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# DILEMMAS OF COMMUNITY-DIRECTED MASS DRUG ADMINISTRATION FOR LYMPHATIC FILARIASIS CONTROL: A QUALITATIVE STUDY FROM URBAN AND RURAL TANZANIA

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**Summary.** There has in recent years been a growing interest in the social significance of global health policy and associated interventions. This paper is concerned with neglected tropical disease control, which prescribes annual mass drug administration to interrupt transmission of, among others, lymphatic filariasis. In Tanzania, this intervention is conducted through community-directed distribution, which aims to improve drug uptake by promoting community participation and local ownership in the intervention. However, the average uptake of drugs often remains too low to achieve the intended interruption of transmission. The qualitative research presented here followed the implementation of mass drug administration in Lindi and Morogoro Regions, Tanzania, in 2011 to understand the different forms of involvement in the campaign and the experiences of stakeholders of their part in community-directed distribution. Some health care workers, community leaders and drug distributors were generally positive about the intervention, emphasizing that the drugs were welcome. Other stakeholders, including the drug-receiving population, reported facing a number of dilemmas of uncertainty, authority and exclusion pertaining to their roles in the intervention. These dilemmas should be of interest to donors, policymakers and implementers. Community-directed distribution relies on social relations between the many different stakeholders. Successful and justifiable interventions for lymphatic filariasis require implementers to recognize the central role of sociality and that the voices and priorities of people count.

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## Introduction

Recent years have seen a growing interest within anthropology in the social significance of global health policy and the consequences of its interaction with local people and contexts (Lock & Nguyen, 2006; Petryna *et al.*, 2006; Prince & Marsland, 2013; Biehl & Petryna, 2013; Hardon & Moyer, 2014). Biehl and Petryna noted that local realities 'frame, constrain, and orient interventions, be they vertical or diagonal' (Biehl & Petryna, 2013, p. 14). This helps explain the vast difference between the intentions of global health policies and technologies and how they manifest themselves in local contexts (Samsky, 2012). This paper is concerned with the phenomenon of mass drug administration (for lymphatic filariasis) implemented through the 'community-directed distribution approach'. Lock and Nguyen (2010) stated that biomedical technologies can only really be understood in context, i.e. at the site of implementation. They should be assessed through extensive first-hand accounts from the populations that are influenced by them. In this research, the people influenced include: those receiving the drugs, the distributors of drugs, and local community leaders and health workers who have central roles to play in the community-directed distribution approach. In the interest of understanding what might challenge this intervention, the aim of this paper was to examine the different forms of involvement in the campaign and the experiences of stakeholders concerning their part in community-directed distribution in two regions of Tanzania.

Lymphatic filariasis is a mosquito-borne parasitic infection that leads to painful swelling of the limbs, genitals or breasts (elephantiasis). Although the manifestations are rarely fatal, they lead to permanent disability, disfigurement and reduced productivity, and have long-term social and economic consequences (Simonsen *et al.*, 2014a; WHO, 2013b). An annual single dose of ivermectin and albendazole, or alternatively diethylcarbamazine and albendazole, consumed by entire populations of endemic areas, should interrupt transmission over a period of 5–6 years (Ottesen, 2006). This preventive chemotherapy has little impact on adult parasites or chronic clinical manifestations. However, the treatment reduces the density of microfilariae in the blood and prevents the parasites from spreading (WHO, 2016; Simonsen *et al.*, 2014a). The fact that the treatment does not reverse, e.g. the swelling of limbs or genitals (hydrocele), has caused disappointment among drug receivers in Tanzania and has been associated with refusal to accept the drugs (Parker & Allen, 2013). In Tanzania, and other endemic countries, interventions to combat infectious diseases such as lymphatic filariasis, onchocerciasis and trachoma, are based on drug donation programmes and the distribution of these drugs through Mass Drug Administration (MDA). In recent years, these interventions have been implemented through the strategy of community-directed distribution (Kisinza *et al.*, 2008), in which the communities targeted for treatment supposedly play a central role in governing and implementing the intervention.

Although the drugs may be donated free of charge, considerable international donor funding is invested in the intervention, together with public health system resources, and such funding has been on the increase (Zhang, 2010; Keating *et al.*, 2014). Community-directed distribution has been said to promote a higher uptake of drugs because of its participatory nature, which is assumed to generate a more pronounced sense of ownership and sustainability (CDI Study Group, 2010). To achieve this, the strategy

relies on communities taking a leading role in decision-making at all stages of the MDA campaign, although the initiation of the campaign may be prompted by central or district NTD officials or health workers (Amazigo, 2012). The community-directed distribution approach, in relation to onchocerciasis control, has been referred to as an 'already-demonstrated success' (WHO/APOC, 2007; Amazigo *et al.*, 2012).

In contrast to the situation for onchocersiasis control, the WHO Regional Strategic Plan for Neglected Tropical Diseases in the African Region 2014–2020 states that although the geographic coverage of preventive chemotherapy is increasing for lymphatic filariasis, schistosomiasis, soil-transmitted helminthiasis and trachoma treatment coverage rates for these diseases are still far below the agreed targets (WHO, 2013a). Studies from Tanzania have indicated that the average percentage of individuals consuming the drugs has been below the recommended 65% threshold for gradually eliminating the infection (Allen & Parker, 2011, 2012; Parker & Allen, 2013; Kisoka *et al.*, 2014; Simonsen *et al.*, 2014b). Chami *et al.* (2016) noted that people of low socioeconomic status, minority religions and minority tribes may be particularly difficult to reach through MDA.

A large volume of research discusses the factors that are likely to influence the success of MDA programmes, (see, for example, Kyelem *et al.*, 2008; Katabarwa *et al.*, 2010; Krentel *et al.*, 2013). Allen and Parker (2011) asked more fundamental questions about the MDA programmes of neglected tropical diseases in terms of suitability of distribution modes, local understandings of diseases and drugs, and the consequences and future of 'institutionalizing integrated vertical' distribution systems for the MDA programmes separately from other health care activities. This paper asks similar questions, based on qualitative research in Tanzania in which the implementation of mass drug administration in Lindi and Morogoro Regions, Tanzania, in 2011 was followed. The aim was to understand the different forms of involvement in the campaign and the experiences of stakeholders concerning their part in the community-directed distribution of medicines.

## Methods

This paper presents results of the qualitative component of a mixed-methods study of MDA for lymphatic filariasis control in Lindi and Morogoro Regions, Tanzania. To gain insight into the community-directed distribution process at community level, and how stakeholders perceived it, it was important for the principal investigator to position himself in time and place so as to make it possible to observe the process in real time. Data collection took place in selected rural and urban districts in Lindi and Morogoro Regions. In Lindi Region, MDA implementation took place from 29th April to 25th May 2011 and in Morogoro Region from 5th July to 18$^{th}$ August 2011. Lindi Region is located along the south-eastern coast of Tanzania and is divided into six districts. Two districts – Lindi Municipality (hence forward referred to as Lindi Urban) and Lindi Rural – were selected as study sites. Lindi Urban, approximately 470 km south of Dar es Salaam, hosts the regional administrative headquarters. The district is divided into thirteen wards, and has a population of 78,841 (National Bureau of Statistics, 2013). Four central and two peri-urban wards (Rahalea, Matopeni, Nachingwea, Mwenge, Mtanda and Msinjahili), with a population of 23,747 (ibid.), were selected. Lindi Rural

has 28 wards and a population of 194,143. Nachunyu Ward, located about 75 km south of Lindi town and with a population of 9713 (ibid.), was selected for data collection. The majority of the population sustains itself on agricultural production and small-scale sea-fishing.

Mass drug administration for the control of lymphatic filariasis has previously been implemented in Lindi Region in 2003, 2004 and 2005. Thereafter, activities were halted due to lack of funding, but resumed in 2011 when funding was made available through a USAID donation. Thus there was a period of 6 years with no intervention.

Morogoro Region is located in the east/central part of Tanzania. The region is divided into seven districts. Morogoro Municipality (henceforth called Morogoro Urban) and a rural site (Morogoro Rural) were identified for data collection. Morogoro Urban is located 210 km to the west of Dar es Salaam. It hosts the regional headquarters, is divided into nineteen wards and has a population of 315,866 (ibid.). Three wards, namely Kichangani, Kingo and Kingolwira, were selected for field work. Morogoro Rural is located to the north of Morogoro Urban and is divided into 25 wards. It has a population of 286,248 (ibid.). The majority of the population were engaged in farming, while other activities include fishing, forestry and small-scale business. Mngazi ward, located about 120 km south of Morogoro town, was selected for field work. Community-directed distribution of ivermectin was carried out in Morogoro Region as early as 1997 for onchocerciasis control. Mass drug administration for the control of lymphatic filariasis started in 2007 in Morogoro Rural and in 2009 in Morogoro Urban with yearly distributions since then. Data were collected through participant observation, focus group discussions (FGDs) and semi-structured interviews. Participatory observation was employed to gain insight into the context and process of MDA implementation and included attending various planning meetings, mobilization and sensitization activities and drug distribution. The study participants for sixteen FGDs included 128 young and adult men and women who were to receive and consume the drugs. Study participants were selected with assistance from local community leaders through a strategy of homogeneity (Creswell, 2007) to ensure that study participants shared social characteristics and experiences and that the discussions were not hampered by major status differences between participants. The selection of research participants by community leaders (religious and political) was observed for possible bias. It was concluded that bias was insignificant, partly because of the variation among the leaders involved and partly due to their very different experiences and opinions about the MDA campaign, which would prevent the selection of people with specific experiences and opinions.

Care was taken to select suitable and quiet places to conduct the FGDs. The discussions were moderated by the principal investigator assisted by one research assistant. The FGD sessions took between 45 and 60 minutes. At the end of each FGD, the main points were discussed with the group to confirm correct understanding and recording. Semi-structured interviews were conducted with 20 community drug distributors (an equal number of women and men). Local community leaders assisted in identifying the distributors. The intention was to interview all drug distributors from each selected site. However, in Lindi Rural, only two distributors could be located during the field work period. In one ward of Morogoro Urban, ten drug distributors happened to be assembled but they were short of time. A FGD was held with these ten

distributors instead of individual interviews in the interest of time. Interviews were also held with eleven community leaders. These included religious leaders (Muslim and Christian) as well as village chairpersons (elected by the communities) and executive officers (employed by local government). In addition, seven health workers (five women and two men) aged 32–50 years, posted at health facilities in Lindi and Morogoro Regions, were interviewed.

Documents relevant to the 2011 MDA campaign in Lindi and Morogoro Regions were reviewed to assess and triangulate data gained from other sources. Documents included the MDA action plans, minutes of planning meetings and reports of activities. Participant observation included participating in planning meetings with regional and district NTD co-ordinators and informal conversations in these environments, which served to contextualize and understand data from FGDs and interviews. All interviews and discussions were conducted in Swahili by the first author, a Swahili-speaking native of Tanzania, and recorded with the permission of study participants. All audio files were transcribed *ad verbatim* and checked for accuracy. The data material was read carefully several times, then sorted and analysed manually through a template approach. Codes for ordering and analysing the data were identified inductively from the data. Based on the codes, the data material was deconstructed and re-assembled and clustered into overall themes and re-read to identify trends and variations.

Research and ethical clearance was granted by the Medical Research Coordinating Committee (MRCC) of the National Institute for Medical Research, Tanzania (reference number NIMR/HQ/R.8a/Vol. IX/1073). Informed consent was obtained from all research participants. Care was taken to ensure that participants remained anonymous.

## Results

### *Getting the intervention started*

This study did not aim to evaluate the MDA intervention in terms of effectiveness or coverage. Nor did it dwell on local understandings of lymphatic filariasis or the drugs offered through MDA. These issues have been covered elsewhere (Kisoka *et al.*, 2014, 2016). The focus instead was on different stakeholders' experiences of the community-directed distribution approach in urban and rural communities, including health workers, community leaders, drug distributors and the target population.

Among the documents consulted was the Tanzania NTD Country Plan for 2009–2014. It states that NTDs are not well known among policymakers, implementers and populations in the endemic communities. Therefore, community mobilization is central. The aim of social mobilization is 'to stimulate the endemic communities to own and sustain program interventions and adhere to the strategies being used' (Ministry of Health and Social Welfare, 2009). The responsibility for advocacy and mobilization is assigned to local government representatives, health workers and community representatives such as community leaders and the selected drug distributors. In Lindi Urban and Lindi Rural, public announcements were made from vehicles. Posters showing people taking drugs were seen in Morogoro Rural, but not elsewhere. In Morogoro Urban, local television and radio stations broadcasted the campaign.

Document review and participant observation pointed to challenges in logistics and administration, which troubled the MDA campaign in several sites; late release of funds and drugs meant postponed distribution. Educational materials arrived too late and were never used. Lindi Region postponed MDA activity for about two months due to the late dispatch of funds from central level and drugs from the Medical Stores Department in Dar es Salaam, causing the campaign to coincide with the rainy season; many farmers were away from their houses tending their fields. Overall, drug distribution in the two sites was delayed and coincided with Ramadan, complicating the distribution, as drugs could only be consumed after dark.

*Selection and training of distributors*

Some distributors were selected by the people in rural and urban settings but data sources confirmed that often, contrary to the intention of the strategy of community-directed distribution, distributors were selected by community leaders, health workers, or even by district counsellors. In several sites, a criterion applied in the selection process was previous experience from other community-based interventions. In other locations, the selection was determined by who was prepared to take on the task. Distributors were awarded a minor financial incentive for their work. In both Lindi and Morogoro Regions, the selection of distributors was the locus of conflict between different stakeholders. In Lindi Rural, a conflict arose between health workers and community leaders. The community leaders complained that local health workers had overruled their decision about who should distribute drugs. Consequently, the community leaders aimed to convince their own people to refuse the drugs and withdrew their support for MDA activity. The health workers, in turn, complained that community leaders had selected their own relatives due to the incentives involved. The health worker in charge of the local health facility feared this would affect the distribution negatively and decided to appoint village health workers instead. As a result, community leaders decided not to participate in, or support, the distribution:

> That's why they did not participate in mobilizing people. I had to use my money to pay for the motorcycle that was used to announce the distribution.

In Morogoro Urban, one member of the District Health Management Team taking part in an advocacy meeting commented that community leaders did not follow proper selection criteria, and in some cases taxi drivers or non-residents were appointed who received an allowance and disappeared.

The distributors were to be trained over three days. However, actual training time varied considerably from no training to 1–3 hours spread over the three days. Distributors were generally trained by health workers although some were trained by ward health officers who are lay persons employed by the government to oversee preventive activities at community level. Training focused on the rationale for treatment, recording procedures and instructions on practical issues of drug distribution. This included taking a census, measuring the height of people to calculate their correct dose and assessment of eligibility for drugs. Interviews and FGDs indicated that training was inadequate to prepare the distributors for their task. Distributors were often uncertain about the aetiology of elephantiasis and hydrocele and struggled to provide information and education to the target population.

*The challenges of distributing drugs*

In all study sites, drug distribution was done 'house-to-house', with distributors visiting every household in a selected area. The community-directed approach prescribes that each community should decide on the appropriate timing and duration of distribution in their communities, but in Tanzania the NTD Control Programme in Dar es Salaam decided on a duration of three days in all regions. Community leaders, health workers and distributors declared that the work of distributing drugs to all households was strenuous and too little time and funding was allocated. In densely populated urban areas, distributors found it difficult to visit every house. In rural locations, it was the distance between houses that proved a trial. The timing of the distribution also presented a challenge. For instance, in Lindi Urban, the distribution took place during the rainy season, making it difficult and time consuming to reach every house. One female distributor in Lindi Urban lamented:

> One day I came back home at eight in the evening while I started working since six in the morning until half past six in the evening, because I suspected people would be asked about the distribution and they would say they were not reached, and so my work would be seen [as] poor. The other constraint is that the distribution was done during the rainy season when many people were at their fields protecting their crops. If this was done during the dry season, we would cover … the people.

In both regions, distributors struggled to find all household members at home when they visited so they had to come back, sometimes more than once. Farmers, anxious to go to their fields, commented that they waited too long for the drugs. Distributors who continued distributing beyond the time limit were not compensated for their effort. Some distributors stopped distributing when the allocated time ran out. A female distributor in Lindi Urban said:

> The drugs are important to us. Those responsible for this programme should firstly consider the size of the area, the number of people and allocate time accordingly. Because we conducted census for seven days and we distributed for three days. It is impossible. Secondly, people move to their farms during the rainy season, it is very difficult to reach them all. Distribution should take place during the dry season.

Since the distribution in Morogoro Rural took place during Ramadan, people were given the choice of taking the drugs in the evening or waiting until after Ramadan.

*Ambivalence about receiving drugs*

Participants in FGDs expressed ambivalence about the drugs and how they are delivered. It was consistently emphasized by participants that they were surprised and even intimidated by the drug distribution because they received little or no information about the event beforehand. People felt that they lacked an explanation of the rationale and justification for being expected to take the drugs. In a FGD with adult men in Lindi Urban, a participant said:

> The problem is for instance when they brought us these tablets, the people only see the vehicle coming and announcing. The people say: 'Ooh look the car is passing. They are going to give the tablets'.

A member of this group added:

> As it stands, there are no benefits of taking these drugs, but I can say if they explain to us about these drugs, then we can see the benefits. Otherwise, I don't think there is any benefit.

In another FGD in the same location, an adult man said:

> Many people are refusing the drugs because they do not get information. They just hear from people who complain about the problems, so it becomes difficult to accept. Therefore, it will be better if people are first educated in order to accept the treatment, because they have the disease.

In a FGD with women in Lindi Urban, the moderator asked: 'Generally, what do you think about this programme?' A participant answered:

> It is good but more education should be given. The programme should not run as a fire fighting exercise so [that] more people can be reached'.

In Lindi Rural, a male participant stated:

> Education was simply not provided to the community because time was too short. But they only told us: 'the disease is caused by worms'. They said 'take drugs first'.

Some health workers commented that the communities were becoming more positive about taking the drugs and on their own initiative requested drugs from health facilities. A health worker in Lindi Rural said:

> … as time goes by, people have demonstrated interest in taking the drugs. For the first time, during this distribution, we have noticed people demanding drugs; they wait for distributors to visit them at their homes, while others come here to ask for drugs.

The FGDs did indeed also reflect that many community members had experienced benefits directly from the drugs. Some reported that symptoms such as itching skin disappeared after taking them.

### *The ambiguous role of community distributors*

The selecting of community members to distribute drugs aims to capitalize on the trust that inhabitants in local communities are assumed to have in each other. In FGDs, some community members did emphasize that they took the drugs because they were brought by people they knew. However, in larger communities and neighbourhoods, distributors would obviously be known in some parts of the community but be strangers in other parts. Some community members expressed surprise that the distributor was a stranger and not the one they expected and they declined taking the drugs. Some community members said they would prefer to have health workers distributing the drugs. In Lindi Urban, a woman claimed that many had refused to take the drugs because they were not distributed by health workers. A participant in a FGD in Morogoro Urban said about community distributors:

> These are temporary groups who just come to register people and distribute drugs without giving proper education to people. Educating people is important because right now there are rumours that the drugs are contraceptives. So people lack this education. We think these groups should work together with our local leaders to educate and sensitize people.

A distributor in Morogoro urban said about his reception in the community:

> They receive us nicely. If you are known, there is no problem. People will accept but we always have to be polite and they receive us even though we are new to their houses.

Accounts of health workers gave an impression of how the community distributors were received by the community. For instance, a health worker in Lindi Rural noted:

> People take the drugs because they feel that the distributors are their relatives, not because they educated them properly. Because the distributors are mostly primary school leavers, they cannot grasp the subject well.

Some distributors experienced a negative reception from people who expressed their frustration with the MDA campaign and belittled the role and importance of both distributors and the drugs. For instance, an elderly community member commented to a distributor:

> If these drugs were meaningful [important], do you think they would allow you to distribute them?

One distributor suggested it would be better if health workers provided information about the drugs:

> We have tried to educate them [fellow community members] and few have taken drugs. Maybe doctors and nurses will do better.

Some distributors and community leaders felt that taking part in MDA improved their communication skills and ability to explain the rationale of the campaign. They felt pride and growing self-confidence in managing to communicate well with different stakeholders. They experienced a greater respect and appreciation from community members when they were able to explain the MDA principles and the purpose of the drugs.

Distributors also felt an obligation to make people take the drugs and were proud when they succeeded in convincing them to do so. Some distributors were inclined to either negotiate or pressurize people to take both albendazole and ivermectin, which proved difficult in some cases:

> They were taking worm drugs while we were there, but refused to take *matende* [elephantiasis] drugs, so later we decided to give the *matende* drugs first and those who took them, we [also] gave worm drugs. Some of them said that they would not take *matende* drugs but only wanted worm drugs.

### *Health worker dilemmas*

Health workers should initiate the campaign in consultation with traditional leaders and oversee or carry out the training of distributors, the census and drug distribution. Health workers felt pressure to demonstrate a good performance but their dependence on the commitment of local government to support the campaign presented a dilemma. A health worker in Lindi Urban said:

> So, I think the district, they should do better by sending messages frequently. Not only during the distribution days and when the campaign is over .... I have participated and seen during immunization campaigns, they do a lot of sensitization, I see there is a

> difference when there is sensitization and when it is not done. During immunization campaigns, they use vehicles for announcements and they visit every neighbourhood. Many people are motivated and they inform each other and we see that things went smoothly unlike during this exercise, where no sensitization was done.

Some health workers were deeply involved and practically walked along with the distributors to ensure that every house was offered drugs. There were health workers who felt strongly about refusal of drugs and considered it their duty to exert some amount of pressure. One health worker in Lindi Urban said:

> Oh, yes some of them did not accept…, so distributors would tell us 'this house has refused'. We then educated [the household]: 'do you know the reason [why] you are given these drugs? Do you know that the government is not foolish to bring these drugs? Do you know about these neglected diseases?' These people are used to threats, so we told them: 'very soon you will notice that your legs are swollen', and in these places, people have seen these, so they know about mosquitoes and they have been bitten by mosquitoes for several years, so they accept to take drugs'.

Health workers concomitantly felt they were under pressure due to discontent of community members over the paucity of public health services delivered in their communities. The frustrations with poor health care were vented in every single FGD; lack of medicine, lack of health workers, lack of diagnostic kits and lack of fair or reasonable conduct by health workers. The lack of trust was also expressed in accusations against health workers, i.e. that they sell government drugs for their own private gain. One health worker from Morogoro Urban stated:

> … people complain 'your drug shops are nearby here. You take these drugs from the facility and send them to your shops. Then you tell us to go and buy from there'. But in fact, we don't own these shops. Those are private shops owned by business men while [facility] drugs have government stamps.

## Discussion

This qualitative research aimed to investigate how people targeted for mass drug treatment, drug distributors, local community leaders and health workers experienced the intervention and what lessons can be learned for future interventions. The intention was to engage, as Lock and Nguyen recommended '… the views of the local actors to gain insight into how global dissemination of biomedicine and its specific local forms transform not only human bodies but also people's hopes and aspirations in ways that may well have broader repercussions for society at large' (Lock & Nguyen, 2006, p. 5).

A previously published paper based on a cross-sectional household survey including 3279 adults (Kisoka *et al.*, 2014) showed that drug uptake in the same study sites in Lindi and Morogoro Urban and Rural varied considerably and that the average rate of drug uptake was only 55%. The main reasons people gave for not taking the drugs were absence from the home during distribution and not being offered the drugs. A second study (Kisoka *et al.*, 2016) showed that distributors and the people receiving drugs had different interpretations of the cause of elephantiasis (locally referred to as *matende*) and hydrocele (*mabusha*) and of the purpose of the drug distribution. It also transpired

that the population's concern over the poor health care services in their localities overshadowed by far concerns over *matende* and *mabusha*.

This paper points to two major and conspicuous dilemmas, which call for a more critical discussion of the meaning and justification of MDA through community-directed distribution. The first dilemma is the stark contrast between policy representations of community-directed distribution and how this approach is experienced by people in the four study locations. The second dilemma is the fact that enormous resources are assembled to bring ivermectin and albendazole to the doorstep of thousands of homes, while the health system fails to secure access to other essential medicines and services at primary health care facilities. Privately funded medicines distributed for specific morbidity-related illnesses take priority over lifesaving medicines for illness conditions from which children and adults routinely die.

Both these dilemmas are at the centre of a more recent anthropology of global health which critically assesses the discourse and priorities of global public health policies and interventions. Such interventions, also called medical technologies, may unintentionally undermine trust and collaboration in relation to the state, and further marginalize impoverished populations. The data presented here point to such a situation.

As for the first dilemma, several papers and reports have celebrated community-directed approaches, mainly in onchocerciasis control, as a major leap forward in strengthening NTD control. The approach has been referred to as revitalizing or even revolutionizing (WHO/APOC, 2007; CDI Study Group, 2010; Amazigo *et al*., 2012). Other scholars remain more sceptical towards MDA overall (Allen & Parker, 2011, 2012; Samsky, 2012). A recent review claimed that consolidated research on the cost-effectiveness of interventions for lymphatic filariasis and other NTDs is urgently needed, given the recent surge in funding (Keating *et al*., 2014).

There is no scope in this study's data set to make any conclusions about the effectiveness of the MDA approach in terms of drug uptake – only about how people experienced the community-directed MDA campaign. Their experiences contradict important and central assumptions and ideals about the community-directed approach. This calls for 'revitalizing' academic and operational debates on what constitutes 'community', 'participation' and 'community-directedness' (Zakus & Lysack, 1998; Cornwall & Brock, 2005). Amazigo *et al.* (2012, p. 235) quoted a 2008 report by UNICEF/UNDP/World Bank/WHO/TDR when explaining the community-directed approach: prior to a MDA campaign, a health worker approaches the community to discuss NTDs and to underline the importance of building partnership with health workers. The health worker explains the clearly defined roles and responsibilities of external partners such as pharmaceutical companies, donors, non-governmental organizations and the Ministry of Health:

> The community understands that it has the authority to make collective decisions (selecting of drug distributors, changing and appointing new distributors). The community takes on the responsibility for the planning and management of integrated distribution of drugs under the guidance and supervision of health professionals.

The meaning of the term 'community' is often assumed and rarely defined in policy documents although it has been much debated in development-related academic literature (Wayland & Crowder, 2002). Policy documents describing the process do not

stipulate how local communities, which may encompass thousands of people with different ethnic, language and religious backgrounds, may achieve such understanding or consensus. Instead, it is often assumed that communities are homogeneous and harmonious wholes. These imaginations of communities as apolitical and egalitarian settings give MDA campaigns an equally apolitical and technocratic gloss. Such imaginations also assume that any person chosen to distribute drugs will be equally known and trusted by all people in a particular area. However, this study found that conflicts and dilemmas of power were common. Some health workers felt both pressurized and abandoned by government authorities and community leaders. In one location, community leaders felt overruled by health workers and therefore refused to contribute to the campaign. Some distributors faced the dilemma of distrusting and disillusioned community members and felt pressurized by time constraints and health authorities to perform well, which sometimes led to imposing drugs on people or working overtime for no extra money, which affected their motivation negatively. Many people who were to receive drugs struggled to make sense of the campaign and the distribution as they were prompted, pressurized or manipulated to accept the drugs. At the same time, they felt marginalized in terms of health-related and political entitlements (Kisoka *et al.*, 2016). Biehl and Petryna (2013) noted that interventions are social relationships in practice and in specific socio-cultural contexts. Any context contains particular situated practices of power and conflicts. Rather than an apolitical and technical exercise, community-directed distribution can be understood to be framed by the landscape of global health initiatives and national development culture on the one hand, and local experiences of power hierarchies, neglect and deprivation on the other (Prince & Marsland, 2013).

Also the concept of 'participation' requires scrutiny (Zakus & Lysack, 1998). Marsland (2006) noted that there are at least two discourses on participation circulating in Tanzania; a discourse stemming from former President Nyerere's concept of self-reliance (*kujitegemea*), in which the population is obliged to contribute their labour and resources to community development; and the international development discourse in which participation is involving people in decision-making, i.e. handing over power to the people. This study's data point to a form of participation in which distributors contributed their labour for a minor sum of money to conduct a census, distribute drugs and report on drug uptake among people within a geographically delimited area. The target population was rarely seen to have any active participatory role or decision-making power. Their participation generally appeared to be limited to remaining in their houses until distributors turned up with drugs. Only in a few locations were the target population involved in decision-making (e.g. selection of distributors or influence on the mode, timing or duration of the MDA campaign). Although efforts were made to inform the population about the intervention in some locations, several FGDs with drug receivers and interviews with community leaders suggested that they were either not informed at all or inadequately informed prior to distribution.

The second dilemma concerns the point that study participants repeatedly emphasized: the odd situation that ivermectin and albendazole are available while other essential medicines and services in primary health care facilities are not. In policy documents, community-directed distribution is framed within the context of Primary Health Care (WHO/TDR, 2008). But the people who receive the drugs live with primary

health care facilities that offer little or no health care (Homeida *et al.*, 2002). As Petryna *et al.* (2006) discussed, there are central ethical dilemmas related to the flow of pharmaceuticals, and ethnography has been trying to make sense of such situations where effective technologies exist concurrently with the loss of life in places where essential medicines are scarce. Prince and Marsland (2013) discussed the scenario in which global health policy assembles attention and resources to certain conditions but not to general primary health care. Socioeconomic and political divisions construct health inequities and influences whose illness is worth treating and whose life is worth saving (Petryna *et al.*, 2006). The data show that some people appreciated the drug distribution and even requested the drugs. Some were also familiar with the intricate relationship between vector, parasite and the yearly distribution of the drugs. However, as Biehl and Petryna (2013, p. 4) pointed out, 'technology delivery does not translate into patient care' and strong negative sentiments were expressed towards the MDA campaign because people felt marginalized opposite the MDA campaign and helpless in the face of more acute health concerns. The drug distribution came to represent the overall want of regard for the concerns and self-determination of the population. The intervention highlighted the lack of decision-making power and the subjectedness to priorities of donors and decision-makers elsewhere. It is in this light that the comment made by a drug receiver makes sense: 'If these drugs were meaningful, do you think they would allow you to distribute?' In context of the realities that these population groups face, community-directed distribution and the drugs provided have little meaning. These dilemmas of justification and meaning should concern both donors and policy implementers.

In conclusion, Cornwall and Brock (2005, p. 26) stated: '... any way of worldmaking that gives us one-size-fits-all development recipes stripped of any engagement with context or culture, politics, power or difference, does violence to the very hope of a world without poverty'. Lymphatic filariasis is the cause of unnecessary suffering in millions of people, most often people who already suffer under poverty conditions (Singer & Bulled, 2012). Global action to eradicate this disabling infection is important, but as Biehl and Petryna point out, donor orientation towards magic bullet interventions that are disease-specific and drug-oriented have detrimental consequences for the public health sector. Mass drug administration for lymphatic filariasis through community-directed distribution is an enormously complex task. It requires collaboration between multiple levels of government, the public health system, local political, traditional and religious leaders and finally, but most importantly, millions of people in rural and urban localities who are already sceptical towards the kind of 'patient care' they have been subjected to. Implementation of global policies on community-directed distribution of drugs should confirm that the voices and priorities of people count (Prince & Marsland, 2013) rather than underpin the pre-existing experience of devaluation and marginalization (Parker *et al.*, 2008). This dilemma ought to interest donors, policymakers and implementers in the interest of achieving more meaningful interaction, prevention and care in relation to lymphatic filariasis.

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