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Life in the buffer zone: Social relations and surplus health workers in Uganda's medicines retail sector

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ABSTRACT

In many countries, when health systems are examined from the bottom up medicine sellers emerge as critical actors providing care and access to commodities. Despite this, these actors are for the most part excluded from health systems and policy research. In this paper, we ask 'what happens to the conceptualisations of a health system when medicine sellers and their practices are foregrounded in research?' We respond by arguing that these sellers sit uncomfortably in the mechanical logic in which health systems are imagined as bounded institutions, tightly integrated and made up of intertwined and interconnected spaces, through which policies, ideas, capital and commodities flow. They challenge the functionalist holism that runs through the complex adaptive systems (CAS) approach. We propose that health systems are better understood as social fields in which unequally positioned social agents (the health worker, managers, patients, carers, citizens, politicians) compete and cooperate over the same limited resources. We draw on ethnographic research from Uganda (2018–2019) to analyse the responses of different actors to a new policy that sought to rationalise the medicines retail sector and exclude drug shops from urban centres. We examine the emergence of new lobby groups who contested the policy and secured the rights of 'drug shop vendors' to trade on the basis that these shops are increasingly populated by trained nurses and clinical officers, who are surplus to the capacity of the formal health system and so look to markets to make a living. The paper adds to the growing anthropological literature on health systems that allows for a focus on social change and a form of holism that enables phenomena to be connected to diverse elements of the context in which they emerge.

1. Introduction

Tracing the ways in which pharmaceutical medicines circulate, the conditions under which they are traded, the ways in which they 'charm' those that buy them, and the manner in which they shape the identities of those who take, sell or prescribe them have been core concerns in pharmaceutical anthropology since it was established in the 1980s (Van der Geest and Whyte, 1989; Nichter and Vuckovic, 1994; Whyte and van der Geest, 1994; Van der Geest, 1987; Van der Geest and Whyte, 1988). Ground-breaking work on the social significance or "lives" of medicines brought a range of previously unexamined actors into the centre of anthropological analysis - shop owners, itinerant sellers and market stall holders – all of whom sold western pharmaceuticals but many of whom were remarkable in their use of practices more readily associated with traditional rather than bio-medicine (Whyte et al., 2002; Van der Geest and Whyte, 1988; Van der Geest, 1982).

From the earliest work, medicine sellers were shown to operate in intimate articulation with the public health services (Whyte, 1992; Bloom et al., 2008). People, medicines and other health commodities travelled between health centres and shops. As wages fell in many Africa health systems under structural adjustment processes, pharmaceutical markets provided an additional source of income for nurses, doctors and clinical officers, who needed a further source of money to make ends meet (Mackintosh and Tibandebage, 2004). Anthropologists interested in knowledge and power documented the difference and outsider status of these largely unregulated, untrained medicine sellers, focusing on the difficulties that individuals had in maintaining legitimacy when they had no qualifications and/or no institutional belonging (Cross and Macgregor, 2010; Pinto 2004; Reynolds Whyte, 1992). Locally constituted rather than bio-medical power structures influenced those who

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were able to maintain their position in these crowded markets Shop keepers selling medicine occupied a liminal position within the health system (Chandler et al., 2011); those more firmly embedded within the formal public sector sought to maintain distinctions between themselves and these 'other' service providers (AUTHOR publication).

The research on these local medicine markets has been amongst the most influential in terms of uptake of anthropological findings in public health (Goodman et al., 2007; Okeke et al., 2006; Alubo, 2001). Although there is debate about how effectively they have been incorporated (Cross and Macgregor, 2010), work provided critical context for those who were looking for ways to intervene in markets to improve access to malaria treatment and tests; for those seeking to improve care for children; and more recently for researchers and policy makers interested in new ways to regulate the market (Goodman et al., 2007; Okeke et al., 2006; Alubo, 2001). Anthropological work on medicine sellers and pharmaceutical markets has, however, rarely found an interested audience among health systems and policy researchers, despite the fact that many ethnographic projects have provided findings relevant to their central concerns.

Two reasons likely underpin this lack of interest. First, a political commitment to publicly funded health services makes these private sector actors unattractive as the subjects of intervention and research. Second, medicine sellers challenge the integrity of the models that health systems researchers work within. The first, building blocks approach to health systems, identified five core areas for investment and improvement that health systems required to be developed. The model that they drew up offered little that could make sense of why it is that these medicine sellers emerge, what they were responding to and the type of care that they provide. Later iterations of health systems models with a focus on complexity, the relational nature of care provision and actors appear to offer more analytical space for medicine sellers. Yet, these models of health systems as complex and adaptive draw on a mechanical logic and present tightly bound systems in which all parts are interdependent and influence one another (De Savigny and Adam, 2009; De Savigny et al., 2017). Appearing as a functionalist whole (Bubandt and Otto, 2010), these models relied on a form of conceptual holism long rejected in anthropology for failing to account for social change and the fragmented nature of many social institutions. Drug sellers demand a form of holism that makes no assumptions about how closely integrated actors are within the health system institutions and which acknowledges dynamic and heterogenous nature of different domains of practice.

In this paper, we draw on the Manchester School of anthropology and conceptualise the health system as a social field that comes into being within the relationships of unequally positioned social actors who compete and cooperate over the same social, material and symbolic health resources (Postill, 2015; Turner, 1974; Gluckman, 1961). We trace actors through this social field to elucidate the structural position of drug shops within the health system, the continuities, and changes in the sector. As is common with this type of field analysis, our paper centres on the responses of different actors to a lengthy and bitter dispute (Kapferer, 2005), in this case, a conflict between Ugandan drug shop vendors (DSVs); pharmacists; and the public authority that regulated and supervised them. The dispute intensified claim-making, debates about who should be selling medicines and why at national level, in district health offices and within the drug shops among clients and the DSVs themselves.

Drawing on ethnographic material gathered in one district we have renamed Mukwero, we present material on the proposed policy, the national campaign launched to protect drug shops; three DSVs who closed up their shops and two who remained. Through our paper, we argue that drug shops continue to occupy a structural position that manages the shortcomings of the formal health system by buffering care seekers from the difficulties of accessing medicines and care in the Uganda's underfunded public sector and providing an income for health workers. There are, however, important transformations underway among the people that populate these shops. Trained health workers, unable to secure permanent work in hospitals, clinics and health centres are appearing in these shops as owner operators but also as staff. The employment and citizenship rights of these new drug shop vendors became the basis upon which drug shops laid claim to market space. We draw on ideas of relative surplus populations (Englund, 2015; Iliffe, 1987; Abbink, 2012) to make sense of the appearance and role of these health workers in these informal markets and ask what is at stake as untrained but socially embedded medicine sellers are replaced by entrepreneurial health workers, who are less likely to foster good social relations and provide credit to patients who can often ill-afford to make payments for their services.

2. Research in Uganda's medicines retail sector

Ugandan medicine sellers have long been of interest to anthropologists seeking to make sense of the social relations that underpin the distribution of pharmaceutical medication (Birungi et al., 1994; Whyte, 1988, 1992). The popularity of pharmaceutical medicines in the country, has been linked back to essential medicines programme of the 1980s (Adome et al., 1996) but the emergence of informal markets occurred in the late 1970s and early 1980s. At this time, markets enabled health workers to supplement their poor pay and respond to stockouts in the public sector. This dual role of these markets has been maintained in the years since (Adome et al., 1996; Mogensen, 2005; Rutebemberwa et al., 2009; Mayora et al., 2018).

Since 1993, these medicine markets have been regulated by the National Drug Authority (NDA) (Whyte and Birungi, 2000). The NDA sets the limits on the medicines that can be sold in drug shops (over the counter medicines or class c drugs) and the personnel who can own and work in drug shops (initially nursing aids, nurses, midwives and clinical officers, more recently nurses and midwives only). From the outset, drug shops were envisioned as a temporary element of the health system (Bagonza et al., 2020) with the expectation that they would eventually be replaced by pharmacies as the numbers of trained pharmacists in the country increased. The NDA's governing body reflects this hierarchy and vision, with pharmacists, veterinary pharmacists, traditional medicine sellers on its board but with no representation by DSVs.

The crisis that we observed during our fieldwork began in 2016, two years before we went to Mukwero, when the NDA responded to a legal challenge to its guidelines by establishing statutory instruments that would govern the market along stricter lines. In these instruments, it introduced a policy to ban drug shops from operating within 1.5 km of a retail pharmacy. Policy changes such as this are usually little cause for alarm among DSVs: one of the key characteristics of the Ugandan medicines retail sector has been the gulf between the policies established by the NDA and the everyday activities that dominate the clinics, retail and wholesale pharmacies and drug shops (Whyte and Birungi, 2000). In June 2018, however, a month before our fieldwork began the following notice was published:

In a bid to stream line regulations and assume further compliancy with the regulatory requirements, all drug shops will be required to comply with the regulation 9 of the National Policy and Authority licensing. Statutory instrument No 35 of 2014, with effect from January 1, 2019, any drug shop located at a distance of less than 1.5 km from a retail pharmacy, shall be required to either apply for a license to operate as a pharmacy in which case applications must meet all the requirements for licensing all the pharmacies or to relocate to other unserved areas. A drug shop that wished to relocate to other promises shall obtain the authorisation of the authority prior to relocation.

Signed, Ms. Donna Kushemererwa. Secretary to the authority.

(https://www.nda.or.ug/nda/ug/dnews/125/Public-Notice—Licensing-of-drug-shops-for-2019.html accessed December 10, 2019).

In this context, between June 2018 and July 2019, three fieldworkers conducted thirteen months of participant observation, including in-depth interviews (among DSVs n = 34 and district level officials n =

4); district, national level officials (n = 8) and focus group discussions (n = 4) with DSVs and pharmacists in the local area. The fieldworkers were all fluent in Luganda and were supervised and mentored by an anthropologist based in the UK who made four two-week field visits. During the first month of fieldwork, the researchers used lists held by the district assistant drug inspector (DADI) and sought advice from local health workers and drug shop vendors to map the registered drug sellers in the district. They then visited each drug shop on the list to introduce the project and request consent for the drug shop vendor's involvement. Following this mapping, each fieldworker was assigned four shops to follow in-depth for the rest of the fieldwork. All fieldworkers had one shop that had been in business for over 8 years, one very close to a health centre (within 200–500 m), one that was further away from a health centre (at least 2 km) and a fourth that was considered by the DADI and/or the local health worker to offer good quality services. The fieldworkers rotated their fieldwork location – spending either 2 or 3 days of the week in each. The first 4 weeks of fieldwork were unstructured observations. Following these, we entered a period of structured observation when, at the end of each week, the fieldworkers had a joint supervisory meeting with the supervisor to decide on the focus for the following week. These included changing periods of the day in shops (morning, afternoon and evening), going with drug shop owners to purchase medicines and discussing decision making about purchasing medicines and going with drug shop vendors to visit local residents. During the first six weeks of fieldwork, the field team became aware of the new policy and so we extended the research to trace these debates at national level and interviewed national level actors (n = 8) from the Ministry of Health, the National Drug Shop Advocacy Initiative (NDAI) and those familiar with the workings of the NDA. The fieldworkers also made regular visits to the District Health Office to discuss the policy and their findings with the Assistant District Health Officer. Following 8 months of participant observation, the fieldworkers began to conduct formal interviews with drug shop owners and vendors (DSVs n = 34) and district level officials (n = 4). In the penultimate month of fieldwork, we conducted four group discussions with drug shop vendors and pharmacists in the local area. These focused on the interpretation of the policy and the position of drug shops at national level and in the district. Three of the FGDs were conducted in Luganda and one in English. All of the interviews with DSVs were conducted in Luganda. All were transcribed and then translated, using meaning-based translation (Larson, 1998) into English. This paper draws heavily on the data collected through participant observation and interviews.

The research was approved by the Ugandan National Council for Science and Technology (UNCST Ref SS 4581), the Makerere University College of Health Sciences School of Public Health (HDREC 561), the London School of Hygiene and Tropical Medicine (14,595). All of the names of our interlocutors have been changed, as has the name of the town and district that we worked in.

3. News of the policy change arrives in Mukwero

In Mukwero, news of the changes had arrived in mid-June when representatives from the NDA called a public meeting with DSVs to inform them of the new policy. Not all the DSVs in the district went to the meeting, but news about the changes spread quickly through word of mouth and via the official letters that started to arrive in some of the shops. Many DSVs were unsure of the exact nature of the proposed policy, the precise distance that there would have to be between the drug shops and the pharmacies in the town and when exactly the policy was expected to be enacted. Nonetheless, there was considerable disquiet about the impact that it would have on them and speculation about what was driving the change. This was unsurprising as 24 of the 34 drug shops in the town were located within the critical 1.5 km distance.

Anthropologists have shown how publics and citizens' rights can become reconfigured through the delivery of care and medicines (Tousignant et al., 2013; Prince and Marsland, 2014; Tousignant, 2013). Discursive practices that blend nationalist developmental visions and public health are, however, often located within the early post-colonial period in Africa (Tousignant, 2013; Prince and Marsland, 2014), a time when the development of health services emerged as part of a broader set of policies to improve economies, ameliorate ill-health and provide increasing access to public services (Prince and Marsland, 2014). Pressures of structural adjustment and targeted global health interventions often push these older discursive practices to one side as other forms of sovereignty, morality and meaning making emerge (McKay, 2018; Geissler et al., 2013; Nguyen, 2010). In the discourse concerning the changes in the medicine markets in Uganda, however, long-term visions around the development of the health system remained pervasive.

At the NDA, the policy change was presented as the inevitable outcome of a long-established process through which as the health system developed, more pharmacists would be trained, pharmacies established, and drug shops rendered structurally redundant. Current estimates suggest that although the numbers of pharmacists have grown from 616 in 2015 to 1100 licenced pharmacists by 2019, but that another 3900 pharmacists are needed in the country (Obua et al., 2017; Nakirigya, 2019). The NDA reports that of the pharmacists that currently work in Uganda, these are not well distributed. and that the majority of the 1179 retail pharmacies in the country are operating in Kampala (National Drug Authority, 2020). In Mukwero, DSVs contested this vision of change but maintained the focus on the long term, and on progress within the health system. They presented themselves as both of and for 'the people'. For them, the policy appeared as an encroachment by the pharmacist lobby (via the NDA) on market space that had long been occupied and developed by DSVs. Pharmacists' professional organisations were described as corrupt, seeking to shape state institutions for their own benefit and as *the* actors driving the NDA's decision-making. Concerns about market access often combined with older, racist discourse, identifying pharmacists' interest as bound up with foreign rather than national concerns and with individualist rather than collectivist visions. "*Most of the pharmacist by the way they are not for us Ugandans, they [the pharmacists] are for Indians. So, Indians they give those pharmacists a lot of money so for them they mind of their own benefits, they mind about themselves more than other people"*, DSV FGD). The lack of representation for drug shops on the NDA executive committee was taken as evidence of the role of pharmacists in the development of the policy and their use of their position as an opportunity to expand their potential to make a living *("They brought that idea to government so that they can be employed and in an actual sense in government there are no people representing us."* DSV, FGD 2 Mukwero*)*. In an act of what Bukenya and Muhumuza have referred to as Musevenism (a process in which President Museveni gets directly involved in citizens' business problems), some DSVs argued that their interests would be best served by going directly to the president to petition him to overturn the policy ("*Us people from Mukwero, we can petition to the president. We fought for him during the bush war, so he has to listen to us, or if not [he'll get] no votes*". DSV Interview) (Bukenya and Muhumuza, 2017).

Although this sense of collective dissatisfaction and feeling of injustice did not develop into spontaneous collective action in the district, in late July a national organisation started to lobby to get the policy overturned. Calling themselves the 'National Drug Shop Advocacy Initiative' (NDAI), their Chairman used the national airwaves and print press to underscore the political and moral nature of the policy change in the national imagination. Like the DSVs in Mukwero, he challenged the reading of the policy as a rationalisation of medicine markets. He presented DSVs as patriotic entrepreneurs who were important to the development of the country, the economy and the receipt of tax payments. Comparing them with the other actors in the medicines retail sector he argued, "*politically drug shops employ more than pharmacies and clinics in the country*". During radio interviews, he called upon DSVs and their clients to work through the national political system, to visit and write to local leaders and their Members of Parliament to protest against

the change. In September, he took a petition to the Parliament, met with the chairman of the Health Committee and then in a private meeting presented the NDAI's case to the President. The Chairman argued that it was the culmination of these meetings that resulted in his success, rather than the meeting with the President. At the end of November 2018, the NDA announced that it would rescind the policy; drug shops could remain in the towns and cities for the foreseeable future.

4. Responses to the NDA policy in the longest serving drug shops

On the cancelling of the policy, the NDAI declared their campaign an unmitigated success. In Mukwero, however, much of the disquiet about the policy remained. DSVs who had been most concerned about the policy and who were convinced that it had been driven by the interests of the powerful pharmacy lobby, remained anxious about whether it had been abandoned altogether or simply been postponed. Its effect was felt throughout the following 8 months but of the twelve drug shops that we worked with most closely, the most profound impact was felt in the three oldest shops. All three of had been in business for at least 10 years and Violet's shop, which was the oldest in the entire sub-district that we worked in was the first shop to have received an official notice from the NDA that it would have to close.

Violet is a familiar character in the anthropological literature on medicine sellers. Like those described by Reynolds, Birungi and Adome in Uganda and more recently by AUTHOR PUBLICATION, she had no formal medical training (Whyte and Birungi, 2000; Adome et al., 1996). Instead, she relied on medical knowledge that she had gained as a volunteer working in a local public sector health centre. Unable to licence the shop herself, a health worker whom we never met registered the shop on Violet's behalf, likely for a small fee. Like successful *ersatz* medicine sellers in India, who rely on their social networks to maintain their legitimacy, Violet had strong and powerful social networks in the local area that had until now protected her business (Pinto, 2004). She was the only DSV that we met who owned the building in which her shop operated. Well positioned in the town, surrounded by restaurants, street food sellers and shops selling mobile money, phone credit, clothes and household goods, her drug shop was one of four small dwellings and shop fronts that had been built by her brother, a Priest, in order to provide housing and a livelihood for his children, his sister and their children. Violet was the most senior member of her family in the town and during her work volunteering at a local health centre had also established a close friendship with a well-respected senior nurse.

Inside Violet's shop, was a wooden counter with a blocked out glass front where Violet stored antibiotics (that the shop was not licenced to sell) behind which was a single wooden shelf displaying boxed and bottled pharmaceuticals. Her shop had once boasted 2 beds for clients to rest on but now there was only a bench for them to sit on. Violet had previously been happy to supply and administer injectable medicines but now she would only give injections (charging a small fee - 500 Ugandan Shillings/0.14 US dollars) using commodities purchased elsewhere. She continued as she had always done to make medicinal cocktails, using her own special recipes that combined pharmaceuticals that she sold (antibiotics, anaesthetic and pain killers) with those purchased elsewhere. She knew how to dress wounds, but was careful about whom she would provide services for: during our year of field work she refused bandage a woman who had been stabbed by her husband as she feared that the police would involve her in a criminal case.

Violet's drug shop made few sales, she often saw only three or four customers a day, but it was nonetheless a sociable space. Violet and her nieces regularly went in and out of their shops and the women were often found sitting together on the benches out at the front talking and caring for the family's small children. Children from other families also visited Violet in the shop and she gave advice to them about how to manage difficult siblings, sometimes supplementing her wisdom with small treats. Women in the local area came to the shop with more serious matters and sat in the space at the back, seeking Violet's counsel on how to manage difficult social and sexual relationships, how to handle violent husbands and how to cope emotionally and financially when families were both poor and sick.

Violet's relative wealth had managed to protect her from the regulators. Laura (the district assistant drug inspector) would give warning of her inspection visits in exchange for airtime vouchers for her mobile phone. Mr Yakezi, a pharmacy and clinic inspector who sought bribes in exchange for silence about the DSVs lack of qualifications and other illegal activities underway had been more difficult and more expensive to placate. Whereas other DSVs closed their shops and ran from Yakezi when they saw him arrive, Violet had the resources to pay his bribes. In private, she described him as troubling and difficult for drug shops in the area, but we witnessed her greeting him warmly when he came to the district and he had never threatened to report her business to the police.

William's shop was 2 km away from Violet's, situated on the main road by the district hospital. A clinical officer working in a health centre in the neighbouring sub-district, he set up a drug shop ten years before our fieldwork began, to make some extra money at a time when his family's needs extended far beyond his salary. Like Violet, he established his shop in the area where he was living and working, but William only attended his shop once a week, on a Wednesday evening to see clients and assess stock levels. His shop looked like Violet's, with wooden shelves displaying a few medicines and a wooden cabinet at the front concealing the antibiotics on sale, but with the addition of public health posters on the wall that promoted circumcision, the use of condoms, and abstinence. When William was out of the shop, as he was for the majority of the time, it was run by Maya who lived in Mukwero. Like Violet, Maya had no professional training. She also refused to stock injectable medicines in the shop but would provide injections of medicines purchased elsewhere, including veterinarian antibiotics from nearby animal drug shops. Whereas Violet had the resources to manage Mr Yakezi's threats and demands, Maya did not. Mr Yakezi had previously demanded money from Maya, when she refused to pay it, he had reported her to the local police, and she had spent some days in the local jail for selling medicines illegally. Whenever Yakezi's car arrived in the town, Maya would close the shop and disappear.

Whereas Violet never discussed how much money her shop made, William and Maya often complained about their decline in profit. In the past, William's shop had done well because it was close to the town's hospital and picked up trade from people looking for medicines and commodities when there were stock outs. Over the last few years, however, as the town and hospital had expanded other clinics and pharmacies had clustered in the area. The wholesale pharmacies nearby supplied medicines cheaply and did not always demand that patients buy in bulk. Although the drug shop offered credit and so captured patients who had no money to buy medicines up front, many who could afford to went elsewhere, Maya estimated that in the last few years, profits had fallen by around fifty percent. Both she and William believed that the new NDA policy-makers and Mr Yakezi were working together to push drug shops out of the towns and into the rural areas where their businesses would not be sustainable.

The third shop in this group was owned by Christine, a medically untrained woman who had come to Mukwero from Kampala fifteen years before with the specific intention of finding a place where she could set up a business selling medicines. Her shop was in a busy shopping area. It was similar to Violet's and William's, with wooden shelves and painted walls, but it was different in important respects. Whereas William, Violet and Maya had other social or professional ties to the town, Christine did not. She did not offer any forms of counselling and rarely provided credit for clients in the shop. She had been conscious to develop her sales technique, honing her skills so that everyone who entered her shop would purchase something. She offered diagnostic services (blood pressure and malaria tests) and was also the only one of this group who conformed to policy by having a trained health worker in the shop all day: working alongside Christine was Grace, a young trained nurse who was unable to find employment in a public or private sector

hospital or clinic and had ended up in Christine's drug shop.

Like Violet and William, Christine was worried about the NDA policy and, of these three DSVs, Christine talked most about the likely impact that it would have on her business. Her fears were exacerbated when a friend of hers who owned a drug shop in the town received notice from the NDA that her drug shop needed to move or close as there was a pharmacy in the next building. Christine feared that she would be next in line for such a letter.

Although these drug shops had managed to survive in the market for many years, by March 2019, all of them had closed. Like many of the other DSVs in the district, Violet, William and Christine though that the policy had been enacted under pressure from the powerful pharmacists who could try again to push drug shops out of the market. Violet's networks could not protect her from the national policy should it be re-enacted, and her lack of qualifications excluded her from any protection that membership of the new lobby group might afford in the future. William's concerns about the proliferation of pharmacies and clinics that undermined his profitability now meant that should the policy be re-enacted his shop would certainly have to close. The implications of the NDA policy coupled with Maya's vulnerability as an untrained medicine seller left him with little appetite to continue the business and he started to run down his stock from December 2018. Christine, however, decided to stay in the market in Mukwero. Her employment of Grace meant that her business worked within the policy and was not under threat in the way that Violet and William's business was. She also had two adult children, both of whom were successful entrepreneurs and so able to provide funds to support what she described as the upgrading of her facility. She closed her shop early in 2019 and used their money to renovate her drug shops and expand her premises so that she could open as a pharmacy. Grace was still employed behind the counter.

5. Responses to the policy among surplus health workers

While there is a good literature on untrained medicine sellers like Violet and Maya; and on health workers like William who seek additional income in medicine markets, anthropologists have yet to consider the significance and experiences of health workers who like Grace are keen to work in public or private sector clinics, health centres or hospitals but who in the end find themselves in the informal spaces of the medicines retail sector. These health workers warrant interest from researchers for a number of reasons, but in Uganda in 2018, they were significant for the role that they played in the claim-making and politics in the dispute over market space for drug shops.

In Mukwero, not all DSVs were represented during arguments that set out the unfairness of the NDA's position. Discussions about the policy centred for the most part on its likely impact on trained health workers who had turned to these markets to make a living having failed to get work in the public sector. For example, "*We are not employed in government because like in the district they can ask for one nurse, one midwife …. .. … laughing … … … so [they said] "let them work in drug shops" but now they are chasing us away*", DSV FGD 1. "*Nowadays nurses are so many, there very many schools teaching Nursing. So, a person has studied and created his job and you have chased them out of it, what do you expect them to do?" DSV interview*).

In the national debates developed by the NDAI, the failure of formal institutions to provide a living for trained nurses was linked to their citizenship rights. The organisation argued that health workers in drug shops had nowhere else to practice their profession and that as government action threatening the viability of drug shops the policy contravened the constitution. Citing article 40 chapter 2, 'every Ugandan citizen has the right to practice his or her profession'; the NDAI argued "*[in] every drug shop you have an in-charge who is qualified either a nurse or a mid-wife, so here you are denying the professionals the right to practice their qualifications*" (Chairman, NDAI).

These discourses about rights and claim-making by people who have failed to secure formal work connect Uganda health workers in drug shops to accounts of relative surplus populations across the world, those who are willing to work but who are continuously excluded from formal employment (Englund, 2015). They were first identified in the 1980s in Africa by Iliffe (1987). Anthropological interest lies in understanding how often highly vulnerable people can make successful claims on others when their labour is no longer necessary. The term is mostly associated with poorly educated groups (Englund, 2015; Abbink, 2012) but more recent accounts show how well-educated university graduates can also find themselves surplus to the needs of capitalism (Li, 2017).

During our research, Ugandan health workers working in drug shops presented themselves and were presented by the NDAI as falling prey to similar processes of exclusion; they were left to hunt for work in semi-formal medicine markets as there were not enough jobs in the public or private sector hospitals and clinics. But, as we explore below, whereas 'surplus workers' in other sectors emerge from an (economic) system that no longer requires their labour, the care economy is different. Care work is not subject to the same processes of mechanisation and therefore joblessness as other sectors (Donath, 2000). The joblessness that appears among Uganda's nurses and midwives comes from the governments ongoing failure to adequately fund and recruit health workers into the health system. During the time of our research, the health sector budget as a proportion of the National Budget remained at 7.2%, far below the 15% agreed in the Abuja declaration. This underfunding translates into understaffing (Kobusingye, 2019). Nationally Health centre IIs (which offer offering the most basic public health services) had the most vacant positions, only 45% were filled during the year that we were working in Mukwero (Uganda Ministry of Health, 2020). Government documents recognise that there are trained but unemployed health workers in the country. Their health systems report of 2017/18 argued that many health workers were being trained but do not register as professionals, suggesting that "the numbers of health professionals in the country legally qualified to practice but not actually practicing or practicing legally is high." (Uganda Ministry of Health, 2018: 40).

Crowded medicine markets can be precarious places in which to earn a living, but for civil servants they are an essential part of the health system, necessary to its overall functioning. In this way, they are conceptualised as a 'necessary evil', and a critical way in which medicines and care are distributed among the population. As one civil servant argued: "*Our budget for drugs, can only cater for 51% of our [national] requirement. That is why NDA [the National Drug Authority] keeps silent a bit on what drug shops stock and we have been trying to see how we can increase the range of medicines*" – *Ministry of Health Official*. This need for drug shops to enable the health system to function, rights-based arguments, the effectiveness of the campaign run by the NDAI and very likely the intervention of the President provided surplus health workers with the space in which they could remain within urban medicine markets. These surplus health workers who worked in drug shops, were much less concerned about the impact of the actions of the NDA on their businesses.

In the final section of the paper, we turn to three of these surplus health workers to consider how they arrived in Mukwero and the social relations that dominate their shops. The first is a drug shop owned by Amina (a laboratory assistant) who employed Miriam (a comprehensive nurse) to work with her.

Amina had started her career as a laboratory assistant by volunteering in a public sector hospital, hoping that the volunteer work would eventually lead to a permanent position. After more than a year with no sign that she would ever secure paid work this way, she left. After a number of years raising children and working in pharmacies, she came to Mukwero and set up a drug shop with financial support from her brother. She had been cautious to find a good location, eventually settling on a busy crossroads about 3 km from the centre of the town where there was one unregistered but no registered drug shops. There, she rented a building and employed local builders to set up her shop, fashioning it as a pharmacy with glass shelves attached to mirrored walls and a large glass and metal cabinet at the front. Miriam, a trained

comprehensive nurse, sat behind this cabinet for the majority of the day. The youngest of this group of surplus health workers, Miriam had never tried to get a job in the public sector. As she explained, "*I never applied to a government job because in a whole district they may recruit only three nurses. You have to pay for transport 100.000/ = [to go to the interview] and then you realise that for those three nursing jobs, 100 trained nurses come [for the interview]. So, I said, 'Ah, let me leave it'*".

The second shop was owned by Susan who had spent years trying to get work as a nurse in the formal health system but had never been successful. She had worked as a cashier in a pharmacy in Kampala, with some money saved and additional funds given to her by her husband, she went to Mukwero district in search of a market in which to set up a business. She rented space in a building around 2 km from the district hospital, set well back from the main road and away from other drug shops and pharmacies. Like Amina, Susan styled her shop to look like a pharmacy and a large, printed banner displaying a multitude of huge, brightly coloured pharmaceutical medicines hung above the metal shutters. Her shelves were well stocked and as well as the medicines on display she sold commodities to be used by in-patients at the hospital, such as saline drips and cannulas. Susan had to work hard to make sure that she always had enough medication on sale. We would often find her texting and phoning different wholesale pharmacies in Mukwero and in Kampala to compare prices and the availability of medicines and commodities. She worried about the volatility of prices in the district, complaining that knowledge of low stocks in public health centres and the hospital would often prompt wholesale pharmacies to put their prices up.

Unlike Violet and William, Amina and Susan stocked and provided injectable medicines. They would dress wounds for a small fee but neither offered the type of medicinal cocktails that Violet had made. We never witnessed anyone coming to either shop for counselling. Susan, Miriam and Amina never sat outside their shops to chat with friends and none had adult family members living nearby to come and visit. Keen to improve practice and create relationships with other businesses in the area, Susan had however devised a referral form for her clients to take to a private clinic near her shop, so that they could get laboratory tests done before she prescribed medicines for them. Despite her best attempts to follow what she saw as good medical practice, however, she complained that many of her customers continued to choose their own medicines and decide on the quantities that they bought "based on their pocket" rather than her advice.

Whereas Maya had thought that giving credit was one of the key services that drew clients into drug shops, Miriam, Susan and Amina were all reluctant to provide medicines unless they had been paid for in full. We witnessed Susan and Miriam turning clients away, even for small amounts of money; leaving those who had been refused credit seeking out neighbours and relatives to lend them money to buy painkillers and antibiotics. Susan was aware that she had little recourse through local social networks should someone take medicines on credit and then fail to return to settle the bill at a later date. On one occasion, shortly before a delivery of medicines was expected at the public health centres in the district and when there were severe stock outs of medicines and commodities reported across the district, we watched Susan's protracted negotiations with a man who wanted to take a sizable stock of medicines to his relative who was sick and being cared for in Mukwero hospital. With cannulas, saline fluid, antibiotics, painkillers, cotton-wool and gloves laid out on the glass counter between them, Susan and her client argued about price and credit. In the end, and only on the basis that he was known to her (she described him as 'her client') she agreed that he could pay seventy five percent upfront and have twenty five percent on credit. The man left the shop empty handed. It took him the afternoon to find the funds, he eventually returned to Susan's shop, paid the initial sum and took the products away.

Whereas Violet, William, Maya and Miriam often complained about the NDA policy and would debate its likely effect on the town, Susan, Amina and Miriam were less concerned. We discussed the policy once with Amina, who had laughed about it, describing how she had also laughed at Laura the district drug inspector when in November 2018 she suggested that the DSVs "*pray for yourselves, the issue is in parliament*". Amina's shop was one of the few shops that was not within the 1.5 km of a pharmacy, which meant that there would be no immediate impact on her should the policy be re-enacted. Still, she also thought that the policy was unlikely to be supported again as it would undermine drug shop and pharmacy businesses who relied on drug shops to purchase medicines and distribute them in the area. Susan, whose shop was closer to the pharmacies in the town, was more concerned. She too had interpreted the policy as an attempt by pharmacists to take over the markets that had been developed and were now populated by drug shops. She thought the policy unfair but never used racist language to draw a division between the drug shop vendors and the pharmacists. In addition to the support that the NDAI might offer her, Susan had set up her drug shop with a pharmacy in mind. The mirrored walls and glass shelves were a testament to this, and she knew that it would take little investment to transform her shop into a registered pharmacy should she need to. Susan's main argument against making this transformation was the cost of the legal requirement that it would take - employing a pharmacist to oversee the business. At approximately 2 million UGX or US $540 a month, the pharmacist salary would seriously eat into her profits. She also thought the pharmacist would likely only be in the shop for a few hours each week and so add relatively little in terms of improvements to her business. She was keen to stay registered as a drug shop for as long as possible. Even if the policy was re-enacted, she was certain that she would stay in the medicines retail sector. Susan argued that the sector provided a good place for her to make a living. For Susan and the other surplus health workers that we met, it also seems likely that without considerable political change and investment that this will be the only part of the health system in which they will be able to find paid work.

6. Conclusions

This paper has charted continuity and change within Ugandan medicine markets and considered how the roles that medicine sellers take on relates to the overall tensions, constraints and opportunities within the health system. These are not new concerns in pharmaceutical anthropology and our work suggests that drug shops occupy a structural position, managing two critical shortcomings within the public sector – poor access to medicines and lack of well-paid work for health workers, that has changed little since the 1980s. Yet, these markets are not static, medicine sellers who had previously populated anthropological accounts appear to be making way for nurses and midwives who are unable to find positions in the formal spaces of the health system and so turn to these semi-formal markets to make a living. As far as we are aware, this is the first time that health workers have been described as surplus workers and the first time that their and their customers' predicament has been described.

This paper used these case studies to challenge and reflect on one of the central themes of health systems research, the idea that health systems are tightly bound totalities, in which all parts are interdependent and influence one another (see for example, De Savigny and Adam, 2009). As health systems has grown as a field of study, the totality under view by researchers has been contested. The 'building blocks' approach which dominated the field initially is now considered overly concerned with the material (the 'hardware') (Sacks et al., 2019; World Health Organization, 2010). It was succeeded by 'the complex adaptive health system' model which allowed for more elements of the social including ideas and interests, relationships and power, values and norms (De Savigny et al., 2017; Mikkelsen-Lopez et al., 2011). Critiques of the failure of this complex adaptive systems model to allow for the impact of political institutions and social forces that originated outside the health system led researchers to expand the model further create more 'people centred' approaches that draw on social constructivism to make sense of practice most especially within clinics and health centres (Sheikh et al.,

2011, 2014).

While approaches to health systems that allow politics and the social to frame research are important adaptations to the models in use, we challenge the idea of the health system as a tightly integrated totality. Our findings suggest that health systems are better understood as social fields whose coherence is maintained by the competition and cooperation over scarce social, material and symbolic (health) resources, but which has many dimensions and parts that are loosely integrated, and others that are virtually independent of one another (Postill, 2015; Turner, 1974; Gluckman, 1961). For surplus health workers, it is the lack of connection to the formal institutions that makes sense of their positions and decision making and in describing the predicament of these surplus workers, we are able to see these markets not as liminal and marginal as they may have been described previously. Instead, they emerge as sites of 'adverse incorporation' for trained health workers, precarious for those seeking and providing care.

We expect that the arrival of surplus health workers in medicine markets in Uganda is mirrored in other countries where the expansion of training for nurses has not been met by substantial increases in budget in the health system. For health systems activists, it could be that their expertise will be welcome in markets that have long been criticised for poor practice, sub-standard medicines, and lack of diagnostics. Future research will need to explore whether there are also losses clients who may no longer be able to find medicines on credit, nor the close social relationships and forms of care that were enacted in shops owned and run by untrained but socially embedded medicine sellers.

Credit author statement

Eleanor Hutchinson: supervised the fieldwork, undertook data analysis and drafted the paper. Sunday Mundua: undertook fieldwork, read and edited to the paper. Lydia Ochero: undertook fieldwork, read and edited to the paper. Anthony Mbonye: conceptualised the overall study, read and edited the paper. Sian Clarke: conceptualised the overall study, read and edited the paper.

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