Social Science & Medicine 187 (2017) 217–224

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Working in scarcity: Effects on social interactions and biomedical care in a Tanzanian hospital

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ARTICLE INFO

Article history:
Received 6 September 2016
Received in revised form
2 February 2017
Accepted 6 February 2017
Available online 7 February 2017

Keywords:
United Republic of Tanzania
Maternal healthcare
Hospital ethnography
Human resources for health

ABSTRACT

Based on mixed-methods, ethnographic research in government health facilities conducted in Rukwa, Tanzania over 23 months between 2012 and 2015, this paper explores the social implications of budget shortfalls in the healthcare system at the level of a regional hospital. Budget crises resulted from the late disbursal of funds and the failure of outside donors to meet aid commitments needed to subsidize healthcare at the national level. Healthcare administrators recounted specific donors who pulled out of commitments as a direct result of foreign government austerity measures enacted after the global financial crisis of 2008. In this environment of scarcity, partially due to years of reduced donor funds in the region, regional healthcare administrators circumvented bureaucratic fiscal procedures to ensure the continued functioning of facilities, and healthcare personnel struggled to provide pregnant women with high quality care in times of emergencies. Providers cited low morale and demotivation due to deteriorating physical infrastructure, lack of supplies, and poor relations with the community as key factors inhibiting their ability to care for the women who came to their facilities.

1. Introduction

At the Mawingu Hospital, shortages and financial problems were a daily topic of conversation, particularly in late 2014 and early 2015. Nearly every morning, when I arrived on the maternity ward and started helping the nurses restock supplies in the labor room depleted from the night shift, we encountered another item that was unavailable. In early 2014 the maternity ward had had a cabinet full of IV fluids but, by year's end, it was not uncommon to find Ringer's Lactate, the most used fluid, entirely absent. The pharmacy was unable to keep it in stock. Other times, when I took a patient's prescription to the pharmacy before a Cesarean section, I was told antibiotics, ketamine (for anesthesia), or dissolvable sutures were unavailable. Delays in getting women to surgery increased as the nurses had to tell women's relatives to purchase catheters, urine bags, sutures, or antibiotics to protect them from post-operative infections, at outside drug stores before the surgery could begin.

Long-term austerity measures, stemming from structural adjustment and decentralization in the 1980s and 1990s, leading to and exacerbated by dependence on donors who were, in turn, affected by the 2008 global economic crisis, have had far-reaching detrimental outcomes for the Tanzanian healthcare sector. Dependence on donors has led to less self-determination for hospitals and regions in ways that make it difficult for administrators and clinicians to prioritize their local needs. Patients' families must bear the financial burden for what the health facilities are not able to provide, while administrators must improvise and nurses must make do without supplies. Those people outside facilities can easily mistake these processes of "making do" for corruption, resulting in further alienation and mistrust among hospital staff, administrators, and patients and their relatives. I use the example of the Mawingu Hospital, and the Rukwa region, to demonstrate that the complex interplay of structural adjustment programs, Tanzanian health sector management, and more recent European austerity measures, continues to result in a scarcity of resources within health facilities. I argue that during the period 2012–2015, this pervasive scarcity led to detrimental social consequences, which contributed to low community trust in biomedical healthcare workers and poor health worker morale; all of which combined to leave promises of improved quality of care unfulfilled.

In order to contextualize the ethnographic data, I start with a

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http://dx.doi.org/10.1016/j.socscimed.2017.02.010
0277-9536/

brief summary of the history of structural adjustment and health sector financing in Tanzania. I then present background on the current state of health sector financing, particularly in relation to the medical supply chain. Following this, I discuss the ways in which lack of resources impacts social interactions in health facilities, particularly at a regional hospital, Mawingu.

2. Background: evolution of foreign aid in Tanzania

After the tumultuous 1970s, during which the Tanzanian economy suffered, the country officially accepted aid from the International Monetary Fund (IMF) in 1985. A structural adjustment program (SAP) was a condition of the funds and was aimed at restructuring the economy and controlling inflation. Austerity—decreased spending on social services, including education and healthcare, in order to reduce debt—was a key component of SAPs. Prior to this point, during the socialist period in Tanzania (1967–1985), the government had invested in free healthcare and worked to expand access for citizens. After Tanzania began to implement the IMF's required reforms, foreign aid increased rapidly, a reward for the country's change in policies (Edwards, 2012). With the implementation of SAPs, the Tanzanian government instituted user fees for healthcare services which, prior to that point, had been free. By the mid-1990s, the government designated certain groups of patients—the elderly, indigent, children under 5, and pregnant women—as exempt from user fees in order to ensure access to healthcare services for these more vulnerable populations.

The international community continued to use development aid as "a tool to induce change and guide policy" (Edwards, 2012:4), recently shifting to a greater emphasis on general budget support (direct deposits to the country's National Treasury) which, in 2016, amounted to approximately 48% of the national budget (B. Mwasaga, personal communication November 2016), instead of more directed project financing or funneling money into NGOs (Pfeiffer and Chapman, 2010, 2015). The structure of foreign assistance in the form of general budget support has created broader challenges in Tanzania as donor countries implemented their own economic reforms and austerity policies in the landscape of the post-2008 economic crisis. Beginning in 2011, many donor countries reduced their foreign aid budgets as part of broader domestic austerity measures (Zealand and Howes, 2012).

3. Research methods

This paper is based on 23 months of ethnographic, mixed-methods anthropological research conducted in the Rukwa region of Tanzania between May 2012 and August 2015. The data are a product of more than 1600 h of participant observation on a government hospital's maternity ward, at the hospital generally, and visits to over twenty villages throughout the three non-urban districts of the Rukwa region. I conducted interviews, focus group discussions (FGDs), and participant observation in eleven randomly selected villages. The sampling frame for each district was composed of all communities with a government health facility. I verified that the random selection yielded villages representing the various geographic zones of the region (plains, highland plateau, lakeshore, and Rukwa valley). Saturation was reached and the results from village FGDs should be considered representative of experiences in the region.

I conducted in-depth, semi-structured interviews with more than half ($n = 17$) of the Mawingu Hospital's maternity ward staff members, including physicians and nurses, and interviewed regional, district, and hospital administrators ($n = 10$). I selected participants through nonprobability, purposive sampling. The interviews averaged two hours in length and were comprised of questions related to maternity care, the hospital work environment and the region more generally, budget challenges, financial procedures, and issues related to health sector bureaucracy. I conducted the research, including all interviews, in Swahili. I analyzed these data using an inductive approach by which themes were allowed to emerge from the words of the research participants and field notes. I used these themes to produce a codebook and coded the notes and interview transcripts with the assistance of MAXQDA 11. I regularly checked my understanding of various concepts and the codes with a key informant in order to guard against bias or misinterpretation and refined the codebook after these conversations.

I obtained ethical approval under Washington University's Institutional Review Board (approval no. 201311098) and obtained the appropriate research permits from the Tanzania Commission for Science and Technology (permit no. 2015-09-ER-2009-31), as well as ethical approval from the Tanzanian National Institute for Medical Research (permit NIMR/HQ/R.8a/Vol.IX/1610). I also obtained permission and support from the Rukwa Regional Medical Officer and the hospital's Medical Officer In Charge. I used a verbal script for securing informed consent and explained and clarified the aims of the research project through presentations to the hospital staff and informal conversations. Of all those I approached for interviews, only one person declined to participate. I have used pseudonyms for the hospital and for all participants whose responses I have included. For those whose titles would identify them, I received explicit permission to include their comments with their title.

4. Study setting: the Mawingu Hospital and surrounding region

The Mawingu Hospital is the largest health facility in the Rukwa region and its catchment area includes approximately 1.5 million people. It is the highest center of care and a government-run facility. The hospital is located in one of the most peripheral regions of Tanzania. Most of the region's residents are subsistence farmers or fishermen, with the majority of the population falling below the extreme poverty line of $1 USD per day (Rukwa Regional Administrative Secretariat [Rukwa RAS] and World Bank Tanzania Country Office, 2007:4).

The Mawingu Hospital has been a regional referral hospital since the mid-1970s and, currently, the hospital has 270 inpatient beds and has been unable to increase this capacity over the last several years due to lack of funds to invest in infrastructure. The hospital has seen a dramatic increase in the number of patients served each year just since 2010 but without a concomitant increase in physical capacity (Prime Minister Office Regional Administration and Local Government [PMORALG], 2015:1), leading to a bed occupancy rate of 172%, representing a great deal of overcrowding, forcing patients to often share beds. Poor quality of care and poor availability of supplies at lower level facilities, as well as increasing clinical capacity (e.g. increased number of physicians) at Mawingu, have contributed to the sharp increase in demand at the hospital.

5. Health sector funding, the Medical Stores Department, and Mawingu Hospital

A 2011 report on the state of the Tanzanian healthcare sector found, "most health sector multi-year plans are characterized by heavy resource dependence on development partners. Such levels of dependence tend to compromise control over some decisions, especially those supported by financiers," (Mtui and Osoro, 2011:iv-

v). The same report indicated an unmet need for funding for nearly all multi-year plans, an "underfunding syndrome" in the health sector (Mtui and Osoro, 2011:v). NGOs and multilateral organizations continue to "bypass national ministries of health and state institutions, leaving the state a weak role as 'coordinator'" (Prince and Marsland, 2013:8). However, other authors contend that Tanzania is not necessarily the prototypical "weak state" (Geissler, 2015). The Tanzanian state continues to control and regulate NGO access to local communities and government health facilities, as well as impose state goals on such programs. The Tanzanian state also still exists as the largest employer of healthcare workers and, through public-private partnership, as the main provider of medical supplies through the Medical Stores Department. Gerrets (2015:179) demonstrates the "slippery space" such public-private partnerships can come to inhabit, which can be inseparable from state goals. Sometimes these relationships advantage the state but, in other instances, the state cannot control the particularities of interventions, which may be mismatched to the local environment or lacking in complexity, as with the Safe Motherhood Initiative, in some cases (c.f. Allen, 2004).

Starting in 1999, foreign donors have been able to contribute directly to health sector basket funds, which pool resources from foreign donors, the national government, and the private sector (MoHSW, 2009:72). Basket funds were meant to improve decentralized funding of health services by operating at the district level. However, for a regional hospital like Mawingu, district councils lacked oversight mechanisms for the hospital budget, which operated outside district control, and this eventually meant the districts withdrew basket funds from Mawingu Hospital. With the removal of these funds around 2011, Mawingu suffered more severely from the underfunding plaguing the entire health sector. Against this background, Mawingu Hospital sought to make up for budget deficits and unmet financial needs through the collection of user fees from non-exempt patients and insurance reimbursement. In contrast to some other regions, Rukwa has a relatively low number of government employees and those employed in the formal sector, limiting income from insurance schemes at the hospital.

Providing free services for exempt pregnant women created a challenge for the hospital. For example, a full 46.8% of the services Mawingu Hospital provided in December 2014 were used for the care of women on the maternity ward and did not generate any income. Throughout 2014 and 2015 this was a continuing financial problem, particularly when combined with late disbursal of funds from the central government. Unable to meet budget gaps or compensate for late funds from the central government, the hospital often experienced stock-outs and supply shortages, common throughout Tanzania at all levels of the healthcare sector (Penfold et al., 2013). Additionally, nurses often complained of delays in extra duty pay.

Tanzania's Medical Stores Department (MSD) was established in 1994 and is an autonomous entity within the Ministry of Health and Social Welfare, operating as a public-private partnership (Mwaifani, 2010; Sikika, 2011). MSD is responsible for the procurement, storage, and distribution of medicines and supplies for government health facilities. Beginning in October 2014, MSD made an announcement that it would no longer fill orders on credit, citing huge unpaid balances from many health facilities (The Tanzania Daily News, 2015). MSD's capital had fallen from approximately $38.6 million in 2008 to $11.9 million in 2015 largely as a result of these unpaid debts (The Citizen, 2015).

Funds disbursed from the central government directly into the regional hospital's account with MSD were a significant source of money for the purchase of supplies and equipment. When this account was empty, and in the absence of supplies being issued on credit, the hospital had to use the cash collected on a daily basis to replenish stocks. The Regional Medical Officer explained,

> We requested 286 million shillings for the fiscal year that is ending in the end of June [2014] and until [first week of May] we had only received 6 million from the government. Last week they told us that … now we have 30 million shillings to buy new medications and supplies. But up until then we really only had 6 million shillings to run the hospital. The money that we collect every day can only be used for certain things, for example for medications … You see the exemptions every day, it's hard to continue to run a hospital with only 6 million shillings for the year. We've already made an order to MSD, we should get more supplies soon. (Interview, May 2015)

Here, the RMO expresses the struggles and bureaucratic constraints related to procuring supplies when the funding system did not work as formally described. Nine months into the 2014–2015 fiscal year, the Treasury had released only 58.4% of the budget (The Citizen, 2015). The Tanzanian government operates its budget on a cash basis, meaning it must wait for sufficient revenues, collected by the Tanzania Revenue Authority primarily in the form of taxes, in order to disburse funds. Without sufficient cash, the treasury does not release funds and these delays affect all service delivery sectors, not just health (B. Mwasaga, personal communication November 2016). Other delays can occur as a result of unexpected increases in expenditures, as with national emergencies, or a delay in receiving direct budget support from donor countries (H. Kandoro, personal communication October 2016). The Mawingu Hospital depended on funds from the central government to pay the hospital's utility bills, maintain ambulances, and pay for staffing costs associated with extra duty, on call, and per diem allowances.

6. Declining donor support for the Rukwa region

By the time the current Regional Medical Officer (RMO) was assigned to the Rukwa region in early 2012, the region had already suffered from long-time allegations of financial mismanagement and a lack of transparency which had cost the hospital, and region, aid and investment. The withdrawal of donor resources after 2008 was, according to those still working in the region, most likely due to a combination of the broader global financial environment and longstanding mismanagement with which donors finally became exasperated; the exact influence of each factor was difficult to disentangle. The current RMO recalled, "When I first arrived here we were collecting maybe 50,000 [shillings] per month and if you went to find that money you would find that the people working in the records office were loaning that money to each other and it was nowhere to be seen. Or nurses were collecting money on the wards and it wasn't making it back to the offices." The hospital leadership before 2012 had not had systems in place to prevent these types of financial mismanagement and it was one of the first changes the RMO made. The hospital now has a cash collection office and a computerized accounting system to keep track of user fees, exemptions, and supplies used. Perhaps contentious in other departments of the hospital because of the increased oversight, which prevented workers from siphoning off any funds for personal use, the effects of the new system on the maternity ward were minimal. The nurses there had never been involved in collecting cash or providing receipts for service. While this new system greatly improved the hospital's ability to track the collection of user fees and helped to increase revenues, some of the worst supply shortages occurred several months after the system's implementation. The ongoing shortages suggested that local mismanagement of funds was not the only cause of the insufficient supplies but related

to central government financial troubles.

In addition to increasing fiscal accountability, the Mawingu Hospital administration has been trying to improve the hospital's physical infrastructure, for both employees and patients, in order to expand the hospital's capacity to meet increasing demand for services. The RMO told me,

> For a regional referral hospital, really the hospital should be nice so that people feel encouraged that they will get good care once they arrive, based on how the facility looks. Here, if you walk in the gate you might not know that it's a referral hospital. We have a plot, the space just behind this compound here, to expand and build a nice new hospital, but the government won't be able to help us do that because there are a lot of other hospitals that also need to be built. At one point, we had an Italian organization that wanted to help build a new referral hospital on our plot but it was around the time of the economic downturn when the United States, and Italy, and a lot of other countries were having economic problems so they didn't have the money then to build the hospital. Until now, we are hoping to find another donor who will be able to help us make it possible to build on our plot there. (Interview, May 2015)

As a direct result of Italian austerity measures at home in response to the 2008 global financial crisis, the Italian organization withdrew its support for the expansion of the hospital and, until the time of writing, there have been no further additions to the hospital aside from minor improvement and maintenance projects. Instead, the administration has been forced to focus on maintaining adequate stock levels, with no hope of having the capital in the budget for building. The RMO explained of NGOs,

> Some of the other programs say now that they aren't able to do any building, it's not in their plans. This is not good because what if the needs are buildings? You will give us other things but what we really need are the buildings. But what can you do, as a leader? You can't refuse their ideas or tell them "no, we really need this instead" because actually they are just coming to you as a courtesy. If you refuse permission or say you need something else, they might go away completely with their money. (Interview, May 2015)

The RMO expressed many of the concerns cited in official Ministry of Health documents about the downsides to a dependency on donor aid for the healthcare system. Those holding the purse strings can determine project priorities or budget categories, regardless of local needs. This mechanism can put Tanzanian health administrators in the awkward position described (see also Shayo et al., 2013).

7. *Uchache* as idiom of a lack of workplace empowerment

One of my most vivid memories from my first visit to the maternity ward labor room in 2012 is of witnessing a woman who had given birth completely unassisted, while standing at the side of her assigned bed. As she stood in a semi-squatting position, she had pushed out her baby who had landed on the cold, tiled floor and begun wailing. I had been following a nurse and we rushed to the woman upon hearing the baby to find the shocked mother standing over her child with blood coming from the umbilical cord, which had ripped as the baby fell to the ground. This unattended birth on the ward was one example of the effects of *uchache* at the hospital in 2012. The nurses and doctors often referred to *uchache*, a Kiswahili term indicating specifically a lack of people, as a key barrier to improving maternal health outcomes at the hospital.

Two years later, the Medical Officer In Charge raised the ongoing issue of low staffing levels during a maternal death audit meeting as one potential cause of more general gaps in maternity care:

> The Medical Officer In Charge (MOIC) says, "I know we can't avoid death but you get a death like this and see there were gaps." … MOIC is saying if you say the problem is [poor] documentation, [because] you're doing a lot of things, then you should say the problem is that there aren't enough people "uchache," just say that because that is the issue … RMO asking if right now it still happens that women are giving birth unassisted? Everyone agrees that yes, this still happens. (Notes from Maternal Death Audit Meeting, July 2014)

Women gave birth unassisted much less frequently in 2014 and 2015, largely due to what amounted to more than a tripling of the ward staff in that time period. The hospital achieved this increase in staffing levels through repeated requests for the funds to hire new employees though, the RMO told me, the Ministry of Health might only approve the funds for four or six of the requested ten providers, making it a multi-year project to even begin making up the long-term deficit in the needed number of staff members.

Despite successes in increasing the absolute number of nurses on the maternity ward, the problems of miscommunication and delays in care, that staff members had been attributing to their few numbers, did not disappear. The nurses continued to invoke *uchache* as a reason for the persistence of poor quality of care. I argue that nurses retained the use of the concept of *uchache*, scarcity of people, which was coded from an earlier period, as an idiom of professional distress resulting from lack of workplace empowerment and control. Beyond an excuse for care that was still less than ideal, for reasons not necessarily attributable to any ongoing deficit of healthcare workers, nurses continued to invoke *uchache* as a way of expressing a more general lack of professional efficacy and power in their under-resourced work environment that prevented them from realizing improvements in care.

8. Scarcity, work environment, and professional goals for care

Scarcity of funds, supplies, and providers often made it more challenging for administrators to implement new programs or ensure their facilities and staff members were adhering to the latest guidelines for best practices. Due to the region's peripheral location and the lower socioeconomic status of the region's inhabitants, there were fewer resources available to support the healthcare system. In the context of maternity care, Nurse Rachel explained the ways in which the lack of resources within the regional hospital could combine with the lack of resources at the household level to cause problems in the course of caring for pregnant women:

> For now, the current work environment has become difficult. Now you are told there are no medicines. We arrive at work … you find that the mother you're helping there, even to start a drip [IV], there's nothing … Truthfully, this environment is very difficult … Many times you find we encounter the women here, they have problems. There are no supplies. It's necessary for [the mothers] to buy a thing but they don't have any money. This, it becomes a problem. The mother, you just look at her. I stay there with her, alright, [but,] it is only God that helps a person to give birth or not … Really, honestly the environment is hard. I don't like it. (Interview, April 2015)

Providers at the regional hospital told me it was this lack of supplies, this scarcity, that prevented them from feeling as though they were able to accomplish more of their professional goals (see also Manzi et al., 2012). Nurse Rachel's comments expressed the sense of impotence many of the nurses felt when they were unable to provide timely and high quality care to the women seeking their services on the maternity ward. In contexts such as this, healthcare workers must often engage in different forms of improvisation in order to secure any form of care for their patients, particularly as standard operating procedures or global guidelines for clinical best practice fail to take into account local realities. This phenomenon is not unique to the maternity ward at Mawingu but continues to be characteristic of health facilities in many low income countries as facility employees work to assemble a bricolage of care by any means possible for patients in precarious environments (Langwick, 2008; Livingston, 2012).

For administrators, the drastic increase in the use of services at Mawingu Hospital meant that it was extremely difficult to keep supplies in stock. When pregnant women came to the hospital and needed vital supplies that were unavailable, the nurses were forced to ask a woman's relatives to seek out the supplies in a private pharmacy in the environs surrounding the hospital. This often resulted in delays initiating the necessary care because it took time for some families to find the money needed for the supplies, further time to go to the pharmacy, purchase the correct items, and then return to the maternity ward (see also Kruk et al., 2008). It is partially due to government stock-outs such as these that families, particularly in rural areas of the country, continue to bear a large portion of the burden of paying for healthcare services (McIntyre et al., 2008). Some mothers waited on the maternity ward for several days before receiving the first dose of a prescribed drug while others did not have the luxury of time and contracted infections, or worse. Many families did not arrive at the hospital with money already put aside for these emergency purchases because, Nurse Peninah said,

> I think it's really the fault of the hospital- from the beginning there, if in the past they were training those people [patients] that "you, if you go to the big hospital, it's necessary that there are these and these necessary items or you will have to pay," they would prepare early, but right now it has come suddenly that things have run out and they got used to if you go to the hospital everything is free, and now they have been told "go buy this." (Conversation on maternity ward, February 2015)

Pregnant women and their families had become used to pregnant women being an exempted group and not having to pay for any services at the hospital, or other facilities. They were unprepared with emergency funds due to this expectation and Peninah blamed the government, as well as providers at the lower levels, for not educating communities about the need to prepare supplies and money before going to a hospital to give birth. She suggested that women could no longer rely on the promise of free care due to these shortages of supplies. This lack of communication about the state of supplies in facilities caused more acute problems now that stock outs were more common. While Peninah envisioned educational interactions between healthcare workers and women pertaining to preparation for birth, a study from Montgomery et al. (2006) in Tanzania suggests didactic exchanges in healthcare settings mimic the rote learning in Tanzanian schools; while women receive and remember health facts, broader gender and empowerment issues often prevent them from acting on their knowledge when accessing care. These findings help to explain why, despite information, women were unable to gather money or goods prior to arriving at the hospital to give birth. Men told me they are the "finders" (of goods and money) in Tanzanian households, suggesting women may not have decision making autonomy in this area.

In discussing the work environment on the maternity ward, Nurse Halima clearly connected the ways in which budget problems affected the availability of necessary supplies and laid out the ways in which this lack could result in care that did not meet the guidelines for best practice, such as those laid out in the Standards-Based Management and Recognition for Improving Quality in Maternal and Newborn Care assessment tool (MoHSW, 2013). She told me,

> You find maybe that there is no equipment … [It] can be that you have studied how to do this procedure but you can't do it and because why? Because of the shortage of those supplies that you need to do work. And if you use more than is necessary, that is, more than has been put in the budget, it means you will do what? You ruin the entire system. It means that the supplies absolutely are not enough. … you find that you are defeated, unable to do it because you have already used everything that you needed to use, but because there is a shortage, you find that you yourself have caused this other patient to not be worked on. [But] really, you were doing the thing that was proper … You find someone comes, she needs to be cared for, you fail to care for her like is necessary. (Interview, May 2015)

Halima went on to give an example of the ways in which, by following the letter of hospital protocols, she could use all the available supplies on one patient, leaving none for subsequent women, even those who might be experiencing an emergency. While striving to provide care for other women, early in the shift, the nurses could exhaust the total sum of available supplies, which disadvantaged women who arrived later in the day. Recognizing this conundrum, the nurses often did not follow guidelines to the letter in order to save a reserve of crucial supplies in case a woman arrived later with an emergency. While, on paper, the nurses were not meeting the stated guidelines of best practice they were, in fact, ensuring all women received *some* care, even if all (or any) did not receive care at the gold standard.

9. Scarcity, trust, and the community

Because it was a referral center, challenges in the communities penetrated the porous boundaries of the Mawingu Hospital. In communities, broad lack of health resources led to allegations of healthcare worker corruption. These suspicions, reinforced by people's actual experiences of village healthcare workers' engaging in corrupt practices, led to much broader distrust of the healthcare system, including nurses and doctors working at Mawingu Hospital.

Many community members did not understand how the government supply chain operated and therefore did not know a large government facility like Mawingu might *actually* be out of critical supplies. This perception was pervasive and further supported by community members' previous experiences in lower level facilities in which they had experienced corruption. A community focus group participant, Juma, suggested the government itself was complicit in the plan to extract more money from citizens by not providing medications in the healthcare facilities:

> They tell you 'go, buy those drugs' and honestly, if you follow-up in all the dispensaries, you find that these drugs don't go [there] … If you go to the private pharmacies you find there the strong drugs, you find them in these pharmacy stores. Now why is it

> that the government fails to bring these for us here so we can be treated here? … They themselves [the government] see that we have become fruit to be harvested in the drug shops, rather than bringing us [the drugs] at the dispensary. (FGD, March 2015)

A second participant, Hamisi, responded to these comments with, "Even amoxicillin it's just one container. Now, for this entire village, you find there's just one container … The doctors, they have their own drug store, yes, that's the business that we see." The insinuations that doctors or nurses were selling government provided drugs for private gain were widespread.

I spoke to Nurse Rukia, who worked at Mawingu hospital, about the suspicions villagers had about their healthcare providers stealing and reselling government supplies. She told me that, while she owned a couple of pharmacies, she would never open one in a place where she was living because of the pervasiveness of these types of rumors. While most village healthcare workers denied selling government drugs, many did seek to supplement their low salaries through other activities and sometimes this included charging patients fees that were inflated or should not have existed. From fieldwork 20 years earlier, also in Tanzania, Allen (2004:161) notes that women often remarked on the lack of medications in healthcare facilities and the same accusations of corrupt healthcare worker behavior were common.

The Rukwa region's location on the country's periphery has delayed investment in infrastructure, a trend that only began to change in 2008 when Mizengo Pinda, originally from this area of the country, became Prime Minister. Communities throughout the region told me of broken promises of ambulances from Members of Parliament and unfulfilled district plans to support water projects or complete maternal-child health buildings. At a national level, there is a widespread narrative about corruption at the highest levels of the government preventing these improvements. The 2010 election spawned the slang term *chakachua*, meaning rigging (Eyakuze, 2010), but now used in popular parlance to indicate anything that has been diluted in quality, usually for increased monetary gain. The term connotes a deep mistrust of government regulation of products and of government institutions, in general. Local community members' mistrust of state representatives, initiatives, and health sector shortages seem eminently rational in this broader context.

10. Nurses as the frontline of hospital care and supply shortages

Despite their previous experiences of shortages in dispensaries and health centers, patients and their family members continued to expect the Mawingu regional hospital to have medications, and everything else, necessary for their care. People were increasingly disappointed if their expectations were not met. The lack of drugs aggravated the relationships between patients and healthcare providers and undermined the entire system's legitimacy (see also Martin, 2009:128).

Again, because care for pregnant women was, by policy, free, an increased patient load in the maternity ward, due to women bypassing their local facilities, was particularly worrying to hospital administrators and an enormous drain on hospital resources. There was no concomitant increase in financial support from the districts from which these women were coming. The nurses were most frequently the providers in the unenviable position of delivering the news that a woman or her relatives would need to seek supplies in a private pharmacy. In a conversation about supplies and allegations that nurses were charging patients and their families, Nurse Halima explained,

> To say, maybe, go, buy something, bring it for your patient … they will be distraught, they don't have any money, and the baby there will continue to get tired. So, this environment is difficult. But, at the end of the day, the [relatives] can't criticize that there are no supplies, they will blame you like, "You, nurse, what have you done?" … But to look if the environment in which you work is difficult- they can't look. (Interview, May 2015)

Halima referenced the baby continuing to "get tired" as a way of describing ongoing fetal distress as the mother was waiting for her family to procure supplies for an emergency C-section, thereby jeopardizing the baby's life as the delays increased due to the lack of supplies. Nurse Peninah echoed Halima's thoughts saying,

> Now [the money] it has finished [run out]. How will you tell that person that doesn't have any means there in the village "hey, there is no equipment for service"? Will she understand you? She doesn't understand you! Again, us, we that deal with patients, we're seen to be bad [people]! Better that person who sits at administration, they don't see him. But us, we who tell her to go buy, she tells you you're delaying her because she was looking for supplies. You're told first you delayed treatment … But you're waiting for important supplies. (Conversation on maternity ward, February 2015)

Nurses were often blamed for supply shortages but, in actuality, they had extremely little control over supply availability, depending on ordering at the ward, hospital, or regional level. Martin (2009:128) suggests, in Uganda, that while nurses or doctors see referring patients to outside pharmacies as a necessary byproduct of more systemic shortages, patients might read this same act as "corruption, greed or indifference."

On the issue of supplies being siphoned off by corrupt providers, there were a few incidents throughout 2014 and 2015 when it was rumored on the maternity ward that some supplies had gone missing. In one case, the Nurse In Charge told me she suspected a ward nurse had stolen ampules of oxytocin to resell in her private dispensary. In another instance, after reaching for HIV test strips and finding no buffer solution for the umpteenth time, I asked, where did the buffer always go? One of the nurses told me they had long suspected that visiting nursing students walked off with the buffer and pocketed strips in order to test themselves or their partners in secret (see also Whyte, 2016). In this way, personnel in the healthcare system diverted supplies from patients.

More than once, while conducting my fieldwork, patients or their relatives offered me bribes, trying to slip me a few bills in their palm as they shook my hand. As they tried to hand me this money, a woman's relatives would explain they wanted to make sure I looked after her and helped her. Stringhini et al. (2009) report that healthcare workers in another region of Tanzania stated patients or their relatives often initiated informal payments, or bribes, in hopes of receiving better, or faster care. Other times, as I was assisting during a delivery, I watched as a new mother tried to give one of the nurses money as thanks for her help. In most cases, the nurses refused the money, telling the mother to put it back in her handbag. At other times, persistently low wages due to health sector financing problems may have predisposed providers to accept these bribes, perpetuating this form of corruption.

Occasionally, at Mawingu, the nurse would take money if the mother continued to insist. Once, I watched this happen when a woman offered money to the ward Nurse In Charge. The In Charge explained to me that nurses were not supposed to take money from patients, citing the Nursing Code of Ethics but, it was allowable if they reported the money to the Nurse Supervisor, and used it for

collective or ward purposes. In that instance, she sent one of the sweepers to buy a crate of sodas and cookies for all the ward personnel to share. Though I never witnessed any nurses at Mawingu demanding money, it was impossible to know how nurses handled such situations when I was not watching.

11. The effects of scarcity and budget shortfalls on provider motivation

Interactions between pregnant women and nurses, in which women or their relatives accused nurses of corruption or withholding supplies, contributed to the nurses' feelings of being undervalued in the hospital and the healthcare system as a whole, particularly in instances when the nurses had not engaged in any corruption but were simply the bearers of the bad news about hospital stock-outs. Due to their constant contact with patients and family members, as well as their continual need for supplies and equipment, the nurses often told me they felt they bore the brunt of the scarcity within their facility. They struggled with frustration, delayed pay for extra work (due to the delay in funds from the central government), low salaries, long-overdue promotions, and an almost complete lack of praise from their managers. Once, I was sitting in the Nurse In Charge's office on the maternity ward when a man knocked on the door. He entered the office and presented the Nurse In Charge with a letter from his community, expressing their thanks for the midwives' hard work and their efforts to improve patient care. When the Nurse In Charge shared this letter with the rest of the ward nurses, everyone was elated and expressed their hopes that the nursing Patron of the hospital would announce the letter and praise the ward in front of the hospital staff assembled at the morning clinical meeting. As the weeks went by, not once did the hospital administrators mention the letter, reinforcing the maternity ward staff's impression they were unseen and undervalued by their leaders. Such instances led many of the nurses to tell me they experienced lower motivation than when they had started working. However, they suggested even occasional praise would have helped them continue to work hard in their difficult, under-resourced environment.

When I asked him what would most improve staff morale the Medical Officer In Charge of the hospital, Dr. Joseph, was quick to say, “Number one [is] to increase the level of supplies-that will boost the morale. Because you are not being motivated if you don't have something to use-you don't have medicines for patients, the infrastructure is poor, you don't have supplies, you get demotivated” (Interview, May 2015). Decreased morale was one result of working in this stressful and underfunded environment, exacerbated by lack of recognition from hospital leadership. With low morale and motivation, came less attention to the details of patient care, sometimes-short tempers, and increased preoccupation with earning supplemental income in order to provide for themselves and their families. Nurses frequently carried out supplemental business dealings while on duty at the hospital, making phone calls to arrange the delivery of various goods for sale, making trips to the bank or post office during their shift, or selling small items (underwear, hats and booties for babies) to the patients or the other nurses.

12. Jumping the red tape and administrative improvisation

Struggling with budgetary constraints and a flow of funds that has constricted was one of the largest challenges facing healthcare administrators at all levels. The Regional Medical Officer and the Medical Officer in Charge of the hospital spent many hours explaining to me the ways in which they sought to keep the hospital functioning in order to provide care for the ever-increasing number of patients. Outdated national cost-sharing guidelines severely limited the ways in which they could use money collected from user fees and insurance reimbursement. However, the RMO emphatically insisted that the hospital's fundamental responsibility was to the patient and he would use whatever money was available to provide care. He explained,

> These red tapes are here but … you try as much as possible to see that you jump those [red tapes] and you completely reduce to the minimum those red tapes and that bureaucracy. Because you know yourself absolutely, in health things, if you have bureaucracy, if you have a lot of red tape, isn't it the patient who is being hurt? (Interview, May 2015)

Similarly, when money from central government block grants or donors was slow to arrive, the RMO would, in consultation with the Hospital Management Team, decide to move money from other budget categories with the primary goal of first ensuring the hospital had electricity, water, and the basic supplies needed to function on a daily basis.

The inventive ways in which the hospital administrators were forced to move money around in order to cover costs sometimes gave the appearance of mismanagement to those who were not privy to the reasoning behind financial choices. For example, one of the doctors on the maternity ward was supposed to receive money through extra duty pay which he was then to use for buying AA batteries to power the maternity ward's fetal heart monitor. This was a work around to circumvent the slower procurement process for obtaining the necessary batteries but some of the other staff members were under the impression this doctor was getting more money for work not done because of his friendship with hospital administrators. These types of rumors resulted in dissatisfaction within the ranks of the hospital employees and frustration for the administrators. The Medical Officer In Charge maintained that he would spend all of his time explaining to people where money was going and why because the majority of the staff were unfamiliar with the government's financial guidelines. He went on to say, “Yeah, there are some issues that you cannot explain, like this one. [It's] very difficult to tell everyone, ‘OK, I'm putting this for this,’ because even if you tell them, they will never believe you” (Interview, May 2015). Once again, the complexity and precarity of the entire system led to dissatisfaction with the work environment and rumors that resulted from a lack of transparency and contributed to tension between hospital employees and administrators, further eroding morale within the hospital.

13. Conclusion

Administrators worked ceaselessly to find creative ways to maintain the hospital buildings and services despite nationwide underfunding and pervasive scarcity. When donors—NGOs, foreign governments, or others—were unable to keep their aid commitments, Tanzania's central government faced severe funding shortages, further compounding delays in the disbursal of funds to the regions. The budget struggles with which the Mawingu Hospital dealt on a daily basis were systemic problems. With low levels of household resources for healthcare and large numbers of pregnant women who did not pay user fees, the administrators and staff members at Mawingu were suffering from severe shortages of medication and equipment. Poor communication between community, hospital ward staff, and administration fostered the circulation of rumors and allegations–and actual incidences–of healthcare provider corruption. In turn, the nurses felt underappreciated by administrators and unfairly accused by clients for shortages over which they had no control.

Starting with economic reforms in the mid-1980s, which cut social service spending and prevented expanded investment in the health sector, compounded by decentralization and on-going dependence on foreign aid, the Tanzanian health system has repeatedly suffered from the effects of the interaction of national (SAPs) and global (World Bank, European government policies post-2008) economic austerity measures. When combined with national or local mismanagement of funds and a hospital's precarious ability to collect user fees, the effects of long and short-term cuts to social service funding—austerity measures producing scarcity—continued to generate mistrust, dissatisfaction, and deadly delays in care provision.

As demonstrated here through the case of Mawingu Hospital, attending to the ways in which scarcity affects social interactions delineates ongoing contributors to institutional dysfunction. Examining the effects of scarcity on social interactions provides insight into the ways in which social tension and lack of trust can undermine attempts to improve quality of care, relevant globally. The sustained consequences of structural adjustment austerity measures, which started a cascade of donor dependence and reduced health spending in Tanzania that continues to shape the sector today, should serve as lessons for other countries before enacting economic austerity measures.

Acknowledgements

The author would like to acknowledge support for this research from Fulbright-Hays Doctoral Dissertation Research Abroad grant no. P022A1400-21, National Science Foundation Graduate Research Fellowship under grant no. DGE-1143954, and National Science Foundation Doctoral Dissertation Improvement Grant no. 1459486, as well as writing support from the P.E.O. Scholar Award. Additionally, I would like to thank Dr. Samwel Marwa and Dr. John Gurisha for their time and support of this research, as well as the three anonymous reviewers for their helpful feedback that much improved the final product.

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