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LESSONS FROM THE FIELD: Delivering Trachoma Mass Drug Administration safely in a COVID-19 context.

Authors: A: Burn Nick, Dr Babar Qureshi; Juliana Amanyi-Enegela B: Dr Osasuyi, Dr Bassey; C: Rinpan Ishaya; Joseph Kumbur; Bright Ekweremadu, Christopher Ogoshi

A: Inclusive Eye Health and Neglected Tropical Diseases Initiative, CBM Christoffel-Blindenmission Christian Blind Mission e.V., Wellington House, East Road · CB1 1BH, Cambridge; Nuffield Centre for International Health and Development, Leeds Institute of Health Sciences, University of Leeds; *Population Council or Research hub?* C: *HANDS Address D: CBM CO Address*

Corresponding Author: Tel: ; Email:

Abstract

The first COVID-19 interim guidance released by the World Health Organization (WHO) recommended suspension of non-urgent community health interventions, including mass drug administration (MDA) for neglected tropical diseases (NTDs). However, with no end in view for the COVID-19 pandemic, it was crucial to plan when to restart MDA for preventive chemotherapy NTDs and decide what measures to introduce to reduce the risk of COVID-19 among health workers and communities. Consequently, a guideline and other tools was developed on delivering MDA safely in a COVID-19 secure context and the implementation was assessed using an observation checklist developed.

The result of the observation of adherence to the guidance revealed that delivering MDA safely in the COVID-19 context is possible, it also revealed challenges, learnings, and opportunities to utilize the MDA platform for COVID-19 health education.

Keywords: Neglected tropical diseases; Mass drug administration; COVID-19 context

Introduction

The emergence of the novel coronavirus and the resulting COVID-19 pandemic caused multiple disruptions to community health interventions in Nigeria, including delays to mass drug administration (MDA) for neglected tropical diseases (NTDs). In recognition of variable and changing situations, the WHO indicated that national governments could interpret the recommendation in its second Interim Guidance Notice, within their specific contexts, balancing the risks of spreading the virus against the negative consequences of delaying health service delivery.

It was therefore crucial for NTDs programmes to explore ways to safely restart MDA to ensure that the accumulated progress toward elimination was not undermined. A Risk Assessment and Mitigation Action (RAMA) tool was therefore completed to secure approval for the MDA from the project donor. CBM also developed guidelines for conducting MDA safely in the COVID-19 context, delivering COVID-19 messaging, and use CDD Aide Memoire and observation checklists to ensure social distancing and personal protection measures were observed and promoted. Adherence to the new guidelines was assessed using an observation checklist; this included the ability of CDDs to give messages and respond accurately to questions on COVID-19 and its prevention.

In this paper, we present the results of the observations carried out during trachoma MDA in five districts in Jigawa State, Northern Nigeria. Key lessons learnt and the opportunities to scale up these strategies across all the preventive-chemotherapy NTDs are also discussed.

House-to-house drug distribution is the normal strategy for MDA in Nigeria and was preferred during the COVID-19 pandemic to avoids mass gatherings at central locations.

Strategies for restarting trachoma MDA safely

Risk assessment

The RAMA tool was used in collaboration with the implementing partner (HANDS), local government and other stakeholders to assess the potential impact of identified risks and define mitigation measures. The RAMA tool uses a traffic light system to indicate if MDA can be carried out with acceptable risks. Approval from the donor was based on this.

The guidelines set out the mitigation measures to be used in each component of the MDA including logistics, meetings, trainings and the house-to-house distribution of azithromycin. An Aide Memoire (Figure 1) was also developed and distributed to all Community Drug Distributor (CDD) during training.

Training on MDA and COVID-19

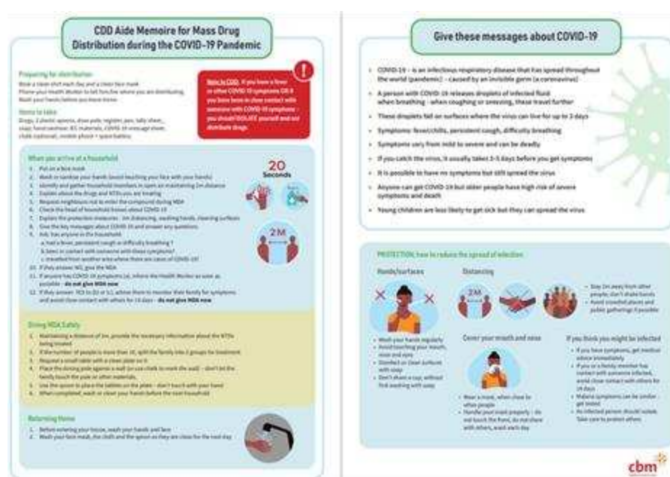
Training is an essential pre-MDA activity that equips health workers and CDDs with the knowledge and skills required to conduct MDA safely and efficiently.

The training content included information on trachoma, drug dosage, recording of treatment data, potential adverse effects as well as community mobilization and sensitization. For this round of training, the content was revised to include a session on COVID-19 prevention & COVID-19 community messaging.

Role play was a central part training to simulate adherence to the COVID-19 guidelines during distribution and 'experience' and learn from the likely challenges under the guidance of the trainer. A short pre- and post-test survey was conducted to assess participants' knowledge on COVID-19 before and after the training.

Independent Monitors used a checklist (Box 1) to assess the level of compliance to the new COVID-19 guidelines in 32 training centres across five districts of Jigawa State.

Figure 1: CDD Aide Memoire



Results of COVID- 19 compliance during training

As recommended in the guidelines, 75% of the training centres limited the number of participants per centre to 20, with adequate distancing always maintained in 50% of the venues. It would be safe to increase numbers slightly in larger venues and the logistical implications of having to train slightly more than 20 CDDs on two consecutive days, led to some trainings deviating from the guidelines??

While PPE was supplied at 100% of venues, it was only in 38% venues that masks were worn correctly **at all times** as it was difficult to attain this high standard in the hot climatic conditions of Jigawa, particularly when masks were less comfortable. Participants were thus tempted to drop their

Box 1: Training and MDA Observation checklist

S/N	Observation Checklist for Training
1	Health check (including temperature check) was made on arrival. Anyone with recent symptor was asked to return home and self-isolate (Symptoms such as coughing, cold etc. in the past 1 days)
2	Meeting room/chairs were cleaned with disinfectant before and after use
3	PPE was available in sufficient quantity (such as face mask, face shields)
4	Number of participants in the meeting was less than 20
5	Suitable meeting room was available with adequate room to ensure spacing/C meeting/training was held outside
6	Distancing measures observed during and after meeting/ training
7	Washing stand/hand sanitizer was available
8	Staff and participants used hand sanitizer/wash with soap under running water before and aft meeting.
9	Participants wore masks correctly at all times
10	There was no sharing of pens or training materials during the trainings
11	Training included content on COVID-19 awareness and messaging to be delivered to communit members during MDA
12	Participants were trained on proper COVID-19 mitigation techniques
13	Role play was used to provide drug distributors with an opportunity to practice new social distancing skills when delivering drugs at the household level
14	Job aid provided to each CDD at end of training (A pictorial COVID-19 message)
15	Training included increased emphasis on how to inform communities about drug-relat adverse events to make sure that post-treatment side effects do not trigger concerns of COVID-1 at the community level.
16	PPE was provided in sufficient quantity at the training for the CDDs

	Observation Checklist for MDA
1	Masks were correctly worn by the CDDs throughout the visits to the households, except while speaking
2	If the mask was removed for speaking, extra distance was maintained
3	COVID-19 messaging was given accurately to the household members during the MDA
4	Questions on COVID-19 were answered fully and accurately
5	CDDs disinfected their hands upon arrival before delivering MDA
6	The family understood and accepted the request to keep distance during the MDA
7	No crowds gathered at the household during distribution
8	At least 2m/6feet distance was maintained at all times with no physical contact between CDDs and members of the households
9	The dosing pole was managed in a suitable way so that 2m/6 feet distance from the CDD was maintained
10	If family members touched the CDDs equipment it was cleaned
11	The dosing of drugs was done accurately
12	CDDs checked themselves for COVID symptoms at the start of each day and reported sick and self-isolated if necessary
13	CDDs wore a clean shirt and mask each day
14	The CDD used a clean spoon to serve the drug to the patient and did not touch the drugs with his/her hands
15	Any family members exhibiting or reporting symptoms of COVID were referred to a health facility and informed to isolate from others
16	CDDs informed family members of potential side effects associated with NTD treatment and how these differ from COVID-19 symptoms during the MDA

masks at times. When planning for procurement, it should be remembered that the quality and comfort of masks provided will affect compliance.

Temperature checks were not done in most (%?) centres due to lack of thermometers. This was due to the lack of time for procurement, but recent findings cast doubt on their effectiveness for identifying all infectious cases.

69% of the training centres provided handwashing stations and in 68% of these were used by all participants before and after the training. Did this include gel??? A key lesson is that someone should be assigned responsibility to ensure everyone washed their hands when entering and leaving the training room.

In 78% percent of the centres, CDDs received the training on COVID-19 and its prevention, on COVID-19 messages to be delivered and on how MDA-related adverse effects differ from COVID-19 symptoms.
With time required for CDDs to travel to the venue, the average time of a one-day CDD training is about four hours. With additional COVID-19 components, there was a general concern that one day was insufficient for effective training delivery. Shortage of time led to only 34% of venues incorporated role plays into their training programme. Training should not be carried out on days of religious observance as this will further restrict training times.

Are there any other things we should report on in this section?

Result of CDDs observation during MDA

Independent monitors observed 75 CDDs during house-to-house distribution and monitored compliance with the guidelines using the indicators in a checklist (Box 1).

Almost all CDDs (99%) wore clean shirts and facemasks each day. 69% of participants wore their masks correctly at all times during household visits and 60% observed extra distancing while speaking without a mask on. In 65% of the households visited during MDA, family members understood and observed the request to maintain safe distancing.

Only 43% of CDDs were observed to have always washed or disinfected their hands before entering and leaving a family compound to administer MDA.

64% always used clean spoons or dispensing caps (provided during the training) to serve the drugs.

During the MDA, 31% of the CDDs gave full and accurate COVID-19 messaging to the household members, 23% answered COVID-19 questions accurately but only 15% of the CDDs informed family members of potential side effects associated with NTD treatment and how they differ from COVID-19 symptoms.

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Reflections and recommendations

The results from all observations showed that while the logistics of providing PPE was good, adherence to the guidelines on all other measures - during both training and MDA - was below expectation.

Training

The standards set for mask wearing and social distancing during training and MDA were very high, since even one observed relaxation would count as a 'fail'. However, a score as low as 38% during training indicates that improvements were needed. Discussions with CDDs revealed that wearing a facemask continuously in temperatures as high as 37 degrees was quite uncomfortable. In this case, regular short breaks could be organised to allow masks to be removed safely. As noted earlier, poor quality masks may make compliance impossible to achieve, so this needs to be considered at the stage of procurement.

It is advisable to conduct trials run of training sessions to identify weak points in distancing and hand hygiene and find ways to ensure as near as possible 100% compliance. However, with repeated MDA, this would be expected to improve.

MDA

A number of factors contributed to low compliance during the MDA. Discomfort with the masks was one factor – as it was during the training – but one key challenge the CDDs faced was to explain the reasons for distancing to the families. With very few cases of COVID-19 in the target districts, most people would not know anyone infected – and certainly not know anyone with serious symptoms. This lack of awareness will have made it harder for the CDDs to convince people to maintain distancing and avoid crowding.

Secondly, a limited number of trainings used role plays - due in part to lack of time. This was extremely effective in simulating the challenges encountered during distribution and practising how to deal with them.

The success rate in giving accurate messages on COVID-19 during MDA and answering questions was also much lower than expected. A common concern expressed by the CDDs was that some sessions were delivered too quickly without taking their learning curve into consideration. Thus, ensuring adequate time on COVID-19 sessions should increase the effectiveness of the messaging.

In addition, the default setting for the CDD training was a classroom setting using a didactic approach – whereas an active learning approach has been proven to be more effective for adults. It is recommended that different approaches should be used at all levels of the training cascade - for example, exercises, games or group work could be devised to make the training more participatory.

MDA is carried out by volunteers and for some, the additional time required to give COVID-19 messages and answer questions will have seemed an additional burden they could do without.

Concluding remarks

Providing MDA safely in a COVID-19 setting is likely to be a common challenge for a number of years. This study indicates some of the practical challenges that need to be addressed before an adequate level of safety can be achieved.

The MDA platform can provide a cost-effective way to disseminate COVID-19 messaging, in part because CDDs are known, trusted, and respected by community members. It provides an opportunity to reach every household with a simple, standard message and provide clear, relevant information about the pandemic. However, methods and duration of training will require careful oversight to ensure full effectiveness.

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