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Equitable access to Mass Drug Administration for trachoma elimination: an ethnographic study to understand factors associated with low coverage in Kenya and Tanzania

FINAL TECHNICAL REPORT
[April 16 2018 – February 29 2020]

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Executive Summary of the Project

Background and outline of the study

Tremendous progress has been achieved worldwide towards trachoma elimination and the prevention of avoidable blindness associated with the disease. Eliminating trachoma by 2020 requires the effective implementation of the SAFE strategy. For the "A" component of the strategy, a key objective is to achieve sufficiently high population coverage (at least 80%) through equitable Mass Drug Administration (MDA) campaigns with Zithromax® in all trachoma-endemic areas. This has proven to be challenge in some parts of Kenya and Tanzania. While some individuals and families refuse treatment, there are many others that are simply "missed" by MDA campaigns. Particular concerns have been expressed about nomadic populations.

This project had the following main objectives 1) to identify the factors associated with low and inequitable coverage and compliance in trachoma endemic areas in Tanzania and Kenya with nomadic populations, 2) to prioritize factors in terms of amenability to intervention, and then 3) to use the evidence generated to design specific interventions that could improve the reach and impact of campaigns of Zithromax MDA in both countries. Methods: This was an ethnographic study. We collected qualitative data through direct observation of MDA campaigns in Kenya and Tanzania, Focus Group Discussions and semi-structured interviews. The study areas were: the counties of Narok and Kajiado in Kenya and the districts of Ngorongoro and Longido in Tanzania. Study participants included community members in the study areas, community drug distributors as well as Ministry of Health staff involved in MDA campaigns.

Preliminary results

- In communities with low trachoma MDA coverage, community rumors about the antibiotic remain a significant factor behind refusals – some hold beliefs that the drug is a contraceptive, or is associated with serious adverse effects.
- In Maasai communities, not taking western medicine is sometimes associated with heroism and is a source of pride, e.g. it can increase further the social standing of those who refuse western medicine, like the *Morans* (warriors class).
- Political issues may play a role in the success of MDA campaigns. In Tanzania, for example, one of the communities with low coverage is affected by a land dispute with government authorities. All government interventions, including health-related campaigns, are viewed with suspicion by some community members. This was also reported in Kajiado County in Kenya where there was a land dispute at the border between Kajiado and Narok County.
- Geographical barriers affected programmatic implementation in different ways in the study communities: lack of advanced promotion ahead of MDA campaigns (no cell phone coverage in some areas); community drug distributors (CDDs) commenting on long distances to cover by foot, with some not carrying water and leaving drug with households without witnessing if the drug was taken.

Recommendations:

The following recommendations were advanced by community members

i. In areas that require multiple rounds, the MDA campaigns need to be regular and predictable as much as possible, yet also take into consideration temporary migration patterns.
ii. There is a need to use existing structures to distribute drugs as well as create awareness at the community level by using influential groups and leaders, e.g. village elders, chiefs, youth groups, the *Morans*. The involvement of groups representing different segments of society would help ensure high coverage due to the trust the community have in them. There is a need to test interventions on how best to engage groups, like the *Morans,* who display strong resistance to western medicine in general (in the study communities).
iii. There is a need for a multifaceted social mobilization efforts to create a high level of awareness before a MDA campaign. The social mobilization efforts should span over a period of 2 weeks so that community members are made aware about the rationale for the MDA campaign, how best to avoid the potential side effects of the drug, who is eligible, who will be distributing the drug, etc. The IEC materials should be translated into Maasai.
iv. Adequate time should be allocated for the training of CDDs to equip them with sufficient knowledge so that they can handle all questions from community members about trachoma, the antibiotic and the MDA campaign.
v. There is a need to encourage use of trachoma champions at the district and/or regional level to advocate on the importance of taking the antibiotic during trachoma MDAs.
vi. Many of the recommendations of community leaders related to the use of diversifying further the mechanisms for community mobilization, as well as increasing the number of CDDs.

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Technical Report

(*The following outline contains suggested sections and tables to include in the report; items may be removed or modified if they are not relevant to your study)*

- ***Background and justification for study***

Tremendous progress has been achieved worldwide towards trachoma elimination and the prevention of avoidable blindness associated with the disease. Eliminating trachoma by 2020 requires achieving sufficiently high population coverage (at least 80%) and equitable Mass Drug Administration (MDA) in all trachoma-endemic areas. This has proven to be challenge in some parts of Kenya and Tanzania. While some individuals and families refuse treatment, there are many others that are simply "missed" by MDA campaigns. Particular concerns have been expressed about nomadic populations.

Methods: This was an ethnographic study. We collected qualitative data through direct observation of MDA campaigns, Focus Group Discussions and semi-structured interviews. The study areas were: the counties of Narok and Kajiado in Kenya and the districts of Ngorongoro and Longido in Tanzania. Study participants included community members in the study areas, community drug distributors as well as Ministry of Health staff involved in MDA campaigns.

- ***Objectives of Study* (both primary and secondary)**

This project had the following main objectives 1) to identify the factors associated with low and inequitable coverage and compliance in trachoma endemic areas in Tanzania and Kenya with nomadic populations, 2) to prioritize factors in terms of amenability to intervention, and then 3) to use the evidence generated to design specific interventions that could improve the reach and impact of campaigns of Zithromax MDA in both countries.

- ***Study Implementation***

In Tanzania, ethics approval was obtained from KCMC College and from the National Medical Research Institute. In Kenya, ethics approval was obtained from AMREF. The principal investigator (Dr. Robert Geneau) also obtained ethics approval from the University of Cape Town in South Africa.

- ***Trainings***

  Two Maasai research assistants (one man and one woman) were recruited in Tanzania while in Kenya four (4) local RAs – 2 females and 2 males were recruited.

- **Dates and places of trainings**:

  In Tanzania, a training workshop for the Maasai research assistants was conducted in Moshi on October 19-21 2018. Mr. Edmund Kamazima from KCCO also attended the training. Mr. Kamazima works for KCCO has a programme coordinator on our Vision 2020 programmes in Tanzania. He dedicated 20% of this time on this project (salary support provided by KCCO, therefore not through the COR-NRD budget. Mr. Kamazima was involved in co-supervising the research assistants in Tanzania, facilitated

communication with the national NTD programme and dealt with logistical issues (e.g. booking meetings with regional and district health authorities, salary and per diem payments to the research assistants, etc.). In Tanzania, the training workshop was conducted by Dr. Robert Geneau and Dr. William Kisoka (National Medical Research Institute of Tanzania). In Kenya, the training workshop was delivered by Dr. Mary Nyamongo with the support from Ms. Alice Sereti Sinkeet who is the Executive Director for the AIHD. Dr. Stephen Mwatha who works for the MOH-NTDs Unit was in attendance. The training was conducted in AIHD's offices and it took place be February 11-12, 2019. However, due to the delayed MDA campaigns in Narok, the research assistants were taken through a refresher training in January 21-22, 2020.

- **Activities conducted**:
  The training workshops (on both Tanzania and Kenya) covered the following topics:

  - The trachoma SAFE strategy, with a focus on the "A" and the importance of high population coverage.
  - Summary of current evidence about trachoma MDA campaigns in Africa – challenges observed and equity issues across population groups.
  - Ethnographic methods - direct and participant observation, focus group discussion, semi-structured interviews, taking field notes, use of digital recorder and transcription of audio-recordings.
  - Basic principles of conducting personal interviews and facilitating FGDs and KIIs
  - Research ethics, confidentiality, and informed consent.

Table 1 Number of people trained and names/roles

	Women	**Men**	**Total**
Tanzania			
Number of people trained	1	2	3
Names and roles: Mr. Elizabeth Lesitey (Maasai research assistant), Mr. Williams Mollel (Maasai research assistant), Mr. Edmund Kamazima (KCCO programme director).			
Number of facilitators/trainers	0	2	2
Kenya			
Number of people trained	2	2	4
Number of facilitators/trainers	2	0	2
Names and roles: Mr. Amos Tarayia and Ms. Mercy Yiampoi (RAs – Kajiado County), Ms. Abigail Keiwua and Mr. Peter Koi (RAs – Narok			

County)

- ***Pre-Intervention Activities***
  Not applicable for this project.

- ***Implementation***
  - Dates and places of activities (include pre-site visits and field work)

In Tanzania, it was determined that a member of the National NTD programme (based in Dar es Salaam) should be part of the team for the pre-fieldwork visits to regional and district health authorities. Mr. Wilfred Lazarus from the National NTD programme joined the research team on December 12 2018 to introduce the project to the Regional Medical Officer (RMO) of the Arusha Region. The original plan was then to continue on to visit the office of district medical officer of Longido. However, the RMO provided information about new administrative requirements for new research and new programmatic activities at the local level - the need of a formal approval from the Ministry of Local Government and Regional Administration (the representative of the National NTD programme was not aware of this requirement). The research team obtained approval from the Ministry of Local Government and Regional Administration on January 24 2019. The full team (including a representative from the National NTD office) visited the district health authorities of Longido and Ngorongoro on February 13-14 2019 to introduce the project and discuss the selection of specific communities for the fieldwork phase, with the collaboration of the regional and district NTD officers.

In Longido district, the decision taken in collaboration with the authorities was to select one community with high MDA coverage (Lerangwa – 90%) and one community with MDA coverage below 80% (Elang'ata Dapash – 75%). In Ngorongoro district, three communities were selected: Ololosokwan (MDA coverage: 36%), Pinyinyi (MDA coverage: 26%), and Piyaya (MDA coverage: 96%).

Living arrangements for the research assistants were made during the month of March 2019. Fieldwork in Longido district started on March 21 2019. On April 10, Dr. Geneau and Dr. Kisoka joined the research assistants in Lerangwa for a first focus group discussion with community drug distributors (as part of coaching/training of the research assistants). Rollout of field work activities to the different communities took place between early April 2019 to early July 2019. Research assistants focused on transcription of audio-recorded interviews in July and August of 2019. Direct observation of a MDA campaign in Ngorongoro district took place in the village of Ololosokwan in September 2019.

Photo 1: First FDG in Lerangwa (district of Longido)

Credit: Robert Geneau

In Kenya, the study was conducted in Kajiado West constituency; Ewuaso ward, given its lowest coverage of 68.9% in the MDA for 2019. The selection of site was done in consultation with the County and sub-county team during the post-MDA meeting. Study areas were Keekonyokie ward and Ewuaso ward where the MDA observation and data collection were undertaken respectively. The MDA observation was done for three days between 27th February 2019 and 1st March 2019 while data collection at Ewuaso ward was done between 11th March 2019 and 27th March 2019. Observation of MDA campaign took place in schools (Naromoru Primary school, Timan brooks academy and Dominion Chapel ECDE), static points of administration (Apostles of Jesus AIDS Ministries and Oltepesi Shopping Centre) and villages (Olomayiana, Oltepesi, Eremit and Enkoireroi). It aimed at understanding the MDA process and finding out about; promotion ahead of the campaign, counselling and interaction with the people, management of questions as well as declines, how children were managed and how tetracycline eye ointment was issued.

The post-MDA data collection for Kajiado County, was done in Ewuaso Ward. On arrival at Ewuaso, the team had a meeting with healthcare providers at Ewuaso Kidong' Health Centre where they were able to access data for the specific locations on Trachoma MDA campaign within Ewuaso Ward. Based on the MDA data, the following villages were selected based on their performance in the MDA:

i. Ewuaso location (69% MDA coverage): The following villages were involved in the study-Enkuserokeri, ILmejooli, Kandirisi and Oseroonyokie.

ii. Najile Location (61% MDA coverage): The following villages were covered-Iltereeti, Ole parsikiria and Ole Ntoko Ogumi.

iii. Olgumi sub-location (45% MDA coverage): we covered the following villages - Kitet, Eluai, Olgumi and iltareto.

We conducted semi-structured interviews with the healthcare personnel, teachers, chiefs, religious leader, traditional healers, village elders, among others, to get their understanding and knowledge on the MDA in the area. Further, we conducted Focus Group Discussions (FGDs)with a group of men and women separately in each research site in order to get their views about the MDA. Finally, conversations were held with community members (under the tree discussions) in their homes to hear their views on community structures, decision making processes, health seeking behavior, MDA and WASH related issues. In total five (5) FGDs, thirty (30) semi-structured interviews and twenty-nine (29) under tree/community discussions were held in Kajiado County.

In Narok County, the MDA campaign was conducted from 26th - 31st January 2020 and covered three (3) sub-counties namely, Narok West, Narok South and Narok East. The AIHD research team undertook observation during this time in Aitong sub-location, Mara Ward, Narok West Sub-County. Aitong sub-location was selected during a consultative meeting held with the County health team on 20th January 2020. In addition, the team conducted observation in Ntulele sub-location, Mosiro Ward, Narok East Sub-County. The research team was able to observe MDA campaign in schools, health facilities, religious institutions, marketplaces, and home steads (manyattas). The post-MDA was conducted in Ntulele sub-location due to its accessibility. In total two (2) FGDs – male and female, five (5) semi-structured interviews and ten (10) under tree/community discussions were held. It is notable this exercise was conducted when they were heavy rain experienced in the area. This slowed the pace of the RAs and the MDA campaign due to poor road network characterized by heavy floods.

- **Staff names and roles:**
  Tanzania: Mr. Williams Mollel (data collection and transcription), Mrs. Elizabeth Leisitey (data collection and transcription), Mr. Edmund Kamazima (logistics, point of contact with regional and district NTD officers), Dr. William Kisoka (supervision and data analysis), Dr. Robert Geneau (supervision and data analysis).

  Kenya: Mr. Amos Tarayia and Ms. Mercy Yiampoi (RAs – Kajiado County), Ms. Abigail Keiwua and Mr. Peter Koi (RAs – Narok County), Dr. Sultani Matechendoro (MoH-NTDs Unit National Coordinator), Dr Stephen Mwatha (MOH-NTDs unit trachoma focal point), Ms. Alice Sereti Sinkket (AIHD Executive Director – logistics and study coordination of field work), Dr Mary Amuyunzu-Nyamongo (technical lead, data analysis and report writing).

- Please include gender disaggregated data in your tables, if applicable.

*Table 2 Participants in Kenya and Tanzania**

Respondents – interviews and FGDs - Tanzania	**Longido**	**Ngorongoro**
Men	27	23

Women	21	5

Respondents – interviews and FGDs - Kenya	Narok 5 interviews (1 FGD (1 man and 1 woman)	Kajiado
Men** Women**	7 respondents through 5 interviews and one FGD with two participants (1 man and 1 woman)	30 interviews 2 FGDs with community members (1 with 10 men and 1 with 10 women) + 1FGD with CHCs (6 men and 4 women)

**These figures are for recorded interviews and focus group discussions. There were several more informal community discussions that took place during the fieldwork phase.*
*** Precise gender-disaggregated data for the interviews in Kenya will be available at a later date.*

- Post-Implementation Activities/Evaluation

  Preliminary results (Tanzanian results only) have been presented at a meeting of the International Coalition for Trachoma Control in Liverpool, UK, in September 2019.

  Data analysis/scientific writing is still ongoing. In Tanzania, visits to the regional and district health authorities are currently on hold because of the COVID-19 pandemic. KCCO will cover the costs of future field visits to present the findings to stakeholders. Retroaction to the communities will be organized based on scheduled TT activities in these areas by KCCO (part of another grant - no separate funding available for the dissemination phase).

  Results will also be disseminated through the publication of a scientific manuscript in an open access journal.

- ***Results***
  - Summarize results, including tables, maps, and figures where appropriate.

Factors affecting MDA population coverage (objective #1)

Through the analysis of field notes and transcripts (semi-structured interviews and FGDs) the following themes and combination of factors (not mutually exclusive in any settings) emerged:

Temporary migrations

In northern Tanzania, temporary migrations involving mostly Maasai men are a common phenomenon. Movements in and out of communities can be linked to weather patterns (cattle grazing) or short to medium economic opportunities. Community respondents suggest that the best time to reach the maximum number of people during a MDA campaign would be the month of June.

"Many Moran have run to Nairobi seeking for employment no jobs here and they don't want farm work" (Elanga'ta, FGD, women)

"If there is no rain, Morans will leave to find pastures"

"*To cover all, the MDA distribution should be on each June, i.e. when all people are available*". (FGD, men, Elanga'ta)

Community rumors and health beliefs

In every study community, even in those with high MDA population coverage with azithromycin, some respondents expressed concerns about MDA drugs and western medicines in general. In Eleng'ata Dapash (Tanzania), a story about the death of child during a trachoma MDA campaign is part of the collective narrative*:

"Many of people fear the MDA drugs in 2016 when was the source of death of my child… My child was scared of the drug and they force him to swallow the tablet… I say this drug was cause of death of my child. Then [they] took water to give him as first aid but he died soon. People fear (…)" (Elang'ata, Mother)

"The death of that kid really shocked us …we couldn't believe how other kids survived". (Elgang'ata, FGD, women)

**There is no programmatic record of such event, but as the quote shows the mother is still convinced that taking Zithromax was the cause of death.*

Several of the women respondents reported that the belief that Zithromax is actually a contraceptive is present at the community level. There is a general belief that that all drugs are dangerous:

"I myself have fear because this society is aware that all these MDA's after taking drugs there always bad things happen in body after taking them […] A: When I was young so I had to use birth control methods I heard that pills cause cervix cancer and when I was using Depo deprovera

(??) I came to realize that I have a tumor in my stomach. That made me be scared of hospital drugs." (Woman who never takes the drug, Pinyinyi)

"I refused to take the drug because I still remember the drug that the Catholic church told people not to take….locally it was referred to as "punda". It was suspected that it was to sterilize women…this particular one was reported not to be given to pregnant women and very young children…we wondered why?" (under the tree discussion with women, Kajiado)

"Some people believe that it is one of the contraceptive drugs" (Elgang'ata, FGD, women)

Interestingly, suspicions or concerns about Zithromax may be linked to the mode of delivery – i.e. during a MDA campaign with a door-to-door strategy rather than at familiar settings like health settings and schools.

"(…) people wonder why they are given at their homes and not like other drugs where people take them in hospital or children who take them in school (…) there is poor communication on distribution of medicine (…) some think it kills (…) [some think] the drug makes people barren in early ages that is what they believe in" (Elang'ata, FGD, women).

Traditional medicine often the first recourse

Health beliefs about antibiotics and other "western drugs" are closely associated with views about the (positive) perceived efficacy of traditional remedies.

"Some community members say that from our ancestor we lacked MDA drugs so why taking the drugs while we [still] have our natural medicine?" (MDA Supervisor, Ngorongoro district)

"Morans argue that we are already use our local medicine and there is no need to take MDA drugs" (FGD, men, Elgang'ata)

"Most of the people prefer herbal medicines they belief that it cures faster than hospital medicines". (Elang'ata, FGD, women)

"*We used to boil water and add some tea leaves in it and wash the baby the eye, we put magadi, and milk of a woman who is breastfeeding a girl. […] There is Olekijujuri, it has thorns on the side and it is juice if you put in the eye the patient get healed. Faith does it part […] There is Enawoji when the eye is itching especially children they use the leave to scratch the skin and the baby get healed. They add magadi and milk in it after the procedure". (CDD FG, Pinyinyi).*

Fieldwork notes and interviews revealed that there is a sense of pride in not taking the MDA drugs. This attitude was especially linked to the young Morans (Maasai warriors).

"*Those who refuse [Zithromax] are seen as heroes, especially the Moranis*" (FGD men, Elgang'ata)

KCCO's William Mollel (center) with Moranis in the village of Pinyini in Ngorongoro district, Tanzania

Household decision-making and gender

The Maasai are a strongly patriarchal society, and this is reflected in how health care decisions are made at the household level. Maasai men often hold the decision-making power over decisions to seek health care services or to accept drugs from MDA campaigns:

> *"Decision-making processing in Maasai elders especially men of the boma or family have top say, women are neglected" (Eleng'ata, FGD, men)*

> *"Most of the fathers refuse that their children take the medicine." (Eleng'ata, woman)*

Distrust of government authorities

In Tanzania, research assistants stayed with families in the study communities and joined community gatherings (participant observation). Field notes from the research assistants revealed additional factors influencing attitudes towards MDA campaigns in general. Some of the Maasai study communities are involved in long-standing land disputes with government authorities, and this has fueled a general distrust towards all government-sponsored activities and programs.

Some additional health beliefs were uncovered through informal conversations and while living with families, e.g. the belief that trichiasis is inherited, making trachoma a disease with low perceived severity.

Supply-side factors

There are several program-related factors associated with a lower uptake of Zithromax (i.e. lower than 80%) during MDA campaigns.

Perceived lack of information about MDA

In some communities, respondents reported that there was little advance notification ahead of a MDA campaign. Poor network connectivity is often a barrier:

"Without advanced notice some men reported that they always miss the CDDs, being away farming. No posters office, no text messages due no network coverage (…) One MDA supervisor and one nurse announce face- to face the coming to the campaign (…) Community leaders conduct only one meeting about MDA drugs distribution". (FGD, men- Eleganta)

"No campaign i.e. we need more campaign by using local language through audio speaker recorded at churches, at markets and at local meetings). (FGD, men- Eleganta)

Perceived lack for information about Zithromax

Some respondents in Tanzania indicated that, from their perspective, there is insufficient information about the drug and its potential side effects. It highlights a potential gap in public health messaging ahead of a MDA campaign, as well during the campaign through the work of the CDDs.

"Other people have said that there is poor communication prior the distribution of drugs, yes I agree, my opinion is that people should be told [about the] side effects of these drugs and during the exercise people should make sure that people swallow medicine because I myself I was given drugs and I was pregnant I put them in a plastic bags and threw them away when they were gone. The reason why I did this is because of the side effects of the disease that I heard and I said if it affects other people how about me whom is pregnant". (FGD, women, Eleganta)

Local stated knowledge was sometimes in direct contrast with key messages of MDA campaigns:

*"My advice is that **people should be told that they have to take the drug with an empty stomach**.*

Logistical challenges and impact on true coverage

In Tanzania, local leaders and CDDs discussed during FGDs the main challenges to trachoma MDA campaigns in their communities. CDDs have to cover large distances, and difficult terrain. This translates into having more difficulties in carrying water with them at all times when going from house-to-house. Some respondents acknowledged situations where CDDs may have left the drug with adult household members without witnessing that the drug was actually taken.

"Also they [CDDs] should make sure that the drugs are taken because giving the drugs and leave it behind does not guarantee if that person has taken it or not and the government is sure that the drugs have been taken while it is not the case". (Elang'ata, FGD, women)

"But all in all the cause is because poor campaign and the way the drugs distributors they give drugs and leave without considering if people do swallow the drugs or not (…) If you look the geographic location it is hilly, and those people are carrying water, drugs and other stuff, and there are two in the sub-village, and look how big this is… it is big. Also there is no enough money for the drug distributors as I have heard, if possible they should add up money and the number of days of distributing drugs should be more than three days so the missed people can be attended or adding the number of distributors". (FGD- local leaders, Tanzania)

Solutions and recommendations: the perspectives of community respondents and MDA supervisors (objectives #2 and #3)

In addition of paying close attention to the calendar of temporary migrations in the targeted areas, other recommendations emerged from the interviews and FGDs (below). Some actions have been undertaken already, e.g. during the most recent MDA campaign in Ngorongoro district (Tanzania), the number of CDDs in some communities was significantly increased (but challenges remained to cover the geographical areas). For other recommendations expressed by respondents, the research team will engage relevant stakeholders to discuss feasibility and intervention design options based on the local contexts (efforts to meet objective #3 will therefore continue past the project period).

The role of traditional and government leaders

Given that there is still some community-resistance to MDA drugs, some respondents suggested that it would be important for local leaders to show that themselves trust that Zithromax is effective and safe:

"If top government officials are there [then] people will not have false beliefs that these people are willing to kill us". (FGD, village leaders, Lerangwa)

"Community elders in Maasai communities have more attractiveness - one can swallow the MDA drug [in front of people] in order to charm the whole society" (FGD, men, Elengata)

In Tanzania, village leaders mentioned that it would be helpful to bring in special visitors like the Regional Medical Officer, District Medical Officer or District Commissioner to launch the MDA drug campaigns.

The need for more local communication and targeted community sensitization

One MDA supervisor mentioned the need:

"To introduce more campaign [messages] at meetings, all markets like noondoto, sokon and ketumbeine in local language and to spreads more papers within the community and in radios". (MDA Supervisor, Ngorongoro district)

"Churches and water points should be used as sources of information as most of the community members are herders and are also found in church" (Men, Kajiado)

Community members also view CDDs as a source of information, but in both Kenya and Tanzania some respondents noted that CDDs appear to be "in a rush":

"They did not take time to explain the importance of taking the drug to the community members. They just give you the drug….when you ask about its importance, they tell you the drugs are for Trachoma…they don't ask if you have eaten or not or explain the side effects"….(Under a tree discussion with women group- Kajiado)

Adjusting the level of resources for trachoma MDA campaigns

To address the challenge of long distances, some respondents proposed the idea of 1) conducting the MDA campaigns in all Maasai markets in the local language, 2) to increase the number of CDDs, and 3) to increase the allowance given to CDDs.

"Time is a big challenge, because the coverage area is so big , you might find that the CDD uses motorcycle to reach the people to vaccinate so it is of no benefit to the CDD because they would have used their pay money. every time there are new CDDs this also is the challenge". (Lerangwa, FGD, village leaders)

In Kenya, community members recommended the widespread use of a door-to-door approach for MDA campaigns.

Involving the Moranis (warrior class)

While some respondents stated the *"need to use Moran leaders during MDA campaigns". (Elegang'ata, FGD, CDDs),* this is a recommendation that would require further research and exploration. In Tanzania, in the village Ololosokwan, Mr. William Mollel (KCCO's research assistant) developed a good relationship with younger *Moranis* but no formal interviews or FGDs could be organized (no audio-recorded interviews or FGDs). The level of fears and apprehensions remain high and *Moranis* proudly reject public health messages about trachoma MDA campaigns (*we use bush drugs).*

Table 3 Summary of recommendations

The following recommendations were advanced: i. In areas that require multiple rounds, the MDA need to be regular and predictable, but also take into consideration temporary migration patterns ii. There is a need to use existing structures to distribute drugs as well as create awareness at the community level by using influential groups and leaders, e.g. village elders, chiefs, youth groups, the *moranis* (warriors in class in Masaai communities). These groups will work best in ensuring high coverage due to the trust the community have in them. There is a need to test interventions on how best to engage groups, like the *moranis,* who display strong resistance to western medicine in general iii. There is a need for a rigorous social mobilization and creation of awareness before the MDA. The social mobilization should be given a period of 2 weeks so that community members are aware about the rational for the MDA campaign, how best to avoid the potential side effects of the drug, who is eligible, who will be distributing, etc. The IEC materials should be translated into Maasai. iv. Adequate time should be allocated for training of CDDs in order to equip them with sufficient knowledge so that they can handle all questions from community members about trachoma, the drugs and the MDA campaign v. There is a need to encourage use of trachoma champions at the district and/or regional level to advocate on the importance of taking the trachoma drugs vi. Many of the recommendations of community leaders related to the use of diversifying further the mechanisms for community mobilization, as well as increasing the number of CDDs.

- *r*

ibe successes and challenges in implementing the study. Think about aspects such as training, implementation, diagnostic tests, logistics, etc. What worked well and what did not work well?

In Tanzania and Kenya, we hoped to be able to extract disaggregated data (age and gender) from local datasets (paper-based) associated with previous MDA campaigns. However, time and costs (vehicle rentals and covering long distances [and several trips] to health dispensaries) made it impossible to complete this activity.

- *Describe how community was involved with the research. (E.g. planning, training, response, dissemination of results)*

  Communities were involved at the data collection phase, and early dissemination phase (by research assistants). KCCO (Tanzania) and the Africa Institute for Health and Development (Kenya) will plan further dissemination activities in 2020 or 2021 once it is safe to do so in the context of the COVID-19 pandemic.

- *Describe how the regional/national programs were involved in this research. (E.g. planning, training, response, dissemination of results)*

The National NTD programs were involved at the design phase, reviewing and commenting on the initial protocol. In Tanzania, a representative of the national NTD program travel twice to norther Tanzania (from Dar es Salaam) to join the research team and introduce the project to Regional and district-level health authorities. Preliminary results were shared at regular trachoma review meetings. The officials involved as investigators will participate in the data analysis (ongoing) and final dissemination phase (presentations and scientific paper).

- *Describe how your research addressed the following (as applicable): gender inclusivity, marginalized populations, individuals with disabilities.*

In both Kenya and Tanzania, interviews and FGDs were conducted with women and men separately. This strategy made it possible to explore some topics more easily and more in-depth with women respondents. It was also part of the research design to select communities that carry a high burden of trachoma morbidity.

- *Photographs and figures may be included here.*
  Please advise – adding more pictures will significantly increase the size of the file.

- ***Next Steps***
  - *Discuss the next steps for this project (i.e. projected publication dates, dissemination meetings, conferences, etc.)*

    We plan to finalize data analysis by September 2020. In terms of presentations, the shorter-term priorities will be present the findings to local stakeholders (regional/district & communities) but availability of funds for travel expenses will be an issue. Currently, KCCO still work on trachoma activities in Ngorongoro district, with dedicated funds for vehicle and fuel. Elsewhere, trachoma activities are now handled by Crown Agents. At least one manuscript will be submitted to an open access peer-reviewed journal.

  - *Do you have any recommendations for modifications to program activities based on your project's successes and challenges?*

    See list of recommendations.

  - *Based on the results of your study, what is the most important lesson learned for the broader NTD community?*

    Although NTD programmes are (mostly) funded vertically, there are common challenges to all programs. This study highlighted the importance of building trusting relationships with communities. There is a need for a common narrative about the benefits of MDA drugs (and immunization campaigns), recognizing that health campaigns are also embedded in socio-political contexts. Communities' overall experiences with "government" programmes – whether these programmes are health-related or not - matter tremendously.

  - *Future directions for related research*

There are preferred practices in place about the importance of community mobilization activities to ensure the success of MDA campaigns. However, local adaptations are necessary and a priori ethnographic studies can help inform the design of community mobilization activities in specific areas with low MDA coverage.

- *If applicable:* Comment on your original theory of change. Think about how the research affected your hypothesis. Would you make any changes? If so, please describe briefly and/or provide an updated graphic. If it was not correct, how would you modify it for future use?

- ***Project Expenditure***
  - What was the budgeted cost?

    USD $71 231

  - How did actual expenditures differ from projected amounts?

    We went over the allocated budget (see financial report) but KCCO will cover the extra costs.

  - If an amendment was needed, briefly state why.

    We were granted no-cost extensions. Initial extension was due to the delay of MDA campaigns in Kenya and Tanzania (direct observation of campaigns was a component of the grant). After the start of the COVID-19 pandemic, programmatic priorities shifted at KCCO to make urgent adjustments to our comprehensive eye health programs in eight countries (develop mitigation strategies, seek donor approvals, etc.).

- ***If you have not already done so, please share the final, clean study dataset(s) along with this report. Please be sure to remove any personally identifiable information (such as name or date of birth). Per the signed data sharing agreement, the study data will ultimately be shared on the CORNTD OR data portal.***