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Evaluation of the Mass Drug Administration Intervention for Lymphatic Filariasis Elimination in The Ikeduru Local Government Area

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ABSTRACT: Nigeria has a serious public health threat from lymphatic filariasis (LF), which is why Mass Drug Administration (MDA) programs are being implemented as a preventive measure. With an emphasis on community viewpoints and influencing variables, this study examines the adoption and development of MDA in twelve communities within the Ikeduru Local Government Area. To determine the start and extent of MDA in Ikeduru communities, assess community acceptability and involvement in the MDA intervention, and pinpoint variables impacting MDA coverage and community attitudes. to suggest modifications for improved MDA efficiency and drug acceptability based on local expertise. Using a cross-sectional survey methodology, 384 respondents from twelve carefully chosen communities in Ikeduru LGA were the subject of the investigation. A standardized questionnaire that was approved by university lecturers was used to gather the data. For data analysis, descriptive and inferential statistics were used. Since 2014, MDA has been continuously applied throughout all of the Ikeduru communities, resulting in complete coverage. Ninety-nine percent of the community actively participates in MDA, demonstrating a high level of community acceptance and support. The success of MDA can be attributed to enabling characteristics such as house-to-house distribution, convenient access, knowledgeable distributors, and instructive services. Disabling issues include time limits, unfavorable distributors, drug shortages, and distance.

Drug acceptance factors are in line with MDA trends, and incentives have been found to be a substantial enhancer. The research highlights the triumphant execution of MDA in Ikeduru, characterized by extensive community endorsement and efficient coverage. The program's success is attributed to identified enabling elements, whilst obstacles require focused actions. Recommendations from the community emphasize the need for improved drug quality, accessibility, professionalism, and incentives. These proposals provide insightful information for program enhancement.

KEY WORDS: Evaluation, mass drug, administration intervention , elimination, lymphatic filariasis

INTRODUCTION

A parasitic condition called lymphatic filariasis is brought on by tiny worms that resemble threads. It causes disability, reduced productivity on a personal, family, and societal level, as well as discrimination. In order to ensure that no one is left out or behind, this research aims to evaluate the state of mass drug administration (MDA) intervention within communities in Ikeduru LGA. MDA is one of the strategies used in Nigeria to ensure the eradication of lymphatic filariasis, and it embraces the carry-everyone-along approach [1].

The primary reason why mosquitoes are considered among the most dangerous creatures on Earth is that, in addition to being bothersome and challenging to manage, they serve as carriers of numerous pathogenic and parasitic organisms that induce illnesses. These illnesses can range from life-threatening conditions like malaria to conditions that can significantly impair quality of life like Zika fever and lymphatic filariasis [2].

The filarial worm Wuchereria bancrofti, also known as filarial bancrofti, is the cause of lymphatic filariasis (LF) in Nigeria. It is typically carried by the mosquito Anopheles gambiae, An. Arabiensiis, An. melas, and Anopheles funestus in rural regions.

Culex quinquefaciatus is a prevalent vector in urban and semi-urban regions [3]. Morbidity from lymphatic filariasis typically manifests as lymphoma or hydrocele.

After conducting an epidemiological mapping study for lymphatic filariasis in Nigeria between 2007 and 2010, it was shown that the disease is endemic in every local government area (LGA) in Imo state, including Ikeduru. The Carter Center, an INGO, and the Imo State Ministry of Health collaborated to make treatment for lymphatic filariasis possible in Ikeduru and the entire state. In 2014,

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they adopted the Mass Drug Administration strategy, treating patients with albendazole and mectizan through community directed distributors (also known as CDDs) to make sure everyone is included in the effort to eradicate the disease [4].

One of the tactics used to end lymphatic filariasis in Nigeria is the mass drug administration intervention (MDA), which aims to stop the disease that has negatively impacted the quality of life and productivity of a great number of Nigerians and has the potential to negatively impact many more as well as the productivity of the country as a whole[5].

Every state in Nigeria, including Imo State, has been shown to have an endemic case of lymphatic filariasis. A significant contributor to both acute and chronic morbidity, lymphedema and hydrocele are symptoms of lymphatic filariasis (LF).

More than 40 million individuals worldwide are afflicted by the clinical signs and symptoms of LF, making it the second most common cause of long-term and irreversible disability globally [6]. Every LGA in Imo state and every state in Nigeria were determined to have endemic lymphatic filariasis [7]. In the 73 nations in Africa, Southeast Asia, the Americas, and the Pacific that are known to be endemic for the mosquito-borne illness, LF is a significant barrier to socioeconomic growth [8].

MATERIALS AND METHODS

The research study focuses on assessing the mass drug administration (MDA) initiative in Ikeduru LGA, collecting data on the community's perception of factors surrounding the MDA intervention.

Research Design

A cross-sectional study design was adopted for the study. Nworgu (2015) opined that descriptive survey design is useful in explaining situations as they appear in their natural setting. The use of similar design in assessing the Mass drug administration intervention for the eradication of Lymphatic filariasis justifies the study of similar nature.

Area of the Study

The study were carried out in twelve (12) selected communities out of Ikeduru LGA. Ikeduru L.G.A is made up of 24 autonomous communities.

Population of the Study

The current population of women, men and adolescents within the ages of 15 and 84 is estimated to be 41,847. The target population will be selected from twelve (12) communities in Ikeduru Local Government Area who are participants of the MDA intervention or familiar with, the mass drug administration intervention. The choice of communities will be based on geographical distribution where available statistics are found, in order to avoid biased data. The respondents will be chosen from the accessible population in these communities.

Sample and Sampling Techniques

The sample for the study was determined using the Cochran's sample size formula was comprised of Three Hundred and eighty four (384) respondents of ages 15 – 80 who are resident in the community.

n = Z^2(pq)/e^2

n = 383.9387238

n (aprxy)= **384**

Where:

Table 1. Variables of sample size determination.

s/n	Variable	Value	Remark
1	N	?	Sample size
2	Z	1.96	For 95% confidence level
3	P	0.512	Standard deviation from previous studies
4	Q	0.488	1 - p
5	E	0.05	Margin of error

Instrument for Data Collection

The main instrument for data collection will be the structured questionnaire, made up of sections A, B, C, and D.

Section A contains 3 questions on age, Gender, and Occupation, Information about the status of MDA initiative in communities of Ikeduru will also obtained from the Imo State Ministry of Health (SMoH). Section B consist of 5 questions on awareness of MDA and LF, Section C consist of 6 questions on MDA, the hindering and enabling factors affecting the coverage of the MDA in Ikeduru Local Government Area. Section D consist 3 questions on possible improvements on MDA that affect the acceptability of the drugs. All the questions will be close ended and patterned using multiple choices. The instruments will be validated by three lecturers in Imo State University, Owerri. The validators were required to check the instrument alongside the objectives, and research questions

in order to confirm the effectiveness in eliciting appropriate responses for the study. The suggestions were used in modifying the instrument used for data collection.

Validity of the Instrument

The instrument will be validated by three (3) Lecturers in Imo State University department of Public Health Owerri. The lecturers will be requested to examine the objectives of the study, research questions and the instrument of data collection to ascertain the possibility of electing appropriate responses for the study. Modifications were made based on validators comments.

Reliability of the Instrument

Reliability of the instrument will be done using split half technique. Twenty (20) copies of the instrument will be distributed once to twenty (20) individuals within the ages of 15 - 80. This will not be part of the population for the study. Result of the study will be divided into two equal halves using odd (x) and even (y) numbers. Spearman Rank order correlation co-efficient was used in ascertaining the correlation co-efficient.

METHOD OF DATA COLLECTION

A letter of introduction (Appendix A) will be presented to the community leader to allow entry into these communities for data collection from consenting, age appropriate, inhabitants of the chosen communities. Pattern interview will be carried out for respondents using the same questionnaire items through the help of a local guide.

Method of Data Analysis

Data collected will be analyzed using descriptive statistics of frequency and percentage as well as inferential statistics. The level of significance was set at 0.05. Appropriate degrees of freedom were worked out.

Result Presentation

Table 2. List of communitites in Ikeduru and when they started MDA (SMoH)

S/N	COMMUNITY	MDA STATUS	YEAR OF MDA COMENCEMENT
1	Abazu	ONGOING	2014
2	Akabo	ONGOING	2014
3	Amaeke	ONGOING	2014
4	Amaimo	ONGOING	2014
5	Amakohia	ONGOING	2014
6	Amatta	ONGOING	2014
7	Atta	ONGOING	2014
8	Atta West	ONGOING	2014
9	Avuvu	ONGOING	2014
10	Ebikoro	ONGOING	2014
11	Eziama	ONGOING	2014
12	Iho-Dimeze	ONGOING	2014
13	Ikembara	ONGOING	2014
14	Inyishi	ONGOING	2014
15	Ngugo	ONGOING	2014
16	Okwu	ONGOING	2014
17	Owuala Avuvu	ONGOING	2014
18	Owubinubi	ONGOING	2014
19	Ugirike	ONGOING	2014
20	Umudim	ONGOING	2014
21	Umuiri	ONGOING	2014
22	Umuofor	ONGOING	2014
23	Umuonyeukwu	ONGOING	2014
24	Uzoagba	ONGOING	2014

Table 3. Showing age ranges and frequency of respondents in MDA

S/N	COMMUNITY	15 -34	35 -54	55 - 64	65 - 84	Total
1	Akabo	19	5	5	3	32
2	Amaeke	15	7	5	5	32
3	Amakohia	14	7	7	4	32
4	Amatta	12	7	8	5	32
5	Atta	16	8	4	4	32
6	Ebikoro	12	12	6	2	32
7	Ikembara	11	9	7	5	32
8	Inyishi	17	7	5	3	32
9	Ngugo	10	11	5	6	32
10	Owubinubi	15	7	6	4	32
11	Umudim	13	9	7	3	32
12	Uzoagba	11	12	8	1	32

Table 4. Showing the gender frequency of Respondents

S/N	COMMUNITY	MALE	FEMALE
1	Akabo	20	12
2	Amaeke	15	17
3	Amakohia	27	5
4	Amatta	25	7
5	Atta	22	10
6	Ebikoro	19	13
7	Ikembara	11	21
8	Inyishi	18	14
9	Ngugo	21	11
10	Owubinubi	17	15
11	Umudim	16	16
12	Uzoagba	18	14

Table 5. Showing the Occupation of Respondents

S/N	COMMUNITY	STUDENT	TRADER	ARTIZAN	CIVIL SERVANT	Total
1	Akabo	16	5	7	4	32
2	Amaeke	15	7	5	5	32
3	Amakohia	13	9	9	1	32
4	Amatta	12	9	11	0	32
5	Atta	14	7	8	3	32
6	Ebikoro	12	10	9	1	32
7	Ikembara	11	12	8	1	32
8	Inyishi	14	6	12	0	32
9	Ngugo	10	12	8	2	32
10	Owubinubi	15	9	8	0	32
11	Umudim	10	12	7	3	32
12	Uzoagba	11	8	10	3	32

Table 6. Showing response to the question: Have you heard of the drug Albendazole before now?

S/N	COMMUNITY	YES	NO	NOT SURE	TOTAL
1	Akabo	30	2	0	32
2	Amaeke	30	2	0	32
3	Amakohia	27	5	0	32
4	Amatta	29	3	0	32
5	Atta	30	1	1	32
6	Ebikoro	27	5	0	32
7	Ikembara	30	2	0	32
8	Inyishi	31	1	0	32
9	Ngugo	28	4	0	32
10	Owubinubi	26	6	0	32
11	Umudim	29	3	0	32
12	Uzoagba	31	1	0	32
		348	35	1	384

Table 7. Showing response to the question: Have you heard of the drug Ivecmectine before now

S/N	COMMUNITY	YES	NO	NOT SURE	TOTAL
1	Akabo	30	2	0	32
2	Amaeke	30	2	0	32
3	Amakohia	27	5	0	32
4	Amatta	29	3	0	32
5	Atta	31	0	1	32
6	Ebikoro	27	5	0	32
7	Ikembara	30	2	0	32
8	Inyishi	31	1	0	32
9	Ngugo	28	4	0	32
10	Owubinubi	26	6	0	32
11	Umudim	29	3	0	32
12	Uzoagba	31	1	0	32
		349	**34**	**1**	**384**

Table 8. Showing response to the question: Have you participated in the MDA initiative before?

S/N	COMMUNITY	YES	NO	NOT SURE	TOTAL
1	Akabo	30	2	0	32
2	Amaeke	30	2	0	32
3	Amakohia	27	5	0	32
4	Amatta	29	3	0	32
5	Atta	31	1	0	32
6	Ebikoro	27	5	0	32
7	Ikembara	30	2	0	32
8	Inyishi	31	1	0	32
9	Ngugo	28	4	0	32
10	Owubinubi	26	6	0	32
11	Umudim	29	3	0	32
12	Uzoagba	31	1	0	32
		349	**35**	**0**	**384**

Table 9. Showing respondents answer to the question: Were you offered Ivecmectine and/or Albendazole in an MDA?

S/N	COMMUNITY	YES	NO	NOT SURE	TOTAL
1	Akabo	30	2	0	32
2	Amaeke	30	2	0	32
3	Amakohia	28	4	0	32
4	Amatta	31	1	0	32
5	Atta	31	0	1	32
6	Ebikoro	31	1	0	32
7	Ikembara	30	2	0	32
8	Inyishi	31	1	0	32
9	Ngugo	32	0	0	32
10	Owubinubi	28	4	0	32
11	Umudim	29	3	0	32
12	Uzoagba	31	1	0	32
		362	21	1	384

Table 10. Showing respondents answer to the question: What can you tell me about Lymphatic filariasis?

S/N	COMMUNITY	Transmitted by mosquitoes	Causes Hydrocele (Ibi)	Causes Bigfoot (Ukwu aba shoe)	Can't be prevented
1	Akabo	30	30	30	2
2	Amaeke	30	30	30	2
3	Amakohia	30	30	30	5
4	Amatta	30	30	30	3
5	Atta	30	30	30	1
6	Ebikoro	28	30	30	5
7	Ikembara	29	30	30	2
8	Inyishi	31	30	30	1
9	Ngugo	30	30	30	4
10	Owubinubi	27	30	30	6
11	Umudim	30	30	30	3
12	Uzoagba	28	30	30	1

Table 11. Showing respondents answer to the question: Did the last MDA happen in your home?

S/N	COMMUNITY	YES	NO	NOT SURE
1	Akabo	22	10	0
2	Amaeke	25	7	0
3	Amakohia	28	4	0
4	Amatta	25	7	0
5	Atta	21	11	0
6	Ebikoro	23	9	0
7	Ikembara	29	3	0
8	Inyishi	27	5	0
9	Ngugo	30	2	0
10	Owubinubi	27	5	0
11	Umudim	29	3	0
12	Uzoagba	24	8	0

Table 12. Respondents answer to the question: (If you answered "No" in the previous question) What was the distance from your house to where MDA took place?

S/N	COMMUNITY	Less than 1km	About 2km	About 3km	4km or more
1	Akabo	5	3	1	1
2	Amaeke	4	2	0	1
3	Amakohia	4	0	0	0
4	Amatta	5	2	0	0
5	Atta	9	1	1	0
6	Ebikoro	7	1	1	0
7	Ikembara	3	0	0	0
8	Inyishi	4	1	0	0
9	Ngugo	2	0	0	0
10	Owubinubi	4	1	0	0
11	Umudim	3	0	0	0
12	Uzoagba	5	2	1	0

Table 13. Showing respondents answer to the question: Where you satisfied with how the MDA was carried out?

S/N	COMMUNITY	YES	NO	NOT SURE	TOTAL
1	Akabo	20	12	0	32
2	Amaeke	24	8	0	32
3	Amakohia	27	5	0	32
4	Amatta	25	7	0	32
5	Atta	21	11	0	32
6	Ebikoro	23	9	0	32
7	Ikembara	18	14	0	32
8	Inyishi	27	5	0	32
9	Ngugo	24	8	0	32
10	Owubinubi	24	8	0	32
11	Umudim	25	7	0	32
12	Uzoagba	23	9	0	32
		281	103	0	384

Table 14. Showing respondents answer to the question: Where you satisfied with the manner in which MDA was carried out?

S/N	COMMUNITY	YES	NO	NOT SURE
1	Akabo	20	12	0
2	Amaeke	24	8	0
3	Amakohia	27	5	0
4	Amatta	25	7	0
5	Atta	21	11	0
6	Ebikoro	23	9	0
7	Ikembara	18	14	0
8	Inyishi	27	5	0
9	Ngugo	24	8	0
10	Owubinubi	24	8	0
11	Umudim	25	7	0
12	Uzoagba	23	9	0

Table 15. Showing respondents answer to the question: Where you satisfied with the person that offered you the drugs during the MDA?

S/N	COMMUNITY	YES	NO	NOT SURE
1	Akabo	22	10	0
2	Amaeke	25	7	0
3	Amakohia	28	4	0
4	Amatta	25	7	0
5	Atta	21	11	0
6	Ebikoro	23	9	0
7	Ikembara	29	3	0
8	Inyishi	27	5	0
9	Ngugo	30	2	0
10	Owubinubi	27	5	0
11	Umudim	29	3	0
12	Uzoagba	23	9	0

Table 16. Showing respondents response to the question: Where you satisfied with the drugs offered during the MDA?

S/N	COMMUNITY	YES	NO	NOT SURE
1	Akabo	22	10	0
2	Amaeke	25	7	0
3	Amakohia	28	4	0
4	Amatta	25	7	0
5	Atta	21	11	0
6	Ebikoro	23	9	0
7	Ikembara	29	3	0
8	Inyishi	27	5	0
9	Ngugo	30	2	0
10	Owubinubi	27	5	0
11	Umudim	29	3	0
12	Uzoagba	23	9	0

Table 17. Showing respondent's response for the question: What did you like about the MDA?

S/N	COMMUNITY	Easy to get to distribution site	House-to-house distribution (if applicable)	Knowledgeable distributors	No long wait for drugs	Received other information or services
1	Akabo	20	22	22	22	30
2	Amaeke	24	25	25	25	30
3	Amakohia	27	28	28	28	27
4	Amatta	25	25	25	25	29
5	Atta	21	21	21	21	31
6	Ebikoro	23	23	23	23	27
7	Ikembara	18	29	29	29	30
8	Inyishi	27	27	27	27	31
9	Ngugo	24	30	30	30	28
10	Owubinubi	22	27	27	27	26
11	Umudim	25	29	29	29	29
12	Uzoagba	23	24	23	24	31

Table 18. Showing respondents answer to the question: What didn't you like about the MDA?

S/N	COMMUNITY	Site too far away	Drugs ran out or were not available	Unfriendly distributor	Took too much time	Adverse reactions to drugs
1	Akabo	9	0	10	2	0
2	Amaeke	7	0	7	0	0
3	Amakohia	4	0	4	0	0
4	Amatta	7	1	7	0	0
5	Atta	11	0	11	1	0
6	Ebikoro	9	0	9	0	0
7	Ikembara	3	0	3	0	0
8	Inyishi	5	0	5	0	0
9	Ngugo	2	0	2	2	0
10	Owubinubi	5	0	5	0	0
11	Umudim	3	0	3	0	0
12	Uzoagba	9	0	9	0	0

Table 19. Showing respondents answer to the question: What areas of the MDA do you feel require improvement? (you may choose multiple options)

S/N	COMMUNITY	The drugs offered	The distance form your house to where MDA took place	The personnel that offered the drug	The manner in which the drug was administered	Incentives
1	Akabo	6	6	10	12	32
2	Amaeke	7	4	15	8	31
3	Amakohia	4	4	4	5	32
4	Amatta	7	5	6	7	32
5	Atta	3	7	12	11	32
6	Ebikoro	9	6	9	9	32
7	Ikembara	3	3	3	14	32
8	Inyishi	5	5	7	5	32
9	Ngugo	2	2	2	8	32
10	Owubinubi	5	5	5	8	32
11	Umudim	3	3	12	7	32
12	Uzoagba	9	8	9	9	32

Analysis of Result

1. What is the state of MDA in the study area?

S/N	COMMUNITY	MDA STATUS	YEAR
1	Abazu	ONGOING	2014
2	Akabo	ONGOING	2014
3	Amaeke	ONGOING	2014
4	Amaimo	ONGOING	2014
5	Amakohia	ONGOING	2014
6	Amatta	ONGOING	2014
7	Atta	ONGOING	2014
8	Atta West	ONGOING	2014
9	Avuvu	ONGOING	2014
10	Ebikoro	ONGOING	2014
11	Eziama	ONGOING	2014
12	Iho-Dimeze	ONGOING	2014
13	Ikembara	ONGOING	2014
14	Inyishi	ONGOING	2014

15	Ngugo	ONGOING	2014
16	Okwu	ONGOING	2014
17	Owuala Avuvu	ONGOING	2014
18	Owubinubi	ONGOING	2014
19	Ugirike	ONGOING	2014
20	Umudim	ONGOING	2014
21	Umuiri	ONGOING	2014
22	Umuofor	ONGOING	2014
23	Umuonyeukwu	ONGOING	2014
24	Uzoagba	ONGOING	2014

From Table 2

To answer the question of if MDA has begun in the communities of Ikeduru LGA and when it begun, the department of Neglected tropical diseases (NTD's) in Imo state's ministry of Health was approached for data regarding community status and MDA start dates which is displayed above. The data revealed that 100% of the communities in Ikeduru resumed MDA in 2014.

2. How well is the MDA intervention accepted in the study area?

S/N	COMMUNITY	YES	NO	NOT SURE	TOTAL
1	Akabo	30	2	0	32
2	Amaeke	30	2	0	32
3	Amakohia	27	5	0	32
4	Amatta	29	3	0	32
5	Atta	31	1	0	32
6	Ebikoro	27	5	0	32
7	Ikembara	30	2	0	32
8	Inyishi	31	1	0	32
9	Ngugo	28	4	0	32
10	Owubinubi	26	6	0	32
11	Umudim	29	3	0	32
12	Uzoagba	31	1	0	32
		349	35	0	384

Answer	%
Yes	90.88542
No	9.114583
Not sure	0

eFrom table Table 8

The table above shows the level of participation in the MDA initiative over the years, revealing that the level of acceptance of the MDA initiative in Ikeduru LGA to be as high as 90.9%. Showing that the MDA initiative has a high level of acceptance in Ikeduru LGA.

3. What are the enabling and hindering factors to the MDA in the study area?

Enabling factors:

S/N	COMMUNITY	Easy to get to distribution site	House-to-house distribution (if applicable)	Knowledgeable distributors	No long wait for drugs	Received other information or services
1	Akabo	20	22	22	22	30
2	Amaeke	24	25	25	25	30
3	Amakohia	27	28	28	28	27
4	Amatta	25	25	25	25	29
5	Atta	21	21	21	21	31

6	Ebikoro	23	23	23	23	27
7	Ikembara	18	29	29	29	30
8	Inyishi	27	27	27	27	31
9	Ngugo	24	30	30	30	28
10	Owubinubi	22	27	27	27	26
11	Umudim	25	29	29	29	29
12	Uzoagba	23	24	23	24	31
	Total	**279**	**310**	**309**	**310**	**349**
	Percent (%)	**72.6563**	**80.7292**	**80.4688**	**80.7292**	**90.8854**

The above table shows the enabling factors to MDA: the data revealed that 72.65% of respondents considered ease of access to distribution site, 80.72% of respondents identified the house-to-house distribution, 80.47% identified knowledgeable distributors, 80.72% identified no long waits and 90.89% identified other information or services received as enabling factors.

Hindering factors:

S/N	COMMUNITY	Site too far away	Drugs ran out or were not available	Unfriendly distributor	Took too much time	Adverse reactions to drugs
1	Akabo	9	0	10	2	0
2	Amaeke	7	0	7	0	0
3	Amakohia	4	0	4	0	0
4	Amatta	7	1	7	0	0
5	Atta	11	0	11	1	0
6	Ebikoro	9	0	9	0	0
7	Ikembara	3	0	3	0	0
8	Inyishi	5	0	5	0	0
9	Ngugo	2	0	2	2	0
10	Owubinubi	5	0	5	0	0
11	Umudim	3	0	3	0	0
12	Uzoagba	9	0	9	0	0
	Total	**74**	**1**	**75**	**5**	**0**
	Percent (%)	**19.2708**	**0.2604**	**19.5313**	**1.3021**	

The above table shows the hindering factors to MDA: The data shows that 19.27% of respondents identified distance to collection site, 0.26% of respondents identified drugs running out, 19.53% of respondents identified unfriendly distributors, and 1.30% identified the initiative taking too much time to get to them as hindering factors.

4. What are the enabling and hindering factors that affect the acceptability of the drug?

Enabling factors:

S/N	COMMUNITY	Easy to get to distribution site	House-to-house distribution (if applicable)	Knowledgeable distributors	No long wait for drugs	Received other information or services
1	Akabo	20	22	22	22	30
2	Amaeke	24	25	25	25	30
3	Amakohia	27	28	28	28	27
4	Amatta	25	25	25	25	29
5	Atta	21	21	21	21	31
6	Ebikoro	23	23	23	23	27
7	Ikembara	18	29	29	29	30
8	Inyishi	27	27	27	27	31
9	Ngugo	24	30	30	30	28
10	Owubinubi	22	27	27	27	26
11	Umudim	25	29	29	29	29

12	Uzoagba	23	24	23	24	31
	Total	**279**	**310**	**309**	**310**	**349**
	Percent (%)	**72.6563**	**80.7292**	**80.4688**	**80.7292**	**90.8854**

The above table shows the enabling factors to acceptability of MDA: the data revealed that 72.65% of respondents considered ease of access to distribution site, 80.72% of respondents identified the house-to-house distribution, 80.47% identified knowledgeable distributors, 80.72% identified no long waits and 90.89% identified other information or services received as enabling factors.

Hindering Factors:

S/N	COMMUNITY	Site too far away	Drugs ran out or were not available	Unfriendly distributor	Took too much time	Adverse reactions to drugs
1	Akabo	9	0	10	2	0
2	Amaeke	7	0	7	0	0
3	Amakohia	4	0	4	0	0
4	Amatta	7	1	7	0	0
5	Atta	11	0	11	1	0
6	Ebikoro	9	0	9	0	0
7	Ikembara	3	0	3	0	0
8	Inyishi	5	0	5	0	0
9	Ngugo	2	0	2	2	0
10	Owubinubi	5	0	5	0	0
11	Umudim	3	0	3	0	0
12	Uzoagba	9	0	9	0	0
	Total	**74**	**1**	**75**	**5**	**0**
	Percent (%)	**19.2708**	**0.2604**	**19.5313**	**1.3021**	

The above table shows the hindering factors to acceptability of MDA: The data shows that 19.27% of respondents identified distance to collection site, 0.26% of respondents identified drugs running out, 19.53% of respondents identified unfriendly distributors, and 1.30% identified the initiative taking too much time to get to them as hindering factors.

DISCUSSION

In this section, we will delve into a detailed discussion of the results obtained from the study regarding the state of Mass Drug Administration (MDA) in Ikeduru Local Government Area (LGA), its acceptability, enabling and hindering factors, as well as factors affecting the acceptability of the drugs. We will also explore community perceptions of potential improvements in the acceptability of the MDA initiative [9].

The findings indicate that MDA had commenced in all the communities within Ikeduru LGA, with an impressive 100% coverage rate since 2014. This suggests the commitment of the local health authorities and the overall readiness of the communities to participate in MDA interventions. These findings are in line with the expectations of the Global Programme to Eliminate Lymphatic Filariasis (GPELF), which aims to reach full coverage and eliminate LF as a public health problem [10].

The study found that the MDA initiative in Ikeduru LGA enjoys a high level of acceptance, with approximately 90.9% of the respondents indicating their willingness to participate in the program. These results are promising and emphasize the importance of community participation in LF elimination efforts. Such a high acceptance rate is essential for achieving the target of MDA coverage, as lower acceptance rates can hinder the interruption of LF transmission [11].

The study identified key enabling factors for MDA in the study area. Factors such as ease of access to distribution sites, house-to-house distribution, knowledgeable distributors, no long waiting times, and other information or services received all contribute to the success of the program. These factors align with the core principles of a successful MDA campaign, which include the accessibility of treatment, community education, and efficient drug distribution strategies [12].

Hindering factors identified include the distance to the collection site, drugs running out, unfriendly distributors, and the initiative taking too much time to reach the community. Recognizing these hindering factors is essential for health authorities, as addressing these issues can further improve the program's overall effectiveness. The fact that only a small fraction of respondents highlighted these hindering factors may indicate relatively minor issues within the MDA implementation [13].

The enabling and hindering factors that affect the acceptability of the drug largely mirror those associated with MDA in general. Factors such as ease of access, knowledgeable distributors, and no long waits are crucial for gaining the community's trust and enhancing the acceptability of the drugs [14].

The study investigated community perceptions about factors that could enhance the acceptability of the MDA initiative. Respondents indicated that improving the quality of the drugs, reducing the distance between their homes and the distribution sites, enhancing the professionalism of personnel administering the drugs, and improving the manner in which the drugs are administered could all contribute to improved acceptability. Furthermore, incentives, as identified by a significant portion of the respondents, play a vital role in motivating individuals to participate in the MDA initiative [15,16].

CONCLUSION

The findings of this study reveal that the MDA initiative in Ikeduru LGA is in a promising state, with full coverage and high acceptability among the community. Enabling factors have played a significant role in the success of MDA, while minor hindrances should be addressed to further enhance the program's efficiency. Additionally, community perceptions highlight various areas for improvement, including drug quality, accessibility, professionalism, and incentives.

These findings underscore the importance of understanding the local context and community needs when implementing MDA initiatives. This knowledge can be used to tailor strategies to address specific challenges and ultimately achieve the goal of LF elimination in the study area. The high acceptability rates indicate that the community is supportive of MDA, and this support should be leveraged to maintain momentum in LF control and eventual eradication efforts.

REFERENCES

1. Shenoy, R. K., & Bockarie, M. J. (2011). Lymphatic filariasis in children: clinical features, infection burdens and future prospects for elimination. Parasitology, 138(12), 1559-1568.
2. World Health Organization. (1211 Geneva). Training in Monitoring and Epidemiological Assessment of Mass Drug Administration for Eliminating Lymphatic Filariasis: Learners' Guide.
3. Mohammad, F. I. (2018). Filarial Worms. International Journal of Pharmaceutical Research, 45, 89-93.
4. Richards, F. O., Eigege, A., Miri, E. S., Kal, A., Umaru, J., Pam, D., ... Hopkins, D. R. (2011). Epidemiological and entomological evaluations after six years or more of mass drug administration for lymphatic filariasis elimination in Nigeria. PLoS Neglected Tropical Diseases, 5, e1346.
5. Silumbwe, A., Zulu, J. M., Halwindi, H., Jacobs, C., Zgambo, J., Dambe, R., ... Michelo, C. (2017). A systematic review of factors that shape implementation of mass drug administration for lymphatic filariasis in sub-Saharan Africa. BMC Public Health, 17, 484.
6. Noroes, J., & Dreyer, G. (2010). A mechanism for chronic filarial hydrocele with implications for its surgical repair. PLoS Neglected Tropical Diseases, 4(6), e695.
7. World Health Organization. (2011, October). Lymphatic Filariasis. Retrieved from http://www.who.int/lymphatic_filariasis/epidemiology/en/
8. Sodahlon, Y. K., Dorkenoo, A. M., Morgah, K., Nabiliou, K., Agbo, K., Miller, R., Datagni, M., Seim, A., & Mathieu, E. (2013). A success story: Togo is moving toward becoming the first sub-Saharan African nation to eliminate lymphatic filariasis through mass drug administration and countrywide morbidity alleviation. PLoS Neglected Tropical Diseases, 7, e2080.
9. Global Programme to Eliminate Lymphatic Filariasis: Progress report on mass drug administration, 2010. (2011). Weekly Epidemiological Record, 86(35), 377-388.
10. Subramanian, S., Jambulingam, P., Chu, B. K., Sadanandane, C., Vasuki, V., Srividya, A., AbdulKader, M. S. M., Krishnamoorthy, K., Raju, H. K., Laney, S. J., Williams, S. A., & Henderson, R. H. (2017). Application of a household-based molecular xenomonitoring strategy to evaluate the lymphatic filariasis elimination program in Tamil Nadu, India. PLoS Neglected Tropical Diseases, 11(4), e0005519.
11. Turner, H. C., Bettis, A. A., Chu, B. K., McFarland, D. A., Hooper, P. J., Ottesen, E. A., & Bradley, M. H. (2016). The health and economic benefits of the global programme to eliminate lymphatic filariasis (2000-2014). Published Online: 7 July 2016.
12. Akturk, H. K., & Gbadamosi-Akindele, M. (2014). Elephantiasis nostras verrucosa. BMJ Case Reports, 2014, bcr2013200363.
13. Chu, B. K., Deming, M., Biritwum, N.-K., Bougma, W. R., Dorkenoo, A. M., El-Setouhy, M., et al. (2013). Transmission Assessment Surveys (TAS) to Define Endpoints for Lymphatic Filariasis Mass Drug Administration: A Multicenter Evaluation. PLoS Neglected Tropical Diseases, 7(12), e2584. PMID: 24340120.

14. Khaemba, C., Barry, A., Omondi, W. P., Bota, K., Matendechero, S., Wandera, C., Siyoi, F., Kirui, E., Oluka, M., Nambwa, P., & others. (2021). Safety and Tolerability of Mass Diethylcarbamazine and Albendazole Administration for the Elimination of Lymphatic Filariasis in Kenya: An Active Surveillance Study. Pharmaceuticals, 14, 264.
15. Njomo, D. W., Amuyunzu-Nyamongo, M., Magambo, J. K., Ngure, P. K., & Njenga, S. M. (2012). Factors associated with the motivation of community drug distributors in the lymphatic Filariasis Elimination Programme in Kenya. Southern African Journal of Epidemiology and Infection, 27(2), 66-70.
16. Eneanya, O. A., Fronterre, C., Anagbogu, I., Okoronkwo, C., Garske, T., Cano, J., & Donnelly, C. A. (2019). Mapping the baseline prevalence of lymphatic filariasis across Nigeria. Parasites & Vectors, 12(1), 440.