian perspectives on informal payments for health care. Social Science and Medicine 2005;60:1445–57.
- [22] WDI. World Development Indicators. Washington DC: The World Bank. http://data.worldbank.org/country/tanzania; 2010 [accessed 26.06.2010].
- [23] NBS. Tanzania Demographic and Health Survey 2004–5. Dar es Salaam: National Bureau of Statistics; 2005.
- [24] TSAM. National Bureau of Statistics and Macro International. Dar es Salaam: MIT Press; 2007.
- [25] WHO. Working Together for Health. World Health Report 2006. Geneva: World Health Organization; 2006.

- [26] Leff NH. Economic development through bureaucratic corruption, American Behavioral Scientist; 1964. p. 8–14 [re-published as chapter 24 in Heidenheimer et al. (1989). Political corruption. A handbook. New Brunswick: Transaction Publishers].
- [27] Nye JS. Corruption and political development. American Political Science Review 1967;61:417–27.
- [28] Huntington SP. Political order in changing societies. New Haven, Connecticut: Yale University Press; 1968.
- [29] Myrdal G. Asian drama: an enquiry into the poverty of nations, vol. II. New York: The Twentieth Century Fund; 1968
- [30] Rose-Ackerman S. Corruption. A study in political economy. London/New York: Academic Press; 1978.
- [31] Fehr E, Schmidt KM. Theories of fairness and reciprocity: evidence and economic applications. In: Dewatripont M, Hansen LP, Turnovski S, editors. Advances in economic theory, eighth world congress of the econometric society, vol. 1. Cambridge, UK: Cambridge University Press; 2003.
- [32] GoT. Poverty and human development report 2005. Report prepared by the research and analysis working group of the poverty monitoring system; 2005.
- [33] ESRF and FACEIT. The state of corruption in Tanzania. Annual report 2002. Report commissioned by the prevention of corruption Bureau, Dar es Salaam; 2002.
- [34] REPOA. Public service satisfaction survey. Report commissioned by the PMS research and analysis working group, Dar es Salaam; 2003.
- [35] Ellingsen T, Johannesson M. Paying respect. Journal of Economic Perspectives 2007;21:135–49.