UTILIZATION OF IMMUNIZATION DATA IN DISTRICT HEALTH PLANNING IN THE CONTEXT OF HEALTH SECTOR REFORMS

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UTILIZATION OF IMMUNIZATION DATA IN DISTRICT HEALTH PLANNING IN THE CONTEXT OF HEALTH SECTOR REFORMS

A Case Study of Iringa District

By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Health Policy and Management of Muhimbili University of Health and Allied Sciences

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled: ***Utilization of Immunization Data in District Health Planning in the Context of Health Sector Reforms – A Case Study of Iringa District,*** in partial fulfillment of the requirements for the degree of Master of Arts in Health Policy and Management of Muhimbili University of Health and Allied Sciences.

_____

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Date: _____

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DEDICATION

This work is dedicated to my loving wife *Thereza Evarist* and our wonderful children *Warren* and *Nancy*. Without their support it would not have been possible for me to complete this dissertation.

ABSTRACT

Background:

The importance of data utilization in health planning at the district level cannot be over emphasized. The demand for and utilization of health information currently is influenced by the health sector reforms which focus on decentralized system. That is to say health systems are managed more closely at the level of service delivery by the people in their respective localities. This shift in function between the central (national) and peripheral (regions and districts) levels generates new information needs and calls for an in-depth restructuring of information systems, with changing data collection, processing, analysis, and dissemination requirements.

Objective:

The study aimed at exploring the utilization of Immunization data in health planning by district health planning teams and the barriers they face in using health information.

Methods:

The study was conducted in Iringa District, Tanzania using qualitative research method whereby interview guides for in-depth interview and Observation Checklist were used to obtain information from respondents. The interview involved: informants of the Council Health Planning Team (CHPT) and Regional Health Management Team (RHMT). The respondents were purposively selected and a total of 18 informants were enrolled in the study.

Results:

Immunization data with doubtful accuracy were found to be used in the preparation of CCHP. From the observation checklist it was noted that immunization data used in CCHP did not match with those found in Annual Health reports. In addition, inconsistency of immunization data within the same CCHP and a problem of *"copy and paste"* of immunization performance indicators were noted. Participants highlighted that there was no involvement of planning team members in the analysis of immunization data. The role of data analysis seemed to be left to those who deal directly with immunization data. In that case, the District Cold chain Coordinators (DCCO). The targeted population was derived from the 2002 National Census

were found to be not realistic. It was also reported that despite the fact that Expanded Program on Immunization (EPI) data management tool covers wide information about immunization services compared to HMIS tool. The CCHP utilizes immunization data obtained from the HMIS tool. Importantly, potential barriers identified were unrealistic target population, inadequate analytic knowledge among the team members, poor quality of immunization data generated and increased workload due to the burden of paperwork to health providers.

Conclusion and Recommendations:

The use of immunization data and consequently information about immunization services in preparation of CCHP must be seen in a broader perspective not focusing only on presence of immunization data in the tables of CCHP but also on the ability of planners to analyse such data and the quality of data being used. The study strongly recommends the following: (1) reduction of paper work should be done at facility level (2) the districts should be empowered to use locally generated health data (3) the existing result based bonus should be strengthened (4) the Council Health planning teams ought to be capacitated in order to be equipped with knowledge on analysis of data and planning.

TABLE OF CONTENTS

Certification ii
Declaration and Copyright iii
Acknowledgements iv
Dedication v
Abstract vi
List of Tables x
List of Abbreviations xi
Definition of Terms xiii

CHAPTER ONE: INTRODUCTION 1
1.1 Background to the Problem 1
1.2 Statement of the Problem 9
1.3 Research Objectives 11
1.4 Research Questions 11

CHAPTER TWO: LITERATURE REVIEW 12
2.1 Knowledge on Data Analysis 12
2.2 Quality of Immunization Data 13
2.3 Uses of Immunization Data in Planning 14

CHAPTER THREE: STUDY METHODOLOGY 16
3.1 Study Area 16
3.2 Study Design 17
3.3 Study Population 17
3.4 Data Collection Tools 18
3.5 Data Analysis 19
3.6 Ethical Approval 20

CHAPTER FOUR: RESULTS 21
4.1 Knowledge on Immunization Data Analysis 22
4.2 Quality of Immunization Data 27
4.3 Use of Immunization Data in Planning 32

4.4 Perceived Barriers to Utilization of Data 39

CHAPTER FIVE: DISCUSSION OF FINDINGS 46
5.1 Knowledge on Data Analysis 46
5.2 Quality of Immunization Data Used in Planning 47
5.3 Uses of Immunization Data in Planning 49
5.4 Limitations of the Study 51

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS 52
6.1 Conclusion 52
6.2 Recommendations 52

REFERENCES 53

APPENDICES 56

INFORMED CONSENT FORM 56
i: Interview Guide for the Council Health Planning Team Informants 58
ii: Interview Guide for the Regional Health Management Team (RHMT) Key Informants 60
iii: Observation Checklist for Council Health Planning Teams 62

FOMU YA RIDHAA 64
i: Mwongozo wa Maswali kwa Wajumbe wa Timu ya Uandaaji Mipango ya Afya ya Halmashauri 66
ii: Mwongozo wa maswali kwa Wajumbe wa Timu ya Uendeshaji Huduma za Afya ya Mkoa (RHMT) 69
iii: Orodha ya Kukagua Matumizi ya Takwimu za Chanjo kwa Timu ya Uandaaji Mipango ya Afya ya Halmashauri 71

LIST OF TABLES

Table 1: Basic Demographic Information about Key Informants ----------21

Table 2: Availability of Council Annual Health Reports and Completeness of Table no.23 of the Reports----------32

Table 3: Comparison of Immunization Data Recorded in Various Sections in the Planning Document (CCHP) ----------34

Table 4: Thematic Network (from Codes to Themes)----------43

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CCHP	Comprehensive Council Health Plan
CHMT	Council Health Management Team
CHPT	Council Health Planning Team
CHSB	Council Health Services Board
CSOs	Civil Society Organizations
DANIDA	Danish International Development Agency
DCCo	District Cold Chain Coordinator
DHO	District Health Officer
DHS	Demographic and Health Surveys
DMO	District Medical Officer
DPT-HB-HiB	Diptheria, Pertusis Tetenus Toxoid, Hemophilus Influenza type B
DRCHCo	District Reproductive and Child Health Coordinator
ESHE	Essential Service for Health in Ethiopia
FBOs	Faith-Based Organizations
GAVI	Global Alliance for Vaccine Initiative
HMIS	Health Management Information System
HRH	Human Resources for Health
IDC	Iringa District Council
IMC	Iringa Municipal Council
JICA	Japan International Cooperative Agency
LGAs	Local Government Authorities
LPG	Liquefied Petroleum Gas
MDGs	Millenium Development Goals
MoHSW	Ministry of Health and Social Welfare
MSD	Medical Stores Department
MTEF	Medium Term Expenditure Framework
MTUHA	*Mfumo wa Taarifa za Utoaji Huduma za Afya* (HMIS)
MUHAS	Muhimbili University of Health Allied Sciences
NEHP	National Essential Health Package

NIP	National Immunization Programme
NSGRP	National Strategy for Growth and Reduction of Poverty
OPV	Oral Polio virus Vaccine
PMO-RALG	Prime Minister's Office, Regional Administrative and Local Government
RHMT	Regional Health Management Team
RS	Regional Secretariat
UCI	Universal Child Immunization campaign
UNICEF	United Nation Children's Education Fund
WHO	World Health Organization

DEFINITION OF TERMS

The following terms are worth defining.

Cold Chain System: is a system which keeps vaccines in the appropriate temperature to remain potent during vaccine orders and supplies, their transportation, storage and distribution from factory to the delivery points.

Data: refers to the collected information or facts.

Data Quality: is a perception or an assessment of data's fitness to serve their purpose in a given context. Aspects of data quality include accuracy, completeness, update status, relevance, consistency across data sources, reliability, appropriate presentation and accessibility.

In this context, three aspects are used to define data quality; *accuracy, completeness* and *timeliness* (update status).

None of the data quality dimensions is complete by itself, and many times dimensions are overlapping.

Data Accuracy as a Dimension of Data Quality:

Accuracy of data is the degree to which data correctly reflects the real world object or an event being described.

Data Completeness Dimension of Data Quality:

Completeness of data is the extent to which the expected attributes of data are provided. *Data can be complete, but inaccurate.*

Data Timeliness:

The timeliness of data is extremely important. The timeliness depends on user expectation.

Data Consistency Dimension of Quality of Data:

Consistency of data means that data across the enterprise should be in synch with each other.

Data can be accurate (i.e., it will represent what happened in real world), but still be inconsistent.

Data analysis: refers to the process of sorting into categories and determining relationships between variables. Data analysis follows collection of information and precedes its interpretation or application.

Drop out: is a comparison of the number of children who started receiving immunization and the number of those who do not receive later doses of full immunization. It is related to drop out DPT1 – DPT3.

Health Management Information System (HMIS): is a core system which provides management solutions to management questions through developed indicators which are applied at all levels of health delivery systems. HMIS indicators are in the form of rates, ratios and absolute numbers, and each has a threshold and target value whereby assessment of performance is based upon.

Motivation: is the psychological feature that arouses an organism to action toward a desired goal and elicits, controls, and sustains certain goal directed behaviours.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Problem

1.1.1 Health Management Information System

At the onset of health system decentralization as a primary health care strategy, which constitutes a key feature of health sector reforms across the developing world, efficient and effective *Health Management Information Systems* (HMIS) were widely acknowledged and adopted as a critical element of district health management strengthening programmes. The focal concern was about the performance and long-term sustainability of decentralized district health systems. The underlying logic was that effective and efficient HMIS would provide district health managers with the information required to make effective and strategic decisions that are the vehicle for district performance and sustainability in these decentralized health systems [1].

The HMIS in most developing countries are inefficient and are greatly affected by unreliability of data resulting from underreporting [2]. Reports from Sub-Saharan Africa indicate that vital health decisions, in this context, are made based on crude estimates of disease and treatment burdens. Findings from this region indicate that the problem of under reporting is huge and is linked to lack of knowledge and practice among the health workers characterized by insufficient analysis skills, training and lack of initiative for using information.

In Tanzania the *Health Management Information System* (HMIS), also known in Kiswahili as *Mfumo wa Taarifa za Uendeshaji Huduma za Afya (MTUHA)*, in its current form was conceptualized in the early 1990s [3]. The first version was launched in 1993 and the second in 1998. The main aim of that system was to establish a comprehensive and integrated routine data system using up to date technologies and approaches. This system was established as a key tool for monitoring and evaluation of health sector reform performance in the country. Therefore, HMIS is a core system which provides management solutions to management questions through developed indicators which are applied at all levels of health delivery systems. HMIS indicators are in the form of rates, ratios and absolute numbers, and each has a

threshold and target value whereby assessment of performance is based upon. In this respect the information is very useful in managing health delivery at all levels of health delivery system in the country.

The system covers all health programmes and health care services, and requires all health facilities, regardless of ownership, to use this system and report to the district health authority on quarterly basis. The overall goal of this system is to optimize the performance of health services at all levels of administration through the timely provision of necessary and sufficient information needed by the health managers to plan, monitor and evaluate their activities. Its success requires a system that is integrated, decentralized, functional and reliable [2].

Data that are accurate, complete and timely delivered to users are an important aspect in health planning, management and decision making. Evidence based plans and decisions must of necessity be based on accurate, complete and timely data. The introduction of the HMIS was aimed at ensuring the availability of *accurate, timely and relevant data* to health managers for purposes of planning and decision-making [4].

The health information system has been aptly described as "an integrated effort to collect, process, report and use health information and knowledge to influence policy-making, programme action and research" [5]. The health information field is complex. On the demand side, there are different users and uses of information including people and patients, communities, service providers, programme managers, policy-makers, providers of funds, global agencies and organizations. All these need information on a range of health-measurement areas including mortality and morbidity rates, disease outbreaks, determinants of health (such as nutrition, environment, and socioeconomic status), access, coverage and quality of services, costs and expenditures, and equity. On the supply side, various tools and methods are available including vital registration and census systems, household, facility and district surveys, routine clinic-based data, disease surveillance systems, national health accounts, and modeling.

Unfortunately, supply and demand in the health information field are not currently in equilibrium, with an oversupply of data coexisting with large unmet needs for information [5]. Although many countries now have relatively good data on levels of and trends in child

mortality, health services coverage, and health determinants, information on adult mortality and cause of death is not generally available. Morbidity too is poorly measured, while the coverage and costs of many interventions are not measured properly, and the information needed to monitor equity is inadequate. In addition, the quality of health information is often highly variable with little standardization across definitions and methodologies, and considerable overlap and duplication. Information dissemination is inconsistent, and the use of information to inform decision-making is weak at all levels of the health-care system.

The quality, presentation and dissemination, and use of data are all closely interconnected [6]. Data that are considered to be of poor quality do not get presented, disseminated or used by decision-makers. This, in turn, leads to the under-valuing of health information, thus feeding a cycle of poor quality and non-use of data.

Even if high-quality data are produced, this does not necessarily result in their effective use in decision-making [7]. The extent to which information is used can be influenced by other factors related to behavior, organization and environment.

1.1.2 Immunization in Tanzania

Immunization is an important means of controlling diseases and has been considered as the most cost effective health intervention. Immunization is provided in most countries through the Expanded Programme on Immunization (EPI) and as a part of the primary health care intervention. Different approaches are used to enhance immunization coverage such as fixed vaccination posts, outreach services and national immunization days.

Worldwide immunization coverage shows an increase in the past years but the validity of the official reports for measuring change over time has been questioned [8]. For example, Mavimbe et al showed in a previous report [9] that there was a tendency to overstate the number of fully immunized children against vaccine preventable diseases.

Facing the problem of over reporting, donor supported initiatives like the Global Alliance for Vaccine and Immunizations (GAVI) have been putting a lot of effort into assessing the quality of data used, since accurate immunization information is essential for EPI managers to track and improve programme performance [10].

EPI was introduced in Tanzania since 1975. The primary aim of this programme was to protect children from vaccine preventable diseases such as Measles. The overall goal was to contribute in the reduction of infant and childhood mortality rates. This was expected through the achievement of high and effective vaccination coverage for all antigens, using quality vaccines. From 1985 to 1989 there was Universal Child Immunization campaign (UCI) in Tanzania. During UCI there was a multi-sectoral approach to boost Immunization including commitment from higher political, religious and other community leaders [10]. This resulted in increased public awareness and reception of immunization services offered. From 1980 to 1996 EPI was a vertical programme. DANIDA supported EPI as a project to strengthen its managerial and financial capacity. Other partners were UNICEF, JICA and WHO. External support for EPI was stable for a number of years.

EPI ceased to be a project from 1st July, 1996 following the introduction of Health Sector Reform in Tanzania [10]. Generic functions of EPI are integrated as follows: - procurement, storage and distribution taken by Medical Stores Department (MSD), regional and district transport taken by Central Transport Unit, and Monitoring and Evaluation is the function of the Health Management Information System (HMIS).

In Tanzania, immunization reporting is done through integrated HMIS utilizing quarterly reports from health facilities to districts, districts to regions and finally the regional reports are sent to the central level (the Ministry). The official national immunization coverage figures are based on routine data produced at the facility level and by the outreach services [11]. The outreach services are sustained by district level authorities. Primary data recording is done through child health cards, immunization tally sheets, client registers and vaccine ledgers. These are summarised quarterly and annually at all levels.

1.1.3 The Comprehensive Council Health Plan (CCHP) and the Planning Process

The government of Tanzania through the MoHSW and PMO-RALG has empowered the *Local Government Authorities* (LGAs) through decentralization by devolving powers of decision making to the LGAs. The LGAs are enabled to mobilize, manage and account for health and social welfare resources and implement health and social welfare activities in line with the national health and social welfare policies.

The *Ministry of Health and Social Welfare* (MoHSW) has developed a framework to reform the health and social welfare sector in order to improve the impact of health and social welfare services and thereby producing better health and social well being outcomes.

Under the health sector reform, each Council is required to prepare its annual health plan which is referred to as Comprehensive Council Health Plan (CCHP). Comprehensive Council Health Plan is an annual health and social welfare plan for a council which collates the health and social welfare plans at all levels and involves all health stakeholders. It addresses the policy and guidelines objectives related to:- the Millennium Development Goals (MDGs), Government Vision 2025, National Strategy for Growth and Reduction of Poverty (NSGRP), National Health Policy (2007), Primary Health Services Development Programme (2007-2017), Health Sector Strategic Plan III (2009-2015), the National Essential Health Package (NEHP) (2000), National Human Resource for Health Strategic Plan (2008-2013), Council Health Strategic Plans, Specific Programmes Strategic Plans and Projects and the Law of the Child Act (2009).

Under Local Government Authorities (LGAs) health sector is management by Council Health Management Team (CHMT) which is headed by the District Medical Officer (DMO) who is also the Head of Council's Health Department. Other core members of the team include District Health Secretary, Health Officer, Nursing Officer, Pharmacist, Dental Officer, Laboratory Technologist and Social Welfare Officer. In addition, there are co-opted members such as District Cold Chain Coordinator (DCCo) who is responsible for management of immunization services within the district, District Reproductive and Child Health Coordinator (DRCHCo), District AIDS Control Coordinator (DACC) and the Focal Person for HMIS.

All core and co-opted members of CHMT are members of the Council Health Planning Team. In addition, CHPT include Council Planning Officer (as a Technical Advisor), Medical Officer In-charge, Council Health Accountant, and representatives from Community Development Department, private sector, NGOs, Faith based service providers (religious organizations, voluntary agencies) and RHMT. The chairperson of CHPT is the DMO and the secretary of CHPT is the Health Secretary.

The planning process of the CCHP is divided into 3 main phases namely the pre-planning, planning and implementation of the plan. Pre-planning meeting normally takes place with all stakeholders before the planning process so that the recommendations are incorporated into the CCHP.

Later on CHMTs collect priorities/needs from hospitals, health centres, dispensaries, community and other health stakeholders such as FBOs, NGOs and Private Health Facilities through their plans to accommodate them in the CCHP.

Thereafter, councils collect information of resources available for Health Block Grant, Health Basket Funds and other partners for the next financial year. Council Health Service Board (CHSB) and Council Health Management Team (CHMT) receive annual plans and budget projections as prepared by council hospital, health centres, dispensaries, FBOs, CSOs, and private health facilities for profit to be accommodated in the CCHP.

CCHP is reviewed by the Council Health Service Board (CHSB) prior to submission to the Regional Secretariat/Regional Health Management Team (RS/RHMTs). The recurrent and development budgets prepared from the CCHP are therefore entered into the Council Medium term Expenditures Framework (MTEF). Then next step is the process of submitting the CCHP to the Regional Secretariat (RS). The RS checks the CCHP for its conformity with national guidelines. All recommendations from the RS to the council are submitted in writing. CCHP and budget is finally approved by the full Council through different standing committees.

The implementation of CCHP has to be followed by appropriate monitoring tools. Therefore, the MoHSW and PMO-RALG has opted for an approach by determining a set of 20 indicators, for which each district has its own baseline data, for each performance indicator.

Determination of baseline data for each performance indicator is part of priority setting and has to be done by all the districts.

According to CCHP guideline, immunization activities are found under the priority area of Maternal, Newborn and Child Health of which immunization is one of the intervention areas. All activities should be aimed at addressing key performance indicators related to immunization. The indicators include proportion of children under one year immunized against each antigen for Measles, Polio, BCG, and DPT3-HB-HiB (Pentavalent) and the Proportion of women attending Antenatal clinic receiving Tetanus Toxoid immunization [12]. The tools used to collect such data include the child health cards, Immunization tally sheets, client registers and vaccine ledgers.

Data must be collected, processed and transformed, communicated, and used to inform decisions on resource allocations, policy formulation, staffing, service delivery, cost-recovery, supportive supervision, and other elements working toward improved health outcomes [13].

Through HMIS several categories of data are generated, processed and reported. Immunization data is one of those HMIS data generated. This study takes immunization data as a proxy for assessment of utilization of data/health information at district level particularly in planning.

There is little standardization of the indicators, targets or tools to be used, too much information is collected, and it is poorly analysed, not easily comparable and often not used [13]. In addition there is data overload, especially at peripheral levels, and major problems with the quality and use of information for decision-making. Those tasked with collecting and reporting data often cite a lack of relevance of the multitude of data collected, the limited capacity of facility and district staff in data collection and analysis. There are too many forms to fill in at the facility or district level, with the same person often reporting similar information to several recipients but in slightly different formats. Ironically, juxtaposed with this information overload is an almost total absence of information from some key players in

health, notably the private sector. The huge volumes of data collected also impinge upon data quality and reliability.

The upward flow of information appears to be associated with an absence of data analysis and use, particularly at the lower levels (health facilities and districts) where the data originate. Data are provided by the lower levels of the system and most often analysed at the top of the pyramid (if analysed at all). The information system seems to stop at the stage of data production – diligent recording and reporting of health data is associated with weak analysis and comments on the findings. This is the most striking in the context of decentralization which increases the demand for data for decision-making at the district level but which has not been accompanied by an increase in the capacity to analyse and use information effectively. Indeed, in some settings, decentralization has resulted in the weakening of the health information system due to lack of central guidance and monitoring.

1.2 Statement of the Problem

The importance of data utilization in health planning at the district level cannot be over emphasized. Demand for health information in Tanzania is currently highly influenced by the health sector reforms which focus on decentralized system. That is, health systems are managed more closely to the level of service delivery by the people in their respective localities. This shift in functions between the central and peripheral levels generates new information needs and calls for an in-depth restructuring of information systems, with changing data collection, processing, analysis, and dissemination requirements.

Countries especially those with most limited resources need to make assessment to identify critical priorities in planning. This is because planning is very much dependent on the quality, quantity, reliability and timely availability of information/data [14].

The lack of analytical capacity is matched by weaknesses in the presentation of information to different constituencies. This links to a major constraint identified in most settings, namely the lack of use of collected data and information. The reasons for this are manifold but seldom clearly identified. Although information is one of fundamental components of the decision-making process, currently it seems to take second or third place to political and other non-informational factors.

There is little known about what data to collect for proper decision-making at district level with regard to immunization services in Tanzania. Little is also known about the capacity to analyse and use immunization data in preparation of annual health plans. Nevertheless, how the quantity and quality of immunization data affect the use of data in planning has not been well documented in the context of Tanzania. More importantly the barriers to proper utilization of immunization data in annual health planning at lower levels particularly the district level are not widely studied. This study, therefore, intends to analyse the utilization of immunization data.

Exploring the extent of immunization data utilization in district health planning is fundamental in a circumstance of severe resource constraints. If the knowledge on data analysis is well imparted to planning teams, the use of data in planning could be their priority in developing district health plans which respond to realistic local health problems. It is also important to know whether immunization data generated at facilities meet the required quantity and quality by planners for them to come up with realistic targets prior to planning.

Thus, the findings obtained from this study may give better understanding of the existing gaps in utilization of health information and hence improve the district health care delivery.

1.3 Research Objectives

This study had the following objectives

1.3.1 Broad Objective

The study aimed at exploring the utilization of immunization data for health planning by district health management teams in the context of Health Sector Reforms.

1.3.2 Specific Objectives

The study was meant to meet the following specific objectives.

(i) To assess the knowledge of the members of CHPT on immunization data analysis.

(ii) To determine the perceptions of the members of CHPT and RHMT on the quality of immunization performance indicators used in district planning.

(iii) To assess the use of immunization data in district health planning.

(iv) To determine the perception of members of CHPT and RHMT on the need to use data in planning.

(v) To determine constraints encountered by members of CHPT in using immunization data for district health planning.

1.4 Research Questions

This study aimed at answering the following questions.

(i) What is the level of knowledge on data analysis among the CHPT members?

(ii) What perceptions do CHPTs and RHMT have on the quality of immunization data used in district health planning?

(iii) Do the CHPTs use immunization data in health planning?

(iv) How do CHPTs and RHMT feel about the need to use immunization data in district health planning?

(v) What are the barriers encountered in using immunization data in district health planning?

CHAPTER TWO: LITERATURE REVIEW

Utilization of immunization data in planning can be viewed in three different perspectives; the knowledge and attitude of data users, the available support system for use of data and the quality and quantity of immunization data generated. In this chapter attention is paid to various sources of information. It is expected that this review will put the study in perspective.

2.1 Knowledge on Data Analysis

There is inadequate evidence in literature regarding the use of HMIS data other than that involving health workers in terms of using information to know how many and what medicines are being used, the services that are provided, the use of equipment and additional equipment required. Kimaro and Twaakyondo [6] report that health workers have no enough knowledge, skills and resources to make sense of information and they lacked an understanding of the general role of HMIS in their work of providing direct health (curative) services.

In a study by Mboera, et al [15] it was reported that in about 51% of the districts, data collection, analysis and utilization are poor. Also, 51.1% of the districts collected and compiled health data without knowing their use. Only 33.3% of the districts used the data for setting their annual health plans. This indicates that most of the health workers fail to understand the purpose of collecting data.

There is a general assumption that data are only needed at the Ministry of Health where planning and decision making is to be done for the lower levels [15]. Thus, the Ministry of Health has the information, power and authority to tell the lower levels what to do in order to improve their health status. Another problem is how the lower levels work under orders from the higher levels as well as from donors.

Over-reporting from the primary health care service outlets, as well as from the District Health Office might be attributable to centralized planning that ignores the local conditions, and to the top down imposition of targets [16]. Lack of proper supervision and feedback might have further contributed to foster inaccurate reporting. Periodical population-based

surveys to estimate the immunization status are costly and time consuming. Therefore, routine reporting remains the major source of information for the planning and management of immunization programmes.

2.2 Quality of Immunization Data

Comprehensive Council Health Plans (CCHPs) utilize routine immunization data that are generated annually. However, the validity of routine/official data is highly criticized. That is, officially reported estimates and administrative data are prone to incentives to over-report, whereas surveys accurately measure changes over time, are done independently, and are largely immune to these incentives. A study by Onta et al [16] concluded that the immunization programme might not result in the expected reduction of morbidity and mortality despite the investment in the programme and reported high coverage due to a tendency of over reporting.

Similarly, a study [20] was done in Mozambique to assess the quality of data in terms of availability, reliability and validity. The findings revealed that at the district health departments, 99% of the monthly facility reports for immunization were properly filed and available. As far as reliability is concerned, 96% of the monthly aggregated district reports for immunization services matched with the information available through the MOH electronic database (obtained at the provincial level) over the 12-month period. The validity of data for DPT3 coverage was questionable. When annual reports from the provinces were compared with those obtained from District Health Information System (DHIS), data for DPT3 coverage was not located within the 95% confidence interval.

Uruguay's immunization registration system serves as a model for implementation in other countries. The study by Olivier Ronveaux et al [21], used the methodology of the World Health Organization (WHO) Data Quality Self-assessment (DQS) tool to assess the quality of Uruguay's immunization information (particularly the validity of the numerators and denominators used to produce the estimated rates of coverage reported by the National Immunization Programme (NIP)) and to determine the strengths and shortcomings of the NIP registration system. The numerator data used by the national and department-level registries

and the vaccination centres were identical; the national system denominators were exhaustive; and registry users' system-wide demonstrated a uniform, clear understanding of the programme. The majority of immunization registration systems still use denominators generated from census data at the central level (made available at the beginning of each year) and require regular reporting of aggregated immunization data from peripheral levels. However, annual denominators from census projections may be imprecise, because the census data, the fertility/mortality indicators, and/or the migration data (particularly at the lower geographical level) may be outdated [21].

This study [21] revealed that nominal immunization registries can be used successfully to trace and reduce the number of vaccination defaulters by ensuring each child completes a full immunization schedule. Achieving full immunization coverage is essential not only for the health of individuals but also for reducing the burden of vaccine-preventable diseases in the population as a whole.

2.3 Uses of Immunization Data in Planning

HMIS is a support system which assists in collection, processing and use of health data. However, most of the information generated through the HMIS is inconsistent with what the management at the lower levels need for decision making as the lower levels are not involved in the system design process [6]. Currently, the lower level health managers and health workers follow orders from higher level to act on data at their locality which contradicts with the general essence of action-led approach where the focus is on information that supports management decisions and emphasis on data collectors as the main information users [22]. The set of norms and resources must be enhanced for each individual level and are subject to be changed to create a culture of information use. Indeed, the interdependence, interaction and integration that exist between levels can be used to enhance learning through proper supervision along with participation in joint local actions. Thus, local changes must be appreciated/supported by or/and go along with changes at the higher levels thus calling for a participative bottom-up and top-down approach for interventions at local levels. The need to

address issues at multiple levels is important (simultaneous top-down and bottom-up) to secure both institutional mandate, participation and ownership.

A study by Haddad, et al [17] on heterogeneity in the validity of administrative-based estimates of immunization coverage across health districts in Burkina Faso, pointed out that, variability in immunization coverage across districts highlights the limitations of using nationally aggregated indicators. If district data are to be used in monitoring and planning immunization programmes as intended by decentralization, heterogeneity in their validity must be reduced. The authors recommended: (1) strengthening administrative data systems; (2) implementing indicators that are insensitive to population mobility; (3) integrating surveys into monitoring processes at the sub-national level; (4) actively promoting the use of coverage information by local personnel and district-level staff.

The Lesotho 2006/2007 HMIS Review findings pointed out three major weaknesses of the information dissemination and use [18]. These weaknesses included, weak capacity for data analysis at all levels, resource allocation to all levels is mostly historical and not necessarily informed by data, and limited by late publication of the health data. These weaknesses largely contribute to low capacity and limited use of information for decision making. Some of the challenges in this component included poor analytical skills, lack of data and information repositories at central and district levels to facilitate sharing of information from the multiple data sources and poor packaging of the information for use.

To promote data use, personnel at all levels need training on data analysis and use for decision-making. Even with proper training, however, other factors need to be considered to improve data analysis and usage. One is that the organizations themselves need to value the analysis and use of data, and reward it [19]. The other is that staff must have time to perform this activity. Do higher levels of the health system use information for accountability? Do they reward personnel and facilities who perform well in terms of data collection, reporting, quality, analysis, and use? If not, it will be difficult to change existing behaviour toward more cost-effective information systems supported by analysis and use of relevant data at all levels for improved decision-making.

CHAPTER THREE: STUDY METHODOLOGY

This chapter discusses the methodology that was employed in carrying out this study. Specifically the chapter looks at the area of the study, study design, study population, sampling technique and tools used to collect data.

3.1 Study Area

This study was conducted in Iringa rural and urban part of Iringa District, located in Iringa region, Tanzania. The district was chosen purposively as a representative of districts with good record on immunization reports and it also gave an insight of urban and rural settings. Iringa region has a total of seven districts and nine councils. Administratively, Iringa district is divided into Iringa municipal council and Iringa district council. Iringa municipality has one division, 16 wards, 7 registered villages, 28 hamlets 40,049 households and 149 neighbourhoods. The municipality also serves as the regional headquarters.

It lies between 7º south of equator and between longitudes 35º East of the Greenwich Meridian. The altitude is between 1,560 and 2,000 metres above sea level. The municipality covers an area of 162 square kms and about 15 square kms is water shed of Little Ruaha basin and its tributaries. The municipality is round bordered by Iringa District Council except for Kilolo District to the South East.

According to the 2002 National Census, it was projected that by 2011 Iringa Municipality will have an estimated population of about 158,587 people of which 82,150 are females and 76,437 are males. Women of childbearing age are 51,742, and under five years children are 18,500 while under one year children are 3,835.

Iringa District Council situated in Iringa Region was established under the local government Act No.7 of 1982. The district has an area of 20,576 square kilometres of which only 9857.5 square kilometres are habitable whereas the rest are occupied by national parks, forests, Rocky Mountains and water. The district extends between latitudes 7 00 – 8 30 degrees South and longitudes 34 to 37 East.

The district borders Mpwapwa District (Dodoma Region) to the north, Kilosa District to the northeast and Kilolo District to the east, Mufindi District to the south, Chunya District (Mbeya Region) to the west and Manyoni District (Singida region) to the northwest.

Administratively, Iringa District Council is divided into 6 divisions, 20 wards, 122 villages and 699 hamlets.

The Department of Health at each council provides administrative and technical support in running Immunization services. The Council Health Management Team (CHMT) is responsible for running all activities related to immunization. All CHMT members play part in preparation of CCHP and together with people from other departments and representative health stakeholders; they form the Council Health Planning Team (CHPT).

For the purpose of this study, CHPT members who are not CHMT members were involved to assess the way team work is practiced.

3.2 Study Design

A cross sectional descriptive study using qualitative research method was used. A descriptive cross sectional study design was chosen because the study meant to collect information once and there was no follow up of participants to the study. A qualitative methodology was chosen in order to capture participants' views, experiences, and challenges in using immunization data in district health planning [22].

3.3 Study Population

The study involved CHPTs of Iringa Municipal Council and Iringa District Council focusing mainly on the six key informants on immunization data namely the District Cold Chain Coordinator (DCCO), District Reproductive and Child Health Coordinator (DRCHCo), District Medical Officer (DMO), District Health Officer (DHO), MTUHA/HMIS focal person and District Planning Officer (DPLO). Moreover the study involved six members of Regional Health Management Team with similar roles as those of the district.

The two Council Health Planning Teams from urban (Iringa Municipal Council) and rural (Iringa District Council) were selected purposely to make a comparison between urban and rural settings. In the urban settings HMIS reports from Health facilities can be easily collected unlike their rural counterparts where there is a geographical disadvantage due to distance and infrastructure.

3.4 Data Collection Tools

The interview focused on particular themes and therefore a *semi-structured interview guide* was used. Thus, it was neither strictly structured with standardized questions, nor entirely "non-directive." Subsequent interviews introduced new questions [22].

Interview guides were used to obtain information from the respondents. Two different key informants interview guides were developed through open ended questions based on the research questions, objectives of the study and information gained from the literature. The two different interview guides were for: informants of the RHMT and Council Health Planning team. A tape recorder and handwritten field notes were used to capture information during In-depth interviews. Observation checklist was used at each of the two councils. The checklist provided evidence for the available immunization data (OPV 0, DPT-HB3, BCG and Measles) in the past three consecutive years, 2008, 2009, and 2010 and whether they were used in district annual health plan (CCHP 2011/2012). Both interview guides and the observation checklist were developed in English and translated into Kiswahili to make them user-friendly.

Data collection procedures

To explore the views of key informants the researcher applied two methods of data collection which were found to be suitable for the study**.** These included the following:

In-depth face to face interviews which were conducted using semi structured interview guide. as it allowed for follow up of points. Prior to the beginning of each interview, the participants were asked for permission to be audio-recorded. The interview was one to one that is interviewer and interviewee, taking one respondent at a time. This helped to note differences in understanding even among respondents with primary role of immunization like DCCO and DRCHCO.

An observation checklist was also used by the researcher to obtain data from district annual health reports for the past three years, 2008, 2009, and 2010. The researcher checked for availability and consistency of immunization data in the report (Table 23 in District Annual Health Report). The Table 23 of District Annual Health report is a table for number of

children under one year received BCG, DPT - HB^{3,} Polio 3, and Measles vaccines. The table also contains the target population for children under one year. This data is an aggregate data from all health facilities within the council.

The figures (data) from the district annual health report were also compared with their corresponding variables in table 6 of the CCHP. Table 6 in the CCHP is a table for Important HMIS Indicators which among other indicators, BCG, DPT - HB^{3,} OPV0, Polio 3, and Measles indicators have to be filled in a period of 3 consecutive previous years. The three tables contain data from routine immunization services and they are all derived from MTUHA/HMIS booklets collected from all health facilities within the council.

3.5 Data Analysis

Qualitative data analysis is an ongoing process that is carried out simultaneously with data collection, interpretation and writing reports. The researcher analyzed data for *themes* or perspectives [23]. In this study content analysis approach was followed. This involved reading through the transcribed text of each interview and identifying responses relevant to the main questions raised by the study [24]. Content analysis can be divided into manifest content analysis which concerns what the text says and latent content analysis which concerns what the text is about, that is an implied or unstated message. In this study a latent content analysis was used. The approach involved shortening of the text (reduction, distillation, and condensation) and creating categories [24]. This study followed content analysis approach which is used in qualitative research generated from existing theories. Main steps followed in content analysis of this study were as follows: First, all audio files were transcribed by the researcher and later translated from Swahili to English. All English transcripts were imported into open code, a qualitative analysis software package, through which we begin coding the data set. From open code software we obtained codes and categories, in which the codes were later on organized into subcategories which formed the categories. The categories were further clustered into four themes (table 4). These four themes form the structure of the results section.

3.6 Ethical Approval

Ethical approval from the Muhimbili University of Health and Allied Sciences (MUHAS) Research and Publications Committee and MUHAS ethical clearance committee was obtained for the present study. Written informed consent was obtained from all participants prior to the interview. The purpose of the present study and the right to withdraw from the interview were explained. All interviews were recorded as anonymous and kept confidential.

CHAPTER FOUR: RESULTS

The findings from this study are organized according to the four themes, knowledge on data analysis, quality of immunization data, uses of immunization data in planning, and the perceived barriers on utilization of data. Each theme has been divided into categories and subcategories. The layout of the findings is derived from the respondents or Key informants of the in-depth interview and the observation checklist.

A total of 18 respondents were involved in the study, whereby all of them were interviewed and two observation checklists were filled.

Table 1: Basic Demographic Information about Key Informants

Variables		Levels			Total
		Iringa MC	Iringa DC	RHMT	
Age in years:	31- 40	1	1	0	2
	41- 50	3	2	1	6
	51- 60	2	3	5	10
Sex:	Male	5	4	5	14
	Female	1	2	1	4
Work experience in years:	0 - 2	3	3	0	6
	3- 5	2	2	3	7
	6- 10	0	0	1	1
	Above 10	1	1	2	4
Profession:	Medical Doctor	0	1	1	2
	Pharmacist	0	0	1	1
	Assistant Medical Officer	1	0	0	1
	Clinical Officer	1	1	0	2
	Environmental Health Officer	2	2	2	6
	Assistant Nursing Officer	1	1	1	3
	Health Administrator	0	0	1	1
	Economist	0	1	0	1
	Social Welfare Officer	1	0	0	1

Of the 18 respondents 10 of them were aged above 50 years, and the majority (13/18) had working experience of less than six years. Male respondents were predominant (14/18), the majority (6/10) of whom were environmental health officers. There were no non-respondents.

4.1 Knowledge on Immunization Data Analysis

Knowledge on immunization data analysis was assessed by asking respondents the meaning and the objective of the indicators, immunization data collection process, and how indicators are computed. Some respondents had a problem of understanding one of the three concepts therefore their knowledge on data analysis is doubtful. Regarding the meaning and objective of immunization indicators, the participants seemed to have a good understanding. The following statement illustrates this:

> *"What I know about indicators is what we normally measure when we want to know where we are. Examples of indicators that we have include coverage of BCG, Tetanus Toxoid, measles, polio and DPT3 vaccines. These indicators help us in planning, also to know how many people have been vaccinated and to know the magnitude of the problem and whether the problem still exists or decreases"* [IMC2].

4.1.1 Knowledge about HMIS Immunization Indicators

Participants had different understanding on the proxy indicator which determines the district overall immunization coverage. Some mentioned measles vaccine coverage as a proxy indicator while others had mentioned DPT HB3 (Pentavalent) vaccine as a proxy indicator.

> *"We use DPT3 and measles vaccines as proxy indicators, but mainly we use DPT3 because by then the child would have been already received the first vaccination BCG, the second vaccination DPT1, 2 and 3 thus in order to complete vaccination the child must receive measles vaccination. When we need to know the facility acceptance rate we use DPT3 but we use measles to indicate that the child has been completely vaccinated"* [RHMT4].

In addition, some participants of this study highlighted some reasons of using DPT HB3 as a proxy indicator:

> *"In immunization services, the criterion we use is the DPT/Pentavalent vaccine which when it reaches 90% it means we have succeeded in vaccinating all children. This is so because the third dose of DPT is the last vaccine which helps to protect children against vaccine preventable diseases. Also we have measles and polio vaccines which are not used as proxy vaccines because of increased drop outs. The increased dropouts of measles vaccine is because of delayed period of vaccination, measles is normally given when the child is 9 months old while other antigens are already given in the first month. Parents tend to forget to take their children for measles vaccination* [IMC3] *".*

4.1.2 Knowledge on Analytic Process of Immunization Data

The process of data analysis begins with collection of immunization data, processing the collected data and finally calculating the relevant indicators. It was observed that there are two parallel systems for collecting immunization data from the facility level. Reports generated from these two systems are of two types, one is monthly report and the other is a quarterly report.

> *"At district level we normally receive a report form known as Tanzania Monthly Health Facility Report on EPI activities. Thus every month the facilities submit reports on vaccinated children, type of vaccines used and temperature records on vaccine temperature. They bring monthly reports for compilation at district level. This report form is different from them (the report form) as HMIS/MTUHA report. In MTUHA report, the data are entered on quarterly basis unlike EPI forms which is monthly and I don't compile them because the Regional and Ministry authorities do not request this form from me(DCCOs), they get them from the MTUHA focal person …"* [IDC5]

The two parallel systems utilize different report forms, that is, apart from HMIS report form immunization data are collected using another form, the EPI data management tool. The two

report forms differ in contents, whereby the EPI report form is more detailed than the HMIS report form. The district HMIS focal person is the overall in charge of immunization data collected by using this tool while the District Cold Chain Coordinator (DCCO) takes charge in all immunization data collected by using the EPI data management tool. The DCCO seemed to have a better understanding of the collection process of immunization data than the other CHMT respondents.

This study went further to assess whether the key informants knew how immunization performance indicators were obtained. The essence was that data must be collected, analysed and interpreted in order to get relevant health information which will be used for decision making. The assumption is when the planners know how the indicators are calculated they will be in a good position to question their validity whoever is presenting the immunization indicators prior to CCHP planning. Some of the informants had a clear understanding on how indicators are obtained as it was expressed by one of them:

> *"For each antigen there is a standard set that means when it is reached or exceeded it means good performance. … it is just a matter of taking the number of vaccinated children say per month divide by all registered children to get the percentage. Thus there is a formula which says, when you take the numerator and divide by the denominator and multiply by 100 you get that coverage. From NBS data (Census data) we receive national data showing children population per each ward".* [IMC4]

4.1.3 Common Knowledge among CHPT Members

According to CCHP guideline CHPT is composed of various people with mixed professions and expertise. Some people are basically coming from the health department of the respective council while others come from other departments within the respective council, that is the employees of the council. However, there are some stakeholders mentioned in the guideline as members of the team who come from outside the council. In this study the key informants among CHPT members were those who are found within the respective council. The reason for not including CHPT members who come from outside the council was the fact that their participation in planning is irregular. Some organizations may be represented by different

persons in each year, thus they could have limited knowledge on how CCHP is prepared. Hence it was important to involve those who had at least attended the planning team meetings for at least three consecutive years.

From the respondents of this study, it was clear that those who come from other departments had difficulties in explaining the meaning and objectives of immunization indicators:

> *"Indicators are those which show how a certain thing can happen. That is it shows what is supposed to be done when a certain thing happens*" **[**IMC5].

They had no idea of how immunization data are being collected and processed. When asked about how immunization data from health facilities are collected and reported using HMIS booklets, one of the participants had this to say:

> *"I don't know much, but I normally see people from facilities bringing certain forms. Before going for planning, we cross-check all reports from the facilities".* [IMC5]

However, when asked about whether variation of knowledge among CHPT members affects the use of immunization data in planning, majority of the respondents denied. They claimed that it is a role of DCCO:

> *"There is no major effect because during planning the head of immunization section is the one who leads the rest in explaining the immunization status, so our contributions are based on his/her explanation. Every section has its own presentation and the DCCO who is presenting knows more about immunization data than the rest. There is a need for orientation on immunization data as a team because normally they are just listening to the DCCO without understanding what actually immunization data means"* [IDC3].

Participants further pointed out that some team members are just technical advisors. They only assist when necessary as they have their primary roles to fulfill:

> *"You know in preparing a plan, there are technical advisors who assist you in preparing a plan according to guidelines but inputs must come from those who are directly responsible to the plan. Therefore, often they cannot change the data we have, because by then the data have already been reported up to the level of the ministry.*

Frankly speaking, it is difficult to orient the team on immunization data because those people also have their own responsibilities in their offices…" [IDC5]

It seemed also that within the planning team there is CHMT. That is to say all CHMT core members are CHPT members but not all CHPT members are CHMT members. The fact that CHMT members often receive orientations and training regarding immunization services, they are required to take charge in analysis and interpretation of immunization data prior to CCHP preparation. One respondent said:

"I think because we, CHMT are the ones who use those data and have been trained on the immunization data, we ought to explain to them (CHPT members) and convince them….." [IMC3].

Despite the fact that majority of the respondents denied that variation in knowledge among the team members affect utilization of data in planning, almost all respondents admitted that there is a need to orient members of the team prior to planning sessions:

"I think this does not affect us because when we sit together to prepare a plan, those members from other departments, normally in order to concur with what we from Health department have prepared, because it is not their career. However there is a need for them to be oriented on immunization data prior to planning session particularly for the DPLO" [IDC2].

In addition, participants expressed that most CHPT members have not been receiving any kind of training or orientation on data analysis. Hence, their capacity to analyse immunization data is questionable. Some CHMT members have not received training since majority have a working experience of less than six years and the trainings about HMIS for CHMT members were conducted long time ago during the introduction of the system. Thus, the newly employed health personnel missed the opportunity of attending formal training on data analysis. This is illustrated by the statement below made by one of the informants:

"The members of the team were selected according to their positions and it was not considered whether we had attended any formal training for planning. Others learn in the process of planning. It is important to have training because others are newly

employed, because of their positions they automatically become members of the team. I think there is a need to have a formal training even if it is for few days." [IMC2]

4.2 Quality of Immunization Data

The knowledge of planners on data analysis alone is not sufficient to effectively use immunization data for planning. To reach informed decisions, one needs to have data of good quality. Therefore, the quality of immunization data may influence the use of data in planning. In this study the quality of immunization data was assessed by using three parameters namely, accuracy of the target population, completeness of data and timeliness of immunization reports. Poor data normally misleads the process of decision making thus resulting into plans which do not address the district local health problems.

4.2.1 Accurate Target Population

Whether information about immunization services is relevant depends on availability of data of good quality. Indicators are calculated from the generated data which is the numerator and the target population as the denominator. Thus the accuracy of the target population determines the relevance of the key performance indicators. If the generated data are poor and the target population is inaccurate, the resulting performance indicator is likely to mislead the process of decision making in planning. This study reports that the target populations of children under one year as derived from the 2002 national census were not realistic. The use of the census figures was expressed as a common practice in the two districts involved in the study. However, the respondents had expressed concerns that the Census underestimates the population of children within the catchment area. The statement below is an example of what the participants claimed:

"... for example in our case we think our target population is very low. As a result of this we have over exceeding coverage, thus we think the projections from the 2002 census baseline data is very low". [IDC1]

Furthermore, the respondents suggested some ways of overcoming this shortfall. The respondents pointed out that physical head count of children could be employed instead of the census data. It is believed that registering all children born in the facility catchment area could help to improve the degree of accuracy of the target population as it is possible to capture even the migrant population. Therefore it is much easier to update the children registers more frequently than updating the census figures. This was reported by the participants as shown below:

> *"… Thus if we have enough resources we could have followed regional advice that we register all children under one year… However, the good advice is to get accurate data by preparing those registers and giving them to facility staff to register children"* [IMC1].

4.2.2 Completeness of Immunization Data

Participants in this study pointed out that during planning sessions some of the immunization data presented were incomplete. Members of the planning team had a tendency to generalize findings from the available reports to the whole district. Thus, decisions base on inadequate data might not represent the actual situation in the district as one of the respondent reported:

> *"…We normally generalize the use of data collected from facilities by analysing them in a holistic manner and not per facility hence implementation is for all health facilities including those facilities which did not submit their reports will benefit"*[IDC1].

When asked about their opinions on the quality of immunization data in relation to data completeness, participants recommended that the tools for data collection at facility level should be improved so as to reduce paperwork to health providers:

> *"….there is too much paperwork which results into health providers to record things which are not realistic. Therefore the ministry could simplify the tools by merging them into one comprehensive tool"* [IDC3].

Increased paperwork at facility level reduces concentration of health providers during tallying vaccinated children. It also forces them to look for alternatives of simplifying the work which most often have detrimental effects to the completeness of immunization data, as one of the respondents said:

> *"... Thus we have monthly and quarterly reports, but the guiding tool is the tally sheet……. Others used to vaccinate children without tallying in the tally sheets and then later they just count the number of bottles used, we told them that was not right because even if one bottle has 10 doses that does not necessarily mean that one has vaccinated ten children, one can just use two doses and discard the bottle"* [IMC1].

Regarding consistency of data collected from health facilities, the district health managers, CHMT were reported to play a significant role in auditing data at facility level:

> "…..*DCCO is the one responsible for visiting every facility to see whether the vaccines received match with the number of children to be vaccinated. Also, there is supportive supervision which is conducted by CHMT. During supervision, we check for consistency of data from the source or origin and the report form. In addition, RHMT also check what is available in the district reports and compare with what is available at health facility level"* [IMC3].

In addition, participants reported another way of checking accuracy of data at facility level. This is normally done by looking at the number of the vaccine doses used at the facility for a specific period of time, say a quarter. Depending on the type of antigen, there are different numbers of doses per antigen like one dose for BCG and measles, three doses for DPT HB and polio vaccines. Thus, the districts normally compute the dosage to get actual vaccines needed, for example BCG which has a single dose they just multiply one dose by target by required coverage, which is 90% to get annual dose and then you divide by 12 to get monthly dose. A CHPT member from Iringa urban revealed that:

> *"Normally we are supposed to check for consistency of data during supportive supervision. Sometimes you may look at the vaccine dosage by checking if they do*

tally with the number of clients, this may help you to be sure with the data collected" [IMC2].

Participants also suggested that CHPT as a team should play a role in monitoring the quality of data. They pointed out that CHMT must take charge in auditing immunization data at the facility level and work in close collaboration with CHPT in order to improve reporting.

"It is better to have accurate data though we may not have a hundred percent accuracy. But we have to monitor accuracy of data…. Thus every CHMT member must make sure that data which is filled in HMIS forms match with those in tally sheets and HMIS book 2" [IDC3].

The importance of supportive supervision at the facilities came out clearly when our informants were explaining about the quality of immunization data they use in planning. The supervision helps health providers to become familiar with the tools they are using in collecting data. Thus errors in recording may be minimized to a great extent when providers attain a better understanding of the tools. They also pointed out that data auditing can be done through CHMT supportive supervision to the health facilities:

"First we want to get data which is of good quality. In other words, to get good data it requires the Council to strengthen supportive supervision especially if we can adopt the so called Data auditing, that is to make follow up of data received from the facilities" [IMC2].

"Generally it is important to first have close monitoring of immunization data generated at facility level. That is, we should have routine supervision so as to improve data recording, completeness and accuracy" [IMC4].

4.2.3 Timeliness of Immunization Report

Timeliness of immunization reports highly influences the use of data in planning. Data must be timely received from the facilities so that analysis can be done prior to planning session.

Delayed facility reports normally lead into incomplete district data; hence the data used in planning are normally of poor quality.

When asked to comment on the quality of data, participants admitted that data timeliness is still a major problem among many facilities in their districts.

> *"…It is true that we have not reached a stage of having good quality of data and even the quantity is not satisfactory because there are some facilities which do not submit their monthly reports timely. We therefore just decide to use such data when at least many facilities have submitted their reports"* [IDC1].

They gave several suggestions on how to improve the quality of data, and a need to have timely immunization reports. Below is one of the suggestions they gave:

> *"First is for CHMT to conduct supportive supervision to those at lower levels so as to identify problems they face in the collection, storage and timely submission of reports. Secondly, we as CHMT should develop a sustainable attitude of timely submission of reports, and thirdly we should give feedback to those who generate reports at facility level so as not to persist and also if they deserve to be praised should be praised. …"* [IMC6].

It was reported that immunization reports are of two types; one is the monthly report which is compiled by the DCCOs while HMIS focal persons compile the quarterly report. However, the district annual report is an aggregate of HMIS quarterly reports, meaning it only takes immunization data which are found in the HMIS reports. Immunization data from the district annual health report are the one supposed to be used in preparation of CCHP. In addition, participants pointed out that there are significant variations between immunization data found in the DCCOs monthly reports and that of HMIS quarterly report. This scenario provides an evidence of doubting the accuracy of immunization data used in planning. The statement below confirms the existing of two types of immunization reports:

> *"There is a special form which people at health facilities fill every month, then the form is submitted to District Medical Officer's Office thereafter DCCO compiles the reports. The reports are submitted to us during the 3rd, 4th, and 5th day of every month.*

However, other reports are submitted on quarterly basis, these reports are compiled by MTUHA/HMIS focal person.…." [IDC2]

4.3 Use of Immunization Data in Planning

Data used for decision making in immunization during the preparation of the CCHP are obtained from the district annual health report prepared by aggregating HMIS Quarterly Reports. However, there also exist immunization data in the form of EPI Annual Report. These data are aggregated at the district from monthly EPI returns obtained from health facilities. Unlike the HMIS Annual Report, the EPI Annual Report is usually not used as a source of information when planning for immunization activities in the preparation of the CCHP.

Table 2 below was derived from the findings in observation checklist. It is the table which shows the availability of district annual health reports for the past three consecutive years, 2008, 2009 and 2010 in the two councils, Iringa municipal council and Iringa district council. It also shows whether table number 23 of that report is filled or not.

Table 2: Availability of Council Annual Health Reports and Completeness of Table no.23 of the Reports

S/No.	OBSERVATION	Iringa MC		Iringa DC		RHMT	
		YES	NO	YES	NO	YES	NO
1	Was Annual Health Reports available?						
	2008		√		√	√	
	2009	√			√	√	
	2010	√			√	√	
2	Did Table no. 23: *Number of children under one year*						

	received BCG, DPT - HB^{3,} Polio 3, and Measles vaccines filled?						
	2008	N/A		N/A		√	
	2009	√		N/A		√	
	2010	√		N/A		√	

*N/A means report was not available

The annual health reports for 2008 to 2010 of Iringa district council were not found during data collection. It was also not possible to obtain soft copies of the same. In Iringa Municipal council report for 2009 and 2010 were found. It was not possible to find out whether table no. 23 was filled or not in those missing reports, from 2008 to 2010 for Iringa District Council and 2008 for Iringa Municipal Council, hence it was reported as not available (N/A).

The council annual health reports for three consecutive years (2008- 2010) were used as baseline data in the preparation of CCHPs for 2009/2010, 2010/2011, and 2011/2012, respectively. This is so because the health report follows the calendar year (January to December) while the CCHP follows the fiscal year (July to June). Thus, due to missing Annual Health Reports, it was not possible to compare with their corresponding CCHPs. However, for the two reports found it was observed that immunization data filled in Table 23 did not match with those in their respective CCHPs.

In the process of planning, situation analysis is normally done. After doing situation analysis, targets are normally formulated using baseline data which are derived from the situation analysis. Thus it is expected that HMIS immunization Indicators reported in situation analysis to be similar to the baseline of the set targets. Since data used for planning is obtained from the HMIS Annual Report, it is expected that immunization data found in this report, specifically in Table number 23 will match with that found in the Situation Analysis section of the CCHP, particularly Table 6. In addition to matching with data in the Situation Analysis section of the CCHP, data found in the HMIS Annual Report in Table 23 need to match with

that found in the Monitoring Performance Indicators section in chapter 7 of the CCHP. In this study, failure of these data to match was regarded as mismatch.

Table 3 below shows immunization coverage for the two councils as found in their respective CCHPs for 2009/10. In the table comparison is made on immunization data reported in the Situation Analysis section and that reported in the Monitoring and Performance Indicators section in the CCHP in order to assess if they match..

Table 3: Comparison of Immunization Data Recorded in Various Sections in the Planning Document (CCHP)

	OBSERVATION	CCHP 2009/10	
		IMC	IDC
1	Important HMIS Indicators as reported in Situation analysis	(%)	(%)
	Coverage of OPV 0	-	85.5
	Coverage of DPT-HB3	121	89.4
	Coverage of BCG	-	84.6
	Coverage of Measles	-	90.0
2	Important HMIS Indicators as reported in setting Targets		
	Coverage of OPV 0	117.0	-
	Coverage of DPT-HB3	110.0	73.0
	Coverage of BCG	232.0	79.0
	Coverage of Measles	121.0	81.0

*IMC stands for Iringa Municipal Council and IDC stands for Iringa District Council

It was observed that there was a mismatch on data reported in the two sections of the same document. For example, in the year 2009/2010 the coverage of DPT-HB3 (121%) for Iringa

Municipal Council reported in Situation Analysis section was 11% higher than that reported in the in the Monitoring and Performance Indicators section. The mismatch implies that there was no consistency in the data found in the same CCHP.

Another important findings obtained in this study was immunization coverage that was beyond 100% which was observed in Iringa Municipal Council. This abnormality was reportedly attributed to underestimation in setting target population from the census that resulted into lowering the denominator.

4.3.1 Evidence Based CCHP

The CCHP format is designed to ensure the planning process uses data to come up with targets, activities and performance indicators. This way the CCHP is said to be an evidence based plan if the criteria outlined in the CCHP guidelines are properly followed. The guideline also outlines the sources of immunization data to be used during preparation of CCHP. The Annex 7 of the guideline provides explanatory notes on sources of information to assist in determining values for the 20 performance indicators. The source of immunization performance indicators outlined in that annex is MTUHA/HMIS. Although there are other sources of data listed in the guideline, like the 2002 Tanzania Census and the Demographic and Health Survey (DHS 2004 and 2010) none of them provide immunization data. When asked about the evidence that data is used in planning, one respondent from the RHMT group said:

> *"Because there is a section of situation analysis where everything is analysed, all indicators are analysed, that is all district data are analysed. This means that if the plan is not derived from data, you will easily see that the data found in situation analysis chapter are not reflected. The situation analysis covers all important health data which is the basis of CCHP; otherwise the plan will be just an ideal plan"* [RHMT2].

Presence of facility immunization reports provides the baseline data for preparation of CCHP. Although it was noted that immunization data are collected using two different tools, HMIS and EPI data management tool, the district annual health report compiles quarterly immunization reports prepared using HMIS tool only. This means that immunization data collected by using EPI data management tool are not used in preparing CCHP. They remain to be redundant as far as preparation of CCHP is concerned. Regarding how immunization data collected are used, respondents from the district level expressed that data help them to prepare reports. The statement below illustrates this fact:

> *"The first thing is these data help us in preparing monthly, quarterly and annual reports. Also, another thing is to know the performance and to know where there is a problem of low coverage. The data help us in preparation of plans …"* [IMC1].

Regarding performance indicators used in CCHP, the MoHSW and PMO-RALG have opted for an approach by determining a set of 20 indicators, for which each district has its own baseline data, for each performance indicator. The district is required to fill its baseline data and the expected performance at the end of the year thus these data have to be reviewed every year. However, from the observation checklist the findings indicated that immunization performance indicators were repeated in another year baseline data. This shows that the problem of "copy and paste" of data do exist among the districts. One respondent whose primary job is to assess the CCHPs had this to say:

> "…..*Others are just lazy, at the back of the guideline there are 21 indicators which have to be reviewed every year and which guide you in identifying your council's health problems but because people don't give evaluation a priority. They just copy and paste. As a result, our plans are not realistic due to lack of commitment in planning"* [RHMT5].

It was also reported that immunization data are used in setting priorities during planning. Priority setting in CCHP is based on the health problems identified during planning. The health problems are identified from the data found in the tables of situation analysis chapter of the CCHP. From the priority needs identified to improve immunization services, it is easy to forecast various needs such as vaccine needs. Thus, immunization data found in situation

analysis chapter of the CCHP help in forecasting annual vaccine needs for the district immunization services. The statements below illustrate this:

> *"We use those data when we forecast our district vaccine needs for each antigen. We use them to know our performance whether all targeted children have been met or not, and this is done when all facilities have submitted their reports"* [IDC2].

4.3.2 Identification of Key Performance Indicators

Immunization performance indicators are used as a monitoring tool for immunization services in the districts. Immunization data collected from the facilities are used to calculate important performance indicators for the district. From these indicators, districts are able to determine areas of weaknesses which will be addressed during the next planning session. Areas with poor performance should be given priorities during preparation of CCHP. Participants of this study described key performance indicators in CCHP as a guide to address the priority health problems. They claimed to have used immunization data to determine performance indicators as it is shown in the following statements made by the respondents:

> *"Through these data, we look at those indicators to know where the problem is. After knowing the problem we plan by prioritizing the problems"* [IMC2].
>
> *"After compiling the data from facilities we get the district performance. Then, we sit as a CHMT to discuss all CCHP indicators as mentioned in the CCHP guideline and also to determine our immunization coverage. At this district level, we mainly use the data in the preparation of CCHP, in reporting to the regional level and to know our performance"* [IDC3].

4.3.3 Motivation is Fundamental for Realistic Plan

Motivation is the crucial element in setting and attaining goals. Having realistic plans entails the use of data in preparing such plans. However, data may be available but not used for the purpose of planning. External force is needed to fuel the behaviour of using data among planners at district level. At this juncture, motivation is said to play a significant role in facilitating the use of data during planning sessions. The informants reported incentives

provided in their respective districts, which are only provided when the health facility has submitted a complete immunization report within the required period. Also, financial incentives are provided prior to participation in planning sessions at the district level. Individual health providers may be given some gifts such as a pair of khanga, T-shirts, caps, medical equipment like BP machine and glucometer. However, the incentives described by the respondents did not have a direct relationship with the use of data in planning. They only focus on reporting and preparation of plans. There are no specific incentives described by respondents for evidence of use of immunization data. One respondent reported as follows:

> *"For us who prepare plans, motivation is very important. For example when we go for planning we normally get some allowances and those who prepare and submit reports to us we also give them some allowances. Another motivation is when someone does a good job, we give him gifts, and he will be selected as the best worker of the year and be given a letter of recognition"* [IDC6].

Financial incentives are said to exist where an agent can expect some form of material reward, especially money in exchange for acting in a particular way. Both health providers at facility level and the district health planners were said to have financial incentives prior to doing their job. This fact was illustrated by the majority of the informants as illustrated in the following quotations (IDC3, IDC5, IDC6, IMC2, IMC3, IMC4 and IMC6):

> *"We know that it is part of their (health providers) job to go for outreach on immunization, but because they go outside their working station, they should be given some allowances even though outreach services are within working hours. Also, CHMT (CHPT members) when they attend planning sessions they normally get some allowances"* [IDC3].
>
> *"In preparation of council plans there are many challenges, one of which is time, the team takes long time thus deserves to get incentives. Another motivation is the provision of allowances and training to staff"* [IMC4].

Also, participants acknowledged to be familiar with the so called result based bonus (Pay for Performance – P4P) a strategy designed by the Ministry of Health to strengthen the use of data, particularly those collected from RCH services. However, they pointed out that its

implementation is sluggish (IDC1, IDC2, IDC5, IDC6, IMC1, IMC2, IMC4, IMC6 and RHMT3).

> *"... It is important to have P4P though its implementation is sluggish because it helps to boost immunization coverage"* [IMC1].
>
> *"In the CCHP guideline there are five criteria for P4P. If the council meets the criteria, it is more likely to be rewarded. However, under normal circumstances when a council has performed well, we give them letter of recognition. We do so because we normally assess the councils' plans and rank them accordingly and therefore give the best performer letter of recognition. For those who have underperformed we give them assistance by identifying their areas of weakness and providing technical support because they are normally weak in some parts, not in all areas"* [RHMT3].
>
> *"P4P is well organized and aims at promoting RCH services at large. But what I see I think its implementation is not good, and this may be due to inadequate fund".* [IMC2]

4.4 Perceived Barriers to Utilization of Data

This study went further to explore what respondents perceived as barriers to utilization of immunization data in the district planning. The findings revealed two major categories of perceived barriers; disorganized process of data analysis and presence of unrealistic performance indicators. The following are factors associated with improper use of data in planning;

4.4.1 Disorganized Process of Data Analysis

For data to be properly utilized in planning it must be analysed to extract the hidden information. The process of data analysis requires data generated by competent health providers to be complete, accurate and timely reported. Incomplete data and delayed facility reports act as barriers to utilization of data in planning since they affect the quantity of data. To come up with informed decisions we must have adequate data about the problems we want

to address. The current practice about immunization service seems not to fulfill these conditions as it was reported by the respondent from the district level:

> *"It is true that we have not reached a stage of having good quality of data and even the quantity is not satisfactory because there are some facilities which do not submit their monthly reports timely. We therefore just decide to use such data when at least many facilities have submitted their reports. To be honest this affects us in planning according to quantity and quality of the available data….."* [IDC1].

In addition, health providers are not provided with adequate support for them to prepare reports timely. The kind of support needed at facility level to ensure generation of good quality immunization data include supportive supervision and coaching, provision of user friendly data collection tools and provision of financial incentives for those who work extra hours to prepare reports. However, the tools available were not user friendly as they are time consuming and the financial incentives do not exist. Supervision though present was not helpful because health providers were blamed for not fulfilling their tasks instead of being assisted to understand the tools. Health providers were sometimes afraid of being blamed for not submitting the reports timely hence they often look for alternatives like recording data that do not exist which further mislead the analysis and results into poor quality of information. One of the participants had this to say:

> *"To be honest the quality of data is still questionable. I don't think if these data are accurate, we don't have accurate children data from our areas in the municipality. This is a problem not only to the municipality but also to other districts. … Another thing is health providers at facility level are confused because they are required to submit reports which are timely, complete and accurate. Thus, when it comes to report writing they just think we have not vaccinated the required number of children that means if they come for supervision they will say we are not doing our job adequately, so it is better for us to do something before they come"* [IMC3].

On the other hand the poor quality of data always misleads the process of decision making. The data which are not complete and timely obtained may lead us into generalization of

problems to be addressed. This is fatal because the resulting plan will have no impact to any of the existing problems, hence resources are wasted. The statement below illustrates this:

> *".....Data are available, but timeliness and completeness is only for some facilities because health providers still have problems with calculations"* [IMC6].

4.4.2 Unrealistic Performance Indicators

The performance indicators listed in the CCHP guideline must be updated every year whenever the CCHP is prepared. Immunization performance indicators are among the 20 listed indicators in the guideline. The planning team is supposed to make use of these indicators when they are doing the situation analysis of the health services in the previous year. It is expected that from performance indicators targets and activities will be formulated. However, if the indicators are not realistic the targets are likely to be not achievable and the activities will not address the health problems identified. In this study, the key informants pointed out that the target populations derived from the 2002 national census were not realistic. This is so because the census did not capture children from the migrating societies like the Maasai and Mang'ati who live a nomadic life. As a result of uncaptured population, the immunization performance indicators in both district were said to have coverage exceeding hundred percent. The following statement illustrates the situation as quoted from one of the respondents at the regional level:

> *"Not only Iringa DC and municipal council, even Njombe DC have their coverage exceeding hundred percent. For example Njombe has a lot of immigration from Makete, Songea etc people go there to look for jobs. Thus, actual population exceeds the projected one. On the side of Iringa municipality, I totally agree that because there is a regional hospital which serve people from various places like Iringa rural, Kilolo and Mufindi districts, others come from villages bordering Iringa region for example those villages of Kilosa district hence the data must shoot to abnormal. Also, the population dynamic of Iringa municipality is higher as compared to that of 2002 due to established higher training institutions. On the side of Iringa DC, the reason for*

population change is migrants, livestock keepers like the Sukuma; hence the coverage must be significantly higher" [RHMT3].

Others went further to explain the implications of unrealistic performance indicators that they lead into accumulation of unvaccinated children within the catchment area. This explains why outbreaks do occur despite the good immunization coverage reported. Conducting physical head count of the children born in their catchment area though it seems to be a solution to unrealistic performance indicators, remains to be not feasible. Participants of this study claimed that the exercise is expensive thus the districts could not afford due to limited fund they normally have. However, they mentioned a possibility of looking for alternatives which could be less expensive. The problem of unregistered children under one year came out clearly during interview as reported by one of the respondents:

"In our case we have challenges regarding immunization data. The census data have problems, and we are not able to perform physical head count of all children in the municipality. This exercise is expensive and health providers cannot perform the exercise since they are very few and may paralyse services at facilities once they engage themselves in house to house physical head count of children within their catchment area. In the rural settings I think it is easy simply because they may use Village Health Workers" [IMC1].

Table 4: Thematic Network (from Codes to Themes)

CODES	SUB CATEGORIES	CATEGORIES	THEMES
• Types of Indicators used • Importance of Indicators	*General knowledge on indicators*	Knowledge about HMIS immunization indicators	**Knowledge on data analysis**
• Antigens and proxy indicators • Antigens, proxy indicator and coverage • Proxy indicator	*Knowledge on proxy indicator*		
• HMIS tool • EPI data management tool	*Data collection and reporting process*	Knowledge on analytic process of data	
• Numerator and denominator	*Calculation of indicators*		
• CHMT are primary users of data • Some are technical advisors • It is the role of DCCO	*Different roles of CHPT members*	Common knowledge among CHPT members	
• Lack of common understanding • Orientation on immunization data	*Importance of common understandings among CHPT members*		
• Registration of all children in the Community • Need for realistic Census	*Establish proper source of data*	Accurate target population	**Quality of Immunization data**
• Indicators should be reviewed • Target population should be reviewed	*Review of baseline data*		
• Improve supportive supervision • Reduce paper-work at facilities • Single data collection tool	*Improved data collection tools*	Completeness of data	

CODES	SUB CATEGORIES	CATEGORIES	THEMES
• Consistency is checked quarterly • Monitoring team for checking consistency • Data Auditing for consistency	*Consistency of data*		
• Collecting facility reports during supervision • Sitting together to verify data	*Ways of submitting facility reports*	Timeliness of immunization reports	
• Data are available in Situation analysis chapter of CCHP • Data from HMIS are used	*Different sources of data are available*	Evidence based CCHP	**Uses of Immunization data in planning**
• Uses of data in reporting	*Presence of facility immunization reports*		
• Measurement of performance • Used in determining the performance	*Presence of performance indicators*		
• Uses of data in planning • Informed decision making • Used to forecast vaccine needs	*Identification of priority needs*		
• Setting priorities of the plan • Formulation of activities to address the gaps	*Addressing the priority health problems*	Identification of key performance indicators	
• Training as incentive package • Allowance as incentive package • P4P as incentive package • Recognition as incentive package	*Types of incentives*	Motivation is fundamental for realistic plan	
• Incentives improve the reports	*Importance of incentives*		

CODES	SUB CATEGORIES	CATEGORIES	THEMES
• Incentives are important			
• Incomplete district data • Untimely facility reports • Poor quantity misleads • Poor quality misleads	*Incompetence of health providers*	Disorganized process of data analysis	**Perceived barriers on utilization of data**
• Too many district reports • Timeliness is a problem • Errors in data generation • Inconsistency of data • Health providers cook data	*Inadequate support mechanism*		
• Target population is derived from 2002 census • Census does not capture immigrants • Data from the census are not realistic • Existence of uncaptured target population	*Unrealistic census data*	Unrealistic performance indicators	
• The target group is children under one year • Emphasis on physical count of children • Physical head count of children is expensive	*Presence of unregistered under one children*		

Source: **Author's data analysis June 2012**

CHAPTER FIVE: DISCUSSION OF FINDINGS

In the present study, the views of the members of CHPT and RHMT on the utilization of immunization data in district planning were explored. This discussion chapter addresses findings from the three major areas of this study: knowledge on data analysis, quality of immunization data used in planning, and uses of immunization data in planning.

5.1 Knowledge on Data Analysis

The study provides an indication of some differences in knowledge on data analysis among the members of the CHPTs. For the team members who are not part of the health department, involvement in processing and analysis of immunization data seemed to be seldom. For those who belong to the health department, understanding varies significantly from that of the DCCO. Although some of the team members denied that their difference in knowledge on data analysis affects the use of data in planning, they expressed the need for training on data analysis to members of the planning team. Their responses raised some doubts whether as a team they really analyse data prior to planning. Surprisingly, CHMT members whose primary role is to take charge in analysis of data pointed the task of analysing immunization data to the DCCO. Instead of CHMT acting as listeners when the DCCO presents immunization data, they are expected to challenge the data presented and help in rectification of those data so as to come up with health information which reflects the reality. If this is left to continue, the impact of CCHP to the community as far as health problems are concerned will not be significant. As a result of this, districts will continue to have health plans which are "business as usual".

Inadequate knowledge on data analysis among district managers is not so uncommon as it resembles those health providers at facility level who are the generators of immunization data. To-date most health workers responsible for data collection and reporting at both facility and district levels have limited knowledge on HMIS [6].

The findings not only suggest there is a variation in knowledge among CHPT members, but also a need for training on data analysis and orientations prior to planning sessions. Although

some key informants claimed that this variation doess not affect the use of data in planning. Almost all of them seemed to understand the importance of having common knowledge about immunization data. It is the fact that some members of the planning team have no background on the health sector. Hence, they are not aware of the health data particularly immunization data required in setting targets and performance indicators. The basis of any plan is situation analysis which employs various data to come up with priority problems to be addressed by the plan.

5.2 Quality of Immunization Data Used in Planning

Regarding the quality of immunization data used in preparation of CCHP, the findings of this study were organized into three categories; accuracy of target population, completeness of immunization data and timeliness of immunization reports.

It was revealed that the target population of under one year children as obtained from the projections of the 2002 national census were not realistic. However, the use of target populations from the census projection was found to be a common practice within the two councils involved in the study. Because immunization performance indicators are determined by the target population, they are also not realistic. Census projections do not capture mobile populations like the nomadic ethnic groups such as the Maasai and seasonal workers like those working in plantations, fisheries, and mining [17]. Also, the population in towns and cities is so dynamic due to business opportunities available. These immigrants largely affect the population of a catchment area and thus inflate the target population. To address the challenge of inaccurate census data, HMIS was designed to catch information from the community level. Such information is the registration of all children born in the community within the health facility catchment area. Providers utilize health facility data and village registers to capture information of children born within the facility catchment area. Therefore, health providers at the primary facility are supposed to conduct visits to the community within their catchment areas at least once after every month. However, although the booklets are available health providers do not visit the community. The reasons expressed by the participants of this study were shortage of human resource for health and limited budget to support the activity. This is a major setback as far as accuracy of immunization target

population is concerned. It was expected that physical head count of children within the facility catchment area could provide data that are close to reality as compared to the census data. This is true because it easy to capture the immigrant populations in the service area as it is easy to update the register frequently unlike the census which is conducted after every ten years and its projections are far from the reality. In a study done in Uruguay [17] it was found that majority of immunization registration systems were using denominators generated from census data at the central level (made available at the beginning of each year) and required regular reporting of aggregated immunization data from peripheral levels. However, annual denominators from census projections may be imprecise, because the census data, the fertility/mortality indicators, and/or the migration data (particularly at the lower geographical level) may be outdated. This could also account for the problem of imprecise performance indicators observed in this study. Imprecise immunization performance indicators affect preparation of CCHP. Activities in the CCHP are formulated from the annual targets which normally reflect the performance indicators of the previous year. If the performance indicators are not realistic the resulting set targets will be either too low or too ambitious. Likewise, the resulting plan will have no impact in the community as far as immunization services are concerned.

In addition to accuracy of immunization target population, the findings revealed existence of incomplete immunization data and untimely submission of immunization reports from the facility. Another finding was on the existence of two different data collection tools. These were the HMIS tool and EPI data management tool. The two tools are managed by different personnel, the HMIS focal person and the DCCO. This is a barrier to health providers at facility level where people are overwhelmed by too much paperwork due to the fact that they have to prepare reports to both the HMIS focal person and the DCCO. Although EPI data management tool provides wide information about immunization services as compared to HMIS and the DCCO is the in charge of district immunization services, CCHP utilizes immunization data obtained from the HMIS tools. This means, EPI data are given less priority as far as preparation of CCHP is concerned, as much of the data are redundant.

Presence of more than one data collecting tools at facility level largely reduces concentration among health providers during data recording resulting into incomplete data. Also, these multiple tools impair the ability of health providers to prepare and submit reports timely since the same providers are responsible for preparing reports at the facilities. To improve the quality of data generated from the facilities, respondents suggested a need to strengthen CHMT supportive supervision. They were of the view that supportive supervision helps in identifying inconsistency between tally sheets and facility report submitted to the district and thus correcting the data. These findings are in line with the study by Mavimbe et al [8] which revealed that although supervision visits were conducted, none related to data consistency between the tally sheets and the facility report. Thus, it is very likely that the data available for preparation of CCHP at district level are normally incomplete and some are missing due to delayed facility reports. At this juncture it is worth to note that even if immunization data are used in preparation of CCHPs, they are likely to be misleading since they are not representative.

5.3 Uses of Immunization Data in Planning

The findings from RHMT respondents who play key role of assessing CCHPs suggest that CCHP is an evidence based plan. This is justified by the presence of immunization data in the chapter of situation analysis of CCHP, which district have to fill all tables prior to preparation of the plan. Also, another evidence of use of data during preparation of CCHP is found in chapter seven of the CCHP where there is a list of 20 important key performance indicators of which immunization performance indicators are among them. Although the evidence available suggests that immunization data are used in preparation of CCHP, the study findings revealed some discrepancies of immunization data used in planning. One shortfall is the quality of data used in planning. By quality this study refers to consistency of data in different reports and CCHP tables whereby it was noted from the observation checklist that immunization data in various tables of CCHP were highly inconsistent. In addition, there was a problem of *"copy and paste"* of immunization performance indicators from the previous CCHPs. Another parameter of quality which was observed to affect the quality of information

derived is the accuracy of immunization performance indicators. From the observation checklist findings, it was found that some immunization coverage in the two councils were over 200%. Although respondents explained that such abnormality resulted from unrealistic estimated target populations which are derived from the estimates of the 2002 national census, this high magnitude of error under normal circumstances could not be accepted. Although reported evidence and quoted data in CCHP serves as evidence for data use, it is doubtful as to what extent such data could help planners improve immunization services due to inconsistency of immunization data, a problem of copy and paste of data and overshooting of immunization coverage. The researcher wonders how planners could come up with vital decisions from such kind of data. Thus although data are used to prepare the plan, the plan might not give the expected impact due to this shortfall.

Participants had mentioned incentives related to health providers from the facility level for timely submission of immunization reports, financial incentives to planning team members for participation in planning and provision of letter of recognition to the council for a well prepared CCHP. However, all these incentives are generalized. Incentives are not specifically motivate the planners to use immunization data during planning. This is true because data may be available and with good quality but not used as required. Inconsistency of immunization data in various tables of CCHP provides evidence that those incentives failed to influence proper use of immunization data in planning. Payment for performance (P4P) was designed to support reporting system for RCH services and not the use of RCH data, which includes immunization data, in planning. The districts are required to set aside some fund in their CCHP for rewarding health providers who meet the set P4P criteria at facility and district levels. The CHMT are supposed to assess health facilities to determine those who met the criteria and thus approve the payment. Likewise, the RHMT approves payment for the districts. However, this strategy is not well implemented due to limited district budget. Although CCHP contain a table of summary on P4P annual performance report of which immunization data, DPTHB-Hib3 and OPV0 are one of the criteria [12]. Its presence does not justify whether immunization data were properly utilized in planning. Hence, as far as motivation to encourage the use of data in planning is concerned, the study revealed that there

were no direct relationship between the incentives provided and the use of data in preparing CCHP. Thus, P4P needs to be modified to fit the purpose of not only reporting of immunization data but also using immunization data in planning. This can be done by first harmonizing data collection tools which will significantly reduce the workload to health providers and consequently increase their concentration on data collection. Other important criteria of implementing P4P should be added which may include evidence of data use in CCHP by letting the assessors of CCHP, the RHMT check for data consistency across various tables of the CCHP.

5.4 Limitations of the Study

The three district annual health reports, 2008, 2009 and 2010 for Iringa district council and one report 2008 for Iringa Municipal Council were not found during data collection. These reports were misplaced as they were available in the regional office. The researcher had a limited time hence he could not obtain those reports at the regional office. However, if all were available they could have helped in verifying the use of immunization data in district health plans. Apart from that, the researcher believes that the data obtained in other reports are good and plenty enough to act as the basis for sound conclusion. The following chapter is the concluding chapter which will, among other things, give recommendations on the basis of this study.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

This is the closing chapter of the study. It is meant to provide a conclusion and recommendations on what can be done about issues raised in the study.

6.1 Conclusion

The study revealed that data are used in preparation of CCHP and thus it is said to be an evidence based plan. However, the major setback found was on the capacity of planning team to analyse immunization data and the quality of immunization data used. The use of immunization data and consequently information about immunization services in preparation of CCHP must be seen in a broader perspective not focusing only on the presence of immunization data in the tables of CCHP but also on the ability of planners to analyse such data and the quality of data being used. Using data with questionable quality may impair the process of informed decision making.

6.2 Recommendations

This study has provided an important message. However, there is a need to: (1) empower districts to use locally generated health data by registering all children born in their catchment area. This can possibly be implemented despite the claims that it is limited by the shortage of health providers and it is expensive. The local authority can use the existing government structures such as the ten cell leaders, Street/hamlet executive officers, village health workers and ward executive officers to register children within their area of localities (2) empower the council health planning teams to be equipped with knowledge on analysis and interpretation of data in line with the planning skills (3) reduce paper work at facility level by merging the two tools into one to enable health providers to concentrate more on the generation of few but very important data and hence improve the quality of data (4) strengthen the existing result based bonus to allow health providers at both district and facility levels be paid according to their performances specifically on proper use of immunization data in planning.

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APPENDICES

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
DIRECTORATE OF RESEARCH AND PUBLICATIONS, MUHAS
INFORMED CONSENT FORM

Interviewee No. ☐☐

Consent to Participate in a Study

Greetings! My name is MAY ALEXANDER. I am currently working on a study on **Utilization of immunization data in district health planning in the context of Health Sector Reforms – A Case Study of Iringa District.**

Purpose of the study

The study is conducted in partial fulfillment of the requirements for the degree of Master of Arts, Health Policy and Management of MUHAS. This study is aiming at evaluating the utilization of immunization data by the district health managers with special focus on the health planning and budgeting which intends to improve the evidence based annual comprehensive council health plans.

I would like to kindly request you to participate in this study because your information, contribution and suggestions will be of tremendous importance to the study. Please be honest and fair so that you may help me to get a clear picture of implementation status. The findings will be useful for making recommendations and suggestions to be used for improvement of other health programmes.

What participation involves

If you agree to participate in the study, you will be interviewed and audio-recorded in order to answer a series of questions in the interview guide prepared for the study.

Confidentiality

I assure you that all the information collected from the interview will be respected, treated confidentially, and used for the purpose of the study only. Your answers, opinion and

suggestion will be valued for the improvement and better implementation; your name will not be written in the report/document. All information collected from the interview will be entered into the computer with only the interviewee number.

Risks

We do not expect that you will come to any harm as a result of participating in this study. There may be some questions you are not able or comfortable to answer. Please feel free to say "I don't know", or you can refer the researcher to your subordinate with the required information including data to support the answer.

Right to withdraw and alternatives

Taking part in this study is completely voluntary. You can stop participating in this study at any time, even if you have already given your consent. Refusal to participate or withdrawal from the study will not involve any penalty.

Who to contact

If you ever have questions about this study, you may contact the **Researcher, MAY ALEXANDER** of Muhimbili University of Health and Allied Sciences, P. O. Box 65001, Dar es Salaam (Tel. 0788-182829).

If you ever have questions about your rights as a participant, you may call **Prof. Muhsin Aboud, Chairperson of the Senate Research and Publications Committee**, P. O. Box 65001, Telephone : 255 22 215 2489 Dar es Salaam.

Signature:

Do you agree to participate in the study?

I ……. have read the instructions and information in this form. My questions have been answered.

I agree ☐ I DO NOT agree ☐

Signature of participant ……

Date of signed consent …….

I: INTERVIEW GUIDE FOR THE COUNCIL HEALTH PLANNING TEAM INFORMANTS

Part I: Identification particulars of the interviewee and Socio demographic data:

a) Name of the council ……..…

b) Profession ……..…

c) Position: ……

d) Age……..... Sex: Female/Male …….....

e) How long have you been in this position? Years …… months.…….

f) What position did you hold…….

Part II: Knowledge about the HMIS and analysis of Immunization data:

a) What do you know about the HMIS indicators on immunization? (*Probe on interpretation of data, current status, objectives*).
b) How do you collect and record immunization data in the HMIS booklets from the health facilities? *(Probe about which HMIS booklets contain immunization data and how to check for consistency).*
c) Can you tell me how do you calculate immunization performance indicators? (*Probe about sources of the denominator used to calculate indicators).*
d) What do you know about immunization performance indicators?
e) What is your comment on the appropriateness of the district immunization performance indicators?

Part III: Uses of immunization data in district health planning:

a) How are you supposed to utilize the information which you always collect in the HMIS booklets from health facilities within your district? (*Probe for various uses of data/health information*)

b) From your experience, how do you utilize the immunization data in relation to health planning in your district? (*Probe the interviewee to give few examples on how they develop performance indicators in the CCHP)*

c) What are your views about the quality of immunization data required in developing the indicators in CCHP? (*Probe for availability, completeness and reliability of data*)

d) Considering the way immunization services are provided in your district, do you really feel that immunization data is worthy to be utilized in district health planning? Please explain. (*Probe for target population at service area*)

e) How the use of immunization data improved immunization services in your district? Please give a specific example.

Part IV: Barriers of using immunization data:

a) To what extent will the quantity and quality of immunization data impair the use of data in planning? (*Probe for underlying reasons*).

b) To what extent will the knowledge and attitude of CHPT members impair the use of immunization data in planning? (*Probe for underlying reasons*).

c) How far is incentive for data use important in district health planning? (*Probe for availability of incentive for evidence based planning*).

Part V: Conclusion and the way forward:

a) What suggestions would you give to improve the use of data for immunization services and for the purpose of planning?

b) Is there anything else you would like to add, regarding the utilization of immunization data in district health planning?

Thank you very much for your participation!

II: INTERVIEW GUIDE FOR THE REGIONAL HEALTH MANAGEMENT TEAM (RHMT) KEY INFORMANTS

Part I: Identification particulars of the interviewee and socio-demographic data:

a) Name of the region ……

b) Profession ……

c) Position: ……..……

d) Age……..... Sex: Female/Male…….....

e) How long have you been in this position? Years …… months.…….

f) What position did you have…….

Part II: Knowledge about the HMIS and analysis of immunization data:

a) What do you know about the HMIS indicators on immunization? (*Probe on interpretation of data, current status, objectives*).

b) What do you know about immunization performance indicators? (*Probe about sources of the denominator used to calculate indicators).*

c) What is your comment on the appropriateness of the district/regional immunization performance indicators?

Part III: Uses of immunization data in district health planning:

a) How are the district managers supposed to utilize the information which they always collect in the HMIS booklets from health facilities within their district? (*Probe for various uses of data/health information*)
b) From your experience, how do they utilize the immunization data in relation to health planning in their district? (*Probe on the interviewee to give few examples on how they develop performance indicators in the CCHP).*
c) What are your views about the quality of immunization data required in developing the indicators in CCHP? (*Probe for availability, completeness and reliability of data*)
d) How will the use of immunization data improve immunization services in the district?
e) How do you tell if CCHPs are evidence based?
f) What incentives are provided to the district with evidence based CCHP?

Part IV: Barriers of using immunization data:

a) To what extent will the quantity and quality of immunization data impair the use of data in planning? (*Probe for underlying reasons*).
b) To what extent will the knowledge and attitude of CHPT members impair the use of immunization data in planning? (*Probe for underlying reasons*).
c) How far is incentive for data use important in district health planning? (*Probe for availability of incentive for evidence based planning*).

Part V: Conclusion and the way forward:

a) What suggestions would you give to improve the use of data for immunization services and for the purpose of planning?
b) Is there anything else you would like to add, regarding the utilization of immunization data in district health planning?

Thank you very much for your participation!

III: OBSERVATION CHECKLIST FOR COUNCIL HEALTH PLANNING TEAMS

EVIDENCE OF USE OF IMMUNIZATION DATA IN DEVELOPING CCHP

SOURCES OF DATA	S/No.	ACTIVITY	STATUS	
			YES	NO
1. COUNCIL ANNUAL HEALTH REPORT	1	Availability of annual health reports		
		2009		
		2010		
		2011		
	2	Is table no. 23 filled?		
		2009		
		2010		
		2011		
	3	Compare table 23 and table 6 of the respective CCHP, i.e. 2009/2010, 2010/2011, and 2011/2012. Do the figures match?		
		2009		
		2010		
		2011		
2. COMPREHENSIVE COUNCIL HEALTH PLAN (CCHP)	4	Check if **table 6** (Important HMIS Indicators) is completely filled in the 3 CCHPs (2009/2010, 2010/2011 and 2011/2012)		
		CCHP 2009/2010		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2010/2011		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2011/2012		

SOURCES OF DATA	S/No.	ACTIVITY	STATUS	
			YES	NO
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
	5	Check if the table in **Chapter 7** (Targets and Monitoring Performance Indicators) **(annex 6)** is completely filled in the 3 CCHPs (2009/2010, 2010/2011 and 2011/2012)		
		CCHP 2009/2010		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2010/2011		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2011/2012		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
	6	Compare the baseline data in each year to the data in their respective year in table 6. Do they match?		
		CCHP 2009/2010		
		CCHP 2010/2011		
		CCHP 2011/2012		

FOMU YA RIDHAA

Namba ya Msailiwa ☐☐

Ridhaa ya kushiriki katika utafiti

Salaam**,**

Jina langu ni MAY ALEXANDER, mwanafunzi wa shahada ya uzamili katika Chuo Kikuu cha Sayansi za Afya Muhimbili, Dar es Salaam.

Dhumuni la Utafiti

Mpendwa mshiriki, ninapenda kukujulisha kuwa tunafanya utafiti wenye kichwa cha habari "*Utumiaji wa takwimu za Chanjo katika uandaaji wa Mipango ya afya ya Wilaya - Iringa*".
Ningependa kukuomba ili ushiriki katika utafiti huu kwa kunipa taarifa juu ya masuala mbalimbali. Utafiti huu un a lengo la kuainisha uwezo wa wajumbe wa timu ya uandaaji mipango ya afya kuchambua na kutumia takwimu za chanjo kiusahihi wakati wa kuandaa mpango wa afya wa halmashauri. Tafadhali ninakuomba uwe muwazi na mkweli kwani matokeo ya utafiti huu yatakuwa sehemu ya mapendekezo yatakayoweza leta utekelezaji bora wa matumizi ya takwimu katika kuandaa mipango.

Usiri

Tunakuhakikishia usiri wa hali ya juu kwa kadri ya uelewa wetu. Hatutaandika jina lako katika dodoso au ripoti au nyaraka zozote ambazo zinaweza kumfanya mtu mwingine kukufahamu. Taarifa zote zitakazokusanywa zitatunzwa na mtafiti mkuu.

Haki ya kujitoa kwenye utafiti

Kushiriki kwenye utafiti ni hiari. Uamuzi wako wa kushiriki au kutoshiriki hautoathiri haki yako kama raia. Unaweza kujitoa kushiriki katika utafiti wakati wowote, hata ikiwa umekwishakubali. Uamuzi wako wa kushiriki au kutoshiriki katika utafiti hauambatani na adhabu yeyote na wala hutapoteza mafao yoyote unayostahili kupata.

Kama kukitokea madhara

Hatutarajii uwepo wa madhara yeyote juu yako kama mshiriki kwenye utafiti huu. Hata hivyo kama madhara yatatokea kwako kutokana na wewe kushiriki katika utafiti huu, tunaahidi kutoa ushirikiano wa hali na mali kwa kadiri ya uwezo wetu.

Mawasiliano na wahusika

Ikiwa una maswali yoyote kuhusiana na haki zako wewe kama mshiriki katika utafiti huu, unaweza kuwasiliana na **Prof. Muhsin Aboud**, ambaye ni Mwenyekiti wa Kamati ya Utafiti na Uchapaji ya Chuo Kikuu cha sayansi za Tiba na Afya Muhimbili, S.L.P 65001, Dar es Salaam, Simu 022-2150 302.

Kwa maelezo zaidi unaweza kuwasiliana na watafiti wafuatao kwa kutumia anwani zifuatazo:-

Jina	Simu	Cheo	Taasisi
MAY ALEXANDER	0788 182829	Mwanafunzi shahada ya Uzamili	Chuo Kikuu cha Sayansi za Tiba na Afya Muhimbili

UKUBALI

Maelezo ya hapo juu yanayoonesha malengo, usiri, madhara, faida, na taratibu katika utafiti unaoitwa "*Utumiaji wa takwimu za Chanjo katika uandaaji wa Mipango ya afya ya Wilaya - Iringa*" umesomwa kwangu na ninakubali kushiriki katika utafiti huu.

Sahihi ya Mshiriki …… **Tarehe** ……

Sahihi ya Mtafiti …….. **Tarehe** ……

I: MWONGOZO WA MASWALI KWA WAJUMBE WA TIMU YA UANDAAJI MIPANGO YA AFYA YA HALMASHAURI

Sehemu ya I: Utambulisho wa Mshiriki:

a) Jina la halmashauri ……

b) Taaluma ya Mshiriki

……

c) Cheo:

……..…….……

d) Umri (Miaka)…… Jinsi: Me/Ke…….....**.....**

e) Muda wa cheo cha sasa: Miaka …… Miezi.…….

f) Nafasi uliyokuwa nayo kabla ya cheo cha sasa: …….

Sehemu ya II: Ufahamu kuhusu MTUHA na uchambuzi wa takwimu za Chanjo:

a) Unaelewa nini kuhusu viashiria vya chanjo vilivyopo kwenye MTUHA? (*Dodosa zaidi kuhusu uchambuzi wa takwimu, hali ya sasa, madhumuni ya takwimu za chanjo zilizopo kwenye MTUHA).*

b) Ni njia zipi unatumia kukusanya takwimu za chanjo kutoka katika vitabu vya MTUHA vinavyotoka katika ngazi ya vituo vya kutolea huduma za afya? *(Dodosa zaidi kuhusu vitabu ambavyo takwimu za chanjo hupatikana na namna ya kuoanisha takwimu).*

c) Unaweza kunieleza ni jinsi gani viashiria vya chanjo hupatikana? (*Dodosa zaidi kuhusu upatikanaji wa vigawo na vigawe vinavyotumika kupata viashiria vya ufanisi wa huduma za chanjo).*

d) Nini maoni yako kuhusu usahihi wa viashiria vya ufanisi wa huduma za chanjo?

Sehemu ya III: Utumiaji takwimu za Chanjo katika kuandaa Mipango ya afya ya Halmashauri:

a) Ni jinsi gani unatakiwa kutumia takwimu za chanjo ambazo mnazikusanya kila siku kutoka vituoni kwa kutumia vitabu vya MTUHA? (*Dodosa zaidi kuhusu matumizi mbalimbali ya takwimu za afya*)

b) Kwa kuzingatia uzoefu ulionao ni jinsi gani unatumia takwimu za chanjo katika kuandaa mipango ya afya ya halmashauri yako? (*Dodosa zaidi kuhusu namna viashiria vya ufanisi wa huduma za chanjo vinavyoandaliwa katika Mpango Kamambe wa Afya wa Halmashauri)*

c) Nini maoni yako kuhusu ubora wa takwimu za chanjo ambazo hutumika kuandaa viashiria vya ufanisi wa chanjo katika Mpango Kamambe wa Afya wa Halmashauri? (*Dodosa zaidi kuhusu upatikanaji, ukamilifu na usahihi wa takwimu za chanjo*)

d) Kwa kuangalia jinsi huduma za chanjo zinavyotolewa katika Halmashauri yako, je unafikiri kuna haja ya kutumia takwimu za chanjo katika uandaaji mipango kamambe ya afya ya Halmashauri? Eleza. (*Dodosa zaidi kuhusu walengwa wa chanjo na eneo la huduma*)

e) Ni kwa kiasi gani utumiaji wa takwimu za chanjo umeboresha huduma za chanjo katika Halmashauri yako?

Sehemu ya IV: Vikwazo vya utumiaji takwimu za chanjo:

a) Ni kwa jinsi gani kiasi na ubora wa takwimu za chanjo huzuia matumizi ya takwimu katika uandaaji mipango ya afya? (*Dodosa zaidi kuhusu visababishi*)

b) Ni kwa jinsi gani uelewa na tabia za wajumbe wa timu ya uandaaji mpango ya Halmashauri huathiri utumiaji takwimu katika mipango ya afya? (*Dodosa zaidi kuhusu visababishi*)

c) Ni kwa kiasi gani motisha kwa utumiaji takwimu ni muhimu katika uandaaji mipango ya afya ya Halmashauri? (*Dodosa zaidi kuhusu uwepo wa motisha)*

Sehemu ya V: Hitimisho na Mapendekezo:

a) Ushauri gani unaweza kutoa kwa kamati ya uendeshaji wa Huduma za Afya ya Halmashauri (CHMT) kuhusu matumizi ya takwimu kwa ujumla katika kuandaa mipango ya afya?

b) Je, ungependa kuongeza lolote kuhusu utumiaji takwimu za chanjo katika uandaaji wa mipango ya afya ya Wilaya?

Ahsante kwa Kushiriki!

II: MWONGOZO WA MASWALI KWA WAJUMBE WA TIMU YA UENDESHAJI HUDUMA ZA AFYA YA MKOA (RHMT)

Sehemu ya I: Utambulisho wa Mshiriki:

a) Jina la Mkoa
……

b) Taaluma ya Mshiriki
……

c) Cheo:
……..…….……

d) Umri (Miaka)……..... Jinsi: Me/Ke…….....

e) Muda wa cheo cha sasa: Miaka …… Miezi.…….

f) Nafasi uliyokuwa nayo kabla ya cheo cha sasa: …….

Sehemu ya II: Ufahamu kuhusu MTUHA na uchambuzi wa takwimu za Chanjo:

a) Unaelewa nini kuhusu viashiria vya chanjo vilivyopo kwenye MTUHA? (*Dodosa zaidi kuhusu uchambuzi wa takwimu, hali ya sasa, madhumuni ya takwimu za chanjo zilizopo kwenye MTUHA*).
b) Unaweza kunieleza ni jinsi gani viashiria vya chanjo hupatikana? (*Dodosa zaidi kuhusu upatikanaji wa vigawo na vigawe vinavyotumika kupata viashiria vya ufanisi wa huduma za chanjo).*
c) Nini maoni yako kuhusu usahihi wa viashiria vya ufanisi wa huduma za chanjo?

Sehemu ya III: Utumiaji takwimu za Chanjo katika kuandaa Mipango ya afya ya Halmashauri:

a) Ni jinsi gani unatakiwa kutumia takwimu za chanjo ambazo mnazikusanya kila siku kutoka Vituoni kwa kutumia vitabu vya MTUHA? (dodosa zaidi kuhusu matumizi mbalimbali ya takwimu za afya)
b) Kwa kuzingatia uzoefu ulionao ni jinsi gani unatumia takwimu za chanjo katika kuandaa mipango ya afya ya Halmashauri yako? *(Dodosa zaidi kuhusu namna*

viashiria vya ufanisi wa huduma za chanjo vinavyoandaliwa katika Mpango Kamambe wa Afya wa Halmashauri)

c) Nini maoni yako kuhusu ubora wa takwimu za chanjo ambazo hutumika kuandaa viashiria vya ufanisi wa chanjo katika Mpango Kamambe wa Afya wa Halmashauri? (*Dodosa zaidi kuhusu upatikanaji, ukamilifu na usahihi wa takwimu za chanjo*)

d) Ni kwa jinsi gani utumiaji wa takwimu za chanjo umeboresha huduma za chanjo katika Halmashauri yako?

e) Unawezaje kusema kuwa Mpango Kamambe wa Afya wa Halmashauri (CCHP) umetokana na takwimu zilizopo?

f) Ni motisha gani hutolewa kwa Halmshauri endapo Mpango Kamambe wa Afya wa Halmashauri (CCHP) umeandaliwa kulingana na ushahidi wa matumizi ya takwimu?

Sehemu ya IV: Vikwazo vya utumiaji takwimu za chanjo:

a) Ni kwa jinsi gani kiasi na ubora wa takwimu za chanjo huzuia matumizi ya takwimu katika uandaaji mipango ya afya? (*Dodosa zaidi kuhusu visababishi*)

b) Ni kwa jinsi gani uelewa na tabia za wajumbe wa timu ya uandaaji mpango ya Halmashauri huathiri utumiaji takwimu katika mipango ya afya? (*Dodosa zaidi kuhusu visababishi*)

c) Ni kwa kiasi gani motisha kwa utumiaji takwimu ni muhimu katika uandaaji mipango ya afya ya halmashauri? (*Dodosa zaidi kuhusu uwepo wa motisha)*

Sehemu ya V: Hitimisho na Mapendekezo:

a) Nini mapendekezo yako kuhusu matumizi ya takwimu katika utoaji huduma za chanjo na kwa ujumla katika kuandaa mipango ya afya?

b) Je, una maoni yoyote kuhusu utumiaji takwimu za chanjo katika uandaaji wa mipango ya afya ya Wilaya?

Ahsante kwa Kushiriki!

III: ORODHA YA KUKAGUA MATUMIZI YA TAKWIMU ZA CHANJO KWA TIMU YA UANDAAJI MIPANGO YA AFYA YA HALMASHAURI

CHANZO CHA TAKWIMU	Na.	SHUGHULI	MATOKEO	
			NDIYO	HAPANA
1. TAARIFA YA MWAKA YA AFYA YA HALMASHAURI	1	Upatikanaji wa Taarifa ya Mwaka ya Afya ya Halmashauri/Wilaya		
		Mwaka 2009		
		Mwaka 2010		
		Mwaka 2011		
	2	Je, jedwali na. 23 limejazwa?		
		Mwaka 2009		
		Mwaka 2010		
		Mwaka 2011		
	3	Linganisha jedwali na. 23 na jedwali na.6 la kwenye Kitabu cha Mpango (CCHP) kwa mwaka husika, i.e. 2009/2010, 2010/2011, and 2011/2012. Je, takwimu zinalingana?		
		Mwaka 2009		
		Mwaka 2010		
		Mwaka 2011		
2. MPANGO KAMAMBE WA AFYA WA HALMASHAURI (CCHP)	4	Angalia kama jedwali na. **6** (Takwimu za MTUHA) limejazwa kwa ukamilifu katika vitabu vitatu vya mpango (CCHP) (2009/2010, 2010/2011 na 2011/2012)		
		CCHP 2009/2010		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2010/2011		
		OPV 0		

CHANZO CHA TAKWIMU	Na.	SHUGHULI	MATOKEO	
			NDIYO	HAPANA
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2011/2012		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
	5	Angalia kama jedwali katika sura ya **7** (Targets and Monitoring Performance Indicators) limejazwa kwa ukamilifu katika vitabu 3 vya mpango (CCHP) yaani 2009/2010, 2010/2011 na2011/2012		
		CCHP 2009/2010		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2010/2011		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
		CCHP 2011/2012		
		OPV 0		
		DPT-HBHeB3 immunization		
		BCG		
		Measles		
	6	Linganisha takwimu anzia za kila mwaka na jedwali na.6 la kila kitabu husika cha Mpango. Je, takwimu zinalingana?		

CHANZO CHA TAKWIMU	Na.	SHUGHULI	MATOKEO	
			NDIYO	HAPANA
		CCHP 2009/2010		
		CCHP 2010/2011		
		CCHP 2011/2012		