ASSESSMENT OF COMPLETENESS AND ACCURACY OF LYMPHATIC FILARIASIS MASS DRUGS ADMINISTRATION DATA IN KIBAHA DISTRICT COUNCIL

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By

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A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Science (Project Management, Monitoring and Evaluation in Health) (PMMEH)

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CERTIFICATION

The undersigned certify that he has read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled: **"*Assessment of Completeness and Accuracy of Lymphatic Filariasis Mass Drugs Administration Data in Kibaha District Council*",** in (partial) fulfillment of the requirements for the degree of Master of Science in Project Management, Monitoring and Evaluation in Health of Muhimbili University of Health and Allied Sciences.

_____

Prof. Billy Ngasala

(Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I, **Veronica Kabona**, declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature:…… **Date:**……..

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My sincere appreciation also goes to the National NTD Control Program workers at national level and Kibaha district council who allowed me to have access to MDA data for the thesis and provided all necessary support that was required during data collection and report writing.

Last but not the least is my lovely families who have been patient and very supportive both materially and morally during my studies. May God bless you immensely.

DEDICATION

To my lovely parents, Mr. Elia Kabona and Mrs. Paulina Kabona for their love, encouragement and support during all the time I was doing this work. I love you so much.

ABSTRACT

Background: The World Health Organization (WHO) recommends the use of electronic data storage systems for the purpose of improving the data quality, easy data access and data use for decision making. Strategies have also been made by different health programs to use the available district health information system (DHIS) and to employ staff for data management responsibilities to assure data quality. The National Neglected Tropical Diseases Control Program (NTDCP) in ensuring the quality of data collected from different interventions such as MDA data collected at district and health facility level in is captured in NTD MIS. Despite of the efforts of ensuring NTD data quality, quality of data collected during MDA campaign in areas with persistent Lymphatic Filariasis transmission has not been well documented.

Study Objective: To assess completeness and accuracy of lymphatic filariasis mass drugs administration data in Kibaha District Council (DC)

Methodology: A descriptive cross-sectional study design was used employing both quantitative and qualitative data collection methods in district level and 8 selected health facilities in Kibaha DC. Questionnaires were used for data collection from district NTD Coordinators and health facility workers, and checklist was used for review of hard copy documents and electronically stored reports for the lymphatic filariasis MDA data of 2018. The qualitative data collection involved in-depth interviews with 8 Health facility workers mainly to assess organizational and technical factors associated with quality of lymphatic filariasis MDA data. Quantitative data recounted from reports were analyzed using excel software. Content analysis was used to analyze the data obtained from interviews with the frontline health workers.

Results: The study findings showed that the completeness of electronic database was 42% for health facility with data entered in the NTD MIS. Completeness of data in the hard copies was good at the district level (100%) and varied among health facilities in MDA registers, proportional of registers with complete data for the assessed indicators in the respective health facility ranged from 60% to 88%. Data accuracy in the hard copies had good measure for four indicators at district and two indicators at the health facility level.

The electronic data had good accuracy measure for two indicators. The findings also showed that district NTD team provided supervision to the frontline health workers but minimal emphasis on data management training to the health facility workers, the following factors were cited by health facility workers including lack of enough data storage space, inadequate skilled community drug distributors and limited knowledge about data quality at health facility level.

Conclusion: The study findings have shown that the NTD data quality components of completeness and accuracy vary among indicators, level of data compilation and type of data storage. The poor data quality at health facility level can be associated with poor training and insufficient skilled staff at the subdistrict level. There is need to have frequent data management training as possible so to strengthen data management skills especially at health facility level and Community drug distributors (CDDs).

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ABBREVIATIONS

ALB	Albendazole
DHIS2	District Health Information Software version 2
DMO	District Medical Officer
DNTDCO	District Neglected Tropical Diseases Coordinator
DQA	Data Quality Assessment
HMIS	Health Management Information System
IVM	Ivermectin
LF	Lymphatic Filariasis
MDA	Mass Drugs Administration
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
NTD MIS	Neglected Tropical Diseases Management Information System
NTDCP	Neglected Tropical Diseases Control Programme
NTDs	Neglected Tropical Diseases
RHMT	Regional Health Management Team
RMO	Regional Medical Officer
RNTDCO	Region Neglected Tropical Diseases Coordinator
WHO	World Health Organization

DEFINITION OF TERMS

Data refers to facts and statistics collected for reference or analysis

Data Quality refers to the overall utility of a dataset(s) as a function of its ability to be easily processed and analysed for other uses, usually by a database, data warehouse, or data analytics system.

Data Quality Assessment (DQA) is defined as a distinct phase within the data quality life cycle that is used to verify the source, quantity and impact of any data items that breach pre-defined data quality rules.

Neglected Tropical Diseases are a group of parasitic and bacterial diseases that cause substantial illness for more than one billion people globally affecting the world's poorest people. The diseases are considered neglected because there is lack of effective and affordable treatment as the pharmaceutical industries ignored the diseases, and the most sufferers are too poor to afford

Mass Drugs Administration (MDA) is a strategy used to administer NTD tablets to the entire at-risk population of an area, most commonly a district. This strategy takes different forms in different countries, but usually consists of a campaign-style approach to deliver medications to all eligible people in at-risk communities, usually once or twice per year depending on the specific, targeted NTDs (USAID)

Health Management Information System is an efficient collection, collation, analysis and evaluation strategy, dissemination and use of information about individual patients, population, resources used and health outcomes of intervention and the state and nature of systems through which the intervention are applied (WHO)

NTDs Management Information System (NTD MIS) is the system that is designed to capture NTDs MDA data to provide decision support for the design and surveillance of the MDA-based integrated NTD intervention program at administrative units ranging from national, regional to district levels.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Data are one of the major components that assist managers in rational decision making about program resource allocation, implementation of the intervention as well as strategy and policy change (1). Sound and reliable information is the foundation of decision-making across all health system building blocks including service delivery and financing(2). Evidence-based decision making is critically important for the appropriate use of scarce resources particularly in resource limited countries like Tanzania (3). In order for data to serve the purpose of being used in decision making, it should possess the data quality dimensions of validity, integrity, reliability, completeness, timeliness and precise (4).

Tanzania in line with the World Health Organisation (WHO) requirements of assuring data quality initiated the electronic storage of health data. The Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) in Tanzania has been committed to building a comprehensive performance and information management system that supports the achievement of its objectives as defined in the Tanzania Health Sector Strategic Plan IV 2015-2020 (HSSP IV)(5). This commits the entire health sector to collect and process data to enhance accountability and more importantly to the use of quality data to improve programmes and interventions towards better health for the nation (5).

Health management information system (HMIS) was introduced throughout the country in 1994 and revised in 1997 and 2013 as one of the efforts to strengthen data management. Strategies have also been made by different health programs to use the available health information system and to employ staff for data management responsibilities. The failure of HMIS in Tanzania can be attributed to poor knowledge on HMIS; inadequate financial, human and technological resource capacity; lack of user-friendly systems; lack of coordination and evaluation, as well as inadequate policies to manage the sustainability of the system(2).

Quality is defined as the totality of features and characteristics of a product or service that bears on its ability to satisfy given needs(6). Tayi and Ballou defined the term "data quality" as "fitness for use" which implies that the concept of data quality is relative according to setting of concern (7). Data are of high quality if they are fit for their intended uses in operations, decision-making, and planning (8). Data are fit for use if they are free of defects and possess desired features. Data quality is a vital component of HMIS and the importance of the availability of usable routine health information is central to the use of the information for planning and decision making(1) . Poor data quality leads to low data utilization efficiency and even bring serious decision-making mistakes (4).

High-quality data and derived information are needed to create institutional knowledge (stored information) plus reasoning processes that help an organisation extract the maximum benefit from the resources. The most common type of problems that are manifested in literature of data quality are: lack of standardization of data, non-standardization of formats, heterogeneity of data sources, Non-Compliance of data in data sources with the standards, missing data inconsistent data across the sources, inadequate data quality testing on individual data source(9). The real concern with data quality is to ensure, not only the data completeness, but that they are accurate enough, timely enough, and consistent enough for the organisation to make appropriate and reliable decisions (8). Despite the emphasis on availability of data quality it has been estimated that up to 5% of data found in organisations are of poor quality(10).

In the early integration of the Neglected Tropical Disease Control Programme (NTDCP) it was realized that the key to the successful execution of the program will be the reliable capture and use of high-quality data from the various activities of the program(11). The data generated from the NTDCP program activities varies from surveys, morbidity management activities and distribution of medicine to the community campaigns called mass drugs administration (MDA) for lymphatic filariasis, soil transmitted helmithiasis, schistosomiasis and trachoma.

LF was found to be endemic in 120 out of 185 district councils in 2004. This necessitated the start of Ivermectin + Albendazole Mass drugs administration campaign in all 120 district councils. The MDA campaigns have been successful in reducing the transmission

of the disease and by 2019 only 15 out of 120 district councils are endemic with LF. Kibaha DC being one among 120 endemic district councils have conducted more than 10 rounds of MDA and the recent assessment of prevalence have shown it is still endemic for LF and therefore is among the remaining 15 district councils.

In the LF MDA the data collected are on community mobilization, training, population, number of people treated, and tablets used. The MDA data capture information for these indicators on total population, number of people treated, and number of tablets used. The flow of the LF MDA data starts from the implementation level to the national level. The implementation level being hamlet has the Community Drug Distributor (CDD) who fills the register during the MDA, after the campaign then he/she sends the register to the health facility worker who then adds up data from hamlets he/she is serving and create a health facility summary report which is then shared to district NTD Coordinator who then adds up data from health facilities to create a district data summary form which is then sent directly to the regional level and national level. The diagram below shows the data flow.

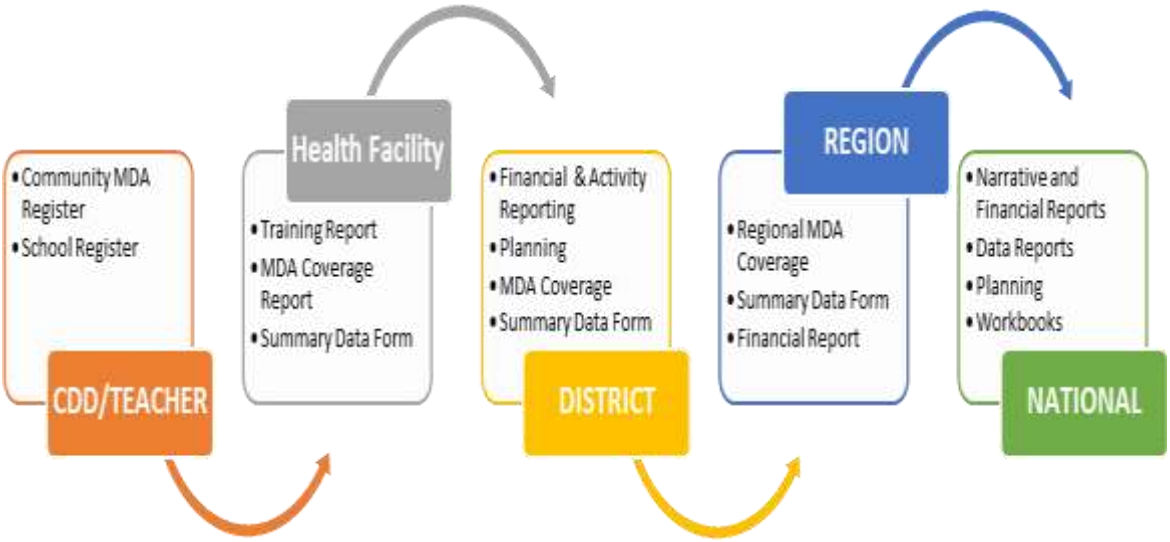


Figure 1: MDA data flow at Neglected Tropical Diseases Control Program

Source: NTDCP Master plan 2018 – 2023

The program focused on data quality improvement strategies to support timely, cost-effective data capture at the local level, and their proper management, analysis and use in decision making at various levels of program organization. In line with that designed NTD MIS which was expected to replace the paper-based data storage with the electronical data storage and provide a cost-effective, real time data capturing process in the coming period.

Understanding data quality, processes of data collection and the associated barriers to enhancing quality helps to formulate tailor-made strategies to improve data quality and use(12). Also, practical and generally affordable strategies exist for generating timely and reliable data on health systems but needs appropriate investment to develop the capacity to collect, manage, analyse, disseminate and use the information obtained (1). As the various research shows if the process's quality as well as information's inputs are not controlled, after a while, the degradation of the data quality will be obvious(13). The experience was found from the results of two DQAs that were conducted in Malawi found poor data accuracy between facility and community registers and reports, and identified weaknesses in quality controls, among other systems factors in need of strengthening(14). Despite being depending on technical, organizational and technical factors, data quality is also affected by the quality of service, in the study conducted in Malawi it was found that patients' flow was that some data elements such as drug stocks were recorded in HMIS before actually being issued at the pharmacy, which affected correctness of the data(15).Thus data validation procedures and data quality assurance need to be enhanced to ensure that data is not just timely but also accurate, complete, comprehensive and relevant to realize what the system was designed for (16).

1.2 Problem statement

Recent transnational trends that have enhanced international pressure to deliver better health information(4) as the average perceived cost of poor data quality is as high as 10% of an organization's revenues. In the healthcare sector, quality data, particularly with regard to timeliness and accuracy, are needed for administrative purposes such as hospital bed-rostering and for planning services to ensure that they are cost-effective(8).

Currently all countries face unprecedented demands for reliable and timely health data to support decision making, especially in the context of health sector reforms (17). Despite the need for good quality data, poor data quality has been a challenge in the health sector especially in developing countries compared to developed countries hence sound information is rarely available in low income developing countries. In the studies conducted to assess data quality it was stated that Health information system performance is affected by three categories of determinants: technical, behavioral and environmental/organizational (18)(19).

Following the need for reliable and easily accessible quality data there has been various efforts in Tanzania to use the electronic data storage for health care data management and capacitating health workers on using these electronic systems. These efforts to ensure data quality have been accompanied by the program efforts and strategies to improve data quality by conducting data quality assessment, data management training and designing of Program– specific health information systems for storage of program's data. The NTDCP being one of the programs in the Directorate of Preventive Services under the MoHCDGEC, it has employed all these data quality improvement strategies and designed a data storage system called NTD MIS. Despite of the efforts employed by the program the data quality is still faced by data quality issues and the most appearing ones are of completeness and accuracy. Despite the necessity of the quality of non-routine data in Tanzanian health sector, many studies focus on the whole of health management information system (17)(20)(21) and few have focused on studying the quality of NTDs specific health information system and data like those generated in the mass drugs administration (MDA) campaigns that are conducted annually(22).

Therefore, little is known about quality of MDA data reported from health facilities, hamlets, NTD MIS and the underlying factors especially in the districts with persistent LF transmission.

This study is therefore designed to assess the quality of lymphatic filariasis MDAs data at Kibaha District Council in Pwani Region and the underlying organizational and technical factors for data quality.

1.3 Rationale

Lymphatic filariasis MDA data has been collected since the start of the implementation of the MDA campaigns. These data are very necessary in monitoring the performance of the program in controlling/eliminating the transmission of lymphatic filariasis in endemic communities. Findings from this study will inform the MoHCDGEC Program officials on the status of the quality of data reported from Kibaha DC and the extent to which the organizational and technical factors influence the data quality, it will also provide knowledge to the other scholars on the quality of LF MDA data and factors associated with it.

1.4 Conceptual Framework

The conceptual framework below indicates the relationship between data quality and data quality determinants. It shows how data quality improvement interventions and organizational and technical factors are influencing data management processes of collection, collation, and data analysis which are then influencing the quality of lymphatic filariasis MDA data in terms of completeness and accuracy.

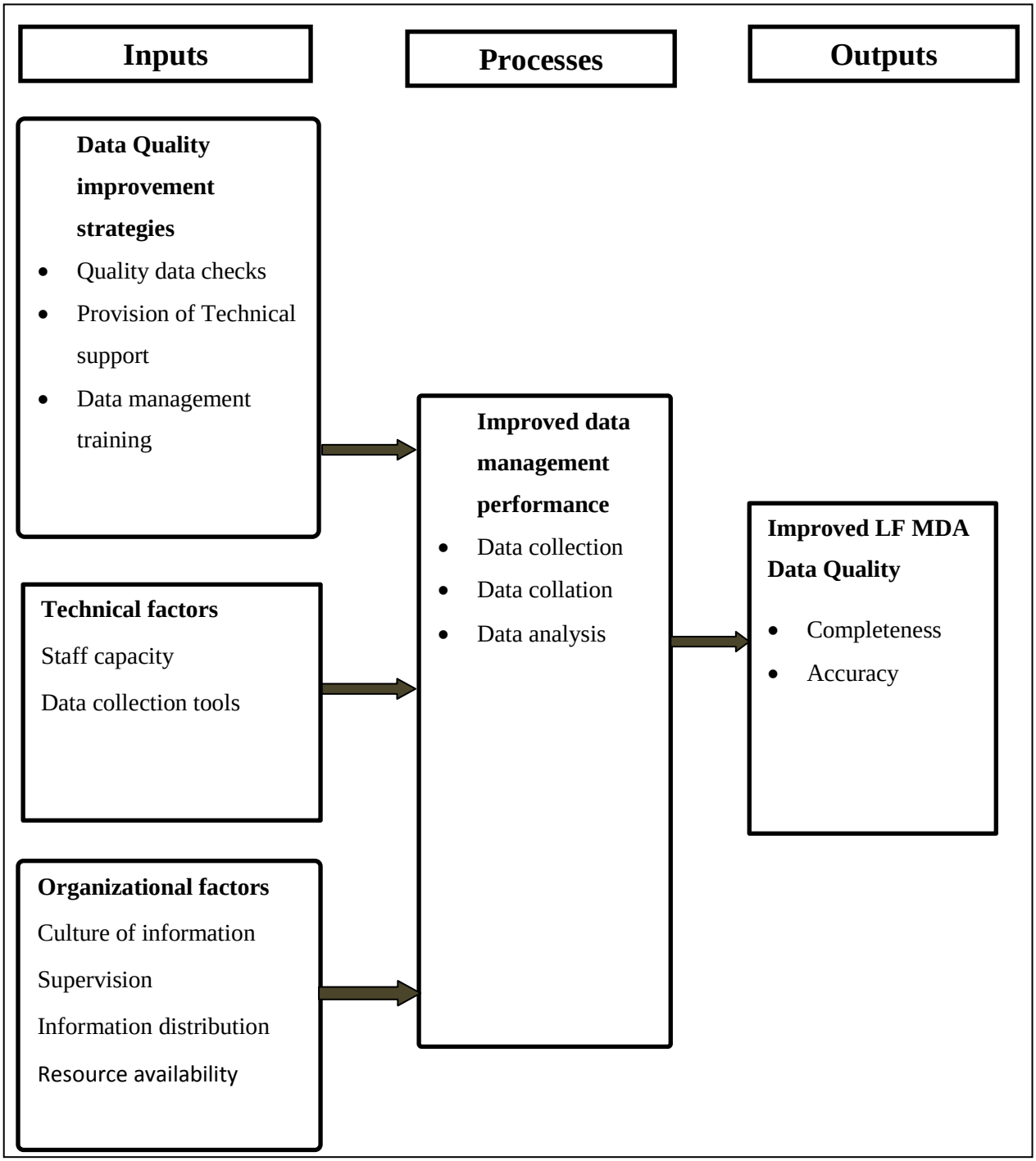


Figure 2: Conceptual framework showing the relationship between data quality interventions and data quality

Source: Adapted and modified from Deming PRISM framework 1993

1.5 Research Questions

1.5.1 Broad Question

To what extent are the lymphatic filariasis MDA data in Kibaha district council are of acceptable good quality in terms of completeness and accuracy and what are the organizational and technical factors associated with LF MDA data completeness and accuracy.

1.5.2 Specific Questions

1. To what extent are the LF MDA data of 2018 complete for indicators of total population, number of people treated and number of tablets used?
2. To what extent are the LF MDA data of 2018 accurate for indicators of total population, number of people treated and number of tablets used?
3. What are the technical factors that affect the quality of LF MDA data?
4. What are the organizational factors that affect the quality of LF MDA data?

1.6 Research Objectives

1.6.1 Broad Objective

To assess completeness and accuracy of LF MDA data in Kibaha District Council and organizational and technical factors associated with LF MDA data completeness and accuracy.

1.6.2 Specific Objectives

1. To assess completeness of LF MDA data of 2018 for indicators of total population, number of people treated and number of tablets used
2. To assess accuracy of LF MDA data of 2018 for indicators of total population, number of people treated and number of tablets used
3. To assess technical factors that affect the quality of LF MDA data.
4. To assess organizational factors that affect the quality of LF MDA data.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

Data is the major component that assist managers in rational decision making about program resource allocation, implementation of the intervention as well as strategy and policy change (1). Research have shown that the quality of data can impact decision-making(23) by enabling decision makers to utilize data more efficiently and effectively(24). It is considered that data are of high quality if they are fit for their intended use in operations, decision-making, and planning(25) and the provision of high quality data helps to guarantee a correct processing and interpretation of information, as well as the appropriate intervention of medical services (26).

Issues of data quality emerge from different levels and stages of data collection and processing that start from lower level to upper level as described below

- Data capture and recording at the time of gathering
- Data manipulation prior to digitization
- Identification of the collection
- Digitization of the data,
- Documentation of the data (capturing and recording the metadata),
- Data storage and archiving,
- Data presentation and dissemination (paper and electronic publications, web-enabled databases, etc.)
- Using the data (analysis and manipulation).

All these have an input into the final quality or “fitness for use” of the data and all apply to all aspects of the data (25) and the if the quality of data is lost at any one of the stages of data processing reduces the applicability and use of data for rational decision making within the organization.

The real concern with data quality is to ensure not that the data are perfect, but that they are accurate enough, timely enough, and consistent enough for the organization to make appropriate and reliable decisions that can help improving the quality of the services (8).

Research on data quality started abroad in the 1990s, and many scholars proposed different definitions of data quality and division methods of quality dimensions(4). In most of the definitions it was seen that in order for data to serve the purpose of being used in decision making, it is suggested that they must be accessible, accurate, timely, complete, consistent with other sources, relevant, comprehensive, provide a proper level of detail, be easy to read and easy to interpret(25). The data quality dimension that are mostly studied in health care research are completeness, timeliness and accuracy(27).

In realizing the importance of good quality data strong health management information system (HMIS) have been most frequently identified as critical for addressing health challenges and improving health service delivery at all levels of health system. However different studies have shown that its data is often inaccurate, untimely, incomplete and inconsistent as a result data are not used effectively for decision-making in developing countries(28). Also although being operational in most developing countries, the routine health information system (RHIS) in those countries are described as ineffective as it is insufficient of comprehensiveness of the information and presence of poor quality of the data collected(29)

The weakness of HMIS was realized in the studies carried out in sub-Saharan African countries whereby data used for program management or evaluation taken from facility-based information systems – whether paper-based or electronic was of sub-optimal quality (30). The findings from different scholars have shown poor data quality of HMIS, Hotchiss et al. in Uganda concerning the assessment of the performance of the RHIS reported a prevalence of 55% for data of poor quality(31).

2.2 Data Quality of Lymphatic Filariasis Mass Drugs Administration data

WHO recommends to control LF transmission therapy using combinations of two tablets of either ivermectin + albendazole or diethylcarbamazine and albendazole should be delivered to entire populations at risk through a strategy known as mass drug administration (MDA)(32). During mass drug administration data should be collected on number of people treated, number of tablets received, used and lost. These data a very necessary as they can be used to calculate therapeutic coverage and determine if a recommended coverage of 65% has been achieved and monitors the tablets usage.

Reliable and timely information, and not merely health data, is therefore critical for effective management and implementation of national neglected tropical diseases (NTD) programmes(33).

In the efforts of understanding the current practices and problems of NTD-related data reporting and management, data quality assessment was carried out in Quezon City and Negros Occidental Province in May 2016 on to check integrity, storage, recording, submission, accuracy and Consistency of data reported between different levels of the system. The findings in this study revealed that there is a lack of data records, discrepancy between raw data and aggregated data reported at different levels, a lack of standardized reporting forms and delays in submission of reports at all levels(33).

For data to serve its purpose of fitness for use, it should possess the most important dimensions of data quality which are completeness and accuracy. Each of them is described below with its link to data quality.

2.3 Completeness of data

There are many definitions of data completeness and the most stated one is that data completeness refers to the presence of necessary data elements in the reports or data sets. It can be measured in various ways such as percent of missing values for a data element, percent of record with sufficient data to calculate a required variable (34).

In the relational databases, completeness is mostly linked to the meaning of null values. A null value has the general meaning of missing value, a value that exists in the real world but is not available in a data collection. To characterize completeness, it is important to understand why the value is missing which the reasons might be either because it exists, but is not known, or because it does not exist, or because it is not known whether it exists(35).

Data completeness has been a major challenge in data storage and the absence or incomplete availability of data also affects decision-making for program implementation or resource allocation. Data incompleteness being one of the issues facing data quality different scholars have studied this data quality component in health care service and came out with varying findings but most of the findings indicate that data completeness is still an

issue in health care services. The level of data completeness sometimes vary depending on the type and desired use of data (36). In the case studies conducted at national, international, the findings have shown that when accessing completeness, 100% completeness of data is hardly found in health care services. Also, literature have shown that data completeness is associated with poor documentation in health services as the North Gondar study showed that in the year 2005 to 2006, there is data unavailability and poor documentation in health care (37).

For the district level case studies in Tanzania have shown that there is problem in data completeness in health care. In the study conducted in 2008 in Kilombero district council to assess the factors for poor data quality in HMIS, the findings revealed that most of the facilities had incompletely filled HMIS booklets (3). However, the study conducted to assess the data quality of Malaria indicators in DHIS2 in Kibaha district council of Tanzania had contradicting findings as it showed that, there is 100% completeness of the data filled in the HMIS for the facilities, majority of health facilities had HMIS tools and the information in patient registers found to be adequately filled, ranging from 69% to 92%(38).

The findings in the already conducted studies showed that health care data are being faced with the issue of incompleteness, then contributing to wrong decision making by managers about the provision of health care services. However, minimal has been studied on the data completeness of the MDA data in the districts that have persistent transmission of the Lymphatic Filariasis despite many rounds of MDA to know if the district MDA data reported is reflected at district and health facility level. This creates a need for assessing the completeness of Lymphatic Filariasis MDA data to understand its completeness status as it is crucial in monitoring the impact of the program in lowering the transmission of Lymphatic Filariasis in the endemic communities, especially those with persistent LF transmission.

2.4 Accuracy of data

Accuracy is the measure that indicates how well and how correctly is data represented in the data base, comparing its value to the real world or to a reference data(27). Accurate data is very crucial to guide in programmatic decision-making. Currently strong evidence

have shown that data stored in health care information systems have a significant number of errors(39). The presence of the errors in data can cost a company or organization millions of dollars and making it difficult for the company in implementing new strategies that can improve performance (40). The inaccuracy of data has high impact in all sectors, for example, it is reported that wrong price data in retail databases alone costs US consumers $2.5 billion annually. Recognizing the negative impact of inaccurate data then there is a need for investigation of data accuracy and adapting effective methods to improve the quality of data, or to clean data(36).

The presence of data accuracy problems in health care data or any data can be contributed by various reasons and the most prominent is human error especially in data entry and designing of the databases (41). Besides the human error other sources of inaccurate data are inadequate senior management support, insufficient budget, lack of internal manual resources, lack of relevant technology, inadequacies in relevant technology and inadequate data strategy(42).

Globally the average amount of inaccurate data has risen from 17% to 22% from 2012 to 2013 as has been shown in the findings of the study conducted by Experian Data Quality commissioned to look at current approaches to data quality(42).

In the study conducted to assess the data quality of Malaria indicators in DHIS2 in Kibaha district council of Tanzania, the findings showed that in the health facilities visited found to have accurate data ranging from 62% to 88% for other tools, while those of summary forms and DHIS were matched 100%(38). For the data accuracy of NTDs there is still the problem of inaccuracy as the study conducted to assess LF MDA data quality in Ghana endemic communities showed that 40% there the problems of over reporting and under reporting by 40% and 20% respectively and most of the indicators are inconsistency between different reporting forms except for the number of tablets received(22).

Research findings have shown that health care data are being faced with the issue data quality and accuracy being among one of the major issues. This directly affect negatively the program's decision-making. All these findings have been from diversity of areas and organization but it is seen that minimal has been studied on the data completeness of the Lymphatic Filariasis MDA data in the districts that have persistent transmission of the

Lymphatic Filariasis despite many rounds of Lymphatic Filariasis MDA to know if the district MDA data is being impacted by poor accuracy at district and health facility level. This creates a need for assessing the completeness of Lymphatic Filariasis MDA data to understand its completeness status as it is crucial in monitoring the impact of the program in lowering the transmission of Lymphatic Filariasis in the endemic communities, especially those with persistent LF transmission.

2.5 Factors that affect the quality of data

Data quality problems especially in health care have become an issue. It has been shown that the existing data quality gaps in the current HMIS were linked to the factors such as lack of training, inactive supervision, staff workload pressure and the lengthy and laborious nature of the system (43).Various studies have been conducted to assess the quality of the electronic stored health data in Health Management information systems in the district level (43)(17) and came out with the finding that the data quality is mainly influenced by all the data management processes and there is poor data management of the electronic stored data in HMIS(17).

It has been found by some researchers that there are factors effecting data quality and most of the findings have shown that data quality is affected by management responsibilities such as commitment improving data quality continually, effective communication among stakeholder and understanding of data quality(13). The data quality associated factors can be grouped into 3 categories of behavioral, technical and organizational factors(2). The scholars studied factors for data quality have found that data quality is influenced by the behavioral, organizational and technical factors.

2.6 Technical factors that affect the quality of data

It has been found from different literature that most of the data errors are associated with human error (59% of errors) especially in data entry and designing of the databases (41). The issues of complexity of filling data collection forms, computer software being not user-friendly, unproper data processing and in a timely manner leading to poor analysis that do not provide meaningful conclusions for decision-making(44).

In the study conducted in Malawi, it was found that completeness and accuracy of data at the facility level for the ART program is associated with factors of supervision, presence of a data entry clerk, greater program experience and patient volume(45). Also, the study conducted in Ethiopia(46), 91(27.4%) of participants complained about having insufficient computer use skills in and unavailability of computer for data recording at their workplace, while 71(21.4%) claimed inconsistency and incompleteness of the reports they receive and loss of timely concrete feedback. Also in the study conducted on rural health facilities revealed that majority of the health workers had none or very limited training for and exposure to computer applications whereby Ghana reported better knowledge and exposure to computers compared to Tanzania(47).

2.7 Organizational factors that affect the quality of data

In the DQA study conducted in Malawi it was found that the health facilities studied had good performance in select areas of data quality which were consistency between registers, reports, and DHIS2 for the studied indicators. The findings also showed that despite the presence of staffs trained on HMIS in the DHOs and hospitals, there is limited data use to track indicator progress and calculate comparisons. In most practices data are not regularly discussed at managerial meetings especially at hospitals (35 percent) and district health offices (DHOs) (50 percent). There exist very low levels of display of up-to-date information at all levels of management even to the leaders who are influential in decision making, policy making, organization culture and planning. Therefore having all the factors in place with poor leadership, even the best designs in health system will fail to be implemented(48). A study conducted in Kindondoni Dar es salaam showed that supervision as an organizational factor is a factor influencing quality of data and it should be regular and effective, otherwise it may not have impact on data quality(49). Also, the study conducted in Zambia showed that supportive supervision enables both data users and producers to address challenges because during the routine visits it provides a channel for gaining verbal and written information(50). The Zanzibar improving quality and use of data through data-use workshops significantly impacted the organizational factors for data quality as after the workshop the district health management teams shared information about service delivery and used the HMIS to monitor and evaluate progress towards targets set in their district annual plans. Leaders became more confident in making evidence-based

decisions to improve quality of care based on collective values developed through the data-use workshops. While a “culture of information” was not fully established, significant strides were made in that direction(51).

2.8 Data Quality improvement strategies

Scholars that have investigated the factors associated with data quality have found that minimal efforts have been taken to control these factors in most of the settings. In 2008 findings from Kilombero district council indicated that that most of health workers had never been trained on HMIS, and there is minimal information use among the health care workers. Evaluation of services provision to assess the factors for poor data quality in HMIS. The gaps in the current HMIS were linked to lack of training, inactive supervision, staff workload pressure and the lengthy and laborious nature of the system(3).

The improvement of data quality has been of vital importance in health care, the need has triggered the use of interventions to minimize factors for data quality to improve data quality. These interventions have significantly improved data quality. One of the interventions for data quality was conducted in the district of Beghi District in West Wollega, Oromia in Ethiopia. The intervention had components of on-job training, supportive supervision, and data audit and well as performance review meeting were provided to health workers. After the project, evaluation results showed that proportion of HMIS data accuracy has been increased from about 65% before to 87% after interventions. Similarly, level of HMIS data completeness has been increased from about 42% before to 100% after intervention. In addition, encouraging improvement were achieved on information use practice in the Beghi district of west Wollaga(37).

The studies on the factors for data quality provides the insight to the root causes of data quality problems which can then alert managers on what to improve so to minimize poor data quality problems. Most of the intervention and studies focus on routine collected data and HMIS data. There is limited research on assessing the factors for data quality of mass drugs administration for Lymphatic Filariasis in areas with persistent LF transmission, therefore this is the area that requires investigation to inform the Program managers working on elimination of LF.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Area

The study was conducted in Kibaha district council. The district is located in Pwani region with estimated population of 81,684 in 2019 as per National Bureau of Statistics (52). It has a total of 29 health facilities both private and public/government and is the one among the first 9 districts to start using NTD MIS in 2016. The district was found to be endemic for lymphatic filariasis and started distribution of Ivermectin + Albendazole to the community members in 2001. Since 2001, 12 rounds of MDA have been implemented in Kibaha district council. Despite all these rounds of MDAs the district is still endemic for LF to the level that it requires more rounds of MDA. In the 2018 MDA for LF was implemented in Kibaha district council and the districtwide report showed that 66,655 people were treated out of 79,936 (83.4%). The most recent prevalence survey conducted in 2018 has indicated that LF prevalence is 4.7% which is above the WHO recommended threshold for stopping MDA of 2% prevalence. The study site was chosen due to the persistent LF transmission and the convenience to the researcher as it is near Dar es Salaam.

3.2 Study design

A cross sectional descriptive study design was used employing both quantitative and qualitative data collection method. Quantitative data collection through administering questionnaires and retrospective review of documents was for assessing the data quality dimensions of completeness and accuracy. The qualitative data collection was for assessing the technical and organizational factors associated with data quality, this method was used because it enables to gain detailed information on the technical and organizational factors associated with data quality.

3.3 Study population

The study involved district NTD coordinators and frontline health workers from 8 selected public health facilities.

3.4 Sampling procedure

Quantitative sample size

The study sample size included 8 health facilities in Kibaha district council, and it was obtained by using systematic random sampling where health facilities were listed according to zone and then sampled by selecting each nth value. The sample size of 8 was chosen following WHO guideline when you want to study a health care system a minimum sample size of 25% is satisfying, and 8 health facilities are 28% of all health facilities in Kibaha district council. In each selected health facility MDA data were reviewed in all registers from the hamlets.

Qualitative sample size

In interviews 8 frontline health workers were selected by using purposive sampling procedure, participants were all frontline health workers who have worked in the MDA campaigns more than once in health facilities visited for quantitative data collection. Participants for the interviews were purposively selected as they are the frontline health workers responsible in compiling LF MDA data in each of the health facilities visited**.** A total of 8 frontline health workers were interviewed.

3.5 Variables

Dependent variables	**Independent variables**
Data completeness	• Filled health facility summary forms in the NTD MIS • Filled data for studied indicators in MDA registers
Data accuracy	• The match of data by comparing MDA data in NTD MIS and source health facility summary data forms • The match of data by comparing MDA data in the summary reports and the aggregated data
Organizational factors	• Decision making using MDA data • Availability of feedback mechanism related to MDA data • Presence of supervision and provision of technical support
Technical Factors	• The user friendly of tools for data recording • Capacity building of the personnel dealing with MDA data

3.6 Data collection methods

3.6.1 Quantitative data collection instruments

Quantitative data collection questionnaires were developed with reference from the ENVISION data quality assessment tools(53) and HMIS data quality assessment tool that was developed by MEASURE(54) with the modification to meet the researcher's need for the purpose of assessing technical and organizational factors for data quality at district and health facilities. The NTD data quality assessment tools that was designed by the ENVISION to assess quality of data for mass drugs administration for NTDs was adapted to create a checklist for the LF MDA data quality assessment with the main focus on the completeness and accuracy of the data reports in the district, health facility and hamlet level.

3.6.2 Qualitative data collection instruments

The interview guide for qualitative data collection was developed with adaption from the study of an assessment of data quality in routine health information systems in Oyo state, Nigeria by Adedapo Adejuma, 2017(55) and study of investigation of factors influencing data management in district health planning process: a case study of Kibaha town council by Clara Chidi, 2017(2).

3.6.3 Data collection procedures

Data were collected after obtaining permission from the regional and district authority and later in health facilities.

3.6.4 Selection and training of research assistants

Research assistants with experience in data collection were recruited after being interviewed. Then followed by the two days orientation to equip them with the knowledge on the objective of the study, data collection procedure and ethical issues. This made them fit for the study to be conducted.

3.6.4 Pre-test of data collection tools

Pretest of data collection tools was conducted at Kisarawe District Council as it is one of the district council implementing MDA. Pre-test of questionnaires was conducted by

administering questionnaires to 2 district NTD Coordinators and 2 frontline health workers who compile MDA data. Interview guide was pretested to 2 frontline health workers and checklist was Pre-tested at district level and in those 2 selected health facilities. Pre-test helped to provide the clarity of the questions in questionnaire and interview guide suitability to the participants and clarity of items to be checked in the checklist. It also allowed to determine the time needed for assessment and the possible obstacle that could arise.

3.6.4 Quantitative data collection

Quantitative data collection was done through administering questionnaires to district NTD coordinators and frontline health workers and review of MDA data collection documents and NTD MIS in assessing the data quality dimensions of completeness and accuracy by using checklist. Data was reviewed for the LF MDA of November 2018. The sources reviewed were the electronic data base of NTD MIS and the hard copy forms used in LF MDA which are district summary data forms, health facility summary data forms and MDA registers. LF MDA data collection has indicators grouped into general statistics, advocacy and social mobilization, training, total population, number of people treated and number of tablets used. This study's review focused on the indicators of total population, number of people treated with ivermectin, number of people treated with albendazole, number of albendazole tablets used and number of ivermectin tablets used. T

To assess completeness of lymphatic filariasis MDA data of 2018 for indicators of total population, number of people treated and number of tablets used

At district, checklist was used for assessing the electronic data completeness and hard copy data completeness. For the completeness of electronic data, it involved reviewing availability of health facility summary data forms in the NTD MIS. For the completeness of data stored in hard copies, it involved reviewing of health facility summary data forms in the hard copies in terms of their completeness of filling of data for five studied indicators

In health facilities; checklist was used for reviewing of MDA registers in the in terms of their completeness in filling of data for five studied indicators.

In assessing accuracy, A checklist was used for data review of health facility MDA reports. At district, accuracy was assessed in two ways, one was focusing on the data stored electronically and another was on the data stored in hard copies. For the data stored in electronic database, data was matched between the hard copy and the electronic form entered in the NTD MIS to check percentage matching for the studied indicators. For the data stored in hard copies, data for each of the 5 studied indicators was aggregated from health facility summary forms and compared with the data reported in the district summary data form. At health facility, checklist was used for data review of community registers and health facility summary data forms. To assess accuracy, data for each of the 5 studied indicators was aggregated from community registers and compared with the data reported in the health facility summary data form of respective health facility.

3.6.4 Qualitative data collection

The qualitative data collection involved in-depth interviews with Frontline Heath Workers at health facilities to assess the technical and organizational factors associated with data quality.
At district level, Unstructured questionnaires was administered to the district NTD coordinators to assess the the technical and organizational factors for data quality. At health facility level, questionnaires were administered to the health facility in charge to assess the technical and organizational factors for data quality. Also, interviews were conducted in some of the selected health facilities to gain a deep understanding of technical factors associated with the quality of LF MDA data.

3.7 Data management

Data from the study were handled in such a way to ensure maximum confidentiality. Research assistants were trained on the way to keep confidentiality about the information obtained from respondents.

Quantitative data collected was kept in confidentiality whereby, questionnaires and checklists used to collect quantitative data were kept in a locked cabinet where no one can easily access.

Qualitative data collected through data recording devices were kept in confidentiality by ensuring that the devices are kept in locked cabinet where no one can access easily and even during data analysis the data were kept in the computer that has password. Data quality was also ensured by using data validation rules in data entry and performing data quality checks before data analysis.

3.7.1 Data entry

Data collected using Quantitative method of questionnaires and checklist were entered into the pre-designed excel database in the computer. The quality of entries made in the database were controlled by running data validation rules for entries.

3.7.2 Data analysis and interpretation

Quantitative data

Excel was used for quantitative data analysis; they were used to analyze the data obtained from questionnaires administered to the participants and those data from the checklist. Data analysis also involved the descriptive analysis by displaying the frequency tables and exploring the findings obtained in data collection.

Data completeness

Data completeness was assessed in both district and health facility level. At district level it was assessed in both the data stored electronically and data stored in hard copies. At health facility was assessed in data stored in hard copies.

Completeness of electronic data at district level: In the electronic database, completeness was assessed by the presence of the health facility summary data forms in the NTD MIS for the IVM + ALB MDA conducted in November 2018 of Lymphatic Filariasis treatment. It was measured by calculating percentage of health facility summary data forms entered in the NTD MIS per total number of health facility summary data forms that were supposed to be in the NTD MIS for by the time of study.

Completeness of hard copy data at district level: In the hard copies, completeness was assessed by presence of the data for the five studied indicators in the hard copies of the health facility summary data forms. It was measured by calculating percentage of health facility summary data forms with data for all the five assessed indicators per total number of health facility summary data forms for the IVM + ALB MDA conducted in November 2018.

Completeness of hard copy data at health facility level: At health facilities, data completeness was assessed by presence of data for the five studied indicators in the MDA registers. It was measured by calculating percentage of registers with data for all the five studies indicators per total number of registers in the respective health facility.

Data accuracy

The accuracy of data was assessed in both district and health facilities level by matching of data from different sources.

District level: At district level, data accuracy was assessed in both the electronic stored data and the data filled in hard copies of district summary data forms and health facility summary data forms for the five studied indicators.

Accuracy of hard copy data at district level:

Accuracy of data filled in hard copies at district was assessed by comparing recounted data from the health facility summary data forms with data reported in district summary data form for the five studied indicators. Data for each of the five studied indicators were aggregated from all the health facility summary data forms and the values obtained were compared with those reported in the district summary data form by calculating verification factor. Verification factor for each of the indicator was obtained by dividing the recounted values by the values reported in the district summary data form. Here I was observing if there is any data summation error from summary forms submitted by each health facility and those reported in the district summary data form. Data were expected to match and if any discrepancy happened it was expected that verification factor to fall between 0.85 – 1.15 since it is the tolerable measure as suggested by Ronveaux, verification factor for accurate data is expected to fall between a score of 0.85 and 1.15.

Accuracy of electronic data at district level: Accuracy of electronically stored data was assessed by comparing data of five studied indicators from the hard copies of health facility summary data forms and those reported in the NTD MIS. The measure used to assess the accuracy was the % match of data between electronic stored data and hard copy data. The % match value was expressed as percentage ratio of the indicator value in the NTD MIS to the value in the original hard copy of health facility summary data form. Here I was observing if there is any transfer error from summary forms submitted by each health facility and those entered in NTD MIS. World Health Organization guidance defined the data to be accurate when the reported value in the electronic data storage was within ±10% of the facility register's value. Data values for each indicator was expected to fall within the WHO recommended measure of ±10%, if any value is above or below recommended measure then it was regarded as inaccurate.

Health facility level

Accuracy of data filled in hard copies at health facility was assessed by comparing recounted data from the MDA registers with data reported in health facility summary data form for the five studied indicators. Data for each of the five studied indicators were aggregated from all the MDA registers and the values obtained were compared with those reported in the health facility data form by calculating verification factor. Verification factor for each of the indicator was obtained by dividing the recounted values by the values reported in the health facility summary data form for the respective health facility. Here I was observing if there is any data summation error from MDA registers submitted by community drug distributors and those reported in the health facility summary data form. Data were expected to match and if any discrepancy happened it was expected that verification factor to fall between 0.85 – 1.15 since it is the tolerable measure as suggested by Ronveaux, accurate data is expected to fall between a score of 0.85 and 1.15

Qualitative data

Audio-recorded interviews were firstly transcribed verbatim and then translated from Swahili to English. Interviews transcripts were analyzed using qualitative content analysis following

Graneheim and Lundman (24). The qualitative content analysis offers the development of categories from the text data inductively; the inductive derivation of categories is important in capturing the experiences of the participants (25). The full transcripts and field notes were firstly read and reread by the principal investigator in order to become familiarized with the data and the context. Condensed meaning units were then formed through data reduction. These were related to technical and organizational factors that affect the quality of lymphatic filariasis MDA data from the perspectives of frontline health workers. The condensed meaning units was read and reread in order to extract the codes. The primary codes were extracted, revisited and final codes were formed. Similar codes were grouped together and through constant comparison were abstracted into subcategories. Sub-categories were further analyzed to distinguish their similarities and differences. Similar subcategories were sorted to form categories that reflect the manifest content of the text.

Trustworthiness of qualitative data

Trustworthiness refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study. Four criteria as outlined by Lincol and Guba were used. These included credibility, dependability, conformability, and transferability(56).

Credibility of the Study

To maintain the study's credibility triangulation was done, whereas, apart from the respondent's views and answers, their responses were compared with what is already known in the literature. An in-depth literature review was done to compare the findings of this study with other similar studies.

Transferability of findings

One should be able to transfer this information and apply it somewhere else. This was assured by providing evidence and using thick descriptions to show the findings can be used in other contexts, times, situations, and population.

Conformability

An audit trail was used, through providing details of the process of data collection, data analysis, and interpretation. Unique and interesting topics were recorded during data

collection, writing down thoughts about coding, providing a rationale for why codes were merged, and explain what the themes mean. Reflexivity was also used, trying to see and avoid how the researcher's personal experiences in life may affect the findings of this study.

Dependability

Efforts were made to establish that the research study's findings are consistent and repeatable. The researcher aimed to verify that the findings are consistent with the raw data collected. She made sure that if some other researchers were to look over the data, they would arrive at similar findings, interpretations, and conclusions about the data.

3.7.3 Investigation tools and validity and reliability issues

Validity and reliability were assured in both qualitative and quantitative data collection methods in order to elicit needed and reliable information. Questionnaires designed with clear questions that avoid ambiguity. Interview guide had clear questions and there will be probing questions in order to assist respondents in providing detailed information. Checklist had instructions on what to do in assessing completeness and accuracy of data. Also, Prior to research, research assistants were well trained on how to use tools and how to interact with respondents in order to obtain the true information during administering questionnaire and conducting interviews and they practiced in Pre-testing of tools as well as be supervised by P.I during data collection.

3.8 Ethical consideration

Ethical clearance was sought from Muhimbili University of Health and Allied Sciences (MUHAS) through Institutional Review Board (IRB). Permission to conduct study was obtained from the regional medical officer and district medical officer. The permission for assessment at health facility level was obtained from the health facility in charge. Before the start of data collection written informed consent was sought out from all the respondents for the participation in the study. The consent was designed in English Language and later on transformed into Swahili language.

CHAPTER FOUR

4.0 RESULTS

The study involved exploring the data quality components of completeness and accuracy in the Mass Drugs Administration (MDA) data by review of MDA registers, health facility summary data forms, district summary data form and data stored in NTD MIS for the lymphatic filariasis MDA data of November 2018. The data quality assessment was done at both district and health facility level, involved 8 health facilities from 5 zones.

4.1 Data Completeness

Assessment of data completeness at district level was based on review of the data in the electronically stored data in NTD MIS and hard copy data filled in health facility summary data forms. At the health facility completeness was assessed in the MDA registers. In the electronic data review, Review was done for health facility summary data forms that were filled in the database from eight health facilities, and hard copies from 19 health facility summary data forms and 45 MDA registers as outlined below:

At district Level

i. Completeness of health facility summary data forms in the electronic database

When assessing the extent to which electronic data is complete, the World Health Organization guidance defined as 75% to represent satisfactory completeness of facility reporting was used (41). The review of completeness of electronic stored health facility summary data forms into the database of NTD MIS showed that only 8 out of 19 (42%) of all health facilities involved in lymphatic filariasis MDA had complete data entered in the NTD MIS (Table 1).

In the NTD MIS database at the time of study, the following indicators were completely filled: total population, number of people treated with ivermectin, number of people treated with albendazole, number of albendazole medicines used and number of ivermectin medicines used were completely filled. The 42% of the health facilities were having data entered in the NTD MIS.

ii. Completeness of data for indicators in hard copies of health facility summary data forms

When assessing completeness of data for indicators, the World Health Organization defined completeness of indicator data to be satisfactory when less than 10% of the expected data were missing values. Review of 19 hard copies of health facility summary data forms was for assessing the completeness of data for studied indicators. The findings have shown that the proportion of health facility summary data forms with less than 10% of the expected data missing values was 100%. No health facility summary data form was missing data for any of the five studied indicators.

At Health Facility Level

i. Completeness of hard copy data at health facility level

Review of 45 MDA registers for assessing the completeness of data as the presence of data for all of the indicators in the summary page of register showed that variation in data completeness in the registers. The number of the registers reviewed from each of the health facilities is indicated in the table below:

Table 1: Number of registers per each health facility

S/No	Zone	Name of the health facility	Number of registers
1.	Kwala	Mperamumbi	5
2.	Soga	Vikuge	5
3.	Ruvu station	Mwanabwito	3
4.	Ruvu station	Ngeta	4
5.	Ruvu station	Ruvu station	10
6.	Magindu	Lukenge	4
7.	Magindu	Magindu	8
8.	Ruvu station	Kitomondo	6
Total			45

Review of data completeness in the 45 MDA registers measured as the percentage of registers with data for all of the five studied indicators ranged from 60% in Mperamumbi and Vikuge dispensary to 88% in Magindu dispensary (Figure 3).

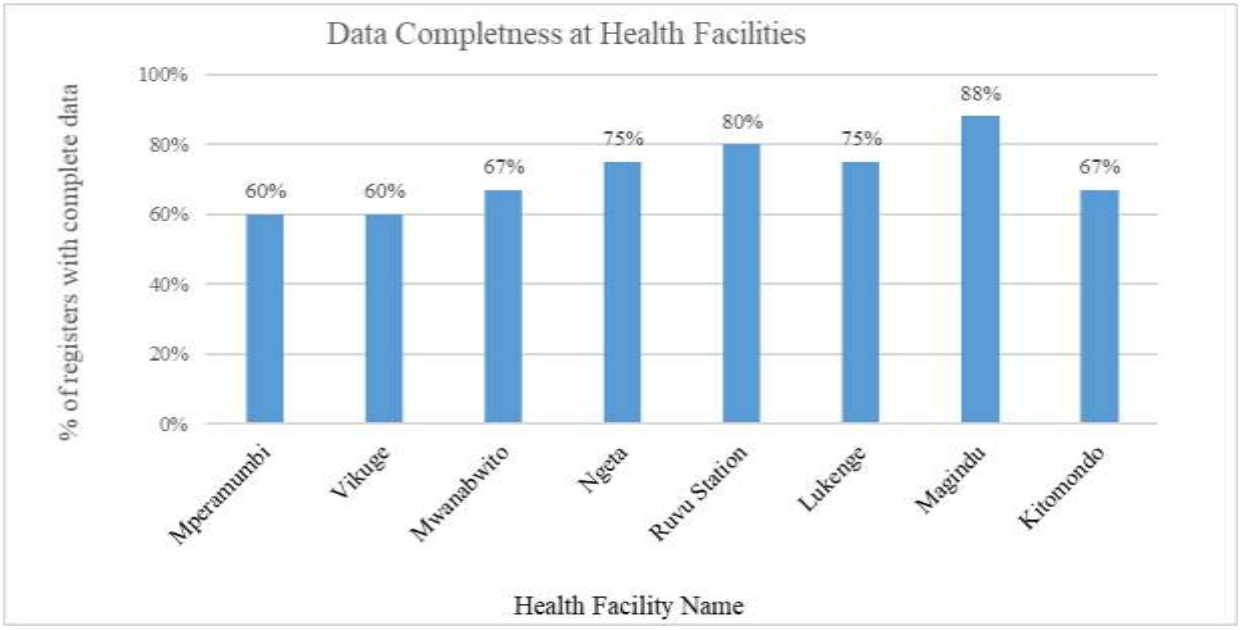


Figure 3: Data completeness of registers at health facility level

4.2 Data Accuracy

i. Electronic data accuracy at district level

When assessing the extent to which data jmatch across sources (accuracy of original health facility summary data form and reported data in NTD MIS), the World Health Organization guidance defined the data to be accurate when the reported value in the electronic database (e.g. NTD MIS) to be within ±10% of the original value (e.g. health summary data form's value), any value of difference that falls out the range, (i.e. >+10%, or <-10%) was considered inaccurate. In the review electronic data accuracy, it was observed that, data entered in NTD MIS had few errors as most of reported value in the database had a difference between the data in the NTD MIS and in the hard copies was within ±10% of the health summary data form's values, most of the scoring 0% which is the perfect match of the data between the sources. Underreporting was found in the Ngeta dispensary for the indicator of number of albendazole tablets used (+120%) and number of ivermectin tablets used (+13%). While overreporting was found in Dutumi dispensary for the indicators of total population (-45%), number of Albendazole tablets used (-62%) and number of Ivermectin tablets used (-65%). The table 3 below shows the matching of the data between health facility summary data forms and NTD MIS for the five studied indicators.

Table 2: Data match for indicators between hard copies and NTD MIS

	% Difference of the data in the summary data form and NTD MIS				
Health Facility	**Total Population**	**Number of people treated with IVM**	**Number of people treated with ALB**	**Number of ALB tablets used**	**Number of IVM tablets used**
Ngeta Disp.	0%	0%	0%	+120%	+13%
Ruvu Station HC	0%	0%	0%	0%	0%
Lukenge Disp.	0%	0%	0%	0%	0%
Bokomnemela Disp.	0%	0%	0%	0%	0%
Gwata Disp.	0%	0%	0%	0%	0%
Kwala Disp.	0%	0%	0%	0%	0%
Dutumi Disp.	-45%	0%	0%	-62%	-65%

ii. Hard copy data accuracy district level

When assessing the extent to which recounted data matches with the reported data, the measure used was the verification factor which is the score obtained after dividing the recounted value to the reported value. Ronveaux suggested that verification factor for accurate data is expected to fall between a score of 0.85 and 1.15 (40). Review of the health facility summary data forms and district summary data form for the studied indicators revealed that most of the indicators were accurate (i.e. verification factor the was good (0.85 – 1.15), The verification factor was found to be poor (1.34) for only one indicator which is number of ivermectin tablets used, therefore stated to have poor accuracy, Figure 4.

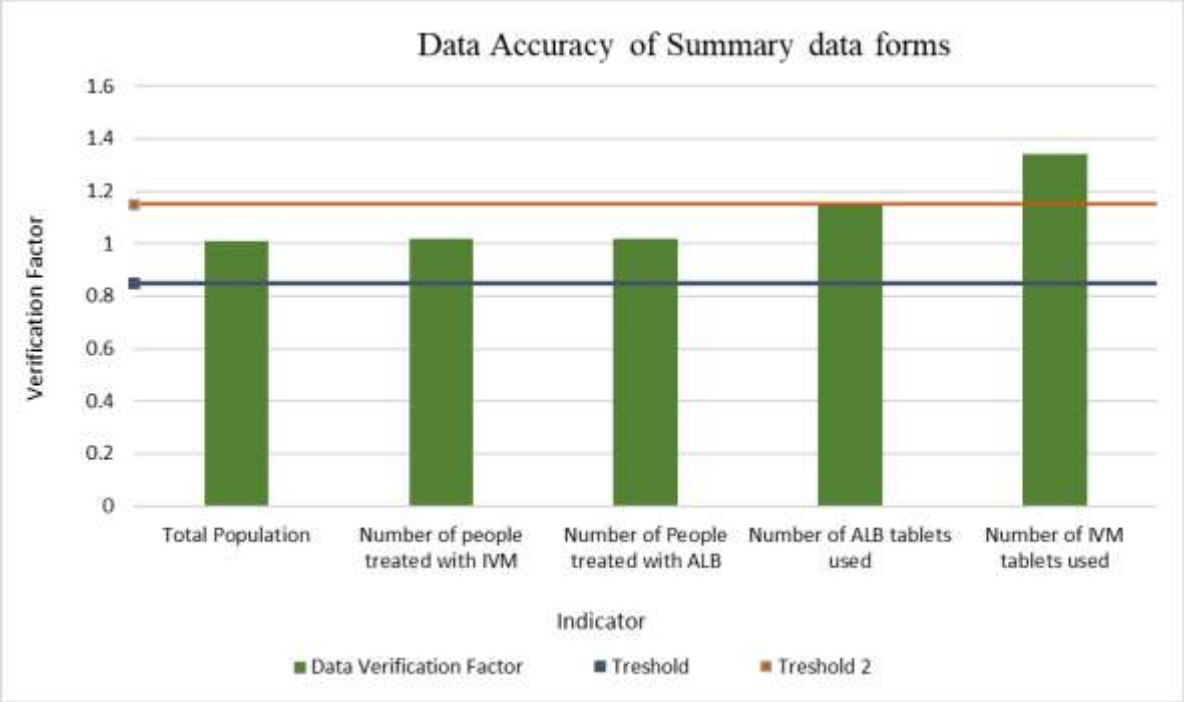


Figure 4: Data summation accuracy at district

Hard Copy data accuracy at health facility level

When assessing the extent to which recounted data matches with the reported data, the measure used was the verification factor (40). When reviewing data for the studied indicators in the 45 MDA registers and health facility summary data forms it was observed that good

accuracy for most of health facilities visited was found for two indicators: number of people treated with albendazole and number of ivermectin tablets used. In these two indicators 75% of the facilities had scored between 0.85 – 1.15. Over reporting was highest for two indicators: total population and number of people treated with ivermectin, 37.5% of the facilities scoring less than 0.85. Underreporting was 12.5% for all the five studied indicators (Table 4).

Table 3: Data match between MDA registers and health summary data forms for the studied indicators

	Percentage of facilities in verification factor				
Verification Factor/Indicator	**Total Population**	**Number of people treated with IVM**	**Number of people treated with ALB**	**Number of ALB tablets used**	**Number of IVM tablets used**
Overreporting (<0.85)	37.5%	37.5%	12.5%	25%	12.5%
Accurate (0.85 – 1.15)	50%	50%	75.0%	62.5%	75.0%
Underreporting (>1.15)	12.5%	12.5%	12.5%	12.5%	12.5%

4.4 Technical and organizational factors for data quality

Technical and organizational factors for data quality were assessed in both district and health facility level. At district level questionnaires collected information on this while at health facility level, questionnaires were used together with the key informant interviews with the frontline health workers to get the deep understanding of the technical factors associated with data quality.

i. At district level

The NTD MIS system seems to be easy usable for data entry, however it has some constraints like the difficulty in making corrections in case you have entered any error in the form. In terms of data management, the coordinators have attended data management training only once, however this limits their capacity in data management and data management skills. Regional and national NTD team provides supporting in giving directory on data storage but does not give real time support during data collection and compilation. The overall assessment of technical factors then revealed that there is limited skills and support at district level which can highly be linked to the incompleteness of reports and inaccuracy of data that was found during assessment of data accuracy and completeness of Lymphatic Filariasis MDA data of November 2018, however the coordinators claimed to be able to perform all of the important data quality assurance and use components, therefore this seems they put much effort on capacitating themselves in data management skills.

The organizational factors at the district seems to have high impact on the data quality for the Lymphatic Filariasis MDA data, there is sense of responsibility as there is assigned person for checking the data quality, also there is good practice of assessing the quality of data after they are entered into MIS, however there seems to be gap in the provision of feedback to the health facilities about the quality of their reports, this highly contribute to poor data management and knowledge at the health facilities.

ii. At Health Facility Level

At health facility level, most staffs receive support from the district level (7 out of 8 frontline health workers), this shows that they are capacitated by the district NTD team, there was only one (1/8) respondent who claimed to have ever attended data management training therefore there is limited data management skills, though they get support from district level.

The findings from the interviews that focused on gaining deep understanding of the organizational and technical factors for data quality have revealed that are factors that affect the data quality at the health facility level, first the data in the registers are of poor quality and

which they claim to be **associated with** the inadequate skills of community drug distributors filling registers and poor capacity building on data management;

iii. Discrepancy affecting data quality

Data inaccuracy

Data inaccuracy was found to be a one of the issues affecting data quality of the Lymphatic Filarisis MDA data especially in the registers filled by the community drug distributors (CDDs). Key informants reported inaccurate data characterized by wrong data recorded in the registers; un-entered data and forged data were found to affect the data management process. Informants from this study revealed that sometimes CDDs forget to fill the registers after they have dispensed drugs to the clients by assuming that they are going to fill the registers later which lead to recording wrong data. They sometimes also forge the data after finding out that they have forgotten the details of the client. One of the key informants pointed out that;

> *"Sometimes you may find registers were not filled accurately. Healthcare providers assume that they are going to fill them after they a back to the center; only to find out they have forgotten the details, which ultimately lead to wrong data recorded"(KI-01)*

Data inconsistency

The presence of inconsistent data attributed by duplicates, redundant data, mismatching of registers' data were mentioned as lymphatic filariasis MDA data management process. Informants reported that sometimes the same data may be recorded more than once as you find details of the client previously recorded are the same as the next client. It was also revealed that sometimes there is mismatching between data recorded and drugs dispensed.

> *"Data inconsistency is sometimes revealed due to mismatching of recorded data as compared to drugs distributed" (KI-03)*

Another key informant also said that;

> *"We have encountered several times that the same data has been recorded twice. We revealed this after finding same details of the particular client have been recorded the same to another client; which this case is rarely possible" (KI-2)*

Untimely recording and transferring data

It has been revealed that, there is issue of poor timeliness of submission of registers, data are not timely recorded in the register, and lately transferred to the health facility and later late to the district. Making it not easily to make data insight for improvement of MDA coverage. Informants also revealed that due to procrastination that they will record later, CDDs record the data late which makes it question their validity and accuracy. It was also revealed that it is distant from the center to district. This leads to late transfer of the data as they sometimes fail to get the transport on time. One of the key informants spotted that;

> *"You may find that when the deadline arrives for delivery of the register; you are told right now we do not have the transport so we ask you to bear it until tomorrow someone on the board is ready to bring us" (KI-6)*

The findings also revealed that the discrepancies that were found in data quality as stated by the respondents is associated by the factors such as

i. Inadequate and poorly skilled personnel

Data Management Knowledge

The skill of data management is very crucial in ensuring to have good quality data at all levels of data compilation and report writing. In the study informants revealed that availability of competent number of CDDs for collection and filling the registers was critical for the successful implementation of the data management process in the Lymphatic filariasis MDA at all levels. However, the findings have shown that, there is limited data management knowledge among CDDs as their selection criteria is anyone who knows how to read and write and knows well the community that he/she is serving.

> *"There are a limited number of CDDs with knowledge of NTD data collection process and the ones available are not health professionals; it is just the people chosen from the community, they are poorly trained."(KI-07)*

Over-tasked

The overwhelming of the frontline health workers at health facilities pose the issue of maintaining good quality data of Lymphatic Filariasis MDA. They informants suggested that frontline health workers at the health facility are sometimes over tasked as they are being overwhelmed with other responsibilities like attending the patients and MDA involves only 2 frontline health workers from each health facility. Also, at the hamlet 2 CDDs are sometimes not enough compared to the workload. They suggested that if more staff were involved in MDA it could be easy to delegate tasks to others hence things could be done timely and efficiently.

> *"There are lots of papers to be filled which is hard for few people to do accomplish the task timely. Also, I suggest more that than two CDD worker should go to the community during drugs dispensing so as when the other dispenses another record the data." (KI-3)*

Another key informant suggested that;

> *"It is advisable to increase the number of health facility workers so that by the last day of data compilation we will have more than one person depending on our catchment area and outreach so we can cover all these data*
>
> *areas on a timely and accurate basis" (KI-4)*

ii. Poor capacity building

Skills on data management

The study findings showed that there are limited skills concerning data management process among the health facility workers. This was since some of them were never trained on data management at all and those who ever attended training reported to have attended long time ago. Some also reported to have poor knowledge on data management process. One of the key informants reported that;

> *"I have never attended training in data management. I have only attended training on drug distribution" (KI-02)*

Another client also said that;

> *"I went but it has been a while. It was a tutorial on register filling, but not these current ones" (KI-05)*

Limited focus of MDA training on data management

Also, informants raised the issue of Lymphatic Filariasis MDA trainings having poor focus on data management in the trainings they have ever attended. This was because trainings were of a very short period of time and the focus was on how they should dispense the drugs.

> *"We are often called when the Lymphatic Filariasis MDA wants to get started, we get oriented, then the second day work gets underway, but there are no special trainings for several weeks. Lymphatic filariasis drugs have regular updates, so it is best to have training that is more than one day discussing it" (KI-05)*

iii. Poor infrastructure for files storage

Limited space to store data

Limited space for storing paper-based data recording was found to be among the stumbling blocks of data management as revealed by key informants. They reported that the space was not enough and even the arrangement was chaos; and since the papers are so many it makes it hard to manage them. They suggested that replacement of papers with electronic data storage could be redemption. One of the key informants revealed that;

> *"We have got a lot of registers filled at our center. There is no enough space for storing these data, so you find we keep any place as long as we know where to find it when we need it." (KI-6)*

Misplacement of the registers

Informants also raised the issue of misplacement of the registers that are having lymphatic filariasis MDA data. Due to chaos arrangement they sometimes cannot find them as they do not know where they put.

They also reported that they sometimes spend a lot of time trying to find the register they need when they want to review a certain data. One of the key informants reported that;

> *"Here at our center we store data in form of hardcopy. We have been finding ourselves having a lot of data which we cannot manage them well. We sometimes store them in a place we believe we can remember, but often time it happens they are lost or misplaced so we lose the data or it consumes a lot of time to get them" (KI-3)*

CHAPTER FIVE

5.0 DISCUSSION

The study focused in assessing the quality of Lymphatic Filariasis MDA data in terms of completeness and accuracy of data and the technical and organizational factors associated with data quality. The indicators assessed were; total population, number of people treated with ivermectin, number of people treated with albendazole, number of albendazole tablets used and number of ivermectin tablets used. The assessment of technical and organizational factors for data quality was done by administering questionnaires to participants at district level and at health facilities was done by questionnaires and interviews with the health facility in to gain deep understating of these factors.

Data completeness

The findings of assessing data completeness of Lymphatic Filariasis Mass Drugs Administration (MDA) in this study showed that there is good practice of hard copy reports storage in all levels of data collection and compilation, these findings were almost similar to the study conducted in Ethiopia as it was found that 82% of health departments visited were found to keep patient registration and HIS monthly reports(37).

Completeness of data for indicators varied from health facility summary data forms filled by the health facility workers to MDA registers that are filled by the community drug distributors (CDDs) as was found to be good in health facility summary data forms compared to MDA registers. This poor completeness of data in the registers compared to the health facility summary forms can be associated with minimal data quality checking skills of the health facility workers which can then be associated with the limited data management training to the health facility workers also the study revealed that the data quality itself is poorly understood among the health facility workers as compared to the district NTD coordinators working at the district level. Similar findings was revealed in the study conducted in assessing the impact of routine data quality assessments on electronic medical record data quality in Kenya whereby new staff that were deployed without receiving adequate training could not maintain the data

quality of the EMR system studied (44). These findings for health facility summary data forms were good compared to those obtained in the study of assessing the quality of routine facility data for monitoring priority maternal and newborn indicators in DHIS2 in Gombe State, Nigeria, facilities reported a value for these data in less than 25% of expected monthly reports and less than 33% of submitted monthly reports(57).

Data completeness was poor in the electronic data storage as there was minimal reporting of the MDA data in the NTD MIS by the district coordinators. Similar findings was obtained from the study of assessing the quality of routine facility data for monitoring priority maternal and newborn indicators in DHIS2 in Gombe State, Nigeria whereby health facility data DHIS2 were incomplete at least 40% of the time, and showed inconsistencies over time, between related indicators, and with an external data source(57). This limited use of NTD MIS can be associated with the minimal support and feedback provided by the region NTD coordinators and staffs at national level as all the district coordinators responded that they receive inadequate support and feedback from national level especially in data compilation, the similar factor for poor HMIS data quality was found in quantitative data quality assessment study report Malawi as inadequate HMIS supervision led to poor data quality in the HMIS(14). The low utilization is also linked to the stated challenges by the respondents which are the difficulty of making the corrections after wrong entries of data**.**

Data Accuracy

Data Accuracy measure was found to be better in the electronic storage in NTD MIS compared with the hard copies as well as the different levels of data aggregation.. These findings are similar to study conducted in Ghana which found that completeness to be estimated at 99.1 % for routine maternal health data in aggregate forms and 100% in the DHIS(58). For the data quality in the hard copies the findings are similar to those from the study conducted in Tanzania as it showed lower completeness rates were found in Tanzania with a value of 64.2% for paper records(49). Similar findings was found in the study that compared data accuracy in the electronic database and in the hard copies whereby mistakes such as typographical errors, decimal point faults or illogical values for the variables glucose,

hemoglobin, blood pressure, heart rate and culture bottle weight before and after incubation of blood were reduced from 7% in the paper-based questionnaires to 1% in the electronic data collection(59). The difference in data accuracy between electronic data storage and hard copies data storage might be associated with the data quality checks that are place in databases to limit errors in data entry and data summation.

The study showed that the aggregation at district level had minor errors compared at the health facilities. The existing difference of data accuracy at district level and health facility level might be associated with the coordinators being having high education level compared to the facility frontline health workers, have many chances of attending most of the data management training, receiving feedback from national level and having access to computers therefore can use computer software like excel to perform the summation which by then reduces errors in summation. This can be improved if both the coordinators and the health facility workers receive data management training and mentorship on data quality checks equally. Also, by the scrutiny from their supervisors and the national data management team.

In the health facilities data accuracy was not good as it was observed over-reporting and underreporting issues existed. Similar findings was obtained from the study of assessing the quality of routine facility data for monitoring priority maternal and newborn indicators in DHIS2 in Gombe State, Nigeria whereby there was issue of facility underreporting 10%-60% of the events documented in facility registers(57). This is linked with the poor data management training to the health facility workers as only one received the data management training and only once, also there is over-reporting for some indicators as they want to be seen with the good performance in MDA coverage that is not real.

Organizational and Technical Factors for data quality

The findings have shown that the poor quality of Lymphatic Filariasis MDA data is mainly on incompleteness of the registers, lack of timeliness and poor accuracy. This has been found during the review of the data recording documents as well as in the interviews with the frontline health workers. Client responded.

"*Sometimes you may find registers were not filled accurately. Healthcare providers assume that they are going to fill them after they a back to the center; only to find out they have forgotten the details, which ultimately lead to wrong data recording*" (KI-01)

Another client also added on data accuracy *"Data inconsistency is sometimes revealed due to mismatching of recorded data as compared to drugs distributed" (KI-03)*

Another client added on timeliness *"You may find that when the deadline arrives for delivery of the register; you are told right now we do not have the transport so we ask you to bear it until tomorrow someone on the board is ready to bring us" (KI-6)*

These poor data quality are highly contributed by the poor feedback from higher level to lower level, inadequate skilled personnel, poor capacity building, difficult in using the electronic data storage system at district level, poor technical support and poor supportive supervision and poor data quality checks. These factors can be grouped into behavioral, technical and organizational factors for data quality. In the interventions for data quality conducted in the district of Beghi District in West Wollega, Oromia in Ethiopia with provision of on-job training, supportive supervision, data audit and well as performance review meeting to frontline health workers. After the project, evaluation results showed that proportion of HMIS data accuracy has been increased from about 65% before to 87% after interventions. Similarly, level of HMIS data completeness has been increased from about 42% before to 100% after intervention(37). This shows that the strengthening of these interventions has direct impact on the quality of data that is collected and compiled.

Limitations of the study

The study aimed at studying the data completeness and accuracy and the organizational and technical factors associated with these data quality characteristics. The study was faced by the issue of missing of more than half of the health facility summary data forms that were required to be filled in the NTD MIS which then lead to assess only 42% of the health facilities in data accuracy.

In the conduct of interview the criteria of choosing the health facility workers that are supposed to have worked in LF MDA more than once then limited number of people to be interviewed which were then 8.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

NTD data completeness and accuracy on total population, number of people treated with ivermectin, number of people treated with albendazole, number of albendazole tablets used and number of ivermectin tablets used indicators is still poor in Kibaha district council. The completeness of LF MDA data was found to be good at district level and varying among health facilities. Also, for the data stored in the electronic database had issues with completeness as most of the health facility data were not entered in the NTD MIS. Data accuracy also varied with the level of data compilation and method of data storage. For the level of data compilation, accuracy was good at district level as 4 out of 5 indicators had good accuracy measure while at health facilities 2 out of 5 indicators had good accuracy measure also for the data stored in NTD MIS only 2 out of 5 indicators had good accuracy measure.

The poor quality status of the data can be due to technical and organizational factors like low participation of the health facility workers in data management training, minimal support from supervisors, lack of sense of responsibility among data collectors and limited number of people to check the data quality of the registers at the health facilities as those that compile data have a lot of other duties.

6.2 Recommendations

- The Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) in collaboration with Councils and Partners should allocate funds to educate health workers at district and health facility level on the importance of data management and data accuracy and data completeness.
- Data collected at both health facility and district level should be checked especially in completeness and accuracy before data compilation or sharing to the next level
- National level and development partners should support regional and district NTD teams to conduct regular, comprehensive, and effective supportive supervision including data quality assessment (DQA).

- The MoHCDGEC and the implementing partners should revise the supervision checklist, so it includes all the important aspects of data quality which are accuracy and completeness and the associated factors
- Further researches to be conducted to assess the quality of MDA data for the other NTDs that are prevailing in Kibaha DC so to provide more information on the MDA data quality for all of the NTDs in the district

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APPENDICES

Appendix 1a: District Questionnaire – English version

A DISTRICT QUESTIONNAIRE TO ASSESS THE QUALITY OF LYMPHATIC FILARIASIS MASS DRUGS ADMINISTRATIONS DATA

KIBAHA DISTRICT COUNCIL – PWANI, TANZANIA

INSTRUCTIONS
Please use your time to read and ask questions properly from this questionnaire with your best capability. Circle/fill the answer mentioned by the informant. Take time to explain to him/her in case of clarification needed. Some questions might have more than one answer.

Key respondent: District NTD Coordinator

DISTRICT IDENTIFICATION

Name of the District: _____

Name of the Region: _____

Title of the person Interviewed (NTD Coordinator – Health, NTD Coordinator – Education): _____

Level of Education (Circle the highest level)

a) Primary education
b) Secondary education
c) Certificate course
d) Diploma
e) Bachelor Degree
f) Masters

Others (specify) _____

Period of working with NTDCP (in years): _____

Contact Telephone number/mobile: _____

Name of the Interviewer: _____

Date of Assessment: _____

PART A: DATA QUALITY ASSESSEMENT

Data Processing/Analysis

DQDQ 1a: Are you using the NTD MIS for reporting lymphatic filariasis MDA data?

1. Yes 2. No

DQDQ 1b: If yes, how often?

1. Frequently 2. Sometimes

DQDQ 2: Does the database produce the following?

a) Data summary report for the districts

1.Yes 2. No

b) Alerts on the performance of health facilities

1.Yes 2. No

c) Comparisons among facilities within the district

1.Yes 2. No

d) Comparisons with district/region/national targets

1.Yes 2. No

e) Comparisons of data over time (monitoring over time)

1.Yes 2. No

DQDQ 3: Do you find the NTD MIS software to be user-friendly?

1.Yes 2. No

DQDQ 4: Do you experience any challenges with NTD MIS?

1.Yes 2. No

If yes mention them

_____

_____

_____

PART B: SYSTEMS ASSESSMENT

M&E Structure, Functions and capabilities

SAD 1: Is there a designated staff responsible for reviewing the quality of data?

1. Yes 2. No

SAD 2: Have all relevant staffs received training on data management?

1. Yes 2. No

Data Management Processes

SAD 3: Do you perform data quality checks of health facility reports before entry into NTD MIS?

1.Yes 2.No

SAD 4: Do you perform data quality checks of reports after entry into NTDCP MIS?

1.Yes 2.No

SAD 5: Do you provide feedback to the health facilities about the quality of their data reports?

1.Yes 2.No

SAD 6: Is there are written procedure to address late, incomplete, inaccurate and missing reports?

1.Yes 2.No

Technical assistance

SAD 7: Does the national M&E team and regional coordinators provide you with technical support with regard to lymphatic filariasis data management?

1.Yes 2. No

SAD 8: Does the national M&E team and regional coordinators provide you supportive supervision during lymphatic filariasis MDA data compilation?

1.Yes 2. No

Training

SAD 9: Did you receive training on lymphatic filariasis MDA data management? *(If Yes, answer question SAD 10, if No skip to Question SAD 11)*

1.Yes 2. No

SAD 10: How many times did you receive the training

1. Once 2. More than once

Lymphatic filariasis MDA data management knowledge

SAD 11: Please circle the skills and capabilities that you possess in Lymphatic Filariasis MDA data management (You can circle more than one option)

- I can check data accuracy
- I can calculate percentages correctly
- I can explain the implication of results of data analysis
- I can use data for identifying service performance gaps and setting performance targets
- I can use data for making operational decision making

Appendix 1b: District Questionnaire – Swahili version

DODOSO LA KISWAHILI NGAZI YA WILAYA KUPIMA UBORA WA TAKWIMU ZA UMEZESHAJI DAWA KWA UGONJWA WA MATENDE NA MABUSHA

HALMASHAURI YA WILAYA YA KIBAHA VIJIJINI – PWANI, TANZANIA

MAELEKEZO
Tafadhali tumia muda wako kuuliza maswali kwa uhakika kutoka katika dodoso hili. Pia toa ufafanuzi pale utakapohitajika. Kuna maswali mengine yatakuwa na majibu Zaidi ya moja

Mhusika kuu: Mratibu wa Mpango wa taifa wa kudhibiti Magonjwa yaliyokuwa hayapewi kipaumbele ngazi ya wilaya.

UTAMBULISHO WA WILAYA

Jina la Wilaya: _____

Jina la Mkoa: _____

Cheo cha Mtumishi anayehojiwa (Mratibu wa NTD afya, Mratibu wa NTD elimu): _____

Kiwango cha elimu (Zungushia kiwango cha juu Zaidi ulichonacho)

a) Elimu ya msingi
b) Elimu ya Sekondari
c) Kiwango cha cheti
d) Stashahada
e) Stashahada ya juu
f) Shahada
g) Shahada ya uzamili

Mengineyo (fafanua) _____

Muda uliofanya kazi na Mpango huu: _____

Namba ya simu: _____

Jina la anayehoji: _____

Tarehe ya kupima: _____

SEHEMU A: UPIMAJI WA UBORA WA TAKWIMU

Unyambuaji wa Takwimu

DQDQ 1a: Je, Unatumia mfumo wa NTD wa kielectronik kuripoti takwimu za umezaji dawa?

1.Ndiyo 2. Hapana

DQDQ 1b: Kama ndio mara ngapi?

1. Mara kwa mara 2. Mara chache

DQDQ 2: Je mfumo wa NTD MIS unaweza kufanya yafuatayo?

a) Kutoa taarifa za muhtasari waumezaji dawa kwa ngazi ya mkoa

1. Ndiyo 2. Hapana

b) Kiashiria cha ufanisi wa umezaji dawa kwa ngazi za kituo cha tiba na wilaya

1. Ndiyo 2. Hapana

c) Kulinganisha takwimu za wilaya mbalimbali katika mkoa huo

1. Ndiyo 2. Hapana

d) Kulinganisha takwimu za umezaji dawa na malengo

1. Ndiyo 2. Hapana

e) Kulinganisha takwimu za kipindi fulani

1. Ndiyo 2. Hapana

DQDQ 3: Je mfumo huu wa utunzaji wa taarifa wa NTD MIS una urahisi katika kuutumia?

1. Ndiyo 2. Hapana

DQDQ 4: Unapata changamoto zozote unapotumia NTD MIS?

1. Ndiyo 2. Hapana

Kama Ndiyo zitaje

_____

_____

_____

SEHEMU B: KUPIMA MFUMO WA TAKWIMU

Mfumo wa Usimamizi na Ufuatiliaji, Majukumu na Uwezo

SAD 1: Je kuna mtumishi ambaye ana majukumu ya kukagua ubora wa takwimu?

1. Ndiyo 2. Hapana

SAD 2: Je watumishi wote wa mpango wamepokea mafunzo ya utunzaji wa takwimu?

1. Ndiyo 2. Hapana

Taratibu za mfumo wa utunzaji wa takwimu

SAD 3: Huwa unafanya zoezi la kukagua ubora wa takwimu za vituo vya tiba kabla ya kuziingiza kwenye mfumo wa NTD MIS?

1. Ndiyo 2. Hapana

SAD 4: Huwa unafanya zoezi la kukagua ubora wa takwimu kwenye mfumo wa NTD MIS baada ya kuingiza takwimu?

1. Ndiyo 2. Hapana

SAD 5: Je, huwa unatoa mrejesho kwa watenda kazi ngazi ya kituo cha tiba juu ya ubora wa ripori zao za takwimu?

1. Ndiyo 2. Hapana

SAD 6: Kuna taratibu zilizoainishwa kimaandishi za jinsi ya kushughulikia fomu ripoti ambazo zinachelewa, zenye mapungufu na zinazokosekana?

1. Ndiyo 2. Hapana

Msaada wa kiufundi

SAD 7: Je, kitengo cha usimamizi na ufatiliaji kwa ngazi ya taifa na waratibu wa mkoa huwa wanawapa msaada wa kifundi juu ya utunzaji na utumiaji wa takwimu za umezaji dawa za matende na mabusha?

1. Ndiyo 2. Hapana

SAD 8: Je, kitengo cha usimamizi na ufatiliaji kwa ngazi ya taifa na waratibu wa mkoa huwa wanawapa usimamizi shirikishi wakati wa majumuisho wa takwimu za umezaji dawa za matende na mabusha?

1. Ndiyo 2. Hapana

Mafunzo

SAD 9: Ulipokea mafunzo kwa ajili ya mfumo wa utuzaji wa takwimu? (Kama Ndiyo, jibu swali no SAD 10, kama Hapana ruka hadi swali namba SAD 11)

1. Ndiyo 2. Hapana

SAD 10: Mara ngapi ulipokea mafunzo kwa ajili ya mfumo wa utuzanji takwimu

1. Mara Moja 2. Zaidi ya mara moja

Uelewa juu ya utunzaji wa takwimu za Umezaji dawa za Matende na Mabusha

SAD 11: Tafadhali Zungushia maarifa na ujuzi ulionao kuhusu utunzaji wa takwimu za umezaji dawa za Mantende na Mabusha (Waweza zungushia jibu zaidi ya moja)

- Naweza kukagua usahihi wa takwimu
- Naweza kukokotoa asilimia za umezaji dawa kwa usahihi
- Naweza kuelezea maana ya matokeo baada ya kufanya uchambuzi wa takwimu
- Naweza kutumia takwimu kutambua mapungufu katika ufanisi wa zoezi na kupanga malengo ya utendaji kazi
- Naweza kutumia takwimu kwa ajili ya kufanya maamuzi ya utendaji kazi

Appendix 2a: District data quality assessment checklist – English version

A DISTRICT CHECKLITS TO ASSESS THE QUALITY OF LYMPHATIC FILARIASIS MDA DATA

DATA QUALITY ASSESSEMENT

Data Completeness

DQDC 1 Check for the availability of the reports in the NTD MIS for lymphatic filariasis MDA of November 2018

DQDC 1a: How many health facility reports should be in the NTD MIS? _____

DQDC 1b: How many health facility reports are there in the NTD MIS? _____

DQDC 2 Check for the availability of the data for the selected indicators in the health facility summary data forms for MDA of November 2018

Fill in the reported data for each of the indicator in the respective health facility report

Name of the health facility	**Indicator**				
	Total population	Number of people treated with Ivermectin	Number of people treated with Albendazole	Number of Albendazole medicine used	Number of Ivermectin medicine used

DQDC 2a: How many health facility reports in the NTD MIS have data for 0 out of 5 selected indicators? _____

DQDC 2b: How many health facility reports in the NTD MIS have data for 1 out of 5 selected indicators? _____

DQDC 2c: How many health facility reports in the NTD MIS have data for 2 out of 5 selected indicators? _____

DQDC 2d: How many health facility reports in the NTD MIS have data for 3 out of 5 selected indicators? _____

DQDC 2e: How many health facility reports in the NTD MIS have data for 4 out of 5 selected indicators? _____

DQDC 2f: How many health facility reports in the NTD MIS have data for 5 out of 5 selected indicators? _____

Data Accuracy

DQDC 3. *Reaggregate the number from reports received from all health facilities for all of the indicators listed for the lymphatic filariasis MDA of November 2018*

Manual count and sum reported data from the health facility summary data forms for the following indicators

S/No	**Indicator Name**	**Reported in the district summary data form**	**Manual count and sum from health facility forms**
1	Total population		
2	Number of people treated with Ivermectin		
3	Number of people treated with Albendazole		
4	Number of Albendazole medicine used		
5	Number of Ivermectin medicine used		

Appendix 2b: District data quality assessment checklist – Swahili version

ORODHA YA KUTATHMINI UBORA WA TAKWIMU ZA UMEZESHAJI DAWA ZA MATENDE NA MABUSHA KWA NGAZI YA WILAYA

UPIMAJI WA UBORA WA TAKWIMU

Ukamilifu wa takwimu

DQDC 1: *Angalia upatikanaji wa ripoti za ugawaji dawa za ugonjwa wa matende na mabusha kwa Novemba 2018 katika NTD MIS*

DQDC 1a: Ripoti ngapi kutoka vituo vya tiba zinatakiwa kuwa katika mfumo wa utunzaji taarifa wa NTD MIS? _____

DQDC 1b: Ripoti ngapi za vituo vya tiba zipo katika NTD MIS? _____

DQDC 2: Angalia upatikanaji wa takwimu kwa viashiria vilivyochaguliwa kwa zoezi la ugawaji dawa za matende na Mabusha lililofanyika Novemba 2018

Jaza takwimu zilizoriptiwa kwa kila kiashiria kwa kituo husika katika NTD MIS

Jina la kituo cha tiba	**Kiashiria**				
	Idadi ya watu wote	Idadi ya watu waliomeza dawa ya Ivermectin	Idadi ya watu waliomeza dawa ya Albendazole	Idadi ya vidonge vya Albendazole vilivyotumika	Idadi ya vidonge vya Ivermectin vilivyotumika

DQDC 2a: Ripoti ngapi za vituo vya tiba katika NTD MIS zina takwimu kwa ajili ya viashiria 0 kati ya viashiria 5 vilivyochaguliwa?_____

DQDC 2b: Ripoti ngapi za vituo vya tiba katika NTD MIS zina takwimu kwa ajili ya viashiria 1 kati ya viashiria 5 vilivyochaguliwa?_____

DQDC 2c: Ripoti ngapi za vituo vya tiba katika NTD MIS zina takwimu kwa ajili ya viashiria 2 kati ya viashiria 5 vilivyochaguliwa? _____

DQDC 2d: Ripoti ngapi za vituo vya tiba katika NTD MIS zina takwimu kwa ajili ya viashiria 3 kati ya viashiria 5 vilivyochaguliwa? _____

DQDC 2e: Ripoti ngapi za vituo vya tiba katika NTD MIS zina takwimu kwa ajili ya viashiria 4 kati ya viashiria 5 vilivyochaguliwa? _____

DQDC 2f: Ripoti ngapi za vituo vya tiba katika NTD MIS zina takwimu kwa ajili ya viashiria 5 kati yaviashiria 5 vilivyochaguliwa? _____

Usahihi wa takwimu

DQDC 7: *Jumuisha takwimu kutoka katika fomu za vituo vya tiba kwa kila kiashiria kwa zoezi la ugawaji dawa wa Novemba 2018*

Hesabu na kujumuisha takwimu zilizoripotiwa katika fomu za majumuisho kituo cha tiba kwa viashiria vifuatavyo

No.	**Jina la kiashiria**	**Jumla Takwimu iliyoripotiwa fomu ya wilaya**	**Jumla kutoka katika fomu za vituo vya tiba**
1	Idadi ya watu wote		
2	Idadi ya watu waliomeza Ivermectin		
3	Idadi ya watu waliomeza Albendazole		
4	Idadi ya vidonge vya Albendazole vilivyotumika		
5	Idadi ya vidonge vya Ivermectin vilivyotumika		

Appendix 3a: Health Facility Questionnaire – English version

A HEALTH FACILITY QUESTIONNAIRE TO ASSESS THE QUALITY OF LYMPHATIC FILARIASIS MASS DRUGS ADMINISTRATION DATA

KIBAHA DISTRICT COUNCIL – PWANI, TANZANIA

INSTRUCTIONS

Please use your time to read and ask questions properly from this questionnaire with your best capability. Circle/fill the answer mentioned by the informant. Take time to explain to him/her in case of clarification needed. Some questions might have more than one answer.

Key respondent: Frontline Health Workers working with NTDCP

HEALTH FACILITY IDENTIFICATION

Name of the region: _____

Name of the district: _____

Name of the Health facility: _____

Type of facility (Circle)

a) National Referral Hospital
b) Regional Hospital
c) District hospital
d) Health Center
e) Dispensary
f) Other (Specify) _____

Title of the person Interviewed: (Facility in charge, clinician, lab technician, health officer, nurse, etc.) _____

Level of Education (Circle the highest level)

a) Primary education
b) Secondary education
c) Certificate course
d) Diploma
e) Bachelor Degree
f) Masters
g) Other (Specify) _____

Contact Telephone number/mobile: _____

Name of the Interviewer: _____

Date of Assessment: _____

PART A: DATA QUALITY ASSESSEMENT

Data Processing/Analysis

DQHFQ 1a: Does this facility have NTD MDA registers?

1.Yes 2. No

DQHFQ 1b: Does this facility keep copies of the reports which are sent to the district office?

1. Yes, Observed 2. No

DQHFQ 2: Do you experience any challenges with filling the health facility summary form for lymphatic filariasis MDA data?

1.Yes 2.No

If yes mention them

_____

_____

_____

_____

PART B: SYSTEM ASSESSMENT

Technical assistance

SAHF 1: Does the district NTD coordinators provide you with technical support with regard to lymphatic filariasis data management?

1.Yes 2. No

SAHF 2: Does the district NTD coordinators provide you supportive supervision during lymphatic filariasis MDA data compilation?

1.Yes 2. No

Lymphatic filariasis MDA data management knowledge

SAD 1: Please circle the skills and capabilities that you possess in lymphatic filariasis MDA data management (You can circle more than one option)

- I can check data accuracy
- I can calculate percentages correctly
- I can explain the implication of results of data analysis
- I can use data for identifying service performance gaps and setting performance targets
- I can use data for making operational decision making

Appendix 3b: Health Facility Questionnaire – Swahili version

DODOSO LA KISWAHILI NGAZI YA KITUO CHA TIBA KUPIMA UBORA WA TAKWIMU ZA UGAWAJI DAWA KWA UGONJWA WA MATENDE NA MABUSHA

HALMASHAURI YA WILAYA YA KIBAHA VIJIJINI – PWANI, TANZANIA

MAELEKEZO Tafadhali tumia muda wako kuuliza maswali kwa uhakika kutoka katika dodoso hili. Pia toa ufafanuzi pale utakapohitajika. Kuna maswali mengine yatakuwa na majibu zaidi ya moja

Mhusika kuu: Mtendaji wa shughuli za Mpango wa taifa wa kudhibiti magonjwa yaliyokuwa hayapewi kipaumbele ngazi ya kituo cha tiba

UTAMBULISHO WA KITUO CHA TIBA

Jina la Mkoa: _____

Jina la Wilaya_____

Jina la Kituo_____

Aina ya kituo (zungushia)

a) Hospitali ya Taifa
b) Hospitali ya Mkoa
c) Hospitali ya Wilaya
d) Kituo cha Afya
e) Zahanati
f) Nyingine (taja) _____

Cheo cha Mtumishi anayehojiwa: (Mfano. Mganga Mkuu wa Wilaya, Muuguzi Mkuu, anayehusika na takwimu, Tabibu, Daktari) _____

Kiwango cha elimu (zungushia kiwango cha juu)

a) Elimu ya msingi
b) Elimu ya sekondari
c) Kiwango cha cheti (Astashahada)
d) Stashahada
e) Stashahada ya juu
f) Shahada
g) Shahada ya Uzamili
h) Mengineyo (fafanua) _____

Namba ya simu ya kituo/kiganjani: _____

Jina la anayehoji: _____

Tarehe ya kupima: _____

SEHEMU A: UPIMAJI WA UBORA WA TAKWIMU

Unyambuaji wa Takwimu

DQHFQ 1a: je, Kituo kina rejista kwa ajili ya kurekodi takwimu za umezeshaji dawa za Matende na Mabusha?

1.Ndiyo 2. Hapana

DQHFQ 1b: Je kituo hiki kinatunza nakala ya taarifa za umezaji dawa baada ya kutuma wilayani?

1. Ndiyo, zimeonekana 2. Hapana

DQHFQ 2: Unapata cangamoto zozote katika ujazaji wa takwimu katika fomu ya majumuishao ya kituo cha tiba?

1.Ndiyo 2. Hapana

Kama ndiyo zitaje

_____

_____

SEHEMU B: KUPIMA MFUMO WA TAKWIMU

Msaada wa kiufundi

SAHF 1: Je, waratibu wa wilaya huwa wanawapa msaada wa kifundi juu ya utunzaji na utumiaji wa takwimu za umezaji dawa za matende na mabusha?

1.Ndiyo 2. Hapana

SAHF 2: Je, waratibu wa wilaya huwa wanawapa huwa wanawapa usimamizi shirikishi wakati wa majumuisho wa takwimu za umezaji dawa za matende na mabusha?

1.Ndiyo 2. Hapana

Uelewa juu ya utunzaji wa takwimu za Umezaji dawa za Matende na Mabusha

SAD 1: Tafadhali Zungushia maarifa na ujuzi ulionao kuhusu utunzaji wa takwimu za umezaji dawa za Mantende na Mabusha (Waweza zungushia jibu zaidi ya moja)

- Naweza kukagua usahihi wa takwimu
- Naweza kukokotoa asilimia za umezaji dawa kwa usahihi
- Naweza kuelezea maana ya matokeo baada ya kufanya uchambuzi wa takwimu
- Naweza kutumia takwimu kutambua mapungufu katika ufanisi wa zoezi na kupanga malengo ya utendaji kazi
- Naweza kutumia takwimu kwa ajili ya kufanya maauzi ya utendaji kazi

Appendix 4a: Health facility data quality assessment checklist – English version

A HEALTH FACILITY CHECKLITS TO ASSESS THE QUALITY OF LYMPHATIC FILARIASIS MDA DATA

Data Completeness

DQHFC 1: Check for the availability of the registers in the health facility for the MDA conducted in November 2018

DQHFC 1a: How many registers should be there from community drug distributors CDDs? _____

DQHFC 1b: How many registers are there in the health facility? _____

DQHFC 2: Check for the availability of the data for the selected indicators in the community MDA registers data forms for MDA of November 2018

Write the reported data for each of the indicators for the respective hamlet register

Register	**Indicator**				
	Total population	Number of people treated with Ivermectin	Number of people treated with Albendazole	Number of Albendazole medicine used	Number of Ivermectin medicine used

DQHFC 2a: How many registers have data for 0 out of 5 selected indicators? _____

DQHFC 2b: How many registers have data for 1 out of 5 selected indicators? _____

DQHFC 2c: How many registers have data for 2 out of 5 selected indicators? _____

DQHFC 2d: How many registers have data for 3 out of 5 selected indicators? _____

DQHFC 2e: How many registers have data for 4 out of 5 selected indicators? _____

DQHFC 2f: How many registers have data for 5 out of 5 selected indicators? _____

Data Accuracy

DQHFC 3. Reaggregate the number from reports received from all hamlets for all of the indicators listed for the MDA of November 2018

Manual count and sum reported data from the community MDA registers for the following indicators

S/No	**Indicator Name**	**Reported in the district summary data form**	**Manual count and sum from health facility forms**
1	Total population		
2	Number of people treated with Ivermectin		
3	Number of people treated with Albendazole		
4	Number of Albendazole medicine used		
5	Number of Ivermectin medicine used		

Appendix 4b: Health facility data quality assessment checklist – Swahili version

ORODHA YA KUTATHMINI UBORA WA TAKWIMU ZA UMEZESHAJI DAWA ZA MATENDE NA MABUSHA KWA NGAZI YA KITUO CHA TIBA

Ukamilifu wa takwimu

DQHFC 1 *Angalia upatikanaji wa rejista za ugawaji dawa za Matende na Mabusha kwa Mwezi Novemba 2018 katika kituo husika*

DQHFC 1a: Rejista ngapi za ugawaji dawa za Matende na Mabusha zinatakiwa kuwepo kituoni kutoka kwa wagawa dawa katika jamii?_____

DQHFC 1b: Rejista ngapi za ugawaji dawa za Matende na Mabusha zipo kituoni kutoka kwa wagawa dawa katika jamii?_____

DQHFC 2: *Angalia upatikanaji wa takwimu kwa viashiria vilivyochaguliwa kwa zoezi la ugawaji dawa za matende na Mabusha lililofanyika Novemba 2018*

Jaza takwimu zilizoriptiwa kwa kila kiashiria kwa rejista husika

Jina la kituo cha tiba	**Kiashiria**				
	Idadi ya watu wote	Idadi ya watu waliomeza dawa ya Ivermectin	Idadi ya watu waliomeza dawa ya Albendazole	Idadi ya vidonge vya Albendazole vilivyotumika	Idadi ya vidonge vya Ivermectin vilivyotumika

DQHFC 2a: Rejista ngapi zina takwimu kwa ajili ya viashiria 0 kati ya viashiria 5 vilivyochaguliwa?_____

DQHFC 2b: Rejista ngapi zina takwimu kwa ajili ya viashiria 1 kati ya viashiria 5 vilivyochaguliwa?_____

DQHFC 2c: Rejista ngapi zina takwimu kwa ajili ya viashiria 2 kati ya viashiria 5 vilivyochaguliwa?_____

DQHFC 2d: Rejista ngapi zina takwimu kwa ajili ya viashiria 3 kati ya viashiria 5 vilivyochaguliwa?_____

DQHFC 2e: Rejista ngapi zina takwimu kwa ajili ya viashiria 4 kati ya viashiria 5 vilivyochaguliwa?_____

DQHFC 2f: Rejista ngapi zina takwimu kwa ajili ya viashiria 5 kati ya viashiria 5 vilivyochaguliwa?_____

Usahihi wa takwimu

DQHF 3. *Jumuisha takwimu kutoka katika rejista za vitongoji kwa kila kiashiria kwa zoezi la ugawaji dawa wa Novemba 2018*

Hesabu na kujumuisha takwimu zilizoripotiwa katika rejista za vitongoji kwa viashiria vifuatavyo

No.	**Jina la kiashiria**	**Jumla Takwimu iliyoripotiwa katiks fomu ya kituo cha tiba**	**Jumla kutoka katika rejista za vitongoji**
1	Idadi ya watu wote		
2	Idadi ya watu waliomeza Ivermectin		
3	Idadi ya watu waliomeza Albendazole		
4	Idadi ya vidonge vya Albendazole vilivyotumika		
5	Idadi ya vidonge vya Ivermectin vilivyotumika		

Appendix 5a: Health Facility Interview Guide – English version

1. Facility Name: _____

2. Facility Type

- National Referral Hospital
- Regional Hospital
- District hospital
- Health Center
- Dispensary
- Other (Specify) _____

3. Facility Location: Urban ☐ Rural ☐

Questions

1. What is your specific role in this health facility during lymphatic filariasis MDA?

- *Probe to find out what does he/she do during lymphatic filariasis MDA especially in data collection*

2. What is your educational background?

3. Can you please describe the routine process of collating data in your health facility after mass drugs administration for lymphatic filariasis?

- *Probe to find out the process of how is data collected after lymphatic filariasis MDA, example; "how do you obtain the data for your health facility after MDA?"*

4. Are there any challenges you encounter in Lymphatic Filariasis data management in your health facility? Please describe.

- *Probe to find out the challenges he/she is facing in managing lymphatic filariasis MDA data, example; "how do you see the process of LF MDA data management?", do you experience any challenges in any of the process in managing LF MDA data e.g. data collection, calculations like MDA coverage etc.*

5. Do you work with anyone to ensure data quality in the health facility? Please describe.

- *Probe to find out if there is anyone else apart from him/her that is responsible of reviewing data and who is that person*

6. Do you attend trainings on Lymphatic Filariasis MDA data management and specifically data quality? How often in a year?

- *If attended training probe to find out what was the training about and what did he/she learn from it*

7. What is your understanding of data quality?

- *Probe to find out his/her understanding of data quality concept example, define data quality and how is it measured*

8. How do you ensure data quality in your health facility?

- *Probe to find what data quality control procedure is he using eg; what do you do to ensure registers and health facility summary forms are well filled?*

9. What are the challenges you encounter ensuring data quality in your facility?

- *Probe to find out the challenges he/she is facing in ensuring quality of lymphatic filariasis MDA data, example; "do you experience any challenges in any of the process in ensuring quality of LF MDA data e.g. completeness, accuracy etc*

Appendix 5b: Health Facility Interview Guide – Swahili version

1. Jina la kituo cha tiba: _____

2. Aina ya kituo (zughushia)

- Hospitali ya Taifa
- Hospitali ya Mkoa
- Hospitali ya Wilaya
- Kituo cha Afya
- Zahanati
- Nyingine (taja) _____

3. Mahali kituo kilipo: Mjini ☐ Kijijini ☐

Maswali

1. Majukumu yako ni yapi katika kituo hiki wakati wa zoezi la ugawaji dawa za Matende na Mabusha?

- *Peleleza kufahamu majukumu yake wakati wa zoezi la ugawaji dawa za Matende na mabusha hasa katika ukusanyaji wa takwimu*

2. Je kiwango chako cha elimu ni kipi?

3. Unaweza ukaelezea mlolongo wa ukusanyaji na uhifadhi wa takwimu za umezeshaji dawa za Matende na mabusha katika kituo chako?

- *Peleleza kufahamu ni jinsi gani takwimu zinakusanywa katika kituo chake baada ya zoezi la ugawaji wa dawa za Matende na Mabusha mfano; "unazipataje data kwa ajili ya kuripoti kwa kituo chako baada ya zoezi la ugawaji wa dawa?"*

4. Kuna changamoto zozote ambazo unazipata katika utunzaji wa takwimu za Matende na mabusha katika kituo chako? Zielezee tafadhali

- *Peleleza kufahamu kama kuna changamoto zozote anazokutana nazo katika utunzaji wa takwimu za umezeshaji dawa za Matende na Mabusha, mfano "unauonaje mfumo mzima wa utunzaji wa takwimu za ugawaji wa dawa za matende na mabusha?, unapata changamoto zozote katika utunzaji wa takwimu hizi mfano ukusanyaji wa takwimu, majumuisho ya takwimu na kukokotoa viashiria kama asilimia za umezaji dawa*

5. Kuna mtu yeyote mayeshirikiana katika kuhakikisha kunakuwa na takwimu bora za umezeshaji wa dawa za matende na mabusha katika kituo hiki? Tafadhali elezea

- *Peleleza kufahamu kama kuna mtu yeyote tofauti na yeye ambaye anakagua ubora wa takwimu za umezeshaji daa za matende na mabusha n ani mtu yupi haswa*

6. Unahudhuria mafunzo kwa ajili ya utunzaji wa takwimu za ugawaji dawa za matende na mabusha? Mara ngapi kwa mwaka huwa unahudhuria?

- *Kama ameshahudhuria mafunzo peleleza kufahamu mafunzo hayo yalikuwaje na alijifunza nini kwenye hayo mafunzo*

7. Unaelewa nini kuhusu ubora wa takwimu?

- *Peleleza kufahamu uelewa wake juu ya ubora wa takwimu mfano; elezea maana ya ubora watakwimu na unapimwaje*

8. Una utaratibu wowote wa kuhakikisha takwimu zako zinakuwa na ubora? Tafadhali elezea.

- *Peleleza kufahamu ni utaratibu gani anautumia kuhakikisha kuwepo kwa takwimu bora mfano nini unafanya kuhakikisha kuwa rejista na fomu ya majumuisho ya kituo cha tiba zimejazwa vizuri?*

9. Changamoto gani unazipata katika kuhakikisha kuwa takwimu zako zinakuwa na ubora?

- *Peleleza kufahamu kama kuna changamoto zozote anazokutana nazo katika kuhakikisha ubora wa takwimu za umezeshaji dawa za Matende na Mabusha, mfano, unapata changamoto zozote katika kuhakikisha ubora wa takwimu za umezeshaji dawaza matende na mabusha mfano ukamilifu wa takwimu na usahihi wa takwimu*

Appendix 6a: Informed consent form - English version

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

CONSENT TO PARTICIPATE IN A STUDY TITLED "ASSESSMENT OF COMPLETENESS AND ACCURACY OF LYMPHATIC FILARIASIS MASS DRUGS ADMINISTRATION IN KIBAHA DISTRICT COUNCIL"

Greetings!

My name is....., from Muhimbili University of Health and Allied Sciences (MUHAS). I am conducting a study on "Assessment of completeness and accuracy of Lymphatic Filariasis Mass Drugs Administration in Kibaha District Council.

Purpose of the Study

The study aims at assessing the quality of Lymphatic Filariasis MDA data. The study involves two parts, one of interview with the designated staffs working with NTD on the status of data quality and data management process. The other part is the is the review of the quality of data which will be in the district and health facilities for the data on MDA conducted in November 2018. The quality of MDA reports will be review of the health facility reports in the NTD MIS at district and at health facility there will be review of the health facility summary forms and registers on the indicators of Total population, Number of people treated with Ivermectin, Number of people treated with Albendazole, Number of Albendazole tablets used and Number of Ivermectin medicine used.

Confidentiality

I am assuring you that all information that are collected from you will be treated confidentially without exposure and will not be used for any other purpose other than this study.

Participation

If you agree to join the study, you will be required to answer all the questions that will be asked by the investigator.

Risks

I assure you that there is no any risk associated with your participation in the study. The answers that you provide for the study won't harm your job or position in any ways.

Rights to Withdraw and Alternatives

Taking part in this study is completely your choice. If you choose not to participate you won't be penalized or treated differently. You can also stop participating in this study any time even if you have already given your consent. Refusal to participate or withdraw from the study will not have any impact in your job, office or position that you are holding for health sector or NTD Program.

Benefits of participation

If you agree to take part in this study you will be contributing to the efforts of strengthening one of the most crucial components of the health system which is health information system. The information collected from you and others who participate in the study will collectively be used by policy makers in strengthening the system which would benefit other Tanzanians. You will receive the feedback about this study upon its completion.

Whom to Contact

If you ever have questions about this study, you should contact the following:

Ms. Veronica Kabona (Principal investigator)

National Institute for Medical Research (NIMR), P.O. Box 9653, Dar es salaam.

Mobile phone: 0756953464, or

Dr. Billy Ngasala (Study supervisor)

Muhimbili University of Health and Allied Sciences, P.O. Box 65001, Dar es salaam

Mobile phone: 0754316369

Also, if you will have questions about your rights as a participant, you may call Prof. Mainen J. Moshi, Chairman of the Senate Research and Publications Committee, P.O. Box 65001, Dar es Salaam. Tel: 2150302-6.

Signature

Do you agree to participate? Write the word ‘yes’ if you agree…….

I, _____ have read the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of participant _____

Signature of investigator _____

Date of signed consent_____

Appendix 6b: Informed consent form - Swahili version

CHOU CHUO KIUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI

FOMU YA RIDHAA KUSHIRIKI KWENYE UTAFITI WA KUPIMA UBORA WA TAKWIMU ZA UGAWAJI DAWA KWA UGONJWA WA MATENDE NA MABUSHA

Habari!

Jina langu ni....., kutoka chou cha chuo kiuu cha afya na sayansi shrikishi Muhimbili. Ninafanya utafiti kwa ajili ya kupima ubora wa takwimu za ugawaji wa dawa kwa ugonjwa wa Matende na Mabusha kwa halmashauri ya wilaya ya Kibaha Vijijini.

Malengo ya utafiti

Utafiti umelenga katika kupima ubora wa takwimu za ugawaji wa dawa kwa ugonjwa wa Matende na Mabusha. Utafiti umegawanyika sehemu kuu mbili, moja ikiwa ni kufanya mahojiano ya maswali na watumishi wanaoshughulika na takwimu za ugawaji dawa kwa magonjwa yaliyokuwa hayapewi kipaumbele juu ya ubora wa takwimu na mifumo ya takwimu. Sehemu nyingine itakuwa ni kukagua ubora wa takwimu za ngazi ya wilaya na kituo cha tiba kwa zoezi la ugawaji dawa lililofanyika mwezi Novemba 2018. Ubora wa takwimu utapimwa kwa kukagua ripoti za kituo cha tiba katika NTD MIS wilayani na katika kituo cha tiba kwa kukagua rejista na fomu za majumuisho ngazi ya kituo cha tiba kwa viashiri vya Idadi ya watu wote, Idadi ya watu waliomeza vidonge vya Ivermectin, Idadi ya watu waliomeza vidonge vya Albendazole, Idadi ya vidonge vya Albendazole vilivyotumika na idadi ya vidonge ya Ivermectin vilivyotumika.

Usiri

Nakuhakikishia kwamba taarifa zote tunazopata kutoka kwako zitatunzwa kwa usiri mkubwa bila kuwekwa hovyo, pia taarifa hizi zitatumika tu kwa ajili ya utafiti hu una si vinginevyo.

Ushiriki

Kama utakubali kushiriki katika utafiti huu utatakiwa kujibu maswali yote ambayo utaulizwa na mtafiti wakati wa mahojiano.

Madhara

Nakuhakikishia kuwa hakuna madhara yoyote yatakayotokana na ushiriki wako katika utafiti huu. Majibu utakayotoa kwa utafiti hayatohatarisha nafasi yako ya kazi kwa namna yoyote ile.

Kukubali kwa hiari kushiriki kwenye utafiti:

Kushiriki katika utafiti huu ni hiari na sio lazima. Ukiamua kutokushiriki hautopata adhabu yoyote. Unaruhusiwa pia kuacha ushiriki katikati ya mahojiano kama ukijiskia huwezi kuendelea. Kukataa kushiriki katika utafiti huu hakutoathiri ajira yako, ofisi yako au nafasi yako katika sekta ya afya au mpango wa taifa kwa kudhibiti Magonjwa yaliyokuwa hayapewi kipaumbele**.**

Faida za ushiriki

Ukikubali kushiriki katika utafiti huu utakuwa umetoa mchango katika juhudi za kuimarisha Nyanja muhimu sana ya mfumo wa afya ambayo ni mfumo wa taarifa za kiafya. Taarifa zitakazokusanywa kutoka kwako na washiriki wengine katika utafiti huu zitatumiwa na watengeneza sera kwa ajili ya kuimarisha sekta ya afya na kuwanufaisha wananchi wa Tanzania. Pia utapokea matokeo ya utafiti hu umara baada ya kukamilika.

Nani wa kuwasiliana naye

Kama una swala lolote kuhusu utafiti huu tafadhali wasiliana na: Bi. Veronica Kabona (mtafiti mkuu), Taasisi ya Utafiti wa Magonjwa ya binadamu, Dar es salaam. Simu ya kiganjani: 0756953464, au

Dkt. Billy Ngasala (msimamizi wa utafiti)

Chuo Kikuu cha Afya na Sayansi ya Tiba Muhimbili, S.L.P 65001, Dar es salaam Simu ya kiganjani: 0754316369

Kama utakuwa na swala lolote kuhusu haki yako kama mshiriki katika utafiti huu wasiliana na:

Prof Mainen J. Moshi, Mwenyekiti wa kamati ya Utafiti na Uchapishaji, Chuo kikuu cha Afya na Sayansi ya Tiba, S.L.P 65001, Dar es salaam. Simu Na: 2150302-6.

Sahihi kwa wanaokubali

Je, unakubali? Andika ndiyo kama umekubali……

Mimi _____ nimeisoma fomu hii na kuelewa lengo la utafiti huu na maswali yangu yamejibiwa na sasa nakubali kwa hiari kujiunga na utafiti huu.

Sahihi ya mshiriki…….....

Sahihi ya mtafiti msaidizi…….....

Tarehe ya kusaini…….....

Appendix 7: Analysis plan

Table 1: List of health facilities visited and village located

Zone	Name of health facility

Table 2: Data verification form - Indicator 1

Health facility name	Reported data	Recounted data	Recounted/ Reported %	Status Good/Bad

Table 3: Data verification form - Indicator 2

Health facility name	Reported data	Recounted data	Recounted/ Reported %	Status Good/Bad

Table 4: Data verification form - Indicator 3

Health facility name	Reported data	Recounted data	Recounted/ Reported %	Status Good/Bad

Table 5: Data verification form - Indicator 4

Health facility name	Reported data	Recounted data	Recounted/ Reported %	Status Good/Bad

Table 6: Data verification form - Indicator 5

Health facility name	Reported data	Recounted data	Recounted/ Reported %	Status Good/Bad

Data completeness

Indicator	Number of reports/ registers with the indicator data	% Percentage availability

Report	Available	Supposed to be available	% Percentage availability

Appendix 8 : Approval for Ethical Clearance

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR OF POSTGRADUATE STUDIES

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Ref. No. DA.287/298/01A/ 2nd September, 2019

Ms. Veronica Kabona
MSc. Project Management, Monitoring and Evaluation in Health
MUHAS.

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "ASSESSMENT OF COMPLETENESS AND ACCURACY OF LYMPHATIC FILARIASIS MASS DRUGS ADMINISTRATION DATA IN KIBAHA DISTRICT COUNCIL

Reference is made to the above heading.

I am pleased to inform you that, the Chairman has, on behalf of the Senate, approved ethical clearance for the above-mentioned study. Hence you may proceed with the planned study.

The ethical clearance is valid for one year only, from **30th September, 2019 to 29th September, 2020.** In case you do not complete data analysis and dissertation report writing by **29th September, 2020,** you will have to apply for renewal of ethical clearance prior to the expiry date.

Dr. Emmanuel Balandya
ACTING: DIRECTOR OF POSTGRADUATE STUDIES

cc: Director of Research and Publications
cc: Dean, School of Public Health and Social Sciences