Resuming mass treatment for neglected tropical diseases following the COVID-19 outbreak in Nigeria: A mixed methods study of programme and community preparedness in Ekiti, Kaduna and Taraba states

Research summary

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Introduction

Neglected tropical diseases (NTDs) are a group of debilitating chronic conditions that occur mostly in rural regions, poor urban areas and conflict zones. These are more common in sub-Saharan Africa (SSA) with about 500 million people affected in this region. About 25 per cent of NTD cases in Africa are in Nigeria, making the country the most endemic in SSA. To control and/or eliminate certain NTDs as public health problems, the World Health Organization (WHO) recommends periodic administration of efficacious, safe and inexpensive drugs to entire at-risk populations. There are ongoing NTD control/elimination programmes in 36 states of Nigeria, including the Federal Capital Territory. These programmes implement mass drug administration (MDA) – referred to as mass administration of medicines (MAM) in Nigeria – to targeted groups either at school or household/community levels.

Mass treatment campaigns bring people together during mobilisation, training and administration of medicines. With the advent of the novel coronavirus disease (COVID-19) as a global pandemic, there have been shifts in policies regarding the implementation of mass treatment campaigns for NTDs. Nigeria reported its first COVID-19 case on 27 February 2020; the subsequent spread led to state and national level lockdowns and new normative measures, including the suspension of mass treatment campaigns (table 1). These approaches helped to maintain health systems' capacity to identify, isolate and treat as many COVID-19 cases as possible. Post-lockdown in June 2020, the national NTD programme implemented the WHO recommendation.

Table 1: Timeline highlighting COVID-19 related events relevant to the study

Month (2020)	Event
February	First reported COVID-19 case in Nigeria
March	Lockdowns in Lagos, Ogun and Abuja were subsequently extended to Kano before becoming nationwide
April	Recommendation from WHO that mass treatment campaigns, active case-finding activities and population-based surveys for NTDs be postponed until further notice
May	Gradual easing of lockdown starts
	WHO's April advice (above) was reaffirmed in the **new guidance document**. The key additions included: countries should monitor and re-evaluate at regular intervals the necessity for an ongoing delay; the decision to resume or commence a planned community-based NTD activity would require the conduction of a risk-benefit assessment on an event-by-event basis
June	**The inception of the COVID-19 NTD MAM readiness study**
	Sightsavers' first risk assessment and mitigation action (RAMA) tool deployed in Nigeria
July	**WHO interim guidance** included considerations for implementing mass treatment, active case-finding and population-based surveys for NTDs in the context of the COVID-19 pandemic

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Month (2020)	Event
August - October	Readiness study data collection

Since MAM programmes rely on community-based volunteers and the delivery is dependent on effective coordination between state, local government area (LGA) and community stakeholders, there were concerns about the readiness to resume MAM at different levels of the system. To investigate this, Sightsavers, in partnership with Mission to Save the Helpless (MITOSATH), conducted a mixed-methods study to assess stakeholder readiness and inform the decisions of the Federal Ministry of Health on how to deliver medicines using the WHO recommended strategy with temporal adaptations. The adaptations included COVID-19 prevention measures such as wearing face coverings, maintaining social distancing and hand hygiene.

Objectives:

1. To assess the readiness of key NTD stakeholders to safely and effectively implement and monitor MAM programmes in the COVID-19 post-lockdown period in Nigeria
2. To explore the opinions of key NTD stakeholders on essential aspects of readiness related to restarting NTD programmes as well as how to ensure the compliance of frontline workers, drug distributors and end users to COVID-19 precautionary measures (for example, wearing masks, physical distancing and contact tracing)
3. To explore opinions of key NTD stakeholders on what the anticipated barriers and challenges will be to implement, monitor and support MAM activities, as well as how to maximise community engagement when restarting MAM

What did we do?

This mixed methods study was conducted between August (commencement of data collection) and December 2020 in three states – Ekiti, Kaduna and Taraba. 57 participants from the various levels of programme implementation (such as state, LGA, frontline health facility and community) were selected for key informant interviews (figure 1). These interviews were conducted primarily over the phone and occasionally face to face with social distancing.

The interviews were structured around readiness questions about seven aspects of implementation (see table 1). The quantitative part of the study used survey responses to calculate percentage 'readiness scores'. Readiness scoring thresholds were based on the **Risk Assessment and Mitigation Action (RAMA) tool** developed by Sightsavers and included: well prepared (76-100%); quite prepared (51-75%); quite unprepared (26-50%) and unprepared (0-25%).

The qualitative part of the study focused on exploring and understanding perceptions of readiness based on the individual's experience.

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Figure 1: A map of Nigeria showing the three states enrolled in the study and participant information per state
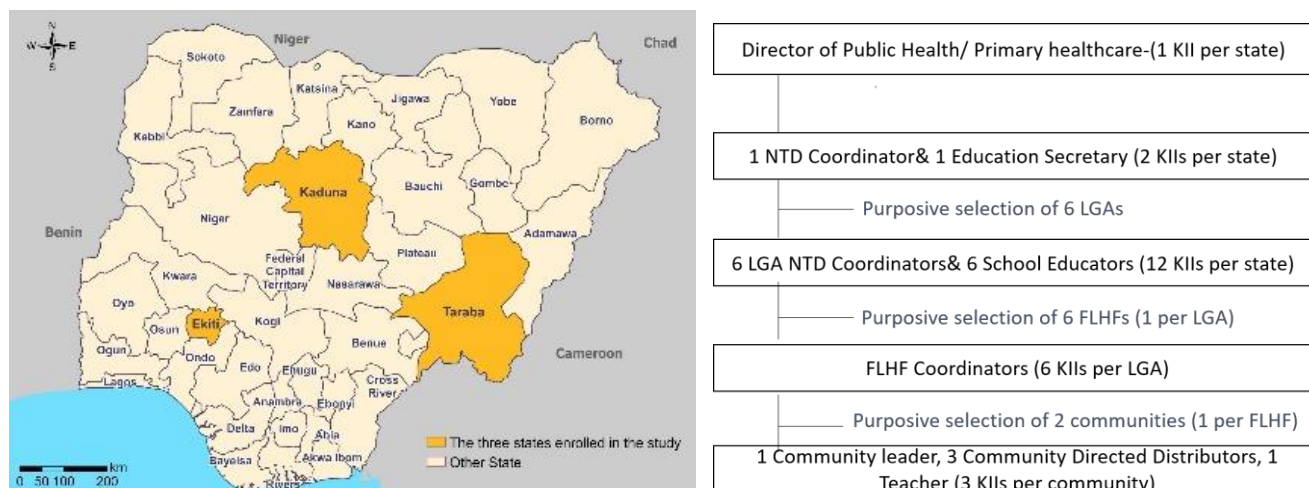
Table 2: Content of rapid assessment questionnaire by aspect of implementation

Aspect of implementation	Content of questions
COVID-19 situational overview	Awareness of protocol on COVID-19: prevention (1); case management (2); provision of information on risks and transmission routes (3); clinical signs and symptoms (4); how to limit spread/transmission (5); where to seek treatment and care (6) and best practices for prevention (7)
Resource availability	Strategy/resources plan for medicines for next round of MDA (8); personal protective equipment (PPE) (9) and equipment/materials (10)
Training	Adaptation of MAM standard operating procedures (SOPs) to optimise COVID-19 preventative measures (11); training on new SOPs (12); training on personal safety measures (13) and screening of trainees (14)
Distribution and support	Whether supervisors/community drug distributors (CDDs)/health workers had been contacted to check their availability and personal risk for participating in MAM (15); advised on the COVID-19 at-risk populations (16). Presence of measures to prevent physical contact between community health workers and household members (17). Provision for physical distancing during MAM (18). Measures to reduce intra-country movements (19). The intention of community and local leaders to work with CDDs to ensure physical distancing (20)
Risk communication	Presence of risk communication strategy for supervisors and health workers (21). Inclusion of needs of remote/marginalised groups in strategy (22). Presence of any assessment to understand community perceptions of and reactions to COVID-19 (23). Whether organisers/public health authorities have reached out to community leaders to understand how to influence positive prevention behaviours and combat stigma, discrimination or false information (24). Whether social mobilisation platforms have been contacted to mobilise and inform communities about MDA (25)
Surveillance for COVID-19	Presence of: established protocol (26); procedure for reporting of suspected cases during training and MAM (27 and 28); health facility SOPs on preparedness and prevention (29) and health facility infrastructure/equipment to respond to and manage any cases (30)
Partner coordination	Whether the national NTD programme has notified WHO and/or partner public health authorities about proposed treatment activities (31). Coordination with multisectoral stakeholders for disseminating risk communication measures (32)

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Why is this research important?

The study generated important information on how to mitigate the impact of COVID-19 on health programmes and resume health interventions in a safe, effective and ethical manner. The assessment of the readiness of stakeholders across different levels of implementation (including the community) provided programme relevant insights into the capacities of the local systems responsible for restarting MAM and practical recommendations for system strengthening.

What do the research findings tell us?

Key messages

- Overall, the NTD stakeholders interviewed had good awareness of COVID-19 and reported to be ready to restart community treatment campaigns using adapted COVID-19 guidelines

- Readiness scores varied across states and levels of implementation
    - Taraba state had the highest overall level of readiness followed by Ekiti and Kaduna states
    - In all states, state-level stakeholders showed higher levels of readiness than LGA and community-level stakeholders

- The areas of preparedness that scored consistently lower in each of the three states were resource mobilisation, MAM training, COVID-19 surveillance and partner communication and coordination

- In preparing for MAM, the timely participation of LGA and community-level members needs to be given particular attention to ensure that all relevant information, protocols and processes are effectively cascaded down the system and reach direct programme implementers

Readiness scores

The overall readiness score was highest in Taraba (86%), followed by Ekiti (72%) and Kaduna (64%) (see table 3). Disaggregated scores by level of implementation showed that in all three states, stakeholders at LGA and community levels were reported to be less prepared than state-level stakeholders. The differences in stakeholder scores were greater in Kaduna and Ekiti than in Taraba. Also, in Kaduna, preparedness scores at the community level were lower than at the LGA level. The areas of implementation that scored consistently low in all three states were: resource availability and management, training in MAM and surveillance for COVID-19 and partner communication and coordination.

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Table 2: Readiness scores aggregated by administrative unit and aspect of implementation

The areas of implementation that scored consistently low in each of the three states are highlighted in red. Superscripts identify the questions from table 2 with scores <50.

Aspect of implementation	Admin level	Average score (%)		
		Ekiti	Kaduna	Taraba
COVID-19 situational overview	**Combined**	**89**	**83**	**92**
	State	100	95	100
	LGA	90	89	96
	Community	88	79	89
Resource availability and management	**Combined**	**62**	**41**	**82**
	State	89	100	100
	LGA	59	39[b]	81
	Community	60	37[c]	81
Training in MAM	**Combined**	**68**	**48**	**83**
	State	67	67 [d]	100
	LGA	57 [e]	44[f]	82
	Community	59	48[f]	84
Distribution and support for MAM	**Combined**	**69**	**75**	**89**
	State	94	94	89 [h]
	LGA	67[g]	81	91
	Community	69[h]	68[h]	89
Risk communication	**Combined**	**79**	**63**	**90**
	State	73	93	93
	LGA	81	74	92
	Community	79	50[i]	89
Surveillance for COVID-19	**Combined**	**68**	**60**	**84**
	State	87	93 [j]	93
	LGA	70	77	82
	Community	66	49[k]	84
Partner communication and coordination	**Combined**	**57**	**37**	**86**
	State	67	67	100
	LGA	56	56 [l]	86
	Community	56	24 [m]	85

Key (%)	
Category	Score
Well prepared	76-100
Prepared	51-75
Quite prepared	26-50
Quite unprepared	0-25

Questions with scores <50: a-10; b-8,9; c-8,9,10; d-12; e-14; f-11,12,13,14; g-16; h-19; i-21,22; j-28; k-29,20; l-31; m-31,32

Perceptions of readiness

The qualitative data from the three states corroborated and provided insight into the quantitative results.

Knowledge of COVID-19

Although not all stakeholders across the implementation levels were familiar with the formal COVID-19 protocols, all indicated good knowledge of COVID-19 in terms of risks of transmission, clinical symptoms and preventive measures. Most respondents received

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information about transmission routes through the media and in remote areas, through town announcers, community leaders and health workers. The key challenges that MAM identified, particularly at the community level, were misconceptions and myths about COVID-19, difficulties with reaching remote and marginalised populations and insufficient incentives for CDDs.

Myths and misconceptions were common at the community and LGA levels and perception versus truth exists: "you know up till now the villagers they do not believe that this disease exists, and some are still saying that the disease belongs to the rich ones or belong to the city people, these the are the reasons they do not bother to take precaution." **State implementer, Taraba**

Staff supervision, support from community leaders and community mobilisation were identified as the key strategies to address these challenges.

Resources

The case of resources, plans and processes for drug requisition were better-known at the state level with respondents at the LGA and community level advising that they only received information when the drugs were already available in their area. With regards to PPE, needs assessments had been carried out in some areas and PPE was reported to be available in hospitals and frontline facilities. Community-level stakeholders did not make many comments about PPE, but there was an expectation that face masks, gloves and hand sanitisers would be provided by the government and implementation partners.

Training and distribution

Discussions around training and distribution indicated that staff for MAM were available at all levels, though not all had yet been trained on COVID-19 related adaptations for MAM. Sub-state level responses provided some evidence of their understanding of the need for training in this area and there was confidence that they would be trained at the appropriate time.
In all three states, face-to-face training with social distancing was the preferred option for all stakeholder groups. Most respondents expected good compliance with COVID-19 guidelines during MAM but recommended giving attention to the supervision of wearing PPE and swallowing medicines.

"If you want to train people, the best way to get them is face to face… I feel the training should be done in batches to avoid overcrowding so that everyone involved will know what is expected of them in the distribution of medicines, there should be face masks and hand sanitisers available during the training." **Community implementer in Kaduna**

Surveillance

In terms of COVID-19 surveillance, respondents at the state and LGA levels largely indicated that systems and infrastructure (mainly at the state level) were in place to manage severe COVID-19 cases. However, actors involved at all levels of implementation needed to be holistically involved and appropriately informed, so they were adequately prepared for MAM adaptations during the COVID-19 pandemic.

Partnerships and communication

At the state level, partnerships and communication seemed to be effective:

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"I know that we draw officers from the LGAs, we also have volunteers, we have the staff from MITOSATH, we have the staff from the NTD unit of the Ministry of Health working together with all the health workers in the various LGAs that have been selected to work together with the primary health care agency, I think that they will be able to support the resumption of MAM." **State implementer in Taraba**

However, as recommended by teachers in Taraba state, the NTD programme needs more coordinated notifications and communications with supporting partners. Teachers are the implementers of school-based treatments for schistosomiasis and soil-transmitted helminths.

Although the higher level of programme implementation was more informed and prepared, the lower levels still had confidence in the system: "I am sure the Ministry of Health would have to do something regarding the enforcement of some of the guidelines. Then we, the community leaders, also through our different stages of authority, will also advise people and encourage people to maintain guidelines and regulations." **Community member in Kaduna**

Recommendations

The key recommendations for NTD programmes that are restarting MDA in the COVID-19 era or during similar pandemics, fall into five categories:

1. Resource availability – with emphasis on strengthening strategies / plans for the supply of PPE, equipment and materials.

2. Partner coordination – with emphasis on supporting early notification of project partners by NTD programmes and easy processes for partner communication.

3. MAM training – with emphasis on supporting trainings on SOPs, personal safety and emergency and preventative screening.

4. COVID-19 surveillance and response – with emphasis on supporting the provision of infrastructure for health facilities to manage COVID-19 cases.

5. MAM distribution and support – with emphasis on restricting intra-country movement by MAM personnel.

Limitations

1) **Remote working**: due to the pandemic, face-to-face interactions with participants were mainly replaced by phone interviews. It would have been beneficial to have a more exploratory view by conducting focus group discussions. This would have allowed for participants to interact, opinions to be exchanged and disagreements to be had. However, internet limitations made virtual focus groups unrealistic.

2) **Validation of tool**: the rapid nature of the study and its time constraints prevented cognitive testing and a more complete validation of the bespoke questionnaire.

3) **Inter-sectoral analyses**: differences in responses between stakeholders from the education and health sectors were not analysed.

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4) **Time considerations and biases**: the time lag between interviews and MAM varied between the states[1]. For example, in Kaduna, the interviews happened over two months in advance of any MAM but in Taraba, some MAM happened within weeks of completing the interviews. This difference might account for the higher readiness scores in Taraba. Future studies could address this by adopting a phased approach to the interviews which links the timing of the interview with the participation of the stakeholder in the MAM planning process.

Suggestions for future research

An evaluation of community perceptions on recently concluded MAMs may explain successes and gaps for further implementation research. This could improve programme delivery and RAMA in the existing and similar programmes.

Even though the WHO's recommendation that a risk-benefit assessment proceeds any MAM has not been adopted everywhere, there would be value in comparing the results from any future readiness (or re-start) studies in areas that have used a risk-benefit assessment tool to those which have not.

Learn more

- **Read the full report here**
- Some of the researchers involved in this study went on to support research evaluating MAM restart, including adherence to COVID-19 related SOPs and an understanding of community perceptions. Read more details **here**
- **Risk Assessment and Mitigation Action (RAMA) tool**
- Learn more about Sightsavers work in Nigeria **here**
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