

Implementing the Mass Treatment Programme for Neglected Tropical Diseases following the COVID-19 outbreak in Nigeria

A mixed-methods study on programme and community preparedness to resume routine disease control activities in Ekiti, Kaduna and Taraba states

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Executive summary

Background

Neglected Tropical Diseases (NTDs) are a group of disabling chronic conditions that occur mostly in settings of extreme poverty. The diseases are more common in sub-Saharan Africa (SSA) with approximately 500 million people affected. Around 25 per cent of Africa's NTD burden is in Nigeria. To control and/or eliminate certain NTDs, the World Health Organisation (WHO) recommends periodic administration of efficacious, safe and inexpensive drugs to entire at-risk populations. To this effect, NTD programmes implement mass drug administration (MDA) - referred to as mass administration of medicines (MAM) in Nigeria - delivered to targeted groups either at school or at household/community levels.

The COVID-19 pandemic necessitated the suspension of routine in-country MAM. Following recent positive epidemiological developments, there have been debates on the readiness of NTD stakeholders to restart mass treatment programmes during the post-lockdown era and on more flexible and location-specific approaches to safely administer MAM and ultimately preserve gains made in NTD control.

This rapid mixed-methods study was implemented by Sightsavers in partnership with Mission to Save the Helpless (MITOSATH) between August and December 2020 with the purpose of assessing the readiness of the NTD programmes to restart NTD treatment campaigns and to inform the Federal Ministry of Health on effective approaches to the implementation of the WHO recommended strategy with temporal adaptations.

Methods

Study sites, design and sampling

The study was conducted in the purposely selected states of Ekiti (South-western geopolitical zone), Kaduna (North-western zone) and Taraba (North-eastern zone). NTD programmes in all three states benefit from the support of non-governmental development organisations (NGDOs). In each state, six local government areas (LGAs) were purposely selected to include both rural and urban areas, and well-performing and underperforming LGAs (based on the most recent MAM data). Within each LGA, six frontline health facilities (FLHFs) and two communities per FLHF were selected. Study participants (57 per state) were purposely selected based on their experience (participation in at least three rounds of MAM). These included stakeholders from state, LGA and community levels.

The study had a mixed-methods design and collected both quantitative and qualitative data during one-to-one key informant interviews (KIIs), which were conducted primarily over the phone and occasionally face to face with social distancing.

Data collection and analysis

The risk assessment and mitigation action (RAMA) tool developed by Sightsavers to score thresholds for the overall readiness of NTD programmes to resume MAM formed the basis for the study tool development and data analysis (Molyneux, 2021). The first part of the KIIs consisted of a structured pre-tested short questionnaire with a set of questions related to

seven core aspects of the adapted MAM: i) COVID-19 situational overview, ii) resource availability and management, iii) training, iv) distribution and support, v) COVID-19 risk communication, vi) COVID-19 surveillance and vii) partner communication and coordination.

The answers to each question were provided on a three-point scale: 'yes', 'no' or 'don't know.' If the participant answered "yes", the question was rated as '1'. If the answers were "no" or "not sure", the question was rated '0'. We did not apply any weighting to the questions or sections of the survey. The average rating for each question and subsequent section was calculated as the proportion of positive ("yes") responses out of total positive responses possible.

In the qualitative part of the interview, participants were asked to describe in their own words how they felt about restarting MAM, any challenges they experienced or anticipated and their recommendations on how to improve the effectiveness and safety of MAM.

Quantitative data was analysed in Microsoft Excel using descriptive statistics. Scoring thresholds for the overall readiness were based on the RAMA tool: well prepared (76-100), quite prepared (51-75); quite unprepared (26-50) and unprepared (0-25). All qualitative data was transcribed verbatim and translated into English. Coding and thematic analysis was conducted using NVivo software.

Ethics approval

An ethics approval was obtained from the National Health Research Ethics Committee (NHREC), Nigeria (Approval NHREC/01/01/2007-06/07/2020). All participants gave verbal recorded consent to participate in the study. Data anonymity and confidentiality were maintained throughout the study.

Key findings

A total of 164 participants were interviewed. The response rates were 100% (57/57) in Taraba, 94.7% (54/57) in Kaduna and 93% (53/57) in Ekiti. The overall readiness score was the highest in Taraba (86%), followed by Ekiti (72%) and Kaduna (64%). The areas of preparedness that scored consistently lower across the states were resource mobilisation (41% in Kaduna; 62% in Ekiti; 82% in Taraba); MAM training (48% in Kaduna; 68% in Ekiti; 84% in Taraba); COVID-19 surveillance (60% in Kaduna; 63% in Ekiti; 82% in Taraba); and partner communication/coordination (37% in Kaduna; 57% in Ekiti; 86% in Taraba).

Disaggregated scores by level of implementation showed that in all three states, stakeholders at LGA and community levels 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 community level were lower than at LGA level.

Qualitative data from the three states corroborated the findings of the survey. Study participants indicated good knowledge of COVID-19 in terms of risks of transmission, clinical symptoms and preventive measures. Most respondents received information about transmission routes through the media and in remote areas, through town announcers, community leaders and health workers. Although not all stakeholders across the implementation levels were familiar with the formal COVID-19 protocols, all were aware of

the disease prevention guidelines, including wearing face masks, using hand sanitisers and social distancing.

The standard operating procedures (SOPs) had been adapted in most areas, although state level stakeholders were more familiar with the documents and adaptation process. Plans and processes for drug requisition were also better-known at state level. LGA and community respondents said that they received information only when the drugs were already available in their area. With regards to personal protective equipment (PPE), needs assessment had been carried out in some areas but the 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.

Staff for MAM was reported to be available at all levels. Training manuals were also available to train health facility staff and volunteers. Face-to-face training with social distancing was a preferred option across all stakeholder groups in all three states. Most respondents expected good compliance with COVID-19 guidelines during MAM, but recommended to give attention to the supervision of wearing PPE and swallowing medicines. The key challenges to MAM identified, particularly at community level, were misconceptions and myths about COVID-19, difficulties with reaching remote and marginalised populations and insufficient incentives for community directed distributors (CDDs). Staff supervision, support from community leaders and community mobilisation were identified as the key strategies to address these challenges.

Systems for COVID-19 surveillance and active case findings were reported to be in place, but largely at state and LGA levels. Infrastructure to manage severe COVID-19 cases was also available, mainly at state level.

Conclusion

Overall, the NTD stakeholders interviewed reported to be ready to restart community treatment campaigns using adapted COVID-19 guidelines. However, LGA and especially community level stakeholders need 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.

The areas for improvement highlighted across the three states include:

- MAM training - specifically training on SOPs, training on personal safety and emergency and preventative screening during training.
- COVID-19 surveillance and response - specifically infrastructure of health facilities to manage COVID-19 cases.
- MAM distribution and support - specifically the restriction of intra-country movement by MAM personnel.
- Resource availability - specifically a strategy for the supply of PPE and a plan for the supply of equipment and materials.
- Partner coordination, i.e. notification of project partners by NTD programme and easy processes for partner communication.

We acknowledge that the rapid nature of the study, purposive selection of participants and time constraints resulted in a number of methodological limitations and therefore the findings of this study should not be generalised to all NTD programme sites in these three states.

Background

Neglected Tropical Diseases (NTDs) are a group of disabling chronic conditions that occur mostly in settings of extreme poverty. NTDs are more common in sub-Saharan Africa (SSA) with about 500 million people affected in this region (Qian & Zhou, 2016). About 25 per cent of Africa's NTD burden is in Nigeria, making the country the most endemic in SSA (Molyneux, Hotez, & Fenwick, 2005). In order to control and/or eliminate certain NTDs as public health problems, the World Health Organisation (WHO) recommends periodic administration of efficacious, safe and inexpensive drugs to entire at-risk populations (World Health, 2020). To this end, 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 at household/community levels (Federal Ministry of Health (FMOH) (2012).

Undoubtedly, 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 (World Health Organisation (WHO), 2020). Non-pharmaceutical interventions including the closure of schools and non-essential businesses, and the enforcement of lockdown and curfew orders have been adopted as control approaches for COVID-19 transmission (Flaxman et al., 2020). These approaches help to maintain health systems' capacity to identify, isolate and treat as many COVID-19 cases as possible (Nigeria Centre for Disease Control (NCDC) 2020). However, with restrictions placed on social gatherings, schools and places of worship, delivering mass treatment campaigns for NTDs in their current form is challenging.

Nigeria reported its first COVID-19 case on 27 February 2020, with the virus spreading to 35 out of 37 states in less than 70 days (Nigeria Centre for Disease Control (NCDC), 2020). The Nigerian government imposed a lockdown order on 31 March 2020 in Lagos, Ogun, Abuja and a few other pocket states in the country. There have been recent developments regarding such orders as the states emerge into post-lockdown status but still in a COVID-19 active transmission period. Considering such developments, there have been recent debates on the readiness of NTD stakeholders to implement mass treatment programmes during the post-lockdown era (Warren, 2020) as more flexible and location specific approaches will be required to support COVID-19 precautionary measures, safely administer MAM and ultimately preserve gains made in the NTD control (Sightsavers, 2020).

To this end, Sightsavers - in partnership with Mission to Save the Helpless (MITOSATH) - conducted a mixed-methods study to assess the readiness of the NTD programmes in selected states to restart NTD treatment campaigns and to inform the decisions of the Federal Ministry of Health on how to deliver medicines using the WHO recommended strategy with temporal adaptations. The study was conducted between August and December 2020 and involved a wide range of relevant stakeholders at state, local government area (LGA) and community levels. The risk assessment and mitigation action

(RAMA) tool developed by Sightsavers to score thresholds for the overall readiness to resume MAM formed the basis of the analysis. The findings will supplement the results of the RAMA assessments conducted at different implementation levels.

Study objectives

The specific objectives of this study were (i) to assess the readiness of key NTD stakeholders (at state, LGA and community levels) to safely and effectively implement and monitor mass treatment programmes in the COVID-19 post-lockdown period in selected states, (ii) to explore the views of key NTD stakeholders on restarting NTD programmes and the compliance of frontline workers, drug distributors and end-users with COVID-19 precautionary measures (wearing masks, physical distancing, contact tracing etc.) and iii) to explore the views of key NTD stakeholders on challenges to implement, monitor and support MAM activities and on how to maximise community engagement when restarting MAM.

Methodology

Study area

The study was conducted in Ekiti, Kaduna, and Taraba states (Figure 1). These states were purposely selected because they span across three different geo-political zones and all benefit from the support of non-governmental development organisations (NGDOs) during the implementation of mass treatment campaigns for NTDs.

Ekiti state is in the South West geo-political zone, with 16 LGAs and Ado-Ekiti as its state capital. Kaduna state is in the North West geo-political zone with 23 LGAs and Kaduna as its state capital. Taraba state is in the North East geo-political zone, with 16 LGAs and Jalingo as its state capital. Six LGAs were purposely selected in each state based on whether they were rural (three LGAs) or urban (three LGAs) and whether they are well performing or underperforming using the most recent MAM data (2019) (Table 1). Within each LGA, six frontline health facilities (FLHFs) and then two communities served by each FLHF were selected based on the criteria of accessibility in relation to MAM.

Table 1: Study site description and selection criteria

State	LGA	Rural/Urban	NTD MAM	Reported therapeutic coverage in 2019 (%)	Performance
Kaduna	Kaduna north	Urban	Lymphatic Filariasis	67	Moderately performing
	Soba	Rural	Lymphatic Filariasis	92	Well performing
	Kaduna south	Urban	Lymphatic Filariasis	28	Under performing

State	LGA	Rural/ Urban	NTD MAM	Reported therapeutic coverage in 2019 (%)	Performance
	Birin/Gwari	Rural	Lymphatic Filariasis	54	Moderately performing
	Lere	Rural	Lymphatic Filariasis	72	Well performing
	Ikara	Rural	Lymphatic Filariasis	70	Well performing
Ekiti	Ado	Urban	Onchocerciasis and Lymphatic Filariasis	68.57	Well performing
	Ido-Osi	Urban	Onchocerciasis and Lymphatic Filariasis	68.37	Moderate performing
	Ikere	Urban	Onchocerciasis and Lymphatic Filariasis	66.38	Under performing
	Efon	Rural	Onchocerciasis and Lymphatic Filariasis	69.25	Well performing
	Gboyin	Rural	Onchocerciasis and Lymphatic Filariasis	66.11	Moderate performing
	Ikole	Rural	Onchocerciasis and Lymphatic Filariasis	65.46	Under performing
Taraba	Takum	Urban	Onchocerciasis and Lymphatic Filariasis	80	Well performing
	Bali	Urban	Onchocerciasis and Lymphatic Filariasis	80	Moderate performing
	Jalingo	Urban	Onchocerciasis and Lymphatic Filariasis	76	Under performing
	Sardauna	Rural	Onchocerciasis and Lymphatic Filariasis	81	Well performing

State	LGA	Rural/ Urban	NTD MAM	Reported therapeutic coverage in 2019 (%)	Performance
	Donga	Rural	Onchocerciasis and Lymphatic Filariasis	78	Moderate performing
	Gashaka	Rural	Onchocerciasis and Lymphatic Filariasis	75	Under performing

Figure 1: A map of Nigeria showing the three states enrolled in the study



Study design

The study had a mixed-methods design and collected both quantitative and qualitative data during one-to-one key informant interviews (KIIs), conducted primarily over the phone and occasionally face to face with social distancing. The first part of the KII consisted of a structured pre-tested short questionnaire, split into sections with a set of questions related to core aspects of MAM: i) COVID-19 situational overview, ii) resource availability and management, iii) training, iv) distribution and support, v) COVID-19 risk communication, vi) COVID-19 surveillance and vii) partner communication and coordination (see Appendix).

Questions in each section were developed around the minimum requirements that should be considered before community-based programmes resume routine activities. The answers to each question were provided on a three-point scale: ‘yes’, ‘no’ or ‘not sure.’ If the participant answered “yes”, the question was rated as ‘1’. If the answers were “no” or “not sure”, the question was rated ‘0’. We did not apply any weighting to the questions or sections of the survey. The average rating for each question and subsequently each section was calculated as the proportion of positive (“yes”) responses out of the total positive responses possible.

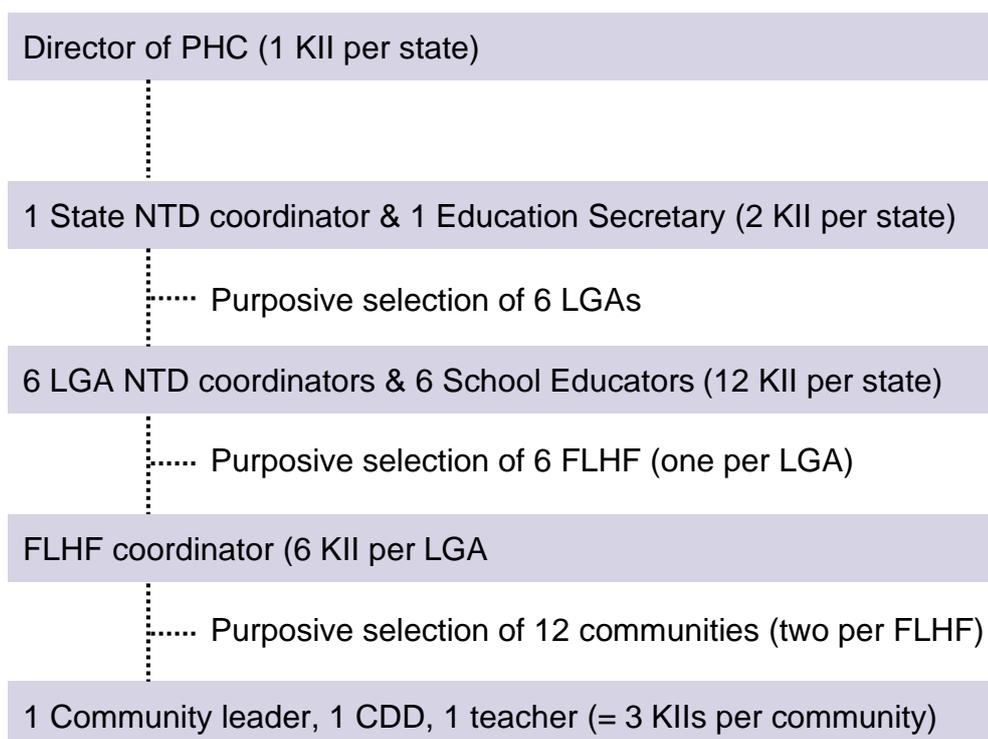
In addition, all participants were asked to describe in their own words how they felt about restarting MAM, any challenges they experienced or anticipated and their recommendations on how to improve the effectiveness and safety of MAM.

Qualitative interviews followed in most cases immediately after the quantitative survey and were audio recorded with the verbal and recorded consent of each participant. The interviews were conducted in the language of the respondent’s choice. The qualitative topic guide included questions about the COVID-19 situation in the state, which NTD activities had been interrupted, resource availability and management, standard operating procedures (SOPs); staff training, risk communication approaches (posters, leaflets, word of mouth), local perceptions of COVID-19, surveillance and MAM recommendations.

Sampling and recruitment of study participants

A purposive sampling was deployed in this study. Participants (18 years and older) were selected based on their role and involvement in three or more rounds of mass treatment campaigns for NTDs, and to explore a range of perspectives. Where possible, a mixture of genders and ages was taken into account. In each state, we aimed to recruit 57 participants representing different levels of programme implementation (Figure 2).

Figure 2: Protocol for the selection of study participants



Data processing and analysis

Quantitative data was analysed in Microsoft Excel using descriptive statistics. The proportion of people who said “yes” represented the readiness score for each question, each section and the overall assessment. Data was analysed separately for each state and for different stakeholder groups. Scoring thresholds for the overall readiness was based on the current RAMA tool and were categorised as well prepared (76-100), quite prepared (51-75), quite unprepared (26-50) and unprepared (0-25).

All qualitative data was transcribed verbatim and translated into English for the analysis. Coding and thematic analysis was conducted using NVivo software. All data was anonymised by separating personal information from the responses and assigning identities.

Ethics considerations

An ethics approval for this study was granted by the National Health Research Ethics Committee (NHREC), Nigeria (Approval NHREC/01/01/2007-06/07/2020). All participants gave verbal recorded consent to participate in the study. Data was anonymised using unique identifiers and uploaded onto an internal site which only the core research team had access to.

Findings

Response rates

A total of 164 participants were interviewed. The response rates were 100% (57/57) in Taraba, 94.7% (54/57) in Kaduna and 93% (53/57) in Ekiti. Three and four participants, who could not be reached in Kaduna and Ekiti respectively, were from community level (CDDs or teachers). There were several attempts to reach these participants, but they were either unavailable or had communication problems that prevented them from undertaking a full interview.

Overall readiness scores by state

The overall readiness score was the highest in Taraba (86%), followed by Ekiti (72%) and Kaduna (64%), indicating that overall the three states were either well prepared (Taraba) or quite prepared (Ekiti and Kaduna) to restart MAM. The areas of preparedness that scored consistently lower across the states were resource mobilisation (41% in Kaduna; 62% in Ekiti; 82% in Taraba); MAM training (48% in Kaduna; 68% in Ekiti; 84% in Taraba); COVID-19 surveillance (60% in Kaduna; 63% in Ekiti; 82% in Taraba); and partner communication/coordination (37% in Kaduna; 57% in Ekiti; 86% in Taraba). Based on the scores for resource mobilisation, MAM training and partner communication/coordination, Kaduna fell in the category of ‘quite unprepared’.

Disaggregated scores by level of implementation showed that in all three states, stakeholders at LGA and community levels 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 community level were lower than at LGA

level (57% compared to 71%). In this state, the aspects of the programme where community stakeholders scored particularly low ('quite unprepared' or 'unprepared' (50% or lower)) were partner communication/coordination (24%), resource availability (37%), MAM training (48%), COVID-19 surveillance (49%) and COVID-19 risk communication (50%).

Analysis by aspects of implementation

Situational analysis

The COVID-19 situational overview section asked about the availability of protocols for the prevention and management of COVID-19 cases and whether participants had been provided with information about transmission routes, clinical signs of the disease, how to prevent it and where to seek care.

Overall, this section had very high scores across all three states ranging from 83% in Kaduna to 92% in Taraba, suggesting that the programmes in all three states were well prepared in terms of protocols and information about COVID-19. The information was reported to be available to stakeholders at all levels with the preparedness scores ranging from 79% for community level in Kaduna to 100% at state level in Taraba and Ekiti.

Responses from the qualitative component from the three states indicated good knowledge of COVID-19 in terms of risks for transmission and clinical signs, although there was limited knowledge of the exact number of COVID-19 cases in the areas. Most respondents received information about transmission routes through the media and, in remote areas, through town announcers and community leaders. In all states, respondents were aware of the protocols for disease prevention, including wearing face masks, using hand sanitisers and social distancing.

Resource availability

This section asked participants about strategies and plans to ensure the availability and uninterrupted supplies of MAM medicines and personal protective equipment (PPE). The reported situation varied between states with the highest score being in Taraba (82% - well prepared), followed by Ekiti (62% - quite prepared), while in Kaduna the score was only 41% (quite unprepared). The only question where stakeholders in Ekiti (only at LGA level) were categorised as 'quite unprepared' was about a plan to ensure sufficient supply of materials/equipment. In Kaduna, however, both LGA and community level stakeholders were scored as 'quite unprepared' (39% and 37% respectively) in this section of the assessment.

MAM training

This section examined whether the SOPs had been adapted to optimise COVID-19 preventive measures, whether training for this had taken place and whether safety procedures (such as temperature checks and screening for symptoms of COVID-19) were in place during the training. The situation also varied between states with the highest score being in Taraba (83% - well prepared) and slightly lower scores in Ekiti (59% - quite prepared). In Kaduna, the overall score was relatively low (48%), categorised as 'quite unprepared'. In Ekiti, only LGA level stakeholders and only in one question (about screening measures and procedures during the training) were categorised as 'quite unprepared' (44%).

In Kaduna, both LGA and community level stakeholders were scored as 'quite unprepared' and in all questions asked in this section (range of scores 39-50%).

Distribution and support of MAM

This section asked whether different MAM stakeholders had been contacted to check their availability and personal risk for participating in MAM; it also asked about specific measures to limit intra-country movements and personal contacts between drug distributors, other stakeholders and households during MAM.

Overall, this section rated relatively high with the highest score being in Taraba (89%) and slightly lower scores in Kaduna (75%) and Ekiti (69%). At LGA and community levels, the scores were 91% and 89% in Taraba; 67% and 69% in Ekiti and 81% and 69% in Kaduna. Only two questions and only in Ekiti state were rates 'quite unprepared'. At LGA level, it was the question about information on COVID-19 at-risk populations provided to all supervisors, health workers and personnel (44%); at community level, it was the question on restrictions on intra-country movements (50%).

Risk communication

This section assessed stakeholders' preparedness to mobilise communities for MAM in the post-lockdown period and community communication strategies, including community leaders, social mobilisation and reaching remote or marginalised groups.

The level of preparedness was reported to be high in Taraba (90%) and Ekiti (79%) with little difference in the scores by different stakeholder groups. In Kaduna, the scores were lower (63% and 54%) but still categorised as 'quite prepared' overall at both LGA and community levels. The two questions which rated relatively low ('quite unprepared') at community level in Kaduna were on a communication strategy on COVID-19 for health workers and supervisors and on addressing the needs of marginalised populations (48% and 45%).

COVID-19 surveillance

This section asked about protocols for surveillance and reporting suspected cases among trainees, drug distributors or MAM participants. It also asked about the infrastructure and SOPs to manage COVID-19 cases in local health facilities.

The highest preparedness score was reported in Taraba (84%). The other two states reported slightly lower, yet relatively high, scores overall: 68% in Ekiti and 64% in Kaduna. However, there were variations in the level of implementation in these two states. In Ekiti, LGA level stakeholders scored low (39% - quite unprepared) on the question about facility infrastructure to manage COVID-19 cases. This question also scored very low (24% - unprepared) in Kaduna, but at community level. Another question rated low (45%) at this level in Kaduna was on COVID-19 SOPs provided to the facilities.

Partner communication and coordination

This section examined communication and coordination of the NTD programmes with different international stakeholders. The preparedness score was the highest in Taraba (86%); the overall score in Ekiti was lower (57%) but still categorised as 'quite prepared'.

Stakeholders in Kaduna reported low scores overall (37%) and particularly low at community level (24%).

Levels of readiness by states

Taraba state

In Taraba, 57 participants were interviewed (100% response rate): three state level stakeholders, 18 LGA stakeholders and 36 community stakeholders.

This state had a very high preparedness score overall (86%) and for different aspects of the programme ranging from 82% for resource availability to 89% for distribution support. There was little difference in scores by different stakeholder groups.

State level stakeholders showed very high scores on all aspects of MAM. The lowest score was reported in the section on distribution support and specifically the question on restrictions of intra-country movements by MAM personnel (33%, i.e. one out of three state level participants answered positively to the question). For four additional questions, two out of three stakeholders answered positively (67%). These were questions on training on the adapted SOPs; additional training on personal safety and emergencies (MAM training section); use of social mobilisation platforms (COVID-19 risk communication) and the infrastructure of health facilities to manage COVID-19 cases (COVID-19 surveillance).

LGA level stakeholders reported slightly lower, yet very high scores (72%) on three questions: the availability of a strategy for the provision of PPE (resource availability); availability of preventative screening during training (MAM training) and the infrastructure of local health facilities to manage COVID-19 cases (COVID-19 surveillance).

Community level stakeholders scored slightly lower (69%) on the question about infrastructure of local health facilities (COVID-19 surveillance).

It is important to note that 69% (reported on one question by one stakeholder group only) was the lowest score reported in Taraba, showing a very high level of preparedness to resume MAM in this state. The overall score and the scores in all specific sections of the assessment were categorised as 'well prepared' (above 75%) (Table 2).

Key for tables 2, 3 and 4:

Well prepared	
Prepared	
Quite prepared	

Quite unprepared



Table 2: Readiness scores for Taraba state

TARABA STATE	Overall readiness scores (% of people who said yes)						
Question	State stakeholders (n=3)		LGA stakeholders (n=18)		Community stakeholders (n=36)		SCORE (%Yes per section)
COVID-19 Situational overview							
Q1	3	100%	18	100%	29	81%	92%
Q2	3	100%	15	83%	27	75%	
Q3	3	100%	18	100%	35	97%	
Q4	3	100%	18	100%	36	100%	
Q5	3	100%	18	100%	34	94%	
Q6	3	100%	16	89%	30	83%	
Q7	3	100%	18	100%	34	94%	
Score (n and % yes)	21	100%	121	96%	225	89%	
Resource availability							
Q8	3	100%	15	83%	30	83%	82%
Q9	3	100%	13	72%	31	86%	
Q10	3	100%	16	89%	27	75%	
Score (n and % yes)	9	100%	44	81%	88	81%	
Training in MAM							
Q11	3	100%	15	83%	29	81%	83%
Q12	2	67%	17	94%	33	92%	
Q13	2	67%	14	78%	29	81%	

TARABA STATE	Overall readiness scores (% of people who said yes)						
Q14	3	100%	13	72%	30	83%	
Score (n and % yes)	19	100%	59	82%	121	84%	
Distribution and support for MAM							
Q15	3	100%	17	94%	32	89%	89%
Q16	3	100%	16	89%	32	89%	
Q17	3	100%	17	94%	33	92%	
Q18	3	100%	17	94%	33	92%	
Q19	1	33%	15	83%	29	81%	
Q20	3	100%	16	89%	33	92%	
Score (n and % yes)	16	89%	98	91%	192	89%	
Risk communication about COVID-19							
Q21	3	100%	18	100%	33	92%	90%
Q22	3	100%	16	89%	30	83%	
Q23	3	100%	14	78%	32	89%	
Q24	3	100%	17	94%	33	92%	
Q25	2	67%	18	100%	32	89%	
Score (n and % yes)	14	93%	83	92%	160	89%	
Surveillance for COVID-19							
Q26	3	100%	16	89%	33	92%	84%
Q27	3	100%	15	83%	33	92%	
Q28	3	100%	16	89%	32	89%	
Q29	3	100%	14	78%	29	81%	
Q30	2	67%	13	72%	25	69%	
Score (n and % yes)	14	93%	74	82%	152	84%	

TARABA STATE	Overall readiness scores (% of people who said yes)						
Partner coordination							
Q31	3	100%	14	78%	30	83%	
Q31	3	100%	17	94%	31	86%	
Score (n and % yes)	6	100%	31	86%	61	85%	86%
TOTAL SCORE (n and % yes)	90	94	510	89%	999	87%	88%

Qualitative data from this state corroborated the findings of the survey. Interviewees reported the availability of medicines for MAM through the supporting partner NGOs. The SOPs had also been adapted by the partner in collaboration with community leaders and the NTD unit. The adaptations included wearing face masks and washing hands before and after the drug distribution.

“The materials can be provided from the NGOs like MITOSATH, ATEN and ...the Federal Ministry of Health ... sir” **TAR_BAL_LNT**

Staff for MAM were reported to be available at all levels. Training manuals and SOPs were also available to train health facility staff and volunteers. Primary schools were used as training venues as trainees preferred face to face rather than online training. The strategy developed for the training was thought to be appropriate. PPE was made available at the medical stores following a needs assessment in the state; this was expected to be distributed by community leaders and NGOs.

Most respondents at this level expected good compliance with the COVID-19 guidelines, as sufficient information had been provided. With regards to hard-to-reach areas, the challenge identified was that volunteers would have to walk long distances or ride donkeys to access them. With regard to supervision and support, all respondents at state level identified the NTD team to be key. Respondents did not mention the use of social mobilisation platforms but reported the use of information, education and communication (IEC) materials for communication of messages on COVID-19 risks:

“We use IEC materials for COVID-19 ...”. **TAR NTD**

LGA level respondents said that there were measures in place to avoid overcrowding during MAM but highlighted challenges with misinformation about COVID-19, resulting in some community leaders believing that the disease was not real. Continuous sensitisation was recognised as a way to tackle this challenge. The lack of awareness of protective measures was also reported to lead to potential non-compliance with the guidelines at this level. Most respondents said that the challenges with compliance were more likely in the areas where there were difficulties in engaging community leaders, and where people believed that COVID-19 affected only those who were relatively well off and lived in urban areas. All

respondents agreed that adherence to the guidelines during MAM could be improved through engaging the NTD team as supervisors, training supervisors and providing funding and bikes for supervision.

“Yes sir. Like the NTD staff and other participants, there are plans on the ground to provide free hand sanitiser, face mask and so on sir.”

TAR_BAL_GAN_FLW

Most health workers at LGA level were aware of the guidelines for surveillance developed by the Federal Government in collaboration with the United Nations. They also reported being aware of a bill by the National Assembly titled the Social Disease Bill and a task force appointed by the president. It was explained that surveillance was being carried out by LGA officers and their deputies who were responsible for checking both government and private health facilities, and for searching for patients with symptoms such as a fever or cough. This team was reported to be coordinated by the state surveillance officer who visited all 15 LGAs on a daily basis for active case searching.

“You know active case searching is going on ... 24/7 in all the 15 LGAs in Taraba state.” **DPH TAR**

“Yes, the surveillance is where we wait and observe if somebody has the sign and symptom ... if we realise that one we send to NCDC.” **TAR_GAS-LNT**

Respondents from the Ministry of Education did not know about the surveillance strategies but were aware of the use of PPE.

At community level, most respondents identified misconceptions about COVID-19 as the main challenge to MAM. All respondents said that educating people about the disease would help them to mobilise communities more effectively. CDDs mentioned low levels of education in the community as a challenge and suggested that health workers could be sent out to provide information about the disease. All respondents mentioned the need for close monitoring to ensure compliance with the guidelines during MAM. Some said there was a need to monitor the use of PPE, as people tended to complain about discomfort while wearing it. Also, a need to monitor the distribution was emphasised to ensure that people swallowed the medicines.

“The challenges is how people will use it [PPE] and the supervisors ... to make sure that people followed the rules and regulations.”

TAR_DON_MAI_FLW_001

At community level, most respondents also noted rough terrain and long distances as challenges affecting MAM. Using bikes to reach distant and marginalised populations was mentioned as a potential solution.

A few CDDs noted inadequate supplies of soaps and sanitisers, urging for more. With regards to COVID-19 surveillance, respondents at this level were not aware of any specific strategies or surveillance teams in their areas.

Ekiti state

In Ekiti, 53 people participated in the study (93% response rate): three stakeholders from state level, 18 from LGA level and 32 from community level.

The overall readiness score for the state was high (72%) but there were some variations between different aspects of the programme. The area which received the highest score (89%) was an overview of the situation. The areas with relatively lower scores (57-62%) were partner coordination, resource availability and MAM training. Overall, however, the NTD programme in this state was rated as 'prepared' with two aspects of the programme implementation categorised as 'well prepared' and the remaining five as 'quite prepared'. (Table 3). The lowest score in this state was 39% (quite unprepared) reported at LGA level for two questions, a plan for provision of materials/equipment (availability of resources section) and the infrastructure of health facilities to manage COVID-19 cases (COVID-19 surveillance).

State level stakeholders showed very high scores. The question with the lowest score in this stakeholder group was on training on new SOPs (MAM training section), where one out of three state level participants answered positively (33%). For eleven additional questions, two out of three stakeholders answered positively (67%). These were questions on the availability of a plan to ensure the provision of equipment/materials (resource availability); training on new SOPs; training on personal safety and emergencies (MAM training section); reductions in intra-country movements of personnel involved in MAM (distribution and support); a strategy for supervisors/CDDs on managing COVID-19 risks; considerations of needs for marginalised populations; use of social mobilisation platforms (COVID-19 risk communication); a protocol for supervisors/CDDs to report COVID-19 cases; infrastructure of health facilities to manage COVID-19 cases (COVID-19 surveillance); notification of partners about treatment activities and easily understood processes for coordination with multi-sectoral stakeholders (partner coordination).

LGA level stakeholders scored moderately (56-67% - quite prepared) on eight questions: the availability of a protocol for the prevention of COVID-19 (situational overview); a strategy for the provision of PPE (resource availability); adoption of new SOPs; training on new SOPs; training on personal safety and emergency (MAM training); contacts with CDDs/supervisors regarding willingness to resume MAM; restrictions of intra-country movements of personnel (distribution and support); and easily understood procedures for communication with partners (partner coordination).

LGA stakeholders scored low (39-50% - quite unprepared) on five questions: availability of a plan for the provision of equipment/materials (resource availability); preventative screening during training (MAM training); information on risks to health personnel/CDDs to help make informed decisions on participation in MAM (distribution and support); infrastructure of health facilities to manage COVID-19 cases (COVID-19 surveillance) and notification of partners about treatment activities by the NTD programme (partner coordination).

Community level stakeholders scored moderately (53-69% - quite prepared) on thirteen questions: a protocol for the prevention of COVID-19 (situational overview); all three questions on resource availability (a strategy for provision of MAM; a strategy for provision of PPE; and a plan for provision of equipment/materials); three out of four questions on MAM training (training on new SOPs; training on personal safety and emergency; and screening procedures during training); contacts with CDDs/supervisors regarding willingness to resume MAM; measures to avoid personal contacts with households (distribution and support);

assessment of community perceptions and social mobilisation platforms (COVID-19 risk communication); SOPs for facilities to prevent and manage COVID-19 (COVID-19 surveillance); notification of partners about treatment activities by the NTD programme and easily understood procedures for communication with partners (partner coordination).

On two other questions (infrastructure of health facilities and restriction of intra-country movements by MAM personnel), community stakeholders in the state were categorised as 'quite unprepared' (50%). However, it is worth noting that there were no scores lower than 50% at community level in Ekiti (Table 3).

Table 3: Readiness scores for Ekiti state

EKITI STATE		Overall readiness scores (%Yes)					
Section	State stakeholders (n=3)	LGA stakeholders (n=18)		Community stakeholders (n=32)		SCORE (%Yes per section)	
COVID-19 Situational overview							
Q1	3	100%	18	100%	29	91%	89%
Q2	3	100%	10	56%	18	56%	
Q3	3	100%	16	89%	32	100%	
Q4	3	100%	17	94%	32	100%	
Q5	3	100%	18	100%	31	97%	
Q6	3	100%	17	94%	25	78%	
Q7	3	100%	17	94%	29	91%	
Score (n and % yes)	21	100%	113	90%	196	88%	
Resource availability							
Q8	3	100%	15	83%	21	66%	62%
Q9	3	100%	10	56%	19	59%	
Q10	2	67%	7	39%	18	56%	
Score (n and % yes)	8	89%	32	59%	58	60%	
Training in MAM							
Q11	2	67%	12	67%	23	72%	59%
Q12	1	33%	11	61%	18	56%	

EKITI STATE	Overall readiness scores (%Yes)						
Q13	2	67%	10	56%	17	53%	
Q14	3	100%	8	44%	18	56%	
Score (n and % yes)	8	67%	41	57%	76	59%	
Distribution and support for MAM							
Q15	3	100%	12	67%	20	63%	69%
Q16	3	100%	8	44%	24	75%	
Q17	3	100%	14	78%	21	66%	
Q18	3	100%	13	72%	25	78%	
Q19	2	67%	10	56%	16	50%	
Q20	3	100%	15	83%	26	81%	
Score (n and % yes)	17	94%	72	67%	132	69%	
Risk communication about COVID-19							
Q21	2	67%	15	83%	26	81%	79%
Q22	2	67%	15	83%	28	88%	
Q23	3	67%	15	83%	22	69%	
Q24	2	100%	13	83%	25	78%	
Q25	3	67%	13	72%	25	78%	
Score (n and % yes)	11	73%	73	81%	126	79%	
Surveillance for COVID-19							
Q26	3	100%	13	72%	25	78%	68%
Q27	3	100%	13	72%	23	72%	
Q28	2	67%	15	83%	23	72%	
Q29	3	100%	15	83%	18	56%	
Q30	2	67%	7	39%	16	50%	

EKITI STATE	Overall readiness scores (%Yes)						
Score (n and % yes)	13	87%	63	70%	105	66%	
Partner coordination							
Q31	2	67%	9	50%	17	53%	57%
Q32	2	67%	11	61%	19	59%	
Score (n and % yes)	4	67%	20	56%	36	56%	
TOTAL SCORE (n and % yes)	82	85%	414	72%	729	71%	72%

Qualitative data from Ekiti state shows that all respondents at various levels were fully aware of the risks and transmission routes of COVID-19. They also mentioned that compared to neighbouring states, Ekiti had very low incidence of the disease with only 24 reported cases at the time of the study. This was attributed to high levels of public awareness and safety measures.

The supply of medicines for MAM was reported to be proceeding as usual with state level respondents involved in requisition and storage at the central stores. LGA stakeholders reported preparing micro plans to ensure the medicines were distributed in line with COVID-19 guidelines. Some potential challenges identified at this level included inadequate provision of PPE, poor compliance with the guidelines, inadequate transportation (project vehicles for each LGA and for CDDs) and insufficient CDD incentives (stipends).

“...the only challenges that we are really having [are] counterpart funds. The money for CDDs is too small. They are ... complaining.” **EKI_IKO_LNT**

Respondents from state level reported that no needs assessments had been carried out but that guidelines and SOPs had been developed and forwarded to the implementing partners. The adapted SOPs included wearing face masks and hand gloves and maintaining social distancing while administering medicines. Each CDD was also required to have hand sanitisers in their possession for regular use. A checklist had also been developed for schools, which included the use of face masks, availability of hand sanitisers (for students) and ensuring social distancing in classrooms. LGA respondents said that although the SOPs were yet to be adapted, the recommended measures were appropriate and if properly adhered to, the risk of transmission of COVID-19 would be minimised. At community level, most respondents were unaware of SOPs and what they should include. However, there was an expectation that the government should provide face masks and hand sanitisers:

“For now, we don’t have guidelines developed but I believe anytime we want implement MAM, it will be available during our own training....it will be appropriate.” **EKI_ADO_LNT**

Study respondents at all levels said that face-to-face training was a preferred option, as many CDDs were not familiar with the Internet. To ensure social distancing during training, state level stakeholders recommended the use of larger premises:

“... no problem with the training, the only thing we have to do is to have bigger space for the training, so that we can ... observe ... protocols.”

EKI_DPH

At community level, some respondents wanted community leaders to be trained first to cascade the training further to the communities, while others wanted health workers to conduct the training.

Many respondents said that the supply of PPE was likely to be a challenge and called for support from the state, corporate organisations and individuals:

“... we ... equally welcome ... corporate bodies that are showing interest ... some old students ... important dignitaries in society ... we are collaborating.” **EKI_EDU**

With regard to COVID-19 surveillance, state level stakeholders described an established system, where surveillance officers were tasked to go around to identify suspected cases, test them and transfer them to the isolation unit. They also received information from community informants and the rapid response team (RRT) trained to identify and report suspected COVID-19 cases. Local communities were sensitised and given a number to call to report suspected cases. LGA level respondents were unaware of surveillance teams but said that there was a communication chain: CDDs reported suspected cases to the frontline workers, who reported to the local government coordinators, who in turn reported to the surveillance officers. Respondents at community level were unaware of any surveillance system but reported a set of guidelines to identify suspected cases (e.g. check temperature).

Infrastructure of health facilities to manage COVID-19 cases was thought to be weak, and although PPE was available in LGA health facilities, ventilators could be found in state isolation centres only:

“... well ... materials you know, it costs a lot of funds to get most of these COVID-19 materials, and the government is overstretched, so the materials are inadequate.” **EKI_EDU**

“... the state has equipped the LGA facilities with PPE and not ventilators. Ventilators will be at the isolation centres where cases are managed ... Health facility level will only do follow up ... they only work in the area of case detection and contact traces in most cases.” **EKI_NTD**

Opinions of respondents on the use of information materials varies, with state level participants pointing out the posters provided by the United Nations Children’s Fund (UNICEF), teachers referring primarily to the radio campaigns and community level CDDs mentioning no IEC or other type of communication:

“Yes, we made use of posters few months ago, supplied by UNICEF.”
EKI_NTD

“...it’s the one [I] am hearing from the radio, that is what have been using Because we just resumed ... so the one [I] am hearing ... is ehnn ... radio and television...” **EKI_ADO_AGO_TEA**

“I don’t know of any protocol for COVID-19...I haven’t seen any posters.”
EKI_ADO_ATE_CDD

Other challenges mentioned at community level were transportation, especially in remote areas, the overall uptake of medicines and misconceptions about COVID-19:

“... what I think can hinder the programme in my own view is the attitude of our people. Some people don’t believe that COVID-19 is real. Also because of ... [adverse reactions] to the drugs we distribute yearly they [people] discourage others and if we try to force them, they tell us we are intruding into their privacy.” **EKI_ADO_A**

“... if the government can help us with the provision of transportation facilities like bicycles and motorcycles so that we can get to remote areas with ease.” **EKI_ADO_AGO_CDD**

Adequate supervision was emphasised as an important strategy to ensure compliance with the guidelines and maximise the benefits of MAM. This was noted by all stakeholders, but particularly at LGA level:

“The guidelines will be strictly adhered to. Yes, there will be supervision by ... the local government and the frontline [workers], even with the state coordinators. They will be on the ground with us to supervise ...”
EKI_EFO_LNT

Kaduna state

In Kaduna, 54 participants were interviewed (94.7% response rate): three stakeholders at state level, 18 at LGA level and 33 at community level. The overall score for this state was 64% (quite prepared) but there were differences between different aspects of the programme and different stakeholder groups. The highest rated aspect of the programme was situational overview (83%) and the lowest was partner coordination (37%). Three aspects of the programme were rated low (<50% - quite unprepared), resource availability (41%), MAM training (48%) and partner coordination (37%).

State level stakeholders in Kaduna showed higher levels of preparedness than other stakeholders. The lowest scores in this stakeholder group (one out of three participants answered positively to the question, i.e 33%) were recorded for two questions: training on new SOPs (training in MAM) and the provision of SOPs for the prevention of COVID-19 in health facilities (COVID-19 surveillance). In addition, in seven other questions, two out of three state level stakeholders answered positively (66%). These were questions on the availability of a protocol for the prevention of COVID-19 (situational overview); organisation of training on personal safety and emergency; preventative screening measures during training (MAM training); contacts with CDDs/supervisors on their willingness to resume MAM (distribution and support); contacts with social mobilisation platforms (COVID-19 risk

communication); notification of partners about treatment activities and easily understood processes for coordination with partners (partner coordination).

LGA level stakeholders in Kaduna scored moderately (56-67% - quite prepared) on six questions: a protocol for the prevention of COVID-19 (situational overview); a plan for the supply of equipment/materials (resource availability); restrictions of inter-country movements of MAM personnel (distribution and support); a strategy for the communication of COVID-19 cases for supervisors and health workers; consideration of needs of marginalised groups (COVID-19 communication) and infrastructure in health facilities to manage COVID-19 cases (COVID-19 surveillance).

LGA stakeholders scored low (28-50% - quite unprepared) on another six questions: a strategy for the uninterrupted supply of medicines; a strategy for the supply of PPE (resource availability); and all four questions about MAM training (adoption of new SOPs, training on new SOPs, training on personal safety and emergency and preventative screening during the training).

Community level stakeholders in Kaduna scored moderately (52-64% - quite prepared) on ten questions: a protocol for the prevention of COVID-19 (situational overview); three questions on the distribution and support of MAM (contacts with CDDs on their willingness to restart MAM; information on COVID-19 personal risks to support their informed decision; and restrictions of inter-country movements of personnel); three questions on COVID-19 communication (assessment of community perceptions; reaching to community leaders and use of social mobilisation platforms); and three questions on COVID-19 surveillance (a protocol for COVID-19 surveillance; procedures for contacting about COVID-19 cases during training and MAM; and a protocol on who to contact for supervisors and CDDs).

Community level stakeholders scored low (21-48% - unprepared and quite unprepared) on thirteen questions: all questions on resource availability (a strategy for the uninterrupted supply of medicines; a strategy for the supply of PPE; and a plan for the supply of equipment/materials); all questions on MAM training (adoption of new SOPs; training on new SOPs; training on personal safety and emergency; and screening procedures during training); two questions of COVID-19 risk communication (a strategy for the communication of COVID-19 cases for supervisors and health workers; and addressing the needs of marginalised groups); two questions on COVID-19 surveillance (provision of SOPs in health facilities; and facility infrastructure to manage COVID-19); and both questions on partners coordination (notification on the intended activities by the NTD programme; and easily understood procedures for communication with multisectoral stakeholders) (Table 4).

Table 4: Readiness scores for Kaduna state

KADUNA STATE	Overall readiness scores (%Yes)										
	Section	State stakeholders (n=3)		LGA stakeholders (n=18)		Community stakeholders (n=33)		SCORE (%Yes per section)			
COVID-19 Situational overview											
Q1	2	67%		17	94%		25	76%		83%	

KADUNA STATE	Overall readiness scores (%Yes)						
Q2	3	100%	11	61%	21	64%	
Q3	3	100%	18	100%	26	79%	
Q4	3	100%	18	100%	29	88%	
Q5	3	100%	17	94%	29	88%	
Q6	3	100%	15	83%	27	82%	
Q7	3	100%	16	89%	26	79%	
Score (n and % yes)	20	95%	112	89%	183	79%	
Resource availability							
Q8	3	100%	5	28%	9	27%	41%
Q9	3	100%	6	33%	14	42%	
Q10	3	100%	10	56%	14	42%	
Score (n and % yes)	9	100%	21	39%	37	37%	
Training in MAM							
Q11	3	100%	9	50%	16	48%	48%
Q12	1	33%	8	44%	16	48%	
Q13	2	67%	8	44%	16	48%	
Q14	2	67%	7	39%	15	45%	
Score (n and % yes)	8	67%	32	44%	63	48%	
Distribution and support for MAM							
Q15	2	67%	13	72%	20	61%	75%
Q16	3	100%	14	78%	17	52%	
Q17	3	100%	17	94%	25	76%	
Q18	3	100%	18	100%	27	82%	
Q19	3	100%	12	67%	18	55%	
Q20	3	100%	14	78%	30	91%	

KADUNA STATE	Overall readiness scores (%Yes)						
Score (n and % yes)	17	94%	88	81%	137	69%	
Risk communication about COVID-19							
Q21	3	100%	11	61%	16	48%	63%
Q22	3	100%	10	56%	15	45%	
Q23	3	100%	15	83%	18	55%	
Q24	3	100%	16	89%	21	55%	
Q25	2	67%	15	83%	19	67%	
Score (n and % yes)	14	93%	67	74%	89	50%	
Surveillance for COVID-19							
Q26	3	100%	14	78%	18	55%	60%
Q27	3	100%	16	89%	18	55%	
Q28	3	33%	15	83%	22	67%	
Q29	1	87%	14	78%	15	45%	
Q30	3	100%	10	56%	8	24%	
Score (n and % yes)	13	93%	69	77%	81	49%	
Partner coordination							
Q31	2	67%	8	44%	7	21%	37%
Q32	2	67%	12	67%	9	27%	
Score (n and % yes)	4	67%	20	56%	16	24%	
TOTAL SCORE (n and % yes)	85	89%	409	71%	606	57%	64%

Qualitative data suggest that in Kaduna, many respondents at different levels had not seen any written COVID-19 protocols, although they were aware of preventive measures through

IEC materials, social media (WhatsApp and Facebook), radio, television (TV) and town announcers.

State level respondents further confirmed that COVID-19 IEC materials, such as posters, leaflets and flyers, had been developed in Hausa and English languages to distribute in the communities. The state engaged media (TV and radio stations) and religious and community leaders to send out messages on COVID-19 risks, symptoms and prevention practices. This was done by the health promotion unit of the state Ministry of Health and Primary Health Care Board.

“Yes, we have media engagement, we have phone-in TV shows, phone-in radio shows, we have IEC materials such as leaflets, posters, banners, billboards. We also do community sensitisation in various communities with the involvement of the traditional and religious leaders. We even work with the bureau of inter-faith where they ... coordinated the inspection of mosques and churches to see how many of them were compliant with COVID-19 protocols.” **KAD_DPH**

State level respondents were aware of the adapted SOPs and COVID-19 guidelines to be followed during MAM. Respondents at community level and some at LGA level said that they were only aware of the guidelines, such as hand washing, using gloves and face masks, sneezing and coughing into their elbows and social distancing.

“Yes, certainly official guidelines were developed but even though I am not in the picture, I believe there is a document ... I don't have a copy, but I certainly know there is [one].” **KAD_NTD**

“No guideline is available to me, but some things were given at the Ward Head's Palace such as leaflets and flip charts which was shared ... in the community. Also, we saw some of the guidelines online and on the radio, also, when the WHO officials came round.” **KAD-KDN-JAM-TEA**

“I don't know of any guidelines ... all I know is that everyone must ensure they wash their hands or make use of hand sanitiser before administering or receiving the medicine.” **KD_IKA_MAK_CDD**

Plans and processes for drug requisition were also known mainly at state level. LGA and community respondents said that they received information only when the drugs were already available in their area.

“As for me, I'm waiting for the supply. I'm not the one who will supply but they will supply it to us.” **KAD_BIR_HAL_FLW**

With regards to PPE, state level respondents reported that a needs assessment had been carried out and that PPE had been supplied by the NTD programme and Sightsavers. LGA respondents were unaware of any needs assessments, but some PPE (face masks, buckets, soaps, hand gloves and sanitisers) was available to frontline health facilities through the Primary Health Care Agency, the local government and international partner organisations. There were no comments on PPE at community level.

“We got some sanitisers and face masks from UNICEF and the Primary Healthcare Development Agency, also the Ministry of Health... and the local

government. We also expect provision from you, Sightsavers.”

KAD_IKA_LNT

Stakeholders at all three levels reported adequate staffing to conduct MAM, despite their temporary diversion to meet COVID-19 needs. Study participants noted that the required staff had been asked to return to their usual places of work and were ready to resume NTD activities. Overall, stakeholders - particularly those at state level - reported being ready to resume MAM. The main issue identified was the fact that the implementing NGO partners were still working from home and were not fully available to support in the field:

“Yes, we have been developing strategies on how to go about NTD activities because we received a letter for the resumption of NTD activities and since then, we have been going up and down even though Sightsavers [and] partners are not fully around, they were working from home during the COVID-19 pandemic, so we have just been communicating through mails and phone calls.” **KAD_NTD**

All respondents said that cluster face-to-face training with adherence to COVID-19 guidelines would be their preferred option, as virtual training would be challenging due to Internet connectivity:

“... you ... have to factor in availability of data, network ... numbers, if it's not going to work to have it virtually, you might decide to cluster your trainings and then meet them in their communities and train them there, while of course still maintaining the COVID-19 protocols, provision of hand sanitiser, veronica buckets, masks and physical distancing.” **KAD_DPH**

“I will adopt this strategy with the use of face masks, social distancing, washing of hands, use of sanitisers there in the training centre and the same strategy will be used for our FLHF in-charge in the LGA chamber, after which they will train their CDDs using the same strategy.” **KAD_SOB_LNT**

Study participants at state and LGA levels reported no major anticipated challenges with adherence to safety measures and COVID-19 guidelines because information had been provided to the communities, and there was general support and cooperation from the community leaders. LGA respondents also reported that the COVID-19 guidelines were followed at the health facility level:

“Anyone who will enter into the hospital premises must wash their hands, they must wear on their facial mask, and there is a hand sanitiser on the table ... social distance is applied between each patient.”

KAD_BIR_HAL_FLW

Community stakeholders noted that some community members may be reluctant to follow the guidelines, wear face masks (especially children) or have misconceptions about the risks of COVID-19. They argued that these challenges could be addressed through better public information, community sensitisation, raising awareness of the adapted SOPs among traditional and religious leaders, good quality training with illustrations, stricter enforcement of guidelines with penalties attached, uninterrupted provision of medicines and PPE (hand sanitisers, face masks) and supportive supervision.

In response to the question on community compliance with MAM, state respondents anticipated no major challenges due to strong relationships with the community leaders. Respondents at LGA level noted only potential security issues in some areas, while community stakeholders pointed out potential refusals to take up drugs in some communities. However, all these issues were thought to be resolvable through clear communication and community sensitisation.

With regard to COVID-19 surveillance, state respondents described eight pillars that worked together to deliver surveillance in the state. The protocol by the Nigeria Centre for Disease Control (NCDC) was adapted for the state, and training was conducted for frontline health workers and volunteers on how to manage COVID-19 cases. National guidelines for triage and infection prevention and control were also adapted for state level. At LGA level, respondents reported to the COVID-19 committee chaired by the Director of Health. It was further explained that the Disease Surveillance and Notification Officer (DSNO), Monitoring and Evaluation (M&E) Officer and other health personnel were tasked to visit different facilities to search for COVID-19 cases through

outpatient department (OPD) registers and to inform the NCDC of any suspected cases found. These personnel also had responsibilities to visit communities and search for cases of high fever, severe respiratory infections and cough. Few respondents mentioned not knowing anything about the surveillance and response system at LGA level. Most community respondents were unaware of how COVID-19 surveillance was carried out; however, some referred to the health workers who organised sensitisation and awareness activities and distributed pamphlets and phone numbers to report suspected cases.

LGA respondents specifically mentioned remote and marginalised populations that could be reached through the engagement of community leaders, health workers and volunteers, if transportation was available to support them:

“Well, first and foremost, we try as much as possible to identify those hard-to-reach areas ... by identifying them, we used to intensify supervision to all those areas by sending health workers in conjunction with their community leaders.” **KAD_LER_LNT**

Conclusion

This study assessed the level of readiness of NTD stakeholders to resume MAM activities post COVID-19 pandemic in three states in Nigeria. Taraba state had the highest overall level of readiness followed by Ekiti and Kaduna states. Across the three sites, state level stakeholders showed higher levels of readiness than LGA and community level stakeholders; and the difference was particularly marked in Kaduna. The finding suggests that LGA and especially community level stakeholders need 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.

The areas of improvement that have been highlighted across the three states included:

- MAM training - specifically training on SOPs, training on personal safety and emergency and preventative screening during training.
- COVID-19 surveillance and response – specifically the infrastructure of health facilities to manage COVID-19 cases.
- MAM distribution and support – specifically the restriction of intra-country movement by MAM personnel.
- Resource availability - specifically a strategy for the supply of PPE and a plan for the supply of equipment and materials.
- Partner coordination, i.e. notification of project partners by NTD programme and easy processes for partner communication.

Methodological considerations and limitations

We conducted interviews amongst stakeholders across all tiers of the NTD programme implementation and, most importantly, gave a voice to implementers at community level. Employing mixed methods in this rapid research also provided an opportunity to triangulate our quantitative and qualitative findings.

Due to the pandemic, we minimised face-to-face interactions with participants by conducting primarily phone interviews. It would have been beneficial to have a more holistic view by conducting focus group discussions, for example, which would have allowed for participants' interactions, exchange of opinions and disagreements. We also acknowledge that we used a bespoke questionnaire developed for the purpose of this study. The rapid nature of the study and time constraints prevented us from cognitive testing and more complete validation of the tool. Finally, we acknowledge that we used purposive sampling to select study areas and study respondents and therefore we cannot generalise our findings to all NTD programme sites in these three states.

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Appendix: Rapid Assessment questionnaire

Rapid Assessment: NTD programme readiness for MAM

1. Demographic Information

Name of interviewee:	Date of interview: Time of interview: (dd/mm/yyyy)
Name of participant:	Contact information:
Participant ID number:	
Meeting ID number:	

Position

Occupation:	Role in NTD programme (or other):	Name of workplace:
Type of NTD programme implemented (community directed or school based?):		

Geographic information

State:	LGA:	Community:
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The below is for FLHF staff and community leaders only

Other demographic information of community being assessed (circle as appropriate):
Urban or rural

Nomadic other mobile/informal groups present: Yes/No/Don't know

High security risk areas present? Yes/No/Don't know

Active local COVID-19 transmission in this state/LGA/community? Yes/No/Don't know

2. COVID-19 situational overview

1. Is there an established protocol for prevention of COVID-19?

Yes/No/Don't know

2. Is there an established protocol for case management of COVID-19 patients?

Yes/No/Don't know

3. Have you been provided with information about the risks and transmission routes for COVID-19?

Yes/No/Don't know

4. Have you been provided with information about clinical signs and symptoms of COVID-19?

Yes/No/Don't know

Rapid Assessment: NTD programme readiness for MAM

5. Have you been provided with information about how to limit the spread and transmission of COVID-19?

Yes/No/Don't know

6. Have you been provided with information about where to seek treatment and care for COVID-19?

Yes/No/Don't know.

Please note any other information provided.

7. Have you been provided with information on best practices for the prevention of COVID 19?

Yes/No/Don't know.

If yes, which information have you been provided with? (circle all that apply)

Respiratory etiquette: everyone at the activity site should cover their mouth and nose with their bent elbow or a tissue when they cough or sneeze. Used tissues should be disposed of immediately and the hands washed/cleaned. Everyone involved in the planned NTD activity should avoid touching their eyes, nose and mouth...'

Hand hygiene

Public physical distancing

Use of personal protection equipment (PPE) where required; travel restrictions adopted by different districts and regions

Other (specify below)

3. Resource availability and management

8. Has a strategy been developed to ensure drug availability for the next round of MAM?

Yes/No/Don't know

9. Has a strategy been developed to ensure relevant personal protective equipment (PPE) is available during MAM?

Yes/No/Don't know

If yes, circle all that apply:

Hand sanitiser

Buckets/hand washing equipment

Face masks

Gloves

Soap

Aprons/clothing

Rapid Assessment: NTD programme readiness for MAM

Cleaning materials

Paper towels

Leg operated bins

Other

If other, please state:

10. Is there a resource plan in place to ensure sufficient supply of materials/equipment?

Yes/No/Don't know

4. Training

11. Have standard operating procedures (SOPs) been adopted for treatment distributions to optimise physical distancing and other preventive and mitigation measures to maximise safety for drug distributors and MDA participants?

Yes /No/Don't know

12. Has a training session been organised to support the introduction of new SOPs and have training materials been developed?

Yes /No/Don't know

13. Have MDA organisers and staff and volunteers, if applicable, undergone additional training and exercising on personal safety procedures and emergency mitigation measures when conducting MAM?

Yes/No/Don't know

14. Are there established screening measures and procedures (e.g. temperature checks, screening for COVID-19 symptoms) in place for attendees/participants at training venues or community distributions?

Yes/No/Don't know

5. Distribution and support

15. Have CDDs and supervisors been contacted and indicated that they are willing to participate in MAM?

Yes/ No/Don't know

16. Has information on the COVID-19 at-risk populations been provided to all supervisors, health workers and personnel so they may make an informed decision on their attendance due to the personal risks?

Yes/No/Don't know

17. Are there measures in place to prevent touching and other forms of physical contact between community health workers and household members (especially shaking or touching hands) so that risk of transmission is reduced?

Yes/No/Don't know

Rapid Assessment: NTD programme readiness for MAM

18. Will designated spacing be provided to ensure individuals receiving drugs are practicing enough physical distance between distribution team members (minimum of 1 metre)?

Yes/No/Don't know

19. Are there measures in place to reduce intra-country movements of personnel, in particular reducing the likelihood of health care providers working in other cities, regions or districts travelling within the designated region or district(s)?

Yes/No/Don't know

20. Will community and local leaders work with CDDs to ensure physical distancing while conducting house-to-house treatment in order to prevent transmission (e.g. maintain social distancing from health workers, avoid communion vessels for drinking water)

Yes/No/Don't know

6. Risk communication

21. Has a risk communication strategy been developed for supervisors and health workers with regard to COVID-19?

Yes/No/Don't know

22. Have the needs of remote and/or marginalised communities/groups been considered and included in this strategy?

Yes/No/Don't know

23. Has there been any assessment to understand community perception of and reactions to COVID-19?

Yes/No/Don't know

24. Have organisers/public health authorities reached out to community leaders to understand how to influence positive healthy and prevention behaviours and combat stigma, discrimination and false information related to COVID-19?

Yes/No/Don't know

25. Have social mobilisation platforms been contacted to mobilise and inform communities about MDA (TV, radio, local dramas, town announcers)?

Yes/No/ Don't know

7. Surveillance and response

26. Is there an established protocol for the surveillance of COVID-19?

Yes/No/Don't know

27. Are there procedures that clearly identify who should be contacted if a training attendee/MAM participant shows symptoms of COVID-19?

Yes/No/Don't know

28. Is there an agreed protocol on who supervisors or community drug distributors should contact to report suspected cases?

Yes/No/Don't know

Rapid Assessment: NTD programme readiness for MAM

29. Have health facilities in the targeted implementation units (IUs) been given SOPs for COVID-19 preparedness and prevention in health facilities?

Yes/No/Don't know

30. Do health facilities in the targeted IUs have required infrastructure and materials to respond and manage COVID-19 cases?

Yes/No/Don't know

If yes, circle all that apply:

Health workers trained workers to understand the major risk factors for the disease and know the preventative measures to take to avoid contracting the disease.

Health workers are provided with information about the current situation in the country and within communities.

Health workers are aware of national guidelines for PHC on COVID-19 response.

Daily preparatory and response checklists are available.

Ventilated waiting area is available.

IEC materials are available on COVID-19.

Protective equipment and other supplies are in stock.

Handwashing (running water and soap).

Garbage bin with lid is available and accessible to patients.

Disinfectants are available.

Area is designated to hold suspected cases outside the health facility.

Training is provided to handle and evacuate suspected cases to relevant facilities.

8. Partner communication

31. Has the national NTD programme notified WHO and/or partner public health authorities about proposed treatment activities?

Yes/No/Don't know

32. Are there agreed, clear and easily understood processes in place for coordination with multi-sectoral stakeholders (including local Public Health or WHO, CDC, ECDC, etc.) for disseminating risk communication messages for COVID-19?

Yes/No/Don't know

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