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## In the shadowlands of global health: Observations from health workers in Kenya

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During the past decade, donor funding for health interventions in Kenya and other African countries has risen sharply. Focused on high-profile diseases such as HIV/AIDS, these funds create islands of intervention in a sea of under-resourced public health services. This paper draws on ethnographic research conducted in HIV clinics and in a public hospital to examine how health workers experience and reflect upon the juxtaposition of ‘global’ medicine with ‘local’ medicine. We show that health workers face an uneven playing field. High-prestige jobs are available in HIV research and treatment, funded by donors, while other diseases and health issues receive less attention. Outside HIV clinics, patient’s access to medicines and laboratory tests is expensive, and diagnostic equipment is unreliable. Clinicians must tailor their decisions about treatment to the available medical technologies, medicines and resources. How do health workers reflect on working in these environments and how do their experiences influence professional ambitions and commitments?

**Keywords:** national health systems; vertical disease programmes; hospital care; Kenya/East Africa; ethnography; health workers

### Introduction

The devastating impact that neoliberal health reforms of the 1980s and 1990s had on national health systems, health workers and health outcomes in African countries has been well documented (Pfeiffer & Chapman, 2010). Structural adjustment cut government expenditure on primary health care and promoted the privatisation of health services (Rono, 2002; see also Janes, 2004; Navarro, 2008). Stock-outs of essential medicines contributed to the emergence of drug-resistant tuberculosis (Nightingale, 2010) and increased antibiotic resistance (Feierman, 2011). Worsening work conditions – lack of essential medicines and equipment – and poor salaries led to demoralisation among health workers. Many either left public work for private or NGO practice or left their countries altogether, precipitating a ‘human resource’ crisis that still plagues African health systems (Sherr et al., 2012).

Into this situation of faltering national health services and demoralised staff, global health initiatives, which gathered force in the early 2000s and committed huge resources to the control and treatment of HIV/AIDS, tuberculosis and malaria, have been a welcome development (Loewenson & McCoy, 2004; World Health Organization

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Maximizing Positive Synergies Collaborative Group, 2009). Funded by the Global fund, the Presidential Emergency Fund for AIDS Relief (PEPFAR) and the Gates Foundation, these interventions have been successful in terms of numbers of people enrolled in prevention and treatment programmes. However, there are concerns about the sustainability of vertical disease programmes amidst criticism that they undermine rather than support national health care systems (England, 2007; Garret, 2007; McCoy, Chopra, Loewenson, Aitken, & Ngulube, 2005; Ooms, van Damme, Baker, Zeitz, & Schrecker, 2008; Parker & Allen, 2014; Sundewall, Chansa, Tomson, Forsberg, & Mudenda, 2009; Yu, Souteyrand, Banda, Kaufman, & Perriens, 2008). Other diseases and health issues – from bacterial infections to the rising burden of chronic diseases such as diabetes and cancer – do not receive the same amount of international funding (Jeffrey, 1995; Livingston, 2012; Mulemi, 2013; Whyte, 2013), while vertical disease funding may even displace funding for and draw expertise away from other public health services (Shiffman, 2006, 2007).

In Kenya, the rise of ‘global health’ has meant that donor funding for health interventions has risen sharply during the past decade. For example, HIV-positive people can now access free antiretroviral treatment in HIV clinics attached to government or NGO sites. Medical professionals recruited into these programmes enjoy a better working environment than those working outside them. However, the focus on vertical disease programmes produces islands of intervention in a sea of under-resourced and struggling public health services. For patients navigating this system, the cost of X-ray, laboratory tests and medicines for pneumonia can be crippling, as can admission to a public hospital ward. A surgical operation may be delayed because the theatre is out of oxygen. This raises questions about the experiences of patients and of health workers as they navigate these archipelagos of treatment and care. An emerging ethnographic literature charts both the opportunities and the challenges facing patients as vertical treatment programmes in African countries collide with chronic under-nutrition and with co-infections and multiple infections and other diseases (e.g. Kalofonos, 2010; Livingston, 2012, 2014; Prince, 2012; Whyte, Whyte, Meinert, & Twebaze, 2013). While further research on patients’ experiences needs to be done, this paper attends to the other side of the equation, the perspectives and experiences of medical professionals. This is an important arena, to which ethnographic research has much to offer. After all, while global attention is focused on HIV treatment, most African doctors, nurses and other health care workers must struggle to provide a reasonable standard of care to patients who present a host of diseases and health problems, often simultaneously (see Wendland, 2010).

Medical professionals working in the public health care system in Kenya face an extremely uneven playing field. On the one hand, they must deal with conditions that have been little improved since the 1990s. At the same time, they encounter a concentration of resources in a few high-profile diseases. Sophisticated antiretroviral medicines (ARVs) and tests for HIV are available free-of-charge, yet for many other diseases, medicines and laboratory tests remain prohibitively expensive and equipment performance unreliable. Clinicians must tailor their decisions about treatment to the diagnostic facilities and medicines available to them, even while global health and research projects located within or near their institutions use advanced diagnostic and treatment technologies. To guide decisions about treating HIV-positive people, there is a wealth of data on epidemiological profiles and treatment outcomes, but the availability of such locally relevant knowledge for other diseases is patchy (Feierman, 2011; see also Canning, 2006). Globally funded clinical trials producing cutting-edge knowledge on

‘best practice’ for HIV treatment coexist with public hospitals that intermittently have no functioning X-ray machine.

Given this scenario, clinicians are forced to develop versions of ‘good enough’ practice through their knowledge and experience of socio-economic realities, the availability of medical technologies, local disease presentations and treatment outcomes – a practice that, as Steve Feierman (2011, p. 172) points out, is ‘good enough for the poor’. The concentration of funding on vertical disease programmes also means that high-prestige jobs are available in HIV treatment and research, while working conditions outside these enclaves can be extremely challenging, leading to demotivation and a desire to ‘get out’ (Good, Mwaikambo, Amayo, & Machoki, 1999).<sup>1</sup>

This paper explores health workers’ perspectives on ‘global’ health interventions and ‘local’ biomedical practices and standards of clinical care, using material gathered from ethnographic studies conducted in western Kenya over several periods from 2008 to the present. This area experienced a severe HIV–AIDS epidemic, which reached a peak in the early 2000s (see Wools-Kaloustian et al., 2006). In 2005, large-scale HIV/AIDS prevention and treatment programmes, funded mostly by the US PEPFAR and the Global Fund, were introduced in government and NGO sites.<sup>2</sup> We describe these landscapes of health care provision, drawing on the first author’s research in HIV/AIDS clinics and on our ongoing collaborative research in a public hospital. Using interviews with a range of health workers (including doctors, clinical officers, medical and clinical officer interns, and nurses) as well as observations of health care practices, we compare health workers’ perspectives on and experiences of working within HIV clinics and of working in a public hospital. These contrasting sites highlight the inequality that exists between global health interventions and under-resourced hospital wards. We explore how the experience of practicing medicine in this landscape of inequality shapes health workers’ daily professional practice, their personal ambitions, their values and their visions, if any, of a public health care system. The material also throws light on how the flows of funding towards particular diseases and conditions impact health workers’ experiences of and perspectives on everyday medical practice in the hospital and the care they are able to give patients.

Concerns about the ‘futures’ of health systems (Bloom & Standing, 2008) have produced vigorous debate about vertical disease funding versus health system strengthening, and the effects of vertical programmes on national health systems (e.g. Biesma et al., 2009; England, 2007; Garret, 2007; McCoy et al., 2005; Ooms et al., 2008; Shiffman, 2006, 2007; Sundewall et al., 2009; Yu et al., 2008). A large literature also exists on health worker shortages in low- and middle-income countries, the demoralisation and demotivation that health workers experienced as a result of structural adjustment policies, their movements between public health care, private practice and NGOs, and migrations to other countries (e.g. Sherr et al., 2012; Songstad, Moland, Massay, & Blystad, 2012). Although there is some research on the impact of vertical disease funding on African countries’ health workforce (Brugha et al., 2010; Hanefeld & Musheke, 2009), health workers’ experiences of navigating global health interventions have received less attention. There is, moreover, little ethnographic research on this important topic.

Outside the public health literature, anthropologists have observed how global health interventions are shaping social and political landscapes and infrastructures of health (Hardon & Dilger, 2011; Janes & Corbitt, 2009; Nguyen, 2011; Prince & Marsland, 2013), inscribing some spaces as ‘global’ while leaving others as ‘local’ through selective movements of medicine, transnational expertise and international standards of care (e.g. Crane, 2010; Geissler, 2013a; Wendland, 2012). They have made important arguments: that vertical disease programmes exacerbate a ‘projectification of care’

(Whyte et al., 2013, p. 144) and that this produces a situation of ‘abundance and scarcity’ (Sullivan, 2011). However, with a few exceptions (Livingston, 2012; Street, 2011; Wendland, 2010), we lack ethnographic research on the perspectives and experiences of medical professionals – those struggling to provide care within this projectified system. In 2010, Pfeiffer and Chapman (2010, p. 159) argued that anthropologists were ‘curiously silent’ about the weak engagement of global health interventions with public sector health systems. They drew attention to ‘the urgency to rebuild a public sector’ undermined by decades of neglect, as funding for vertical disease programmes collides directly with structural adjustment on the ground (Pfeiffer & Chapman, 2010, pp. 156–158). If anthropologists wish to make their work relevant to the struggle for a more inclusive public health, then we must engage with this important issue (Pfeiffer, 2013). This paper contributes to this aim by describing the complex architecture of public health provision in Kenya and the perspectives of health workers as they struggle to navigate it. It offers perspectives from ethnographic research conducted over extended periods, which offers the benefits of long-term immersion, a grasp of changes over time, and insights into the perspectives and practices of different actors, as we explain below.

## Methods

This paper draws upon ethnographic research on global health interventions and public health care facilities in Nyanza Province, western Kenya, conducted over several periods and within several research projects from 2008 to 2013. Ethnography aims to create a ‘thick description’, which is built up over long-term fieldwork, and our observations of the relations between global health and public health in the region offer insights into how health workers and patients experienced changes in the landscape of funding and health care during this time.

Research began in 2008–2009 with a project that explored health workers’ and patients’ experiences of care provided within antiretroviral therapy (ART) programmes in Kisumu city.<sup>3</sup> The seven-month study focused on two government clinics and two NGO clinics that offered patients HIV/AIDS care-and-treatment; these clinics were chosen because they were large and central, with growing numbers of HIV-positive patients. Research methods included shadowing members of staff in their daily work; interviewing health workers at the clinics ( $n = 31$ ); conducting questionnaires with patients ( $n = 29$ ); and observing staff–patient interactions. The aim was to interview all members of staff attached to the clinic who agreed to participate. Staff interviewed included clinical officers, nurses, pharmacists, nutritionists, community health workers and HIV counsellors, some of who were employed by NGOs and some by the government. Patients – referred to as ‘clients’ – were recruited through snowball sampling; we met them at the HIV clinics and at patient-support groups attached to the clinics.<sup>4</sup> A long-term study of 20 of these HIV-positive people was also conducted, which involved regular visits to their homes and accompanying them to the clinic.<sup>5</sup> Relevant documents produced by the Ministry of Health and NGOs on HIV–AIDS and articles in the national newspapers were collected. The second period of research began in 2013 and focuses on a large public hospital in western Kenya.<sup>6</sup> Research methods include interviews and focus group discussions with doctors, nurses, students and interns at the hospital; observations of medical practice and teaching on the wards. The study is ongoing, and the material drawn upon for this paper is thus limited. We draw upon a visit to the hospital in October 2013, observations in hospital wards conducted in April 2014, focus group discussions with interns ( $n = 3$ ), and interviews ( $n = 14$ ) with health workers (doctors, clinical officers and interns of different cadres).<sup>7</sup> In the next section, we describe these landscapes of care in more detail.<sup>8</sup>

## **Between global medicine and local medicine: landscapes of public health care provision in Kenya**

### *Global health interventions*

The concentration of global health activities has turned western Kenya into an intense site of global health research and intervention (Geissler, 2013b; Prince, 2013a, 2013b). In Nyanza province, these global funds have encouraged a proliferation of NGOs. By 2008, 907 NGOs, ranging from transnational groups to ‘community-based organisations’, had registered with the government as operating in or around the province’s main city, with the majority conducting projects relating to HIV/AIDS.<sup>9</sup> In addition, there are numerous transnational research groups partnering with national institutions. For many Kenyans, these interventions are tangible evidence of progress and improvement, opening the region up to globalised flows of resources, knowledge and expertise, and providing access to previously out-of-reach treatment options and medicines. However, as we explore below, the circulation of resources coexists with a situation of scarcity in crucial aspects of the national health system.

Public health care in Nyanza is dominated by the global response to HIV–AIDS. From 2005, with funds mainly from PEPFAR, HIV clinics (called ‘Patient Support centres’) providing HIV prevention and antiretroviral treatment for outpatients have been rolled out in government health facilities and NGO sites. They offer free HIV tests and CD4 counts, counselling services and health checks, prevention-of-mother-to-child programmes, as well as ARVs, multivitamins and prophylactics. By 2010, there were 24 HIV clinics operating within the provincial capital (if the surrounding district is included, the number reaches 65). These range from the large HIV clinic located in the provincial hospital’s outpatient section, which caters to over 15,000 patients, to small clinics run by national, international and local NGOs.<sup>10</sup> The HIV clinics are the centre of much activity and attention, densely staffed, and subject to continuous surveillance and monitoring. Meanwhile, outside the HIV treatment programmes, the hospital struggles to provide a basic standard of care.

The location of the HIV clinics gives little indication of the complex partnerships between government, NGOs and transnational institutions, which define them. The clinics are part of the government of Kenya’s HIV–AIDS programme, but their funding comes almost entirely from PEPFAR via its ‘preferred partners’, which include NGOs as well as the ‘Global AIDS programme’ of KEMRI–CDC [the partnership between the para-statal Kenyan Medical Research Institute (KEMRI) and US Centers for Disease Control and Prevention (CDC)], which in turn funds several ‘partners’.<sup>11</sup> A major recipient of PEPFAR funds is an NGO, Family AIDS Care and Education Services (FACES), a collaboration between a US University and KEMRI, which works with the Ministry to Health ‘to build sustainable HIV–AIDS care systems’ in Nyanza Province.<sup>12</sup> It operates some HIV clinics and provides ‘training, clinical mentorship and technical support’ to over 100 health facilities across Nyanza Province. Within all HIV clinics, the government-run Kenya Medical Supply Agency (KEMSA) delivers medicines for opportunistic infections while KEMRI/CDC’s Global AIDS Programme (GAP) delivers ARVs and USAID-donated nutritional supplements. KEMRI–CDC donates equipment to government health facilities, such as the HIV rapid tests and the CD4-count machine located in the provincial hospital’s laboratory. In 2009, PEPFAR supplemented salaries of government health workers employed in the HIV clinics and provided small stipends for community health workers.

The complexity of organisational structure can be appreciated through closer observation of particular HIV clinics in the city.<sup>13</sup> Both government and KEMRI-CDC staff serve the provincial hospital's HIV clinic. It is newly painted, with bright murals offering health education messages commissioned from local schools and artists. Plaques and donated equipment display the logos of funders: PEPFAR and USAID, KEMRI/CDC and the Clinton Foundation. These organisations are also present in the large outpatient government health centre in the town centre, which rents out other buildings within the compound to international groups (mostly from US universities) conducting health research.

The two NGO-run HIV clinics display similar entanglements between the state and non-government and transnational organisations. A Catholic missionary priest set one of these NGOs in the 1970s, and its health clinic remains a stable institutional feature of the area. Located in one of the city's oldest informal settlements, the NGO's clinic employs a laboratory technician and a pharmacist, while the nurse-in-charge is paid by the government. In 2007, with PEPFAR funds, the NGO set up a separate HIV clinic, which is rapidly growing. Staff at the HIV clinic includes two clinical officers, a pharmacist and four clerical officers (who conduct HIV counselling and basic health checks). They receive their salaries through FACES. The other NGO is much smaller and was set up in the late 1990s by a Catholic nun, as a centre for orphan care. In 2007, it too began receiving PEPFAR funding and support from the government to provide HIV testing and treatment. Supplies of medicines are delivered by KEMSA and GAP; the pharmacist is paid with PEPFAR funds; while the six volunteer HIV counsellors received a small monthly stipend (first from a British NGO and later from PEPFAR). In the following section, we explore how medical professionals and health workers navigate this complex landscape.<sup>14</sup>

### *Navigating global health*

Medical professionals working both within and outside HIV programmes emphasised the positive nature of new global health initiatives. They are a huge improvement on the neglect that characterised HIV/AIDS care 10–15 years ago, when patients had no access to treatment, unless they were recruited into a clinical trial. They also circulate resources, expertise and opportunities, putting the region 'on the map', as one informant put it. PEPFAR-funded NGOs offer good salaries (in 2009, these were better than government salaries), even if conditions of work are less secure than state employment. Government health workers chafed at the differences between NGO and government employment; they pointed out that staff supported by PEPFAR get paid more for doing the same work. Yet government staff also benefited from the training workshops offered by NGOs, which provide professional development and opportunities to make contacts as well as much appreciated per diems.

Across government and NGO-run HIV clinics, health workers commented on the positive working environment, even in the face of increasing patient numbers. 'Medicines are available, supplies are reliable, there is more staff and they are motivated', as the Nurse-in-charge of an NGO's HIV clinic told us. A clinical officer (CO), who worked in an HIV clinic ran by FACES, compared these privileged conditions to his earlier internship in the hospital, where on many wards 'there is nothing!' Knowledge is also readily available: there is a telephone 'hot-line' through which staff can access expertise regarding HIV treatment, while continuous medical education on HIV–AIDS issues give health workers the latest exposure to clinical guidelines and scientific research. For COs

and doctors recruited into HIV programmes soon after their internships in public hospitals, HIV clinics represent a safe haven of functioning medicine. Many expressed their satisfaction at being able to provide treatment and care according to national protocols and to practice what they had learnt: 'Here, you can give the patient the treatment they need. You can get the tests done, you can tailor the treatment'. Staff enjoyed the attention and prestige that PEPFAR programmes generated. They talked of the better pay, good prospects for their professional futures and of 'exposure' to the prestigious field of global health. 'Here I can develop myself' was a common sentiment, which referred to opportunities to learn and make contacts within the fields of global health and global science, which professionals gained from working in the HIV clinics and attending the numerous workshops on HIV/AIDS.

Health workers' appreciation of the HIV treatment programmes did not mean they were uncritical. They knew that if their patients had to be admitted to hospital, they would have no privileged access to doctors, free medicines and tests. They were well aware of the limited impact of providing ARVs to people who were struggling to eat enough and who were living in slum housing with open sewers and no electricity. While some health workers were brusque and even harsh with patients, blaming patients' troubles in adhering to medicine or turning up at appointments on their 'ignorance' or 'laziness', others pointed out that hunger and poor nutrition were huge limitations on the success of the programmes (Prince, 2012). Some expressed frustration at their inability to tackle these issues. As one clinical officer told the first author:

People ask me 'How can I swallow these medicines you are giving me when I have not eaten this morning?' There are so many. What can you do? All I can do is prescribe medicines.

Health workers were acutely aware of rising socio-economic inequality in Kenya. As one of the senior doctors told us:

These differences between rich and poor are getting worse. The rich are getting richer while the poor are getting poorer. In the early 1990s, food was affordable to everyone. Now people cannot afford even basic food...Nutrition is a big problem.

Health workers also knew that if their patients became ill and had to be admitted to hospital, they would have no privileged access to doctors, free medicines and tests.

Some health workers wondered about the future of public health services in a situation where resources and expertise have been skewed towards HIV: 'What we will do when the donors and the projects leave?' COs working in the HIV clinics pointed out that they knew 'a lot about HIV' but they had little chance to develop expertise outside the field of HIV medicine: 'You end up interpreting everything as related to HIV'. This suggests that the fragmentation brought about by disease-specific programmes may become self-reinforcing through the creation of increasingly specialised expertise. However, it was the younger professionals who held this perspective – clinical officers who had been recruited into the ART programmes directly after their internships. The older COs (aged 35 or over) regarded work within ART programmes as both enabling and a relief from the conditions they had earlier worked within, where necessary medicines and diagnostic tools were often unavailable. Still, internship in government hospitals gave even the younger professionals a broader perspective on public health, as we explore below.



HIV treatment clinics aim to incorporate people into treatment and care programmes as early as possible, when they are healthy and immune systems are robust. In reality, however, poverty, poor housing and associated stress compound HIV infection and accentuate vulnerability to ill health (Prince, 2012). In our study of HIV-positive people enrolled in HIV treatment programmes, we found that every family at some point had to admit members to a hospital ward – whether for severe attacks of malaria, tuberculosis, pneumonia or co-infections (the aetiology of which we were never able to establish, as the patients themselves were rarely given information). Usually patients had to pay for a laboratory test, X-ray and medicine before they were administered. Treatment was thus sometimes delayed and this could have tragic consequences. The hospital we introduce below receives patients such as these – people who face multiple challenges, medical and economic. As a referral hospital, it also gathers patients at the end of treatment trajectories – people who have been misdiagnosed elsewhere, who are in a state of frail health, chronic disease and/or acute infection. Health workers working in the hospital are thus under considerable pressure.

### *In the shadowlands of global health*

The rest of this paper attends to a large public hospital in western Kenya, which acts as a teaching and referral hospital for the region while also serving the population of the town in which it is located. In 2012, the hospital had a bed capacity of 470 spread over nine wards. The nine wards cover general medical, surgical, orthopaedic, gynaecology, paediatric, maternity and eye wards, an ICU with five beds and two cots, and a recently opened paediatric oncology ward, which is funded by an NGO. There are laboratory, pharmacy and radiology departments, and casualty services. Outpatients number on average 22,762 per month, while the inpatient average is 1500 per month. Deliveries average 463 monthly. Staff lists in 2012 included 20 consultants, 15 medical officers, 12 medical officer interns, 20 clinical officers, 161 nursing officers, 83 Kenya enrolled community nurses, 12 radiographers, 14 laboratory technicians and 9 pharmacists, among other health cadres. Staff are employed by the Ministry of Health, although in some departments (for example the outpatient HIV clinic and the paediatric ward), there are clinical officers, doctors, community health workers and counsellors paid by KEMRI-CDC and other partners. In-patient morbidity statistics for the past five years list ‘pneumonia, malaria, anaemia, diarrhoea, tuberculosis, abortion, road traffic accidents, meningitis, unspecified protein energy malnutrition and hypertension’, while outpatient morbidity for the same period lists ‘malaria, ear infections, respiratory infections, typhoid fever, pneumonia, eye infections, urinary tract infections, diarrhoea and dysentery and tuberculosis’. The hospital also receives patients suffering from cancer, although its capacity to treat and care for these patients is extremely limited.

Beginning in 2005, a large part of the hospital’s outpatient buildings were given over to the PEPFAR-funded HIV treatment clinic (described above) and Prevention of Mother-to-Child Transmission (PMTCT) programme. In 2010, a Directly Observed Therapy (DOTS) programme for tuberculosis outpatients was introduced. KEMRI/CDC operate a research clinic, with a state-of-the-art laboratory, in a building within the hospital grounds. There are other areas of care that receive donor attention. In 2011, the hospital opened a new maternity wing, with 75 beds, funded by a Northern government, with an ultrasound machine and a newborn unit with six incubators. A new children’s ward opened in 2010 with funding from the USA, with 74 beds.

Outside these areas, there are fewer donor funds for improvements to hospital services. The women's and men's general medical wards and surgical wards are overcrowded, with bed space of between 40 and 50 usually overflowing and patients at times lying on mattresses on the floor. The theatre has five operating rooms, three of which are functioning. While benefiting from a CD4 machine and haemogram donated by CDC, the hospital's laboratory could not compare with KEMRI-CDC's state-of-the-art laboratory used for research studies. The X-ray department has four X-ray machines, but in October 2013, only one was operational, and it was used exclusively for obstetrics and gynaecology. The three other machines had broken down – funding for repair and maintenance is scarce. The CT scanning machine has not worked for two years. A radiographer explained that repairing radiography machines is expensive and requires expertise that is 'not available in Kenya'. As a temporary solution, KEMRI-CDC had loaned the hospital an X-ray machine, to be used exclusively for paediatric cases. Adult patients had to go to a private hospital to get an X-ray [at 1500–1800 shillings (US\$21–23)].<sup>15</sup>

This picture of variegated services and facilities available to patients in the provincial hospital breaks up stereotypes of dilapidated African public hospitals. The hospital *has* experienced major improvements, from the new maternity wing to the paediatric ward, due in large part to a dynamic medical superintendent who has successfully persuaded donors to invest in maternity and paediatric care. Still, the manicured lawns, glossily painted walls and impressive new buildings within the hospital grounds coexist with a great deal of pressure on staff and patients, deriving from inadequate facilities, lack of medicine and inadequate staffing levels. These details only emerge once one begins to follow the day-to-day running of the wards and to interact with health workers, nurses, clinical officers, doctors and interns as well as with patients and their families.

### ***Working in the shadowlands***

We turn now to the experiences of medical professionals who were working or training within the hospital or who had recently worked there. We draw on interviews with medical officer interns, clinical officer interns and doctors. Kenyan medical training involves two cadres: doctors, who study for five or six years and are known as 'medical officers'; and 'clinical officers', who study for three years and who learn to diagnose and treat a more limited range of conditions. Both cadres must pursue a one-year internship in a hospital to complete their medical training. While fully qualified doctors and consultants see patients during ward rounds, and thus have a more distanced relationship to medical practice on the wards, interns are, like nurses and clinical officers, 'frontline' workers, who are there throughout the day (and in the case of the medical officer interns, throughout the night). The interns interviewed thus presented a more immediate, visceral experience of struggling with the day-to-day challenges of providing care. It is important to note that these different cadres of medical professional had different experiences of hospital care, and of their own competence within the conditions they found there; they also had different stakes in it. We discuss six key issues that we enquired about or that arose during interviews: (1) issues concerning diagnosis and treatment; (2) the implications of staff shortages; (3) the challenges facing patients; (4) the challenges facing staff in dealing with patient poverty; (5) future career plans and aspirations; and (6) perspectives on global health interventions. We consider these in turn below.

*Issues concerning diagnosis and treatment*

The interns we spoke to expressed a sense of being overwhelmed by their experiences on the wards – in the face of patients presenting late, with serious conditions, and in the face of inadequate or malfunctioning equipment to support diagnosis. The clinical officer (CO) interns in particular talked of having to face challenging cases without necessary tools, equipment or medicines. Medical Officer (MO) interns also spoke about distressing situations, in which they had lost patients through the lack of a key intervention or equipment (whether it was oxygen, an ultrasound, or the right medicine) and about their sense, often, of working in the dark. However, the more experienced MO interns, those at the end of their internship, also told us that their immersion on the hospital wards had given them much experience and that they were now well-trained doctors. They talked about their growth as professionals, the steep learning curve they had gone through and their sense of growing competence – of being able to handle difficult and complex situations. Some interns experienced this process of adjustment better than others; and all interviewed clearly found some wards much more frustrating to work in than other wards.

CO interns agreed that the male and female general medical wards were particularly challenging. As one told us, ‘Especially when you start there, you are not used to it. People die and there is nothing you can do’. Another agreed, ‘I lost my relative on that ward. He came in, he was bleeding internally, he needed a CT scan, but the machine has not worked for two years. We had to take him to a private hospital [where the CT scan cost 20,000 shillings (US\$233)]. By the time, he was dying’. A third chimed in, ‘In the general medical wards, someone dies because of lack of blood. Or the oxygen cylinder is empty. You know, someone is in need of oxygen, but you can’t find it. After thirty minutes, that person is dead!’ The first intern continued, ‘Those wards have the highest mortality. Someone is dying who should not be dying. And you can’t do anything’. A senior doctor confirmed this picture:

[On the general wards] we are losing 20–40 year olds. Younger people. And infectious conditions are the most common cause [of mortality]. We need the drugs to prevent this and treat them [we need them] there, in the hospital. Pneumonia, meningitis...For TB, HIV and malaria, the drugs are there. But if you are admitted with pneumococcal meningitis, you won’t make it well because no one is providing access to those drugs. And in some wards, like the general medical wards, patients present very late.

He continued:

We also need better supplies of antibiotics. If a patient has severe pneumonia and is admitted at night, he has to wait until he can send someone outside [the hospital] to buy the drug. By that time, especially at night, he is dead!

Basic equipment and even emergency items are often inadequate:

Resource allocation is a problem! We need oxygen for example. It is an emergency item and we should not be missing it. We lack oxygen masks too, sometimes, like this week...the oxygen supplies need upgrading. We are still using the oxygen pipes that were put there in 1968!

While senior doctors were concerned about these conditions, they did not share interns’ feelings of being overwhelmed by patients’ needs. Successful in their own careers, most of them with thriving private practices, the challenges of hospital work did not threaten

their sense of professional identity. This statement should be qualified however. A surgeon who worked with victims of tumours and road accidents expressed frustration at not being able to practice the skills he had trained and of being unable to translate his training into adequate patient care:

The challenge is materials. We have to make use of anything that is there [and these are mostly] materials that are not what we should be using. Patients cannot afford the right materials, so we have to make do with what is out there. We have to improvise. With bits of wire, for example, for jaw reconstruction, instead of having a proper dental plate...It's not humane.

He continued, 'So we can't practice what we were trained to do, and it's very frustrating – we just have to make do with what is there'. For this specialist, improvisation underlined inadequacy and heightened frustration.

### *Shortage of staff*

Our interviews with health workers break up a stereotype of demotivated, uncaring clinicians and nurses operating in dilapidated public health facilities. All staff complained of being overworked and of wards being chronically understaffed and patients were occasionally treated brusquely. At the same time, many among the staff were caring and supportive towards patients. Furthermore, staff worked very well together, putting great effort into providing a supportive environment for each other. Still, staff shortage was a major complaint voiced by all staff members, across all wards. CO and MO interns and student nurses all argued that there were not enough trained nurses on duty in each ward: 'Especially at night, you have several patients who need intensive care, and there is one nurse on duty'. In such cases, patients' families shoulder the burden of care (see Brown, 2012). As a senior doctor commented (in his usual forthright manner):

Nursing care in public hospitals in Kenya is almost zero. You have one nurse to a whole ward, especially at night, one nurse to sixty patients at night, or to 30–50 patients during the day. There are student nurses but they are learning. What happens if you have critical patients? You can have three to four critical patients and one nurse – she cannot give adequate care!

Shortage of staff is a well-known and extensively described issue facing national health systems – a legacy of structural adjustment, the medical brain drain and lack of investment into medical staff. While shortage of staff has obvious consequences for patient care, it is important to realise that it also has severe repercussions for health workers. For the trainee doctors we spoke to, shortage of staff meant that they often faced agonising decisions alone.

### *Challenges facing patients*

Under the cost-sharing introduced in Kenya after the Bamako initiative of 1987 and still a central plank of government health policy today, patients must pay for every stage of diagnosis and treatment at the hospital (see Hearn, 1998; Rono, 2002). In 2009, the patients in our study who were admitted to the two public hospitals in the town reported that, unless it was an emergency case, they had to provide documentation of payment before they received diagnosis or treatment. The wards were full of patients who were waiting for their families to find money for diagnosis and/or treatment. This could take

time, as families had to mobilise kin and social networks. This situation continues. Patients have to send someone to buy medicine from the hospital pharmacy or, if the medicine is out-of-stock, they have to go to a private pharmacy. As a CO commented:

Patients have to buy everything. And if they can't ... they wait there ... Okay, there is paracetamol, there are drugs for malaria, we have IV quinine ... but if you need anything else, it is the patient who is to buy it.

A friend, who had just spent three weeks together with his sister, nursing their mother on Ward 4, commented:

The medicines that are on the wards (...) are just paracetamol, aspirin, some diclophenic. There are no drugs for treatment, only some basic painkillers. If you need to be treated, you send someone to buy the drugs from the pharmacy. Often they don't have those drugs. You have to go outside the hospital.

Patients can apply to the hospital administration for fee waiving but given the extent of patient poverty, the hospital has to triage these applications. Our 2008–2010 longitudinal study of 20 HIV-positive patients and their families suggests that families can cope with one admission to the hospital, but readmission and multiple admissions can have hugely detrimental effects: children are pulled out of school and sent to live with relatives, while meals are reduced to porridge and black tea (Prince, 2012). Emergency treatment is supposed to be given irrespective of payment, but because facilities are not always functioning and waiting lists are long, even emergency treatment can be delayed. Except for emergencies, operations can only go ahead once the patient's family has bought the medication, including IV fluid, anaesthetics and painkillers. These experiences were reflected in conversations with staff. During one focus group discussion, CO interns agreed with a young colleague who commented, 'You know, ideally, life should come first, and you look for the bill later, but here it is the opposite'.

#### *The pressure of triaging resources*

As mentioned already, health workers are acutely aware of patient poverty. Indeed, patient histories include detailed socio-economic facts concerning the patient and his or her family; clinical and nursing interns are trained to ask about and consider socio-economic factors when writing case histories. The interlocking of poverty and disease is, indeed, difficult to avoid, and medical interns and professionals confront these issues daily. How do they respond? Some delve into their own pockets to help a patient. In the case of acute need, financial support may be organised collectively among ward staff. The senior doctors we spoke with argued that the costs of treatment meant that patients often received care too slowly. Dr H recalled:

During a ward round, if there was a patient who cannot afford treatment, we would ask the staff to contribute something for the medicines, say 100 shillings each, then we, the consultants, made up the rest. So if the medicine is 1000 shillings, I collect 600 from staff and make up the 400 shillings that is lacking. We do this to help patients.

Of course, it is difficult to gauge the extent to which staff provide financial support to patients. There is obviously a gap between what people say in interviews, their self-perceptions and their actions. However, observations suggest that staff do commonly put their hands in their own pockets. For example, a child on the high dependency unit in

the paediatric ward needed an expensive antibiotic for severe pneumonia; interns, doctors, consultants and nurses chipped in to buy it. However, patients' needs are so great, and so overwhelming, that medical staff cannot respond to everyone, and working on a hospital ward involves a continual triage not only of one's professional services but also of personal involvement in medical care. Another child on the same ward spent two weeks waiting for a CT scan (which had to be done in a private hospital while his family tried to raise the money).<sup>16</sup>

The strain of this daily involvement in triaging of socio-economic support for patients as well as medical treatment, and the pressure it places on interns and staff, surfaces in occasional anger and frustration. A MO intern commented, 'You help, you feel you have to, but then later you also get angry with the political situation – why should we be paying for patient's medicines when that is the government's responsibility?' She continued, 'Sometimes I wish I had not studied medicine; I could be working in an office'. However, she went on to explain that being a doctor is not like being another professional. You are faced with these problems daily and 'you cannot look away'. These dilemmas arose because health workers had a stake in the national health system. The hospital was a public institution, and, as members of staff, they felt responsible for producing this public good. As a senior doctor told the first author in recounting his efforts to build up better post-operative care: 'After all, when I retire, or I leave this hospital, I have relatives who will be using this facility'.

#### *Career plans and future aspirations*

A fifth issue that arose during interviews was how the working conditions described in this paper shaped health workers' aspirations for the future. Did the frustrations medical professionals experienced daily lead to desires to leave hospital work for a better place? As is common in Kenya, the senior doctors interviewed also ran private practices. However, many had also worked in the hospital for a long period of time, upwards of 10 years, and they were committed to improving the conditions of care in the hospital and training the next generation. Dr Z, one of the senior doctors, commented:

People used to say that if you were coming to the hospital to be operated on, 'your life is in danger'. I took that as a challenge. Why should someone's life be in danger? Why should someone be taken to theatre to die? Why should they think it is a 50/50 chance of living or dying? I studied (the medical speciality) to save lives, not to let someone die. So I had to examine myself and really think about it.

He continued:

It is important to like what you do, to be interested in it, to see it as a challenge, however difficult the thing may be. I began training students. And I impressed upon them above all the need to get good outcomes, and to develop people's confidence in (this) field.

He recounted his efforts to build up a team, to improve post-operative care: 'I want to leave a well-functioning team'.

The interns we spoke with held different opinions about their future options and prospects. Government work offered stability and relative flexibility, plus some opportunities for study leave and professional development, and many hoped to stay on in the town and work in the hospital for a year or two. However, they knew that as junior doctors it was more likely that the government would post them to a remote district

hospital. As they considered this future with trepidation, many were looking for work within the competitive job market of NGOs and transnational medical research projects. These organisations were understood to pay higher salaries and offer better working conditions and faster promotion than state employment. Some of the younger doctors and clinical officers we interviewed had moved from an internship in a government hospital straight to a career in research or into global health programmes and NGO employment.

*The impacts of global health funding*

Finally, senior doctors were asked about their opinions of the impact of donor funds and global health interventions on public health provision in Kenya. Doctor A described his frustrating experience of trying to get cancer treatment funded by the government and by donors. He argued:

This focusing of donor funds leaves some patients, many patients actually, completely without care. They are ignored completely. For example, cervical cancer patients end up on ward four – there are so many patients there with cervical cancer but there is no treatment for them there. They are almost without care. They are completely neglected! It's the same with medicines. Like morphine. We were given a donation, but it was for one year only! So there was enough for one year. We had one year of pain-free patients. But how does that help patients who are still in pain after one year?

Dr H was similarly frustrated at the landscape of care produced by global health research and resources:

The Global Fund is run by NGOs here. We are not in charge. You hear MOH practitioners saying this, 'We are not in charge'. It is (transnational groups) who run the clinics, where they treat patients and do research. And [this creates] barriers to accessing information.

Speaking of HIV/AIDS treatment-and-care, he continued:

For example, CD4 tests are controlled by (transnational partnerships), NGOs and the Global Fund. And certain other investigations, viral load, resistance testing, are done by (transnational partnerships) for research purposes. It is difficult for us to access them. No clinic here [in the hospital] receives this kind of attention.

The gatekeeping of resources within global health programmes meant that some patients fall through the gaps:

You know, most of these tests and medicines are very expensive. If our patients are not registered with a research project, with research teams, they don't get that attention. [...] If your patient is in the research study, he will receive treatment. If not, there is no care. And many [of the hospital's patients] come from outside, they are referred from elsewhere, so they are not even clients of the (HIV/AIDS) clinics here.

He concluded, 'So, these private-public partnerships pull in different directions. We have to find a middle ground [between them]'.

These comments should be read alongside those of a specialist who was employed within one of the prestigious global health research organisations that conduct clinical trials in the region. Supported by the research organisation, he also worked a few days every month on the hospital ward. He reflected on the differences between globally funded research work and medical care in the hospital ward:

In research, it's like you have a big light shining on you and your work. You can't go wrong. Everything is scrutinised. You are expected to be exact. And you have the resources to be exact. You can get the tests you want done, you follow the patient closely, you can get exactly what you need; everything is there. You can provide a high standard of care. Whereas outside research, you are often working in the dark...you don't know exactly [...] you have to rely on your clinical acumen.

The contrast that Dr W made between the 'light' of research work – which is brilliant in its attention to detail, all-seeing, exact and exacting – and medical work outside research, when you are often 'working in the dark', resonates with a sense that those working in the hospital's wards had of residing in a neglected arena. In these shadowlands one often has to improvise care.

### Conclusions

The material presented here reveals the contrasts between the conditions health workers experience within vertical disease programmes and their experiences of providing medical care in public hospital wards. Medical professionals working within globally funded programmes had positive experiences; they expressed a sense of satisfaction in their access to up-to-date knowledge and their ability to turn it into action. However, this was tempered by concerns about the circumscribing of medical practice by HIV/AIDS, future funding and sustainability. Meanwhile, interns and doctors working in hospitals focused on the acute everyday challenges that saturated their work and some expressed a sense of being overwhelmed by the conditions they faced. These perspectives were, in turn, tempered by the length of time spent on wards and were most strongly expressed by interns (who, like medical interns worldwide, were under intense work pressure).

The need to improvise in the face of inadequate diagnostic tools and unreliable facilities was stressful for all health workers. Added to this stress was the degree to which health workers had to attend to patient poverty. While staff within HIV/AIDS clinics also faced these issues, hospital staff often found them overwhelming as they were confronted daily and relentlessly with the moral dilemma of how to deal with patients who could not afford treatment. In this situation, the strain of being forced to practice medicine that was only 'good enough' was a source of stress and frustration. Among interns, the moral complexity of their situation added to their uneasy positioning as young professionals struggling to gain a sense of professional identity and competence.

How do these situations affect health workers, personally, morally and professionally? In her study of Malawian medical students, Clare Wendland (2010) argues that a key form of competence that students learnt to develop was empathy, expressed as 'having a heart for the work'. The Kenyan interns also spoke of the morality of medicine, as a profession that addresses suffering. Like their Malawian counterparts, this empathy coexisted with (and maybe also generated) feelings of anger and frustration – a frustration that was not directed at patients but at a government that, they felt, ignored these challenges. In this situation, being understood and supported by colleagues gave interns a sense of a shared position – of tackling a vast problem, with few resources, but together. This points to the importance of a working culture of mutual support and understanding among hospital staff, which they cultivated as a way of managing, through teamwork, the stresses and strains of their working conditions.

These findings underline that, to understand the present and futures of national health care systems, we have to look beyond global health programmes, at the day-to-day practices and experiences of care provision in the public health system. Ethnographic



research challenges stereotypes about health workers and medical practice in African countries and offers an empathetic understanding of the conditions under which they practice medicine. Through ethnography, we can listen to the concerns and issues raised by those working in frontlines of biomedical practice but in the shadows of global health regimes.

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### Notes

1. Compare this to the situation described in the 1990s by Good, Mwaikambo, Amayo, and Machoki (1999)
2. Since early 2005, ART has been delivered free in government health facilities, private and mission hospitals, NGOs and selected 'faith-based' groups in Kenya. By 2011, 1,560,500 Kenyans were receiving 'care and support' at HIV clinics with 493,000 individuals receiving antiretroviral treatment. A third of people on ART live in Nyanza Province. <http://www.unaids.org/en/CountryResponses/Countries/kenya.asp> and <http://www.pepfar.gov/countries/kenya/index.htm>.
3. Research was conducted between October 2008 and April 2009 with additional visits in April 2008, December 2009, September 2010 and September 2011. The study was conducted by the first author and was approved by the Ministry of Higher Education, Science and Technology. During this period, the first author was associated with the Faculty of Social Sciences, the University of Maseno.
4. We aimed at a representative sample of patients, of both genders and generations and of various socio-economic strata. However, most of the patients who agreed to participate were unemployed and living on the informal economy; some experienced severe poverty. We also recruited more women than men, which reflected the willingness of women to talk about their HIV status.
5. The longitudinal study was conducted with the help of a research assistant, Bidy Odindo.
6. The study was approved by the KEMRI Scientific Steering Committee and Ethics Review Committee (KEMRI/RES/7/3/1) and by the hospital's ethical review board.
7. Interviews with staff of HIV clinics and with hospital staff were conducted in English using a semi-structured and open-ended questionnaire.
8. Following our research protocols, we do not give the proper names of the clinics and hospitals in the study, and have anonymised names of study participants and interviewees, to protect confidentiality.
9. <http://www.ngobureau.or.ke/Publications/National%20Survey%20of%20NGOs%20Report.pdf> and <http://www.kanco.org/KANCOMembers.php/>.
10. For example, in 2013 in Kisumu District (now County), 74 health facilities provide ART and 111 provide PMTCT (out of 276 health facilities). 48,534 persons are enrolled into ARV care. This figure does not include people starting ARVs in 2013 (18,288) or 'clients' of HIV clinics who are not yet on ARVs. [https://www.faces-kenya.org/wp-content/uploads/2013/09/THE-FINAL-COUNTY-PROFILES-REPORT-FOR-KENYA-revised\\_2.pdf&chrome=true](https://www.faces-kenya.org/wp-content/uploads/2013/09/THE-FINAL-COUNTY-PROFILES-REPORT-FOR-KENYA-revised_2.pdf&chrome=true) (see pages 108–111).

11. In its 2011 report, PEPFAR stresses its efforts to work together with the Kenyan government to support 'health systems strengthening' through 'capacity-building', improving infrastructure, 'skills-building' among health cadres and improving supply chains management. Yet it remains focused on HIV/AIDS preventions and treatment. See p4 of <http://www.pepfar.gov/documents/organization/133035.pdf> (accessed 9 October 2013)
12. See FACES website (accessed 14 November 2013 and 28 May 2014). <http://www.faces-kenya.org/>
13. This part of the research took place in 2008 and 2009.
14. Elsewhere Prince has described the ways in which other cadres of health workers – community health workers and HIV counsellors (many of whom are recruited as volunteers) – approach this landscape of care and opportunity (Prince, 2013b).
15. By April 2013, one X-ray machine had been repaired, and the radiography department thus had two functional machines.
16. Approximately, 20,000 Kenyan shillings.

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