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Original article

A qualitative study of the role of workplace and interpersonal trust in shaping service quality and responsiveness in Zambian primary health centres

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Abstract

Background: Human decisions, actions and relationships that invoke trust are at the core of functional and productive health systems. Although widely studied in high-income settings, comparatively few studies have explored the influence of trust on health system performance in low- and middle-income countries. This study examines how workplace and inter-personal trust impact service quality and responsiveness in primary health services in Zambia.

Methods: This multi-case study included four health centres selected for urban, peri-urban and rural characteristics. Case data included provider interviews (60); patient interviews (180); direct observation of facility operations (two weeks/centre) and key informant interviews (14) that were recorded and transcribed verbatim. Case-based thematic analysis incorporated inductive and deductive coding.

Results: Findings demonstrated that providers had weak workplace trust influenced by a combination of poor working conditions, perceptions of low pay and experiences of inequitable or inefficient health centre management. Weak trust in health centre managers' organizational capacity and fairness contributed to resentment amongst many providers and promoted a culture of blame-shifting and one-upmanship that undermined teamwork and enabled disrespectful treatment of patients. Although patients expressed a high degree of trust in health workers' clinical capacity, repeated experiences of disrespectful or unresponsive care undermined patients' trust in health workers' service values and professionalism. Lack of patient–provider trust prompted some patients to circumvent clinic systems in an attempt to secure better or more timely care.

Conclusion: Lack of resourcing and poor leadership were key factors leading to providers' weak workplace trust and contributed to often-poor quality services, driving a perverse cycle of negative patient–provider relations across the four sites. Findings highlight the importance of investing in both structural factors and organizational management to strengthen providers' trust in their employer(s) and colleagues, as an entry-point for developing both the capacity and a work culture oriented towards respectful and patient-centred care.

Key words: Health systems, primary health care, service delivery, trust

Key Messages

- Findings demonstrated that providers had weak workplace trust influenced by a combination of poor working conditions, perceptions of low pay and experiences of inequitable or inefficient health centre management.
- Weak trust in health centre managers' organizational capacity and fairness contributed to resentment amongst many providers and promoted a culture of blame-shifting and one-upmanship that undermined teamwork and enabled disrespectful treatment of patients.
- Although patients expressed a high degree of trust in health workers' clinical capacity, repeated experiences of disrespectful or unresponsive care undermined patients' trust in health workers' service values and professionalism.
- Lack of patient–provider trust prompted some patients to circumvent clinic systems in an attempt to secure better or more timely care.
- Findings point to the need for investment in both structural/material improvements and organizational management to strengthen providers' trust in their employer(s) and colleagues, as an entry-point for shifting primary health service work culture towards more respectful and patient-centred care.

Background

Within the global health fraternity, there is growing recognition of the 'people-centredness' of health systems (Sheikh *et al.* 2014a,b). Despite this, the role of human relationships within health systems and the factors that influence their development remain poorly understood. Guided by functionalist constructs including the six World Health Organization (WHO) health system building blocks, health systems research in low- and middle-income countries (LMICs) in particular, has tended to focus on the material components of health systems or, where human factors are considered, intellectual capabilities (World Health Organization 2007; Atun and Menabde 2008; van Olmen *et al.* 2012). One encouraging exception to this trend, however, is a small but growing body of literature focusing on trust as a lens for examining the way human relations influence and are influenced by health system functioning in LMIC (Goudge and Gilson 2005; Svedin 2012).

Hall *et al.* (2001) characterize trust as 'the optimistic acceptance of a vulnerable situation in which the trustor believes the trustee will care for their interest'. To date, much of the scholarly work on trust has focused on three main constructions of the concept, namely personal, inter-personal and impersonal trust (Taylor 1989; McKnight and Chervany 1996). Explorations of personal trust include examinations of strategic behaviour (Creed and Miles 1996; Gambetta 2000) or the ways in which an actor assesses the relative risks versus potential gains from trusting another person. Others have examined personal trust as a product of altruism, rooted in the morally worthy behaviour of actors who perceive intrinsic value in acting in others' interests (Mansbridge 1999; Ulsaner 1999).

As discussed by Gilson *et al.* (2005b),Wuthnow (2004) theorize that inter-personal trust is not only based on judgements of competency but also on assessments of a third party's reliability, sincerity, generosity and fairness. Inter-personal trust has also been demonstrated to be time-sensitive, strengthening or weakening over time as a result of repeated interactions that produce cumulative judgements about, and expectations of, certain behaviours. Where the interactions are positive, Lewicki and Bunker (1996) note that such engagement can contribute to the generation of common norms and shared values.

Related to inter-personal trust and sharing many similar features, explorations of impersonal trust have included studies examining the links between trust and natural or unconscious dispositional traits such as shared identity (e.g. nationality) (Putnam 1993) or on repeated interactions between relative strangers (Mayer *et al.* 1995). In health systems, where interactions between relative strangers are a common occurrence, impersonal trust is critical. In such settings, impersonal trust may be fostered by institutions that provide the nominal basis for trusting strangers such as defined organizational roles or legal frameworks that enable monitoring and evaluation of performance (Warren 1999) or by professional or technical institutions that generate and protect knowledge such as medical licensure (Giddens 1990).

Even in the case of impersonal trust, however, repeated interpersonal interaction will likely play an important role. Indeed, a serious complicating factor in the generation of impersonal trust is whether the 'trustee' has the material capability to meet the expectations of the 'truster', especially where the former is dependent on a range of enabling factors (e.g. resources or service environment) that lie outside their direct control (Tendler 1997). In such circumstances, mechanisms of accountability operating at multiple levels to enable the generation of impersonal trust are likely to take on particular significance.

Trust in health care and health systems

Various studies have demonstrated that trust is linked to important health-care objectives including access, utilization (Russell and Gilson 2006), satisfaction (Safran *et al.* 1998), information dissemination and effectiveness (Hall *et al.* 2001). Some recent studies have also suggested that trust is associated with improved self-reported health status (Wang *et al.* 2009). Empirical research from high-income settings has tended to focus on patient–provider trust, investigating, among other areas, 'cues' of trustworthiness (Anderson and Dedrick 1990; Mechanic 1996; Thom and Campbell 1997), and the role of institutions and structures such as ethical codes, training standards and regulatory mechanisms for improving patient–provider trust (Campbell 1996; Rothstein 1998; Straten *et al.* 2002). A more limited body of work has explored the concept of distrust. Mascarenhas *et al.* (2006) argue that 'distrust is a qualified [or] conditional trust in doctors and/or the health care delivery system on the part of the patient' arising from a range of factors including cost, the difficulty of navigating the health system, pre-existing anxiety and previous negative encounters within the health system. The authors suggest that distrust can co-exist with trust during patient–physician encounters.

Despite growing recognition that the human decisions, actions and relationships that invoke trust lie at the core of any productive social system, only a handful of studies have focused on trust in the health systems of LMIC. Based on a mixed methods study, Gilson (2005) and Gilson *et al.* (2005a) examined the role of trust in

provider performance and patient–provider interactions in South African primary health centres (PHCs) concluding that 'workplace' and 'patient–provider' trust are influenced by multiple and overlapping factors. The important role of patient–provider trust as a driver of health seeking behaviour among patients in a hospital setting in Colombo, Sri Lanka was outlined by Russell (2005), while in Tanzania, Tibandebage and Mackintosh (2005) explored the effects of system-wide mistrust and the associated expectation of abuse and/or exclusion on patients' psycho-social well-being and financial status. Relatedly, Gilbert (2005) demonstrated that trust is influenced by professional norms and power dynamics between nurses and doctors. A recent review of quantitative measures of trust used in both the developed and developing world concluded that the focus of the published literature remains narrow (predominantly addressing patient–provider trust) and geographically skewed in favour of high-income settings (Ozawa and Sripad 2013).

The study presented in this article was premised on the idea that trust offers an important lens through which to understand service practices in primary-level health centres. Our aim was to examine the relevance of and factors contributing to the production of trust, and related, the influence of trust (or its absence) on the quality and responsiveness of service delivery in a low-resource setting.

Methods

Study setting

Zambia's health system at the time of study was comparatively centralized with the Ministry of Health (MOH) responsible for national health policies as well for direct oversight of tertiary hospital operations. A network of 1500 PHCs, first- and second-level hospitals were overseen by Provincial and District Health Offices, respectively. As at 2011, PHCs made up the majority (79%) of Zambia's health facilities, with ~29% of these located in urban areas.

According to the Zambian MOH, urban PHCs serve a catchment population of 30 000 to 50 000 while rural PHCs serve a population of up to 10 000 [MOH and Government of the Republic of Zambia (GRZ) 2007]. Depending on location and the centralized allocation of district resources, urban and rural health centres may include various combinations of the following 'departments': outpatient department (OPD), inpatient department (IPD), maternal and child health department (MCH), labour ward, tuberculosis treatment department (TB corner), HIV care and treatment department (HIV department or sometimes 'antiretroviral clinic'), laboratory and environmental health team. The typical administrative structure of PHCs is outlined in Figure 1, with health centre activities overseen by an 'overall in-charge' who is deputized by a series of 'departmental in-charges'. All such appointments are made at the district level.

Conceptual framework

The study formed part of a larger research project that investigated how interactions between 'hardware' and 'software' components of the health system shaped the service patterns in four Zambian PHC (see: Topp *et al.* 2015). The larger study was guided by the mechanisms of effect framework, which suggests that in micro-health systems, people-centred mechanisms such as trust and accountability provide important lenses through which to

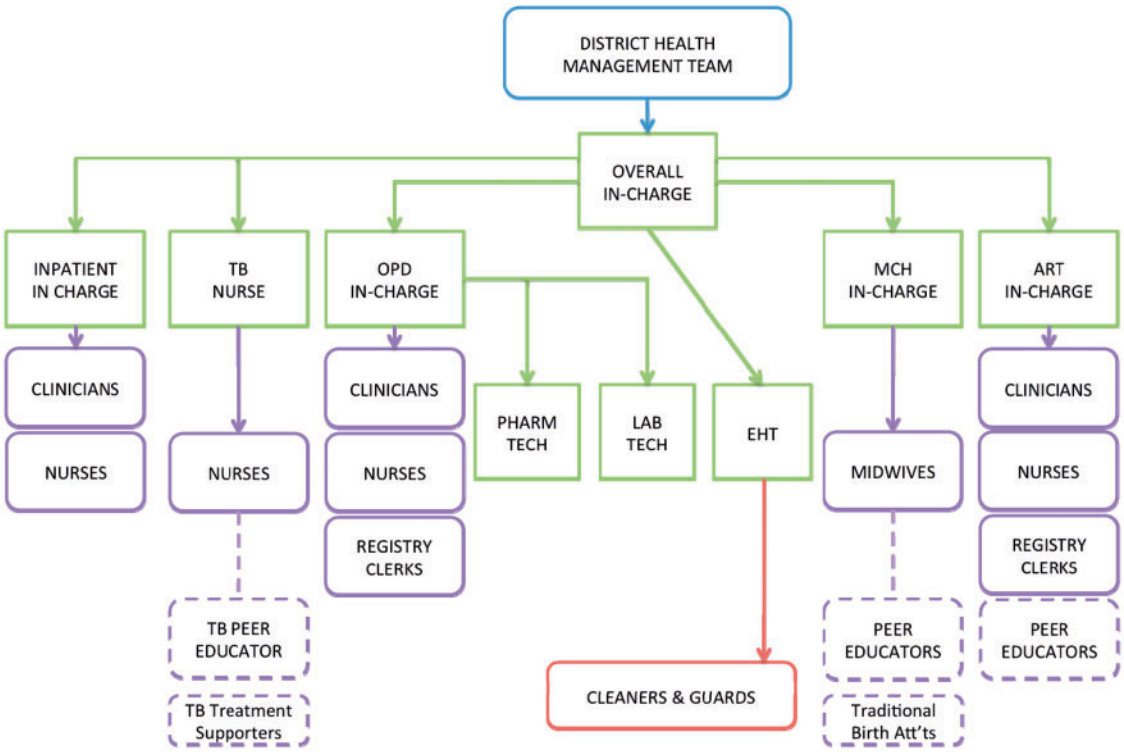

Figure 1. Typical administrative structure for a Zambian primary health centre

OPD, outpatient department; MCH, maternal and child health department; ART, antiretroviral (for HIV); TB, tuberculosis; EHT, environmental health technologist

→ Solid-line arrows indicate lines of authority from the top down

— Dotted lines indicate lay or auxiliary workers with positions sanctioned but not officially financed by MOH

understand service quality and responsiveness. Mechanisms of trust and accountability are in turn the localized product of interactions between health system 'hardware' and 'software' but may also evolve to become properties of the system as a whole (Topp *et al.* 2014).

The focus of this study was explicitly on mechanisms of trust in the primary health care domain, with previous published work examining the role of accountability in the same setting (Topp *et al.* 2014). Guided by Gilson *et al.*'s (2005b) trust framework our research focused on two key dimensions of trust: workplace trust and patient–provider trust. Workplace trust was understood to be the product of health-care providers' trust in their employer, supervisors and colleagues. Workplace trust was also conceptualized as an important determinant of providers' motivation and client orientation, which in turn influenced patient–provider trust. Patient–provider trust was theorized to be the product of patients' and providers' inter-personal trust (trust in each other), and their trust in health system institutions, including health worker qualifications. A summary of these domains is listed in Table 1.

Study aim

The aim of this study was to examine how workplace trust and patient–provider trust influenced the quality and responsiveness of service delivery in four Zambian health centres. Our specific objectives were to (1) test the relevance of the concepts of 'workplace trust' and 'patient–provider trust' in the Zambian setting; (2) understand the factors influencing the production of these different types of trust and (3) explore whether and how workplace and patient–provider trust interact in the Zambian primary health-care setting and with what effect.

Study design

A multi-case design with a theoretical replication strategy (Yin 2009) was adopted. Four PHCs (PHC1–PHC4) each representing a case unit were purposively chosen from two districts within Lusaka Province. Selection was based on established (>36 months) HIV care and treatment service[1] and a catchment population characterizing the PHC as a large urban facility (>100 000), small urban facility (40 000–70 000), peri-urban facility (<40 000) or rural facility (<30 000), respectively. A list of all facilities in the districts that fitted the criteria was initially developed, and case selection was conducted in collaboration with District Medical Officers and local colleagues accounting for both logistical issues and accessibility. Final selection was subject to the informed consent of each PHC in-charge.

Data were collected between June and December 2011. Data collection methods included in-depth interviews with a proportionate sample of health-care workers from all health centre departments ($n = 60$); structured observations and semi-structured interviews (conducted post-consultation/observation) with a quasi-random sample of patients ($n = 180$); review of health centre paper-based registers; and direct unstructured observation of facility operations (2–3 weeks per site). Structured observations focused on recording explicit activities (e.g. medical history, physical examination, blood draw, etc) and the type of information exchanged between health workers and patients during routine screening visits in the outpatient, MCH, TB and HIV departments. Unstructured observations were guided by a note-taking tool developed from the conceptual framework and included notes on informal discussions and interactions. We additionally conducted key informant interviews with government and non-government officials ($n = 14$) with specific knowledge or experience in front line supervision. Table 1 outlines the sampling approach and rationale for each data collection method and summarises the number of activities conducted at each site.

In interviews with providers and patients, the term trust was not explicitly introduced due to the risk of social desirability bias (Krumpal 2013). Prior experience of conducting interviews in Zambian health centres (Topp *et al.* 2010; Topp *et al.* 2013) indicated that when asked direct questions about interpersonal interactions, both patients and providers tended to provide undifferentiated and affirming descriptions of their relationships. This, despite observations of inter-cadre and patient–provider tension suggest a more complex set of relationships. In this study, therefore, questions were designed to elicit detailed descriptions of interactions among and between staff and patients to provide insight into whether and why trust may be present in certain relationships, without necessarily asking directly about 'trust'. Themes that were explored in relation to workplace trust included perceptions of support and collegiality between health providers and towards supervisors and district managers, providers' confidence that their professional expectations would be met and providers' willingness to rely or depend on their colleagues or managers under different conditions. In relation to inter-personal trust particular attention was paid to expressions of faith in providers' good will; patients' confidence that providers were adequately skilled and their hope versus expectations of receiving timely and good quality services. These responses were then triangulated with direct observations of inter-personal interactions to provide a better understanding of the way workplace trust and patient–provider trust influenced day-to-day operations.

The primary investigator conducted all the health worker interviews in English. Patient interviews were conducted by one of the two trained research assistants in the participants' choice of English, Nyanja or Bemba. All interviews were conducted in private rooms in the health centres. Written informed consent was obtained from all participants (patients, providers and key informants) for any observations or interviews. The study received ethical clearance from the authors' local institutes.

Analysis was carried out in three phases. Phase one was conducted concurrently with data collection, as collated notes and summaries of evidence were generated for each health centre. Transcribed interviews were imported into NVivo QSR^{TM} for electronic coding. In phase two, data were organized to produce a case description for each health centre (Yin 2009). Qualitative and observational data were synthesized and compared with develop as comprehensive a picture as possible of the operational reality at each site. This phase included comparison and cross-checking of all data to generate cohesive and consistent case descriptions and to identify unusual or exceptional experiences. Preliminary case descriptions were disseminated to the health-centre managers and district medical officers to garner feedback. Phase three focused on cross case comparisons using both deductive and inductive analysis. Deductive analysis was guided by codes developed from the conceptual framework including system hardware (e.g. financing, human resourcing, drug supplies); system software (leadership, workplace norms, patient expectations); workplace trust (employer, supervisor, colleagues) and patient–provider trust (inter-personal, institutional). Coded text and its (anonymized) source were collated in a word document and printed to enable synthesis of major findings relating to hardware–software interactions and their impact on mechanisms of effect within the health centres. Theoretically generated codes were supplemented with inductive codes, and commonalities identified across the four cases. Negative case analysis was conducted through the identification of experiences or interactions that

Table 1. Summary of data collection and sampling at four PHCs

Method	Source	Sampling approach	Rationale for data collection	PHC1a Dates: 1–21 June 2011	PHC2a Dates: 26 Jun.–15 July 2011	PHC3a Dates: 3–19 Oct. 2011	PHC4a Dates: 11–25 Nov. 2011	Total
				Number of activities conducted				
Direct observations	Facility audit		Designed to provide a snap-shot of physical, material and administrative structures in place. Conducted with facility in-charges.	1	1	1	1	4
	Unstructured observations and research memos	2 weeks per facility	Contributed to building a picture of typical workflows and human interactions that influenced health centre operations. Provided important data to supplement structured health centre audits and direct observation of patient visits.	3 weeks	2 weeks	2.5 weeks	2 weeks	n/a
	Structured observations	Quasi-random sampling (every third queuing patient approached to participate on specified observation days for each department). Interviews in all active PHC departments with a minimum of eight patients per department.	Provided evidence of the actual care pathways and waiting times involved and the nature of patient–provider interactions across all major departments. This evidence provided a quantifiable basis for comparing patient and provider perceptions of health centre service operations	47	48	46	44	185
Interviews	Health care workers	Proportional (relative to departmental staff numbers) purposive sampling to include overall and departmental in-charges, and at least one active staff member from all departments. Minimum two interviews per department conducted in urban PHCs.	Interviews were built around four major themes; (1) providers' role in the health centre, their typical routine and their position in relation to others in the facility; (2) the challenges faced in day-to-day work; (3) perceptions of the work patterns and work culture in the facility, including the role of health centre managers; (4) their understanding of, and attitudes towards, the introduction of HIV services.	23	8	16	17	64
	Patients	Conducted with the same patients who consented to participate in the structured observation exercise—sample outlined earlier.	Questions designed to provide an insight into the patient's reasons for attending the clinic, their perceptions about what happened during the visit, their understanding of processes and relationships driving service delivery, and how provider behaviour and services met their expectations.	47	48	46	44	185

[a]PHC, primary health centre

appeared to contradict the theoretical assumptions underpinning this study. Results and discussion presented in this article draw primarily on in-depth provider interviews and semi-structured patient interviews but are critically informed by in-person observations and key informant interviews.

Findings

Using Gilson *et al.*'s (2005) framework as a guide, we present findings in two sections focussing on workplace trust and patient–provider trust, respectively. Within each section, we outline factors influencing providers' or patients' trust and distrust in the health system and subsequently describe how these factors influenced service quality or responsiveness. Consideration of the influence of health system hardware and software is integrated into each section, while exploration of how workplace trust and patient–provider trust interact is addressed in the Discussion. Study sites or primary health centres are referred to as PHC1, PHC2, PHC3 and PHC4 respectively.

Relevance of and factors influencing workplace trust

We found the concept of workplace trust to be highly relevant to the Zambian PHC setting with a range of factors contributing to generally weak trust in employer, supervisor and colleagues, respectively.

Trust in employer

Four common themes were identified across the four sites as influencing trust in employer amongst the Zambian public health workers (Table 2). The first was inadequate or delayed remuneration, with many providers complaining about insufficient pay. A number additionally commented on problems to do with the timeliness of payment

> Our pay, it is something else. Especially here in Lusaka, it doesn't go very far. The government should just consider giving us what we need. Nurse, PHC4.
>
> Payments come late and [although the Ministry] always promise, 'it is coming,' it's a challenge. Nurse, PHC1.

Human resource shortages and associated workload were a second theme related to providers' trust in their government employer. Respondents frequently attributed staff shortages to the need for the MOH to hire more people or the need for better-qualified staff. Others expressed frustration with having to take on extra duties or responsibilities (experiencing 'duty creep') as a result of health centres being short-staffed.

> I want the Ministry to send people who are qualified [. . .], not someone who can only deliver half the services. Overall In-Charge, PHC2.
>
> A nurse should just be nursing. But you find that . . . I have to do data, I am a lab tech and I have to do the counselling. So I'm doing five [sic] people's jobs. Nurse, PHC3.[2]

In the rural PHC, where government housing is an established benefit of the post, several providers expressed frustration based on the perception that the MOH used lack of staff housing as an excuse to avoid allocating the full complement of staff:

> If [the Ministry] built us more [staff] houses then [it] would not give us that excuse: 'there is no accommodation so why allocate staff?' Nurse, PHC2.

A third common theme related to providers' trust in their employer was sub-optimal working and/or environmental conditions. Such concerns were focused on drug or equipment shortages and most commonly raised by providers working in the OPDs of the urban facilities. Critically, drug and commodity shortages were perceived to be reflective of a more systematic breakdown in Ministry- and District-administered supply chains.

> Supplies are never enough. Nurse, PHC1.
>
> Drug shortages are constant; we are always running out of this or that. Nurse, PHC3.
>
> Here we push our [pharmacy] orders [. . .] but it takes time and [we] often find that what [we] ordered hasn't come. But, it's difficult to know whether the issue is with [the stocks in] Medical Stores or if [the problem] is no District transport for delivery. [Another problem] is if Medical Stores don't have enough [drugs] to begin with, they [provide] less to the District and then the District just decides how much [each health centre] gets; LabTech, PHC 3.

A final theme emerging in relation to providers' trust in employer was that of inadequate administrative and supervisory support. This concern was most emphatically expressed by providers at the rural facility (PHC 2) where the professional staff who were interviewed expressed anxiety about the lack of District support including the nurse who was dually in-charge of the outpatient and HIV departments:

> I don't feel I am getting support [from the District]. It's not adequate. [. . .] I am all alone. Nurse, PHC2.

Table 2. Factors influencing workplace trust in four Zambian health centres

Workplace trust			
Sub-category	Dimension of trust or mistrust	Themes arising from data	Hardware–software factors
Trust in employer	System trust Fidelity	Insufficient/delayed pay Unmet professional expectations Poor work conditions District/MOH support	HCW identity as 'underpaid' civil servant Under-resourcing Limited professional development
Trust in supervisor	Competence Communication Fairness	Weak transparency Lack of consistency Weak problem solving capacity *Ad hoc* information sharing	Weak leadership capacity Orientation fatigue Frequent staff turnover Weak mechanisms of administrative accountability
Trust in colleagues	Honesty Communication Fairness	Weak accountability Unequal conditions of service	Erosion of service values Weak sense of teamwork High stress environment

In the urban and peri-urban health centres, staff reported a more supportive District presence. However, complaints related to perceptions of weak support from provincial or ministry-level officials remained common.

> The District is supportive and understands. There are meetings and performance assessments. [They] will call or visit to find out how you are going; Nurse, PHC3.
>
> Rarely, if ever, do the Ministry come to see us, to see what we need. So how can they look after us? In-Charge, PHC1

Trust in supervisor

Trust in supervisor was an important theme emerging from both interview and unstructured observational data across the four sites and was influenced by three common factors (Table 2). The first was a perception amongst providers that overall or departmental in-charges did not behave fairly or consistently. In PHC1, PHC3 and PHC4 this concern was focused on the issue of selection for inclusion in workshops or in-service training opportunities, with various staff implying that in-charges' decisions about who was selected for these sought-after opportunities were arbitrary and lacking transparency:

> I see a bit of a problem [with management] to be honest. There are some people who are sidelined when it comes to trainings. Nurse PHC3.
>
> If you are friendly with the [manager] maybe you are given opportunities. But if you are not friendly you just get passed over. Nurse, PHC1.

A second theme related to trust in supervisors was problem-solving capacity. Frustrations with overall and departmental in-charges' perceived inability to address ongoing material shortfalls in the health centres were common. Although many respondents acknowledged the backdrop of general resource shortages, a number also suggested that health centre managers used these resource and financial constraints as an excuse for their own local inaction:

> The answer is always: 'no funds'. It's a scapegoat. Sometimes it's true, [but] if the issue has not been communicated to the District or somewhere else that's why the same issues keep coming up; Nurse, PHC3.

Poor communication and information dissemination constituted a third theme related to trust in supervisors. As noted earlier, lack of transparency around the selection for in-service trainings was a common complaint, contributing to many providers' suspicion of their supervisors' motives.

> There is no way of knowing how people are selected [for trainings] – we are not told why. Nurse PHC4.

But in-clinic observations also demonstrated generally *ad hoc* approach to intra-facility information sharing, exemplified by the irregular scheduling of nominally compulsory 'monthly' staff meetings. Such weak information sharing was partly related to the high rate of health-care worker and in-charge turnover, which in turn exacerbated the need for information transfer and added to 'orientation fatigue'.

Trust in colleagues

Two major themes relating to providers' trust in their colleagues emerged from interviews and observation data (Table 2). Belying providers' initial descriptions of the solid teamwork within the facility, observations of heavily siloed work-operations and providers' own complaints about the impact that other staff-members' (substandard) work practices had on their own performance suggested a perceived lack of accountability among members of staff in 'other' departments or 'other' cadres.

> If these clinical officers were found there doing their job, we [in the lab] would also be able to do our jobs; Lab Tech, PHC3.
>
> The nurses don't do their jobs. They're meant to triage the complex cases to send to us, but they just take the temperature and send all the patients on; Clinical Officer, PHC4.
>
> [Clinical Officers] are sometimes lazy, and then the patients shout as us [nurses] for being slow but there is nothing we can do; Nurse, PHC1.

Underpinned by widespread perceptions of underpay and overwork (see earlier), a second theme related to trust in colleagues was the perception that providers operating in different departments were somehow advantaged.

> These others [in the outpatient department], they have morning and afternoon shifts. So by midday they change shift and the new ones that come are fresh. But for us [in maternal and child health department] we work morning to evening. Midwife, PHC3.

Notably, we found fewer concerns about comparative professional or financial advantage, and much stronger expressions of trust amongst providers in the smaller rural facility (PHC2) where both professional and lay provides described a culture of mutual respect and teamwork. This was supported (for the most part) by direct observation. Professional staff indicated that the shared experience of operating in a small, understaffed clinic with on-site housing contributed to a sense of team bonding. This, in combination with the flat management structure and a perceived reduction in status differences associated with constant task-shifting appeared to contribute to the greater degree of tolerance amongst colleagues.

The influence of workplace trust on service quality and responsiveness

Weakening of individual work ethic and an undermining of provider teamwork constituted the most obvious effects of these workplace trust factors on service quality and responsiveness. In relation to salary levels and the consistency of payment, for example, many providers described a general lack of motivation underpinning their own individual, as well as team performance.

> There are no incentives to motivate the workers. Nurse, HC4.
>
> Really you just have to appreciate yourself, because if you were relying on the government [...] to appreciate you, then you would always feel frustrated. They don't care. Nurse, PHC3.

Some providers linked the perception of poor pay to their decision to seek additional paid work ('moonlighting') to supplement their income, acknowledging that this practice often left health centres even more short-staffed than before. Others described how the perceived lack of financial incentive also directly influenced their attitude and responsiveness to patient needs.

> If I got enough money from [this job], it would be satisfying. But I don't get enough, so I have to look for other sources. Nurse, PHC1.
>
> When you motivate someone financially, even if they do not have all the equipment they need, they would just find a way to help out. But without that [financial incentive] they relax. For example, there are times when we run out of these TB sputum containers here in the lab. If truly I were motivated financially, I would go out of my way to go out there and ask for these

> containers from other clinics. Or I would come and help out the other patients. But when there is nothing like that I just say "go elsewhere." Lab Tech, PHC3.

Also affecting workplace motivation in the two urban health centres (PHC1, PHC3) were concerns for personal health and safely, as interviews with nurses, clinicians and laboratory technologists revealing common concerns about the way overcrowding and inadequate physical infrastructure increased their risk of exposure to infectious diseases

> The clinic is over-crowded and you can get diseases. Like right now I am not feeling well. I am feeling very sick and I'm worried. It might be anything. Clinical Officer, HC3.
>
> If you look at our environment it is not conducive to operate from. They [the Ministry] should do something about that. Nurse, PHC1.

Weak motivation and poor work performance were also linked by many professional health workers to their lack of trust in supervisors or colleagues. Supervisors' apparently arbitrary decision making, weak information dissemination and associated perceptions of favouritism or unfair advantage gained by their colleagues, were all factors listed as affecting motivation to perform well or even just to standard.

> You see that favouritism and it is demoralising; Nurse, PHC1.
>
> There is no way of knowing how people are selected – we are not told why. Even when you work so hard you might be overlooked. Nurse, PHC4.

Lack of resolution on outstanding health centre systems issues or in-charges' unwillingness to tackle perverse work norms (e.g. tardiness and absenteeism) were also linked to a sense of futility in some providers' efforts to remain positive and deliver good care.

> There are challenges that come up almost every month and they are not resolved; we just talk about them again and again. It makes you feel low. Nurse, PHC3.

In all facilities, providers' frustration with their workload was linked to a sense of their diminished capacity to deliver quality care and in turn, feelings of frustration or inadequacy that provoked inappropriate behaviour towards their patients.

> Drug shortages are always a challenge. All the things we use like [thermometers, blood pressure cuffs], we always run out of these things. Nurse, PHC1.
>
> When you ask the patient to go and buy drugs [at an external pharmacy] they don't understand why. And I cannot explain properly so I just tell them off, even though I know they are correct, I should have the drugs. Nurse, PHC3.

Similarly, the issue of human resource shortages was strongly linked to weaker individual performance and to less positive patient orientation.

> It's too much for me [...] I find that I am not doing quality work. Nurse, PHC2.
>
> You touch here, you touch there, you go give an injection, but you are not concentrating. Clinical Officer, PHC3.

Relevance of and factors influencing patient–provider trust

As outlined below our findings demonstrate the relevance of patient–provider trust to the Zambian PHC setting with a number of contributing factors.

Institutional trust

We found mixed, but generally positive perceptions in relation to patients' institutional trust in providers, with a majority of those interviewed expressing confidence that professional health workers were qualified and clinically competent. Clinical officers and medical officers, in particular, were described as having the training to 'examine me properly' and 'give me the right medication for my illness'. In response to the question: 'which health care provider would you prefer to see?' patients most often expressed a desire to be examined 'by the doctor' giving reasons like the doctor (clinical or medical officer) can 'cure me' or 'solve my problems'.

> The doctor is the only person I want to see. If he is examining you, you know that he will give you the right treatment; OPD Patient, PHC2.

Notwithstanding these affirmations, patients' institutional trust was often undermined by repeated experiences of unresponsive or even abusive staff (see next section). While many patients described professional health workers as 'experts', for example, they simultaneously criticized provider performance as 'not up to expectation'.

Interestingly, patients from all four clinics expressed far less 'institutional' confidence in lay health workers, with the main reason being their lack of, or lower-level qualifications.

> A lot of people who work here are just volunteers from the villages and sometimes act like they are qualified which is not good; OPD Patient, PHC2.

However, patients' accounts of their inter-personal experiences with these same lay staff were more often positive, especially by comparison to descriptions of patient interaction with professional health workers. This phenomenon was most clear in health centres 1 and 2 where peer educators who had been delegated responsibility for TB treatment and support services were referred to by patients' as 'doctor' despite understanding that these staff members were not formally qualified.

> The ones here, they really have a heart. They provide the information and they are patient with us. TB Patient, PHC1.

Inter-personal trust

Inter-personal trust, so heavily influenced by providers' behaviour, emerged as the major theme dictating patient–provider trust in all four health centres. Three major factors emerged in relation to this inter-personal trust (Table 3). The first was health workers' perceived lack of respect for patients or clients. Although some patients did report positive experiences, examples of disrespectful behaviour by health workers were reported by a number of patients in all sites.[3] Disrespect was most frequently linked to experiences of verbal abuse or the perception that health workers' simply didn't care about patients.

> Nurses are very harsh with patients. Sometimes they shout at us. OPD Patient, PHC4.
>
> Yes, the nurse should be kind. They should know that they are dealing with people who are sick. ART Patient, PHC1.
>
> I sometimes feel like us patients are not respected here at the clinic. MCH Client, HC2.

Linked to, but distinct from, perceptions of disrespect, the second theme patients reported on was the lack of professional accountability for basic standards, particularly in relation to health workers' timeliness.

Table 3. Factors influencing patient–provider trust in four Zambian health centres

Patient–provider trust			
Sub-category	Dimension of trust of mistrust	Themes arising from data	Hardware–software factors
Inter-personal trust	Honesty	Lack of provider respect	Under-staffing
	Fairness	Lack of professionalism	Information asymmetries
	Communication	Weak communication/transparency of HCW actions	Lack of opportunities to 'voice' concerns
			Lack of mechanisms of social accountability
Institutional trust	Competence	HCW's formal qualifications	Power asymmetries
	System trust	HCW's role within facility	Tacit knowledge
		Availability of drugs/equip.	

HCW, health care worker; MOH, Ministry of Health

> The nurse is always chatting with her friends, just looking at her phone; OPD Patient, PHC1,
>
> The health workers at this clinic are lazy and very relaxed. They take up too much time before attending to us. HIV Patient, PHC3.

In PHC1, PHC3 and PHC4, HIV patients frequently cited misplacement or loss of medical files as evidence of providers' lack of commitment or professionalism, implying in their descriptions, their own inability to hold providers to account for such issues.

> The health workers at this clinic are very slow and those involved with files keep losing them. They have lost my file this time, and it is not the first time. I know I won't be attended to today; HIV Patient, PHC4.

Lack of professionalism was also indicated in patients' complaints about providers' favouritism towards friends and family or their willingness to accept informal fees.

> The clinic works very well if you know someone because you go straight to that person. Some patients give staff money. Some they have an affair, so they can save money. Either way, [such patients] will be attended to fast when they come to the clinic. But no one [from the Ministry] is checking on [this problem]; HIV Patient, PHC4.

A third theme relating to patients' inter-personal trust in providers was that of insufficient and poorly communicated information. In the urban facilities especially, a number of patients complained that health-care workers spent too little time with them individually to be able to provide personalized care.

> In the doctor's room, he didn't explain why I was going to the lab. He just said 'go to the lab'; OPD Patient, PHC1.
>
> Yes a lot of people need information of what is happening to this clinic and in the community and on ART is. Because we don't know. OPD Patient, PHC3.

Notably, and as illustrated by the quotes later, patients who perceived providers to be disrespectful or lackadaisical also more often conflated these concerns with other, more generalized service inefficiencies not linked to provider orientation, such as mandated health facility opening hours, the environmental conditions of the facility or drug stock-outs.

> The [work] culture here is not good. Also [healthcare workers] should be working twenty-four hours shifts so there is always someone available. HIV Patient, PHC1.
>
> The health workers should stop reporting for work late and we need more toilets. OPD Patient, PHC2.

Influence of patient–provider trust on service quality and responsiveness

The effect of weak inter-personal relations and poor patient–provider trust on service quality and responsiveness were profound. Lack of confidence in provider empathy and anticipation of poor service undermined patients' tolerance of other more generalized or structural health system constraints. Poor tolerance of health system constraints in turn contributed to a range of patient responses (both observed and reported) most commonly including attempts to skip long queues (with or without informal fee payment—see Box 1) and verbal arguments with providers (of varying degrees of intensity). In more extreme cases (PHC3) patients were observed initiating physical shoving matches in an effort to establish an advantageous position outside screening rooms or even physically blocking clinical officers who were trying to leave at the end of their shifts.

A critical consequence of such actions was to contribute to providers' own sense that clients were ill-educated or ill-mannered and lacked understanding of the multiple pressures that they were experiencing:

> Patients are always complaining and lying about when they arrived to try to make you go faster. Clinical Officer, PHC3.
>
> The patient will not understand, they will look at you like you don't want to execute your services, they will look at you like you are not even there, like you don't care. But the [problem is that] you don't have [the equipment] to use. Nurse, PHC1.

Discussion

Although one of the most basic units of a health system, PHCs are far more than just mechanisms of service delivery. Encompassing

Box 1. An example of a patient's response to long waiting times

'Here you have to be clever. I show [the Peer Educator] my plastic bag and then I leave the bag on the bench and pretend to leave. Inside the bag, I put 5 000 kwacha [$1.00USD]. So when [the Peer Educator] opens it he takes that 5 000, he goes to the pharmacy and collects my drugs and puts them inside the bag. Then he comes with my bag to find me outside the shelter. He is going to say: 'Is this your bag?' I will say: 'Yes. Thank you! It didn't get lost. It's my bag. I just want to go now.' So, as long as you have money, you go home early.' HIV Patient, PHC3.

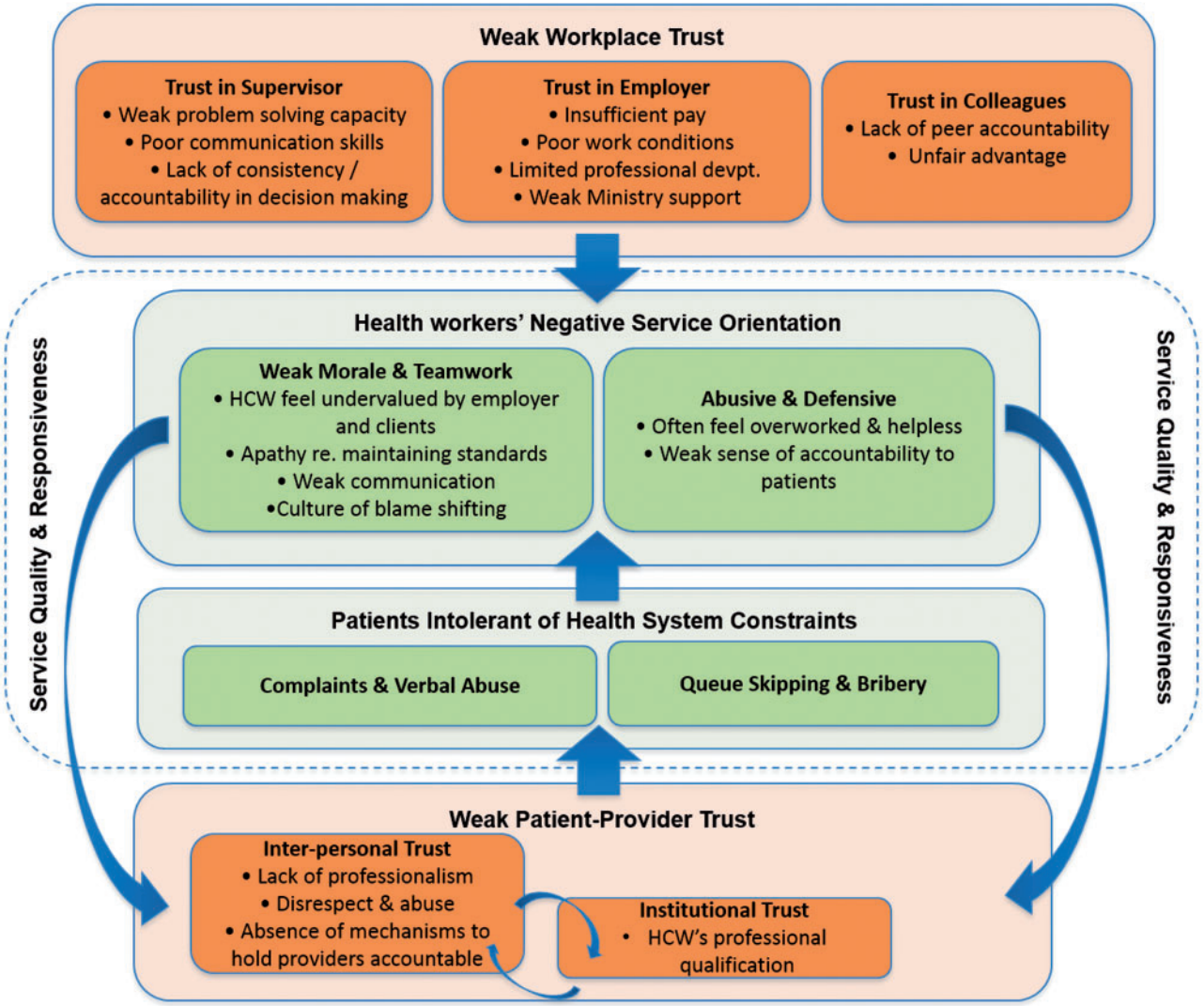

Figure 2. Interactions between weak workplace and patient–provider trust impact on service quality and responsiveness

a range of human actors, PHCs are complex, adaptive and social systems in their own right (Sheikh *et al.* 2011; Topp *et al.* 2014). Recognizing that human decisions, actions and relationships are at the core of such systems, this study aimed to investigate the relevance of the concepts of workplace and patient provider trust to the Zambian setting and how factors influencing the production of these different types of trust might shape service quality and responsiveness of PHCs. Contributing to a nascent body of literature in this area, our findings (summarized in Figure 2) both confirm the relevance of the concepts of workplace and patient–provider trust and highlight the way interactions between these types of trust are influencing service delivery through various pathways.

Overall, findings from this study demonstrated low levels of both workplace and patient–provider trust. Consistent with Gilson *et al.*'s (2005) typology we found weak workplace trust was variously linked to providers' weak trust in their government employer, their health centre in-charges and their work colleagues. Drawing on the Mechanisms of Effect framework (Topp *et al.* 2014) an important contribution of this work is to demonstrate more explicitly how production of these various forms of trust was influenced by interactions between material (hardware) and relational (software) factors in the health centre setting.

In relation to workplace trust, for instance, interview and observational data demonstrated that long-term experiences of overwork in frequently substandard work conditions damaged providers' trust in the government as either a respectful employer or one capable of providing the basic resources needed to ensure basic service quality. Providers' lack of confidence in the government to establish the material conditions necessary to work was inter-mingled with ongoing frustrations related to remuneration. Matching findings from studies elsewhere (Fox 1974; Pfeffer and Veiga 1999; Gilson *et al.* 2005a) the data presented here suggest these factors combined had a powerful influence Zambian providers' workplace motivation and patient orientation.

Frustrations with material work conditions also formed an important backdrop for providers' low levels of trust in supervisors and colleagues. Across all four clinics, disappointment at being overlooked for the limited professional development opportunities (e.g. training or workshops) fed some providers' perception that selection decisions were driven by favouritism. Combined with in-charges' generally weak communication or information-dissemination skills,

these perceptions fuelled more general suspicions of supervisor bias. An overall sense of being treated unfairly both by their government employer and supervisors, in turn, influenced providers' trust in their colleagues by fuelling concerns that other health workers were somehow less accountable or obtaining unfair personal or professional advantage. Interestingly, in the smaller rural facility PHC2, which, by necessity had a much flatter administrative hierarchy and inter-professional task-shifting, findings suggested a greater degree of trust amongst colleagues. Such findings align with existing evidence that suggested that trust in colleagues is more likely to evolve in more democratic institutional settings (Dirks 1999; Pearce *et al.* 2000; Gould-Williams 2003)

As summarized in Figure 1, providers' weak workplace trust was found to be strongly linked to a normative work culture that enabled frequent blame-shifting and that rationalized negative attitudes towards, and abuse of, patients. Such responses have been noted in other settings (Brockner and Wiesenfeld 1996; Lewicki and Bunker 1996) and these behaviours formed the basis for weak inter-personal trust between providers and patients, undermining patients' confidence in health workers' service values or empathy.

An inverse pattern vis-à-vis trust in lay providers was demonstrated, however, with patients' initially weak institutional trust often outweighed by the growth of inter-personal trust over time, based on repeated experiences of respectful and personalized care. As has been found in other health-care settings, therefore, we found patient–provider trust to be simultaneously influenced by affective judgements about providers' sincerity, empathy and fairness, as well as patients' cognitive judgements about clinical competency (Giddens 1990; Wuthnow 2004).

As noted in the literature, the development of impersonal trust in settings involving a large number of interactions between relative strangers are reliant, to a degree, on institutions and mechanisms of accountability, such as rules, laws, norms and customs (Gilbert 2005; Gilson *et al.* 2005a). Findings from this study, however, demonstrated that both patients and providers lacked confidence in the rules, norms and institutions that should have guaranteed (in the case of providers) a productive work environment and (in the case of patients) responsive services.

Building on previously published work demonstrating endemic weaknesses in mechanisms of both administrative and social accountability in Zambian PHCs (Topp *et al.* 2014), the current study thus makes an important contribution by providing meaningful evidence of the way weak mechanisms of administrative and social accountability interact with structural determinants (particularly chronic resource shortages) to undermine workplace and patient–provider trust in frontline Zambian health facilities. Providers' lack of confidence in the accountability of both their supervisors and peers contributed to perceptions of being both professionally undervalued and personally disadvantaged by arbitrary decision making or unevenly applied standards. Many providers described their concern with whether, and how, others might be gaining a financial or professional advantage and the negative flow-on effects these suspicions had in terms of teamwork, attention to medical and ethical standards and patient-oriented care. At the same time, patients lacked confidence in providers to deliver on their expectations. Without the means to enforce these standards, patients often resorted to small-scale bribes or queue skipping in an attempt to get more timely or more personalized care. These actions exacerbated patient–patient and staff–patient tensions, further undermining service quality and responsiveness. The resulting negative feedback loops and their impact on service quality and responsiveness are captured in Figure 2.

Study limitations and methodological considerations

This study's conceptual framework and methodological approach place a strong emphasis on the importance of context-specificity. Since every context, by definition, is unique, it could be argued that the findings presented here are specific to the experience of the four health centres. To the extent possible, however, we have maintained a distinction between the context specific analysis that addressed the study's 'how' and 'why' questions on the one hand, and theoretical insights related to health system performance more generally. We acknowledge that the research team's disciplinary and professional background (including significant prior experience working in Zambian health centres) represent a potential source of bias that may have predisposed the team to understand and analyse certain issues in certain ways. Nonetheless, such experience could also be seen as an advantage, providing a deeper understanding of the social and institutional context in which both patients' and providers are operating and the paradoxical nature of their actions, decisions and relationships.

Conclusion

Although more and deeper work is needed to understand how to develop both macro- and micro-level institutions that 'demonstrate the norms of truthfulness, solidarity and fairness' (Gilson 2003), our findings do flag some important points. First, providers' orientation and behaviour towards patients is a critical 'fulcrum' on which the production of trust in frontline health services balances. As our findings illustrate, however, providers' orientation is the product of multiple and intersecting factors, and disrespectful or abusive behaviours are unlikely to be fixed by any single intervention, particularly training (Gilson 2005). Two potential entry points for tackling the sort of negative work culture described earlier might include investment in improved workplace conditions (system hardware) as well as strengthened frontline leadership capacity (system software). Recent work by several southern African consortia recognizes and has already begun to act in the latter, complex leadership domain (Gilson 2013; Mirzoev *et al.* 2014). In the long term, however, more and further-reaching structural reforms relating to human resource for health management systems, including supervision, appraisal, disciplinary and reward mechanisms are likely to be necessary.

This study highlights the importance of trust as a mechanism influencing both health care workers' performance and patient responses, and its role in shaping health centre relationships central to generative and protective service delivery. Application of the Mechanisms of Effect framework with its emphasis on hardware–software interactions drew attention to the way both material and relational health system components influenced the production of these different types of trust and with what effects on health centre performance.

Our findings contribute to a small but growing body of evidence demonstrating how and why breakdowns in trust have occurred in public sector services in Zambia and demonstrate the critical consequences of these breakdowns on service quality and responsiveness. The study flags the importance of strengthening investment in both structural factors and organizational management to strengthen providers' trust in their employer(s) and colleagues as an entry point for developing both the capacity and a work culture oriented towards respectful and patient-centred care.

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Ethical Clearance

The study received ethical clearance from the Human Research Ethics Committee of the University of Melbourne (Ref 1035194) and the University of Zambia Biomedical Research Ethics Committee (Ref 004-03-011).

Conflict of interest statement. None declared.

Notes

1 Since one of the study's overall goals was to assess the impact of introducing HIV services into primary health centres, this was a necessary criterion.

2 Frustrations with 'duty creep' were common but not universal amongst those interviewed with examples given by individuals in Health Centres 1, 2 and 4 describing their enthusiasm for taking on greater clinical responsibilities (We have few clinical officers so I just have to beef up [screening] now and then. I like it. These other professionals they are specific but nursing is so dynamic) and in one exceptional case (Clinic 4) a newly graduated nurse practitioner with the skills to manage and screen stable HIV patients paradoxically complained that she was unable to utilize her new skills as she continued to be rostered for just 'basic nursing duties.'

3 Although complaints about provider disrespect and abuse were recorded from patients in all departments, comparatively more patients from the outpatient department complained compared with the maternal and child health, HIV or tuberculosis departments.

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