THE UNITED REPUBLIC OF TANZANIA
NATIONAL AUDIT OFFICE

PERFORMANCE AUDIT REPORT ON THE MANAGEMENT OF IMMUNIZATION AND VACCINATION PROJECT ACTIVITIES

AS IMPLEMENTED BY

THE MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT, GENDER, ELDERLY AND CHILDREN AND PRESIDENT'S OFFICE- REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT






REPORT OF THE CONTROLLER AND AUDITOR GENERAL OF THE UNITED REPUBLIC OF TANZANIA
March 2020

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LIST OF ACCRONYMS AND ABBREVIATIONS

AFP	Acute Flaccid Paralysis
ANO	Assistant Nursing Officer
BoPV	Bi-Oral Polio Vaccine
CHAI	Clinton Health Access Initiative
CHMT	Council Health Management Team
CSOs	Civil Society Organizations
DIVO	District Immunization and Vaccination Officer
EPI	Expanded Programme on Immunization
FRI	Febrile Rash Illness
GAVI	Global Alliance for Vaccines and Immunization
HBF	Health Basket Fund
HPV	Human Papilloma Virus
ICC	Inter-Agency Coordinating Committee
IPV	Inactivated Polio virus Vaccine
IVD	Immunization and Vaccine Development
LGAs	Local Government Authorities
M & E	Monitoring and Evaluation
MCSP	Maternal and Child Survival Program
MoFP	Ministry of Finance and Planning
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
MoU	Memorandum of Understanding
MTUHA	Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya
NITAG	National Immunization Technical Advisory Group
OPV	Oral Polio Vaccine
PO-RALG	President's Office-Regional Administration and Local Government
RCH	Reproductive and Child Health
RHMT	Regional Health Management Team
RIVO	Regional Immunization and Vaccination Officer
RSs	Regional Secretariats
SOPs	Standard Operating Procedures
VIMS	Vaccination Information Management System
WHO	World Health Organization

PREFACE

Section 28 of the Public Audit Act No. 11 of 2008, authorizes the Controller and Auditor General to carry out Performance Audit (Value-for-Money Audit) for the purposes of establishing the economy, efficiency and effectiveness of any public expenditure or use of public resources in the MDAs, LGAs and Public Authorities and other Bodies which involves enquiring, examining, investigating and reporting, as deemed necessary under the circumstances.

I have the honour to submit to His Excellency, the President of the United Republic of Tanzania, Dr. John Pombe Joseph Magufuli and through him to the Parliament a Performance Audit Report on the Management of Immunization and Vaccination Project Activities.

The report contains conclusions and recommendations that directly concern the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) and the President's Office-Regional Administration and Local Government (PO-RALG).

MoHCDGEC and PO-RALG were given opportunities to scrutinize the factual contents and came up with very valuable comments on the draft report. I wish to acknowledge that the discussions with the two audited entities have been very useful and constructive.

My office intends to carry out a follow-up at an appropriate time regarding actions taken by the MoHCDGEC and PO-RALG in relation to the recommendations in this report.

In completion of the assignment, the office subjected the report to critical reviews of the following experts namely Professor Daudi Omari Simba and Dr. Yahya Abdallah Ipuge who came up with useful inputs in improving this report.

This report has been prepared by Mr. Denis Andrea Charle and Ms. Ndimwaga Shitindi under the supervision and guidance of Ms. Mariam Chikwindo – Ag. Chief External Auditor, Mr. James G. Pilly –

Assistant Auditor General and Mr. Benjamin Mashauri – Deputy Auditor General.

I would like to acknowledge the commitment of my staff and cooperation accorded to my audit team by respective Accounting Officers and their staff which has facilitated timely completion of this audit report.

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March, 2020

Executive Summary

Immunization refers to a process by which a person becomes protected against a disease through vaccination which produces immunity to a specific disease. Vaccines are used to immunize people against infectious diseases, which can cause illness, severe disability or even death[1]. Apart from the fact that, vaccines are one of the most cost-effective and lasting health investments it also plays a vital role in reducing mortality and morbidity among children and under five, pregnant women and adolescents.

Currently, the country is implementing a number of immunization and vaccination activities in order to save life of people at various age groups such as children under five years, pregnant women and adolescents. Such immunization and vaccination project activities are for prevention against immunizable diseases such as polio, tuberculosis, diphtheria, pertussis, tetanus, measles and rubella, human papilloma virus, hepatitis "B" and any other immunizable diseases[2].

Surveillance data has shown that in 2016 only 19% of children admitted with severe gastroenteritis were due to rotavirus compared to 40% before vaccine introduction[3]. But, there is persistence of inequalities in terms of access of immunization and vaccination services among various social groups in Tanzanian communities.

It has been reported[4] that, less has been invested to support implementation of the immunization and vaccination program activities. This is contrary to Addis Declaration which called African leaders to pledge on increasing and sustaining domestic investments and funding allocations to meet the cost of traditional vaccines; fulfill new vaccine financing requirements; and provide

[1] https://immunizebc.ca/ask-us/questions/what-difference-between-immunization-and

[2] Public Health Act No. 1 of 2009, section 19(1).

[3] https://www.usaid.gov/sites/default/files/documents/1860/Immunization_Fact_Sheet_July_2018.pdf retrieved on 04/12/2019

[4] Immunization commitment pledged by African Leaders in 2016 to accelerate Vaccines in Africa

financial support for operational implementation of immunization activities.

In this regard, the Controller and Auditor General decided to carry-out a performance audit on the Management of Immunization and Vaccination Projects with the objective of determining whether the MoHCDGEC in Collaboration with PO-RALG efficiently manage the implementation of Immunization and Vaccination Project activities to ensure preventive care is improved and immunizable diseases are controlled.

The audit covered three financial years 2016/2017 to 2018/2019. Main Audited entities were the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC); and the President's Office-Regional Administration and Local Government (PO-RALG). The audit focused on planning prior implementation of Immunization and Vaccination activities, funding and implementation of Immunization and Vaccination projects at both Ministerial and Health Facilities level. Further, the audit examined the adequacy of the monitoring and evaluation activities executed.

Main Audit findings

Planning for the Resources was not sufficient

i. Inadequate Planning for Human Resources

The audit noted that the Ministry of Health and visited health facilities have deficiency in the number of staff responsible for immunization and vaccination activities. The shortage were reported at all levels but marked higher at the health facility level. The deficiency of staff at the immunization and vaccination department at the Ministry of Health for the financial years 2016/17 and 2017/18 were 76 percent with a slight improvement in the financial year 2018/19 which was 71 percent. This showed that, the Immunization and Vaccination department was still under-staffed as it had less than one third of the required number of staff.

Despite having inadequate number of staff, the audit also noted inadequate skills to 44 out of 136 staff dealing with immunization and Vaccination activities in the visited Health Facilities.

ii. Inadequate Planning for Financial Resources

Review of MTEF from the Ministry of Health showed that, the amount of funds disbursed by the government to facilitate procurement of vaccines was less compared to the planned budget.

The audit noted that, in the financial year 2018/19, the Ministry of Health received less than a half of the budgeted fund amounting to 30 Billion. It was also noted that, the budget of IVD on procurement of vaccines increased from TZS 16 to 33 billion in the financial year 2017/18 but decreased to 30 in the financial year 2018/19.

However, for the seven (7) visited District Hospitals there was an improvement in the disbursement of funds. This is because the amount of funds received was as per the requested amount with the exception of Ruangwa District Hospital which had deviation ranging from 12 to 52 percent. Further, review of Mid Term Expenditure Framework of PO-RALG indicated that despite PO-RALG having a role of supervising and coordinating vaccination activities, there was no specific budget which was set aside to facilitate implementation of these activities. The reason for this was lack of coordination on funding for immunization and vaccination activities as interviewed officials from PO-RALG did not provide justifiable reasons.

iii. Inadequate Planning for Equipment to Facilitate Implementation of immunization and vaccination activities

There was shortage of equipment and tools such as vehicles, vaccination tools and vaccine storage facilities at the Regional, District and health facility level to facilitate smooth implementation of Immunization and Vaccination activities. It was noted that in general the shortage of vehicles was 50 out of 184 required, while the shortage for vaccination storage was 1515 out of 2900.

This was highly caused by limited investment in immunization and vaccination activities by the Government despite an increase in

the budget of the Ministry of Health. As a result, the Government relies on donor support to supply vehicles to health facilities.

iv. Set Targets do not Ensure Adequate Coverage in the Provision of Immunization and Vaccination services

It was noted that, the MoHCDGEC sets targets for reduction of morbidity, mortality and disability caused by vaccines preventable diseases through provision of high quality immunization services based on the set targets of 90 percent for all antigens.

Review of Immunization Performance and Data Desk Review of 2018 showed that, in general the Ministry of Health surpassed the set targets for all the categories of immunization and vaccination as the performance ranged from 75 to 122 percent. For instance the level of performance for immunization and vaccination to children under the age of five years ranged from 83 to 115 percent.

Furthermore, it was noted that, there was a deviation in the set targets of surviving infant's population at District level as received from Immunization and Vaccination Department and District Immunization and Vaccination Officers of respective visited LGAs. The noted deviation ranged from 0.3 to 26.3 percent.

v. Inadequate Storage of Vaccines

Observation made to visited health facilities and reviews of Programme Report of January, 2018 indicated cases of inadequate temperature control for some health facilities. At Mwananyamala Hospital auditors observed temperature out of the range on 2nd January, 2020 which was a day before the visit. Similar situation was observed in other 8 visited health facilities namely: Mbekenyera Health Centre (Ruangwa DC), Handali Health Centre (Chamwino DC), Siha Health Centre (Siha DC), Ngarenairobi Dispensary (Siha DC), Buigiri Dispensary (Chamwino DC). Others were Kifura Health Centre (Kibondo DC), Kigendeka Dispensary (Kibondo DC), and Maweni Referral Hospital (Kigoma).

Presence and Use of Expired Vaccines in Health Facilities

Reviewed Supportive Supervision Reports from the visited regions showed the presence and use of expired vaccines to some health facilities. Nyamilama Heath Centre in Mwanza region was reported to have 2 bottle of BCG which had expired for the past 5 months, but up to August, 2018 when supportive supervision team (RHMT) conducted their visit, these bottles were still in use. At Magu District Vaccine Stores (DVS) whereby the supervision team observed 10 expired[5] bottles of polio vaccine.

Similarly, three bottles of BCG vaccines which were used some days ago were found in the fridge at Nyamilama Health Centre indicating that those vaccines were in use. This was contrary to the standards which require opened vaccines bottle for BCG to be used within 6 hours only, and if not finished had to be discarded. Furthermore, review of Supportive Supervision Report of Kigoma region (April 2019) showed that, at Nkundutsi Dispensary, there were expired vaccines namely: Measles Rubella (140 doses), Pentavalent (88 doses), and Tetanus (140 doses).

vi. Vaccines Not Timely Provided to Beneficiaries as Required

Interviewed officials in the visited health facilities indicated untimely provision of immunization and vaccination services. All the visited health facilities reported that, not always immunization and vaccines were provided to beneficiaries as per established schedules. For example, at Makanjiro Dispensary and Nkuwe Health Centre both in Ruangwa District vaccination services were not timely provided to beneficiaries due to stock out of Measles Rubella vaccines.

[5] Vaccines were in stage 3 of Vaccine Vial Monitor (VVM) which is not recommended for use.

Untimely Disbursement of Funds

i. Delays in Funds Disbursement were Noted at the Ministerial Level

Interviews with officials from the MoHCDGEC and PO-RALG, and reviews of budget and progress reports noted that, there were delays in disbursement of funds to facilitate implementation of various immunization and vaccination activities at both the Ministry of Health and PO-RALG. The delay in fund disbursement ranged from 7 days in the second quarter of the financial year 2016/17 to 123 days in the first quarter of the financial year 2018/19. At PO-RALG the highest delay was noted in the first quarter of the financial year 2017/18 which was more than 7 months. Improvement was noted in the financial year 2018/19 as there was a delay of almost three months but it raised to more than 6 months in the first quarter of the financial 2019/20.

ii. Untimely Disbursement of Funds to Visited District Hospitals and Health Centres

Visited District Hospitals showed delays in the disbursement of funds which ranged from 10 days to more than 7 months. The delays were noted to be high in the second quarter of the financial year 2018/19 at Misungwi District Hospital which had delays of 221 days. It was noted that, about 50 percent of the disbursement at visited District Hospitals delayed for more than three months. The delays were noted high for the first quarter of the financial year 2019/20 at Handali Health Centre (Chamwino DC), Mbekenyera Health Centre (Ruangwa DC), and Kifura Health Centre (Kibondo DC).

Inadequate Implementation of Planned Immunization and Vaccination Activities

The following weaknesses were noted in the implementation of planned immunization and vaccination activities

i. Vaccines Stock Out in Visited Health Facilities

It was found that, 6 out of 21 visited health facilities lacked some of the vaccines. 5 out of these 6 health facilities lacked Measles Rubella vaccines while 4 out of these 5 lacked Polio Zero (OPV) vaccines. Other missed vaccines were Rota, Penta and PCV.

Lack of vaccines in the visited facilities affected provision of routine immunization and vaccination services and this led to postponement of vaccination sessions.

Inadequate Monitoring of Immunization and Vaccination Activities by the Ministry of Health and PO-RALG

Review of Supportive Supervision Reports showed inadequate conducting of supportive supervision because not all planned supportive supervision activities at MoHCDGEC were implemented. In the financial year 2016/17 and 2017/18 the MoHCDGEC did not conduct any supportive supervision to all regions, while for the financial year 2018/19 the MoHCDGEC conducted supportive supervision to only 10 out of 26 regions.

Review of Annual Work Plan (2016/17 to 2019/20) from PO-RALG and interviews with official of PO-RALG showed that, PO-RALG planned to conduct supportive supervision to regions on vaccination activities, however, the planned supportive supervision were not all conducted.

Overall Conclusion

Efforts are still needed to improve the immunization and vaccination services. This is because, the MoHCDGEC and PO-RALG did not efficiently manage the implementation of immunization and vaccination activities that ensure preventive care services were improved and immunizable diseases are controlled.

Immunization and vaccination activities were challenged by inadequate allocation of resources i.e. finance, tools and human resources which were critical for smooth implementation of the

vaccination programmes. Vaccines and immunization services were poorly managed by healthcare workers because of lack of skills on proper management which affect the quality of vaccines. Health facilities were facing with stock out of vaccines and its related supplies especially Measles rubella, Polio, Tetanus, Rota, Penta and PCV thus compromising the provision of vaccination and immunization services. On the other hand, Communities were not well sensitized on the importance of immunization and vaccination. This leads to low coverage for some vaccines such as Human Papilloma Virus (HPV) as reported in Kilimanjaro Region which had a drop rate of 11% for HPV2 in 2017 as well as cancellation of the scheduled vaccination services of up to 2 months as noted at Nkuwe Health Centre and Makanjiro Dispensary in Ruangwa DC.

Audit Recommendations

The MoHCDGEC should**:**

1. Conduct thorough needs analysis which will be based on the actual size of population of the targeted groups to avoid under-estimation/over-estimation in the targets set for immunization and vaccination activities.
2. Ensure adequate planning for availability of vaccine stocks and its related supplies at central and regional vaccine stores.

PO-RALG should:

1. Ensure adequate planning for timely distribution of vaccines to district vaccine stores, and to Health facilities to allow continuity in provision of immunization and vaccination services.

MoHCDGEC in Collaboration with PO-RALG should:

1. Strengthen the mechanism for deploying skilled health workers in health facilities especially those located in remote areas to improve availability of quality immunization and vaccination services.

2. Ensure regular formal trainings and refresher training are conducted on vaccine and cold chain management especially for the newly recruited staff.

3. Strengthen community advocacy in order to increase coverage by ensuring all eligible groups for vaccination are reached.

4. Liaise with MoFP to ensure funds are timely disbursed to allow timely implementation of immunization and vaccination activities. This includes to ensure timely availability of both reports of achievement of agreed service delivery performance indicators and verification that enable timely release of funds by Development Partners and MoFP.

5. Ensure regular maintenance of the cold chain equipment to ensure vaccines are stored within the recommended temperature range.

6. Ensure speeding up installation of remote temperature monitoring system (RTM) in all health care facilities to enable instant sharing of information in case temperature goes out of range so as to take corrective action timely.

7. Strengthen supportive supervision especially to health centres and dispensaries in order to track the progress made and observe anomalies originating from implementation of immunization and vaccination services in health facilities.

8. Ensure that healthcare facilities implement recommendations issued during supportive supervision with a view to rectify observed gaps.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Audit

Immunization refers to a process by which a person becomes protected against a disease through vaccination which produces immunity to a specific disease. Vaccines are used to immunize people against infectious diseases, which can cause illness, severe disability or even death[6].

Immunization is crucial for new-borns, children and mothers health[7]. Since 1975, the United Republic of Tanzania has been implementing immunization activities to protect children from vaccine preventable diseases[8]. Currently, the country is implementing a number of immunization and vaccination activities in order to save life of people at various age groups such as children under five years, pregnant women and adolescent age. Such immunization and vaccination project activities are for prevention against immunizable diseases such as polio, tuberculosis, diphtheria, pertussis, tetanus, measles and rubella, human papilloma virus, hepatitis "B" and any other immunizable diseases[9]. For instance, the country has been implementing polio eradication initiative activities by maintaining high national coverage of routine OPV3 above 90% for the past ten years.

Immunization and vaccination projects are carried out through various funding sources which include different Development Partners which are Global Alliance for Vaccines and Immunization (GAVI), World Health Organization (WHO), United Nations Children's Fund (UNICEF) Clinton Health Access Initiative (CHAI) and Maternal and Child Survival Program (MCSP).

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[6] https://immunizebc.ca/ask-us/questions/what-difference-between-immunization-and

[7] The national roadmap strategic plan to improve reproductive, maternal, newborn, child and adolescent health in Tanzania 2016-2020

[8] IVD bulletin 1st edition 2017

[9] Public Health Act No. 1 of 2009, section 19(1).

Approximately US$400 million has supported Tanzania's routine immunization system and enabled the nationwide introduction of the pneumococcal conjugate vaccine (PCV) and rotavirus vaccine to combat pneumonia and diarrhoea which are the leading causes of death in children under five. Surveillance data has shown that in 2016 only 19% of children admitted with severe gastroenteritis were due to rotavirus compared to 40% before vaccine introduction[10].

1.2 Motivation of the Audit

The need to conduct the audit was motivated by various factors which include: High rate of under-five child mortality rate; unsustainability of immunization and vaccination programs; and being a priority area in the UN Sustainable Development Goal number three.

1.2.1 High Rate of Under-five Child Mortality

It has been reported that around the world, about 1.5 million children under the age of five die every year due to diseases that can be prevented by vaccination and immunization. In Tanzania most of preventable diseases such as pneumonia and treatable diseases such as malaria and diarrhoea causes 270 deaths of children under five years of age every day[11].

Pneumonia and Diarrhoea Progress Report of 2018 indicated that, among 15 countries with the greatest number of pneumonia deaths, Tanzania had the highest overall score. This happened despite the efforts made by the MoHCDGEC through Expanded Programme on Immunization (EPI) to introduce Rotavirus (Rota) and Pneumococcal Conjugate (PCV) Vaccines in 2013 to accelerate improvement in child health and survival.

1.2.2 Unsustainability of Immunization and Vaccination Programme

Vaccines are one of the most cost-effective and lasting health investments and, play a vital role in reducing mortality and morbidity among children and under five, pregnant women and adolescent age. It

[10] https://www.usaid.gov/sites/default/files/documents/1860/Immunization_Fact_Sheet_July_2018.pdf retrieved on 04/12/2019

[11] https://www.unicef.org/tanzania/what-we-do/health retrieved on 12/10/2019

has been reported[12] that, less domestic resources has been invested to support implementation of the immunization and vaccination program activities. This is contrary to Addis Declaration which called African leaders to pledge on increasing and sustaining domestic investments and funding allocations to meet the cost of traditional vaccines; fulfil new vaccine financing requirements; and provide financial support for operational implementation of immunization activities.

While the Government of Tanzania is committed to this declaration, it often lacks sufficient domestic resources to cover recurrent operational costs required to implement the program[13]. To a large extent immunization and vaccination activities in the country are funded by GAVI[14].

1.2.3 Low Coverage and Equity in Accessibility of Immunization and Vaccination Services

There is persistence of inequalities in terms of access of immunization and vaccination services among various social groups in Tanzanian communities. This is categorized in terms of geographical location, urban versus rural population, education background and cultural believes. According to Program Support Rationale (2018) vaccination coverage in urban areas is decreasing. The desk data review identified three municipality councils (urban) which had low immunization coverage and these were Shinyanga, Nyamagana and Sumbawanga. The rationale for identifying these municipality councils as low performing included their coverage, the decreasing number of children who had been vaccinated over the period 2014-2017 and the prevailing huge discrepancies between DPT3, OPV3 and MR1.

The Joint Appraisal Report (2017) revealed that, despite the high number of health facilities in urban areas there is a significant number

[12] Immunization commitment pledged by African Leaders in 2016 to accelerate Vaccines in Africa
[13]https://www.usaid.gov/sites/default/files/documents/1860/Immunization_Fact_Sheet_July_2018.pdf
[14] Global immunization and Gavi (2019) retrieved frohttps://www.cgdev.org/sites/default/files/global-immunization-and-gavi-five-priorities-next-five-years.pdf.

of unvaccinated children and recommends more research to determine equity challenges in urban settings including slums.

Further, Vaccination coverage among nomadic pastoralists is low. Studies have found lower vaccination coverage among pastoralists compared to national coverage, this is because Nomadic populations are highly mobile for most part of the year and they are very hard to reach with immunization and other health services. In areas where nomadic populations live, poor road networks make it very difficult to effectively deliver vaccines. These pastoralist populations are less likely to access immunization services.

1.2.4 Supporting Sustainable Development Goal Number 3

Goal number 3 of Sustainable Development Goals (SDGs) focuses on ensuring healthy lives and promote well-being for all people at all ages. Among its target is to end preventable deaths of new-borns and children under 5 years of age by 2030. Another target intends to support research and development of vaccines and medicines for communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines.

In this regard, the Controller and Auditor General decided to carry out a performance audit on the Management of Immunization and Vaccination Projects. This is because proper management of these projects would positively influence the reduction of mortality and morbidity among children under five, pregnant women and adolescents.

1.3 Audit Design

1.3.1 Audit Objective

The audit objective was to determine whether the MoHCDGEC in Collaboration with PO-RALG efficiently manage the implementation of Immunization and Vaccination Project activities to ensure preventive care is improved and immunizable diseases are controlled.

Specific Audit Objectives

Specifically, the audit focused mainly on determining whether the:

a) MoHCDGEC has working mechanisms in place to efficiently plan prior to the implementation of Immunization and Vaccination projects;

b) MoHCDGEC and the Ministry of Finance and Planning have efficient mechanisms in place to ensure timely disbursement and utilization of funds to facilitate implementation of Immunization and Vaccination projects;

c) MoHCDGEC, PO-RALG and Health Facilities are efficiently implementing Immunization and Vaccination Project activities; and

d) MoHCDGEC has mechanism in place to conduct supervision, monitoring and evaluation of Immunization and Vaccination project activities.

In order to address these audit objectives, more specific audit questions and sub - questions were developed as provided in **Appendix 2.**

1.3.2 Audit Scope

Main Audited entities were the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC); and the President Office-Regional Administration and Local Government (PO-RALG). The MoHCDGEC was audited because of its main responsibility of managing all health issues. Also the Ministry of Health through Referral Hospitals is the key implementer of Immunization and Vaccination projects. PO-RALG is the key implementer of Immunization and Vaccination Projects through Health facilities such as District Hospitals, Health centres and Dispensaries. PO-RALG is also responsible for monitoring RHMT and CHMT which have the task of supervising all health facilities where immunization and vaccination projects are implemented.

The audit focused on planning prior implementation of Immunization and Vaccination activities and implementation of Immunization and Vaccination projects at Ministerial, Regional Secretariats, Local Government Authorities and Health Facilities levels. Further, the audit examined the adequacy of the monitoring and evaluation activities executed.

The audit team focused on immunization and vaccination activities for children under five years, pregnant women and adolescent as shown in **Appendix 3**.

Information was also collected from the Ministry of Finance and Planning, selected Regional Secretariats, Local Government Authorities and selected health facilities in the visited regions and districts. The Ministry of Finance and Planning was covered because it is the principle recipient of all project funds. Regional Secretariats and Local Government Authorities are responsible for providing supportive supervision to health facilities through RHMT and CHMT respectively. Health facilities are the key implementers of the immunization and vaccination activities.

The audit covered three financial years 2016/2017, 2017/18 and 2018/2019 and where necessary the coverage was extended to December, 2019. The selected period enabled auditors to establish trends, and be able to develop conclusions relating to the findings.

1.3.3 Sampling, Methods for Data Collection and Analysis

Sampling Techniques Used

The Audit team used non-probability sampling to select regions and district visited. All regions in Tanzania mainland were grouped into seven geographical zones namely; Eastern zone, Western zone, Southern zone, Southern Highland zone, Lake zone, Northern zone and Central zone.

Purposive sampling was used to select visited region by using criteria such as geographical representative and reported performance on provision of immunization and vaccination services. Based on these

criteria seven (7) regions were visited these were; Dar es Salaam, Kilimanjaro, Mwanza, Dodoma, Songwe, Lindi, and Kigoma. In each region one referral hospital was visited.

Within the 7 regions, a purposive sampling technique was used again to select visited LGAs by considering level of performance as a factor for selection. Therefore audit team visited two (2) LGAs with good performance namely Mbozi DC (*Songwe Region*) and Siha DC (*Kilimanjaro Region*); two (2) LGAs with moderate performance namely Chamwino DC (*Dodoma Region*) and Misungwi DC (*Mwanza Region*); and three LGAs with bad performance namely Kinondoni MC (*Dar es Salaam Region*), Ruangwa (*Lindi Region*) and Kibondo DC (*Kigoma Region*). In each LGA visited, three (3) health facilities (one District Hospital, one Health Centre and one Dispensary were sampled. This made a total of 28 health facilities visited i.e. 7 Referral Hospitals, 7 District Hospitals, 7 Health Centres and 7 Dispensaries.

Methods Used for Data Collection

Both qualitative and quantitative data were collected to provide evidence regarding Management of Immunization and Vaccination Projects. Three different methods were used to collect required qualitative and quantitative data which were interviews, review of documents and physical observations.

i. Documents Review

The document review intended to gain comprehensive and reliable information on the management of immunization and vaccination projects services. Also, the review assisted in identifying the risks, their impacts and possible causes which facilitated the team to come up with clear findings and recommendations. The audit team reviewed various documents from the MoHCDGEC; President's Office-Regional Administration and Local Government; Ministry of Finance and Planning; selected regional referral and district hospitals; and health centres and dispensaries; from RHMT and CHMT.

Reviewed documents included Plans, Performance Reports, Internal Audit Reports, Supervision Reports, Financial Reports, files and meetings

notes. Category of documents reviewed and reasons for their reviews are detailed in the **Appendix 4.** However, other documents were identified and reviewed during the audit process.

ii. Interviews

Different officials responsible for execution of Immunization and Vaccination project services were interviewed from visited institutions.

Interviewed officials were Projects focal persons, Medical Officer In-charges, Regional and District Immunization and Vaccination Officer, other officials who were identified to be relevant for the subject. **(Appendix 5)**.

iii. Physical Observations

The audit team visited seven (7) Regional Referral Hospitals, seven (7) District Hospitals, seven (7) Health Centres and seven (7) dispensaries in the visited regions and districts. During the visit, auditors observed the provision of immunization and vaccination services. When observing interviews were conducted with those officials responsible for providing the services.

In all visited sites, auditors were taking notes and take pictures as evidence of what have been observed.

(a) Methods for Data Analysis

The audit team analysed the data gathered through documents review, interviews and physical observations by separating and grouping them into qualitative and quantitative data; so that they could be easily analysed using different approaches.

Quantitative data were analysed by organising, summarizing and compiling them using spreadsheets as well as different statistical methods of data computations. The analysed data were presented through different ways including tabulations, histograms and graphs with quantitative labels on indicators, charts and percentage distribution. The presented data were then explained in order to answer the 'what' and 'how many' questions.

Qualitative data were described depending on the number of interviews conducted and documents reviewed. The data were also transformed into quantitative form. Calculations were made into percentage of investigated documents or interviews that include a particular type of statement.

1.3.4 Assessment Criteria

The assessment criteria extracted from various sources such as legislations, policies, guidelines and best practices were used to assess the Immunization and Vaccination project activities:

Efficient Planning Prior for the Implementation of Project Activities

i. The MoHCDGEC and PO-RALG is supposed to have adequate staffing, budget and tools to facilitate management and implementation of executed health projects such as Immunization and Vaccination project at all levels. This is expected to be taken as the most critical success factor in achieving quality health and social welfare services. (Health Sector Strategic Plan IV (2015 - 2020 Page 54).

ii. Health facilities are supposed to develop strategic and business plan, and ensure proper allocation of resources for quality improvement through investment of time, fund and education (Total Quality Framework in Health care, 2011-2016, part 5.2).

Timely Disbursement and Utilization of Fund to Facilitate Implementation of Project Activities.

i. MoFP is supposed to ensure funds are disbursed to the project from fund providers timely and in the budgeted amount. Such disbursed funds are expected to be utilized according to the existing guidelines in relation to the disbursed fund. (Guidance 5.3 of public investment management operational manual, 2015).

ii. For projects financed by public finance approach, the Chief Accountant is supposed to set up a mechanism to ensure that availability of funds is guaranteed for the entire life of the project. This includes ensuring that the projects are included in budgets and funds are appropriately disbursed. (Guidance 5.4.2 of public investment management operational manual 2015).

Implementation of Project Activities

i. The MoHCDGEC is supposed to facilitate the mechanisms to ensure Immunization and Vaccination activities are effectively implanted. Health workers engaged in immunization and vaccination services need to be skilled in all aspects of vaccine administration, cold chain and logistics. (Immunization and vaccination project manual; and WHO regional strategic plan for immunization 2014-2020).

ii. The MoHCDGEC is supposed to prepare its annual procurement plans in a rational manner. Furthermore, MoH is required to prepare tender document, to advertise (international or national), conduct evaluation of tenders, carry out review of evaluation, approve recommendations and award or reject the process for the tendering(The public procurement act no 11 of 2011 section 49(1),PPRA 150&151,203(1).

iii. The MoHCDGEC is supposed to put in place coordination mechanisms within the Ministries and at all levels of the health system to ensure joint planning for and implementation of immunization project (WHO Regional Strategic plan for Immunization 2014–2020, page38).

Supervision, Monitoring and Evaluation of Executed Immunization and Vaccination Projects Activities

i. The MoHCDGEC is supposed to conduct supportive supervision, monitoring and evaluation. These as are integral components of quality improvement in health services and are required in order to meet established quality goals, to identify

problems(opportunities for improvement) and to ensure that improvements are initiated and maintained(National Health Policy of 2007).

ii. The MoHCDGEC is supposed to monitor the Implementation of Health Sector activities which include executed immunization and vaccination projects activities (The National Road Map Strategic Plan to Improve Reproductive, Maternal, Newborn, and Child & Adolescent Health in Tanzania, 2016 – 2020).

iii. PO-RALG and MoHCDGEC are supposed to introduce a monitoring system of health facilities and actual status to have better overview of specific needs and constraints and anticipate renovations and replacement of equipment (Total Quality Framework in Health care, 2011-2016, page 45.)

iv. The MoHCDGEC is supposed to improve sharing of lessons learnt on key results in vaccination and immunization program to ensure drawbacks are identified and acted upon timely. (Tanzania quality improvement framework in health care (2011-2016).

v. The MoHCDGEC is required to strengthen its Monitoring and evaluation systems to track progress in reaching the unreached and new population groups. (WHO Regional Strategic plan for Immunization 2014–2020, Page 38).

1.4 Data Validation Process

The Ministry Health, Community Development, Gender, Elderly and Children, Ministry of Finance and Planning and President Office Region Administration and Local Government were given an opportunity to go through the draft audit report.

Both, the MoHCDGEC, Ministry of Finance & Planning and PO-RALG confirmed the accuracy of the information presented in this report. The

comments and responses of the MoHCDGEC, Ministry of Finance & Planning and PO-RALG are shown in ***Appendix 1***.

1.5 Standards Used for the Audit

The audit was conducted in accordance with International Organization of Supreme Audit Institution's (INTOSAI) performance auditing standards. The standards require the audit team to plan and perform the audit so as to obtain sufficient and appropriate evidence as well as, provide a reasonable basis for findings and conclusions based on audit objective(s).

The audit team believes the evidences obtained provide a reasonable basis for the findings and conclusions based on the audit objectives.

1.6 Structure of the Report

The remaining part of the report is structured as follows:

- *Chapter Two* presents the description of the system for managing immunization and vaccination projects.
- *Chapter Three* presents the findings of the audit;
- *Chapter four* provides overall conclusion and specific conclusions for the audit; and
- *Chapter five* outlines the audit recommendations that can be implemented by the Ministry of Health, the Ministry of Finance and PO-RALG.

CHAPTER TWO

SYSTEM FOR MANAGING IMMUNIZATION AND VACCINATION PROJECTS

2.1 Introduction

This chapter describes the system for managing implementation of Immunization and Vaccination project activities. It covers legal and administrative framework, key stakeholders involved and their main responsibilities and processes involved in Immunization and Vaccination projects.

2.2 Policies, Laws and Regulations Governing Immunization and Vaccination Projects

2.2.1 Policies

National Health Policy of 2007

The policy calls for the more access to health services to all Tanzanians with a focus on those most at risk. Its vision is to have a health community that contributes effectively to individual as well as to Nation's development towards becoming a middle income country. Meanwhile, its mission is to facilitate the provision of basic health services. It calls for the government and stakeholders to prepare and improve laws, guidelines and strategies for controlling communicable diseases that include epidemic, emerging and re-emerging diseases in a timely fashion.

According to this policy, the Government in collaboration with private sector, non-profit organization is supposed to insure availability of vaccines, medicines, equipment, medical equipment, and sufficient reagents for controlling communicable epidemic diseases. The Government is required to improve system for provision of vaccination services including special program and techniques to bring expected improvement and preventing diseases[15].

[15] National Health Policy of 2007, section 5.3.2 (c)

2.2.2 Legislations

Public Health Act No. 1 of 2009

The Act provides for the promotion, preservation and maintenance of public health with a view of ensuring the provision of comprehensive, functional and sustainable public health services to the general public and to provide for other related matters.

According to Section 19 (1) of the Act, every parent or guardian of a child born in Mainland Tanzania is supposed to within twelve months from birth, cause that child to be immunized against polio, tuberculosis, diphtheria, pertussis, tetanus, measles, hepatitis "B" and any other immunizable diseases which may be prescribed by the Minister in the *Gazette*.

Also, Section 19(3) of the Act, every pregnant woman is supposed to, throughout her pregnancy, ensure that she undertakes immunization against tetanus and any other infectious immunizable diseases as the Minister may prescribe in the Gazette.

2.3 Strategies and Guidelines for Managing Health Projects

2.3.1 Health Sector Strategic Plan IV of 2015-2020

The Plan calls for Health facilities to maintain high levels of vaccination coverage and improvements in access of vaccination as well as introducing new types of vaccinations such as Rotavirus vaccine, Pneumococcal vaccines, Combined Measles Rubella vaccine and second dose of Measles Rubella. The Plan assures good vaccination services and that all children are supposed to be vaccinated.

2.3.2 Project/Appraisal Documents

All projects executed by the MoHCDGEC are guided by projects appraisal documents. These documents provide a blue print in ensuring implemented projects/programs adhered to standards and are consistent with the project plan. The document covers issues such as objective of the project which is to contribute in the reduction of morbidity,

mortality and disability due to vaccines preventable diseases through provision of high quality immunization services in Tanzania[16].

According to Program Appraisal Document, key players of the Immunization and Vaccination projects are the MoHCDGEC, PO-RALG, LGAs, Health facilities, Development Partners and beneficiaries (children under five years, pregnant women and adolescent age). According to this document, health facilities are the main implementers of the immunization and vaccination activities, and will be monitored by the Ministry of Health and PO-RALG at the national level. At the regional and Council level will be monitored by RHMT and CHMT[17] respectively.

2.3.3 Memorandum of Understanding (MoU)

Most of the health projects executed by the MoHCDGEC are donor funded, hence the Ministry of Health enters into formal agreements with donors with a purpose of establishing official partnership. Therefore, the Memorandum of Understanding for the Immunization and Vaccination Projects provides necessary information regarding the agreements entered between the Ministry of Health representing the Government of Tanzania and development partners (Donors) namely Global Alliance for Vaccination and Immunization (GAVI), World Health Organization (WHO), United Nations Children's Fund (UNICEF) Clinton Health Access Initiative (CHAI) and Maternal and Child Survival Program (MCSP).

Other key information included in this document include: budget and financial management; obligation between the key involved parties; implementation arrangements; how procurement should be done, amendment of the MoU; corruption issues; admission and withdraw from the MoU; and what needs to be done when there is non- compliance to the agreement.

2.4 Key Players and their Responsibilities

Below are detailed responsibilities of each of the stakeholders:

[16] Comprehensive Multi-year Plan of 2016-2020, section 4.1, page 43
[17] **Comprehensive Multi-year Plan of 2016-2020, section 2.2, page 11**

2.4.1 Ministry of Health, Community Development, Gender, Elderly and Children

The MoHCDGEC is responsible for formulating policies, guidelines and standards for strategic planning and budgeting. Other functions include monitoring, training, technical support, supervision and facilitating procurement of vaccines, equipment and related supplies as well as ensuring adherence to quality service delivery.

At the MoHCDGEC, Immunization and Vaccine Development (IVD) program is a subsection under the Reproductive and Child Health (RCH) Section. Reproductive and Child Health is one of the five sections of the Preventive Services Division.

The IVD program has five main sections which are: Administration; Surveillance (Monitoring and Evaluation); Cold Chain and Logistics; New Vaccine Development (including Routine Immunization and Research); and Training (including demand creation).

The organization structure is as shown in **Figure 2.1**.

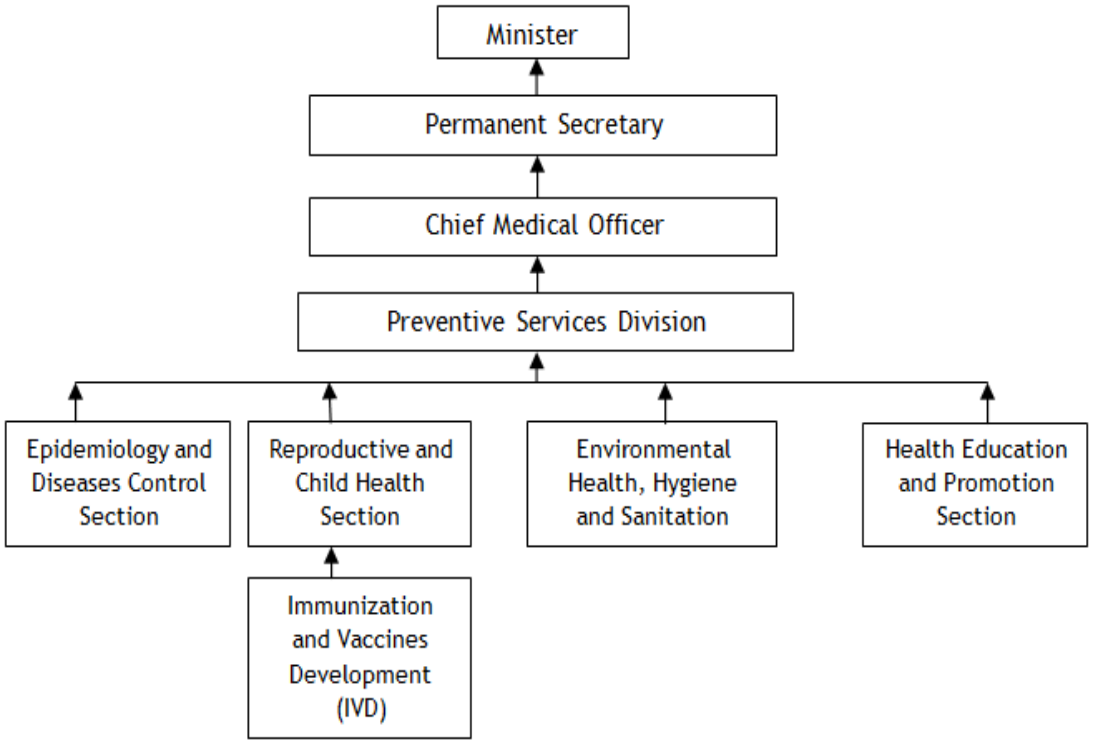


Figure 2.1: Part of the Organization Structure of the Ministry of Health dealing with Immunization and Vaccination activities

2.4.2 President's Office - Regional Administration and Local Government (PO-RALG)

PO-RALG under Health, Social Welfare and Nutrition Services is responsible for supervising immunization and vaccination activities at both regional and council levels[18]. These roles are detailed as follows:

- To translate and supervise implementation of policy and guidelines on vaccination;

[18] Letter dated 2nd June 2017 with reference number AB. 81/228/01, from PO-RALG to the Ministry of Health

- To supervise provision of vaccination services at regional and councils;
- To coordinate implementation of national vaccination campaigns;
- To coordinate capacity building programs/to vaccination service providers and to staff; and
- To ensure that supervisors of vaccination services at regional and council levels get trainings on supervision, monitoring and provision of vaccination services.

Regional Administrative Secretariat (RS)

The RS through Regional Health Management Team, provides technical support to LGAs for the implementation of vaccination and immunization activities. It is also responsible for reporting on the implementation of immunization and vaccination activities to PO-RALG.

Local Government Authorities (LGAs)

LGAs are the most important implementation units for all health projects. Within LGAs, Council Health Management Team manages and supervises the provision of Health Care services which include immunization and vaccination activities.

2.4.3 Health Facilities

Immunization and Vaccination activities are implemented through a wide network of health facilities in Tanzania which include:

i. Regional Referral Hospitals;
ii. District Hospitals;
iii. District/Designated Hospitals;
iv. Health Centres; and
v. Dispensaries

All these health facilities are responsible for implementing activities and reporting back to RHMTs (Regional level) and CHMTs (District Council level).

2.4.4 Ministry of Finance and Planning (MoFP)

The Ministry of Finance is responsible for managing the overall revenue, expenditure and financing of the government; advice the government on broad financial and economic affairs; and oversees budget preparations and execution. The Ministry has an important role over the health and social welfare sector budget and also over income generating activities[19]. The Ministry, therefore, is the principal recipient of all projects funds including immunization and vaccination projects. The Ministry of Finance also involved when development partners (GAVI) and the MoHCDGEC on behalf of the Tanzania government sign contract for financing immunization and vaccination project activities.

2.4.5 Development Partners (Donors) for Immunization and Vaccination Projects

The implementation of immunization services by the Ministry of Health is carried out under different funding sources from different Development Partners which include Global Alliance for Vaccines and Immunization (GAVI), World Health Organization (WHO), United Nations Children's Fund (UNICEF) Clinton Health Access Initiative (CHAI) and Maternal and Child Survival Program (MCSP).

Donors provide financial support for the coordination planning, implementation, capacity development, monitoring and evaluation of projects. They also directly purchase medical supplies and commodities and donate to the Ministry of Health. On the other hand they monitor the progress made and assure implementation of projects is aligned with required projects documents.

[19] Comprehensive Multi-year Plan, 2016-2020, page 8

2.4.6 Beneficiaries

Beneficiaries of Immunization and Vaccination projects are Tanzanians who receive the services provided through Immunization and Vaccination Project activities. Their role is to support implementation of these project activities through representatives working with Health Facility Governing Committees with members from the Villages/Communities and sometimes by participating in immunization and vaccination projects activities.

Figure 2.2 summarizes the major processes and actors involved in managing immunization and vaccination projects.

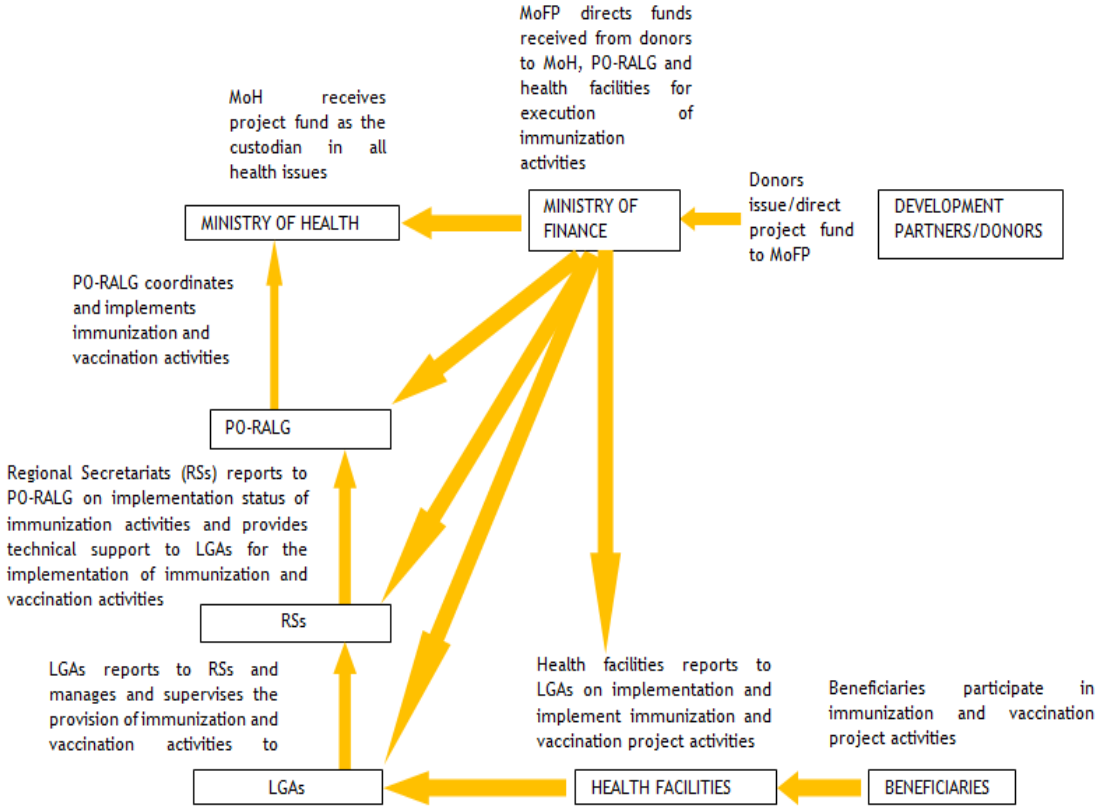


Figure 2.2 Major processes and actors in the Management of Immunization and Vaccination Projects.

2.5 Process for Managing Immunization and Vaccination Projects

The process for managing immunization and vaccination projects is as described hereunder:

i. Planning for Immunization and Vaccination Projects

The Ministry of Health identifies the immunization and vaccination project activities to be implemented based on priorities indicated in the Ministry's strategic plan. Donors invite the Ministry to write a proposal whenever there is a possibility or availability of funds. The Ministry convenes a meeting to discuss the matter based on priorities highlighted on strategic plan in line with donor's requirements. The Ministry then writes project proposal to request for funds from donors for execution of identified immunization and vaccination project activities.

Donors scrutinize the project proposals from the Ministry of Health to ascertain if the submitted proposal(s) is in line with donors' priorities. The proposal is thereafter accepted for funds release.

ii. Disbursement of Project Funds

When the proposal is accepted, a Memorandum of Understanding (MoU) is signed between the Government (represented by the Ministry of Health) and Development Partners to establish official partnership. Thereafter, donors' funds are channelled to the Ministry of Finance and planning as the principal recipient of all projects funds. The Ministry of Finance and Planning, thereafter, disburses funds to the Ministry of Health, PO-RALG, Regional Secretariats, LGAs and Health facilities.

iii. Execution of Project Activities

The Ministry of Health after receiving funds from the Ministry of Finance, disburses funds to the Programme Unit Upon request based on established work plan.

PO-RALG after receiving the funds from the Ministry of Finance proceeds with the role of overseeing the immunization and vaccination project activities performed by Regional Secretariats and LGAs.

Health Facilities, utilize the funds for implementation of immunization and vaccination daily activities based on the established work plan.

iv. Monitoring of Immunization and Vaccination Projects

The Ministry of Health monitors the implementation of immunization and vaccination direct from LGAs through Vaccines Information Management Systems (VIMs). PO-RALG and Regional Secretariats are given access to the system. Health Sector Strategic Plan IV of July 2015 – June 2020 requires that, at all levels in Monitoring Health and Social Welfare Performance, there should be weekly reporting and monitoring of key performance indicators from facilities to the Ministry of Health and to the President's Office. The Indicators can also be monitored annually and usually quarterly or monthly.

v. Supervision of Immunization and Vaccination Projects

The Ministry of Health under the new structure of regional health system, is responsible to conduct Supportive Supervision (SS) to National, Zonal Referral, Specialized hospitals and Regional Referral Hospitals (RRHs). Supportive Supervision aims to deliver the national policy and programs, to monitor the functions and performances of different level of the hospitals based on annual plans[20]. Supportive Supervision is done on quarterly basis.

The summary of the process flow is as shown in **Figure 2.3.**

[20] Guideline for Internal Supportive Supervision (ISS) and External Hospital Performance Assessment (EHPA) for Regional Referral Hospitals

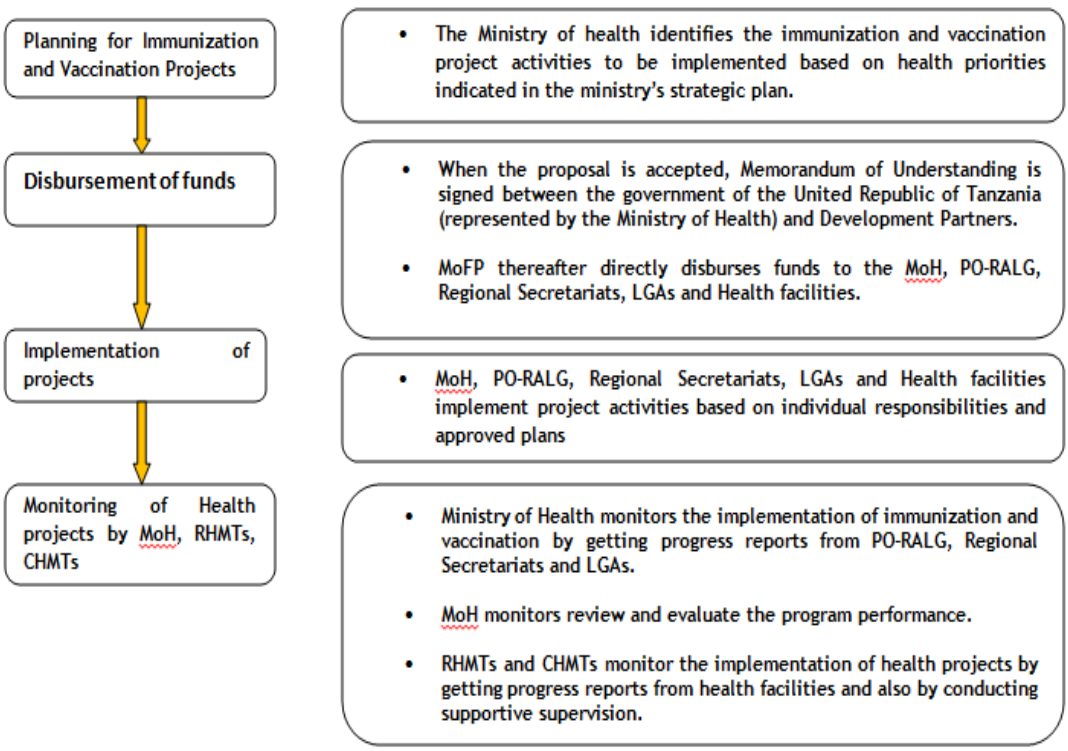


Figure 2.3: Summary of the Process Flow in Management of Immunization and Vaccination Projects

2.6 Allocated Resources for Immunization and Vaccination Projects

Both the Ministry of Health and PO-RALG have required resources (both financial and human resources) for management of immunization and vaccination projects. Details of the resources are as shown in the following sub - sections.

2.6.1 Financial Arrangement for the Management of Immunization and Vaccination Projects at MoHCDGEC

The Ministry of Health receives financial resources for the management of Immunization and Vaccination projects from both internal and external sources (Development Partners) as shown in **Table 2.1.**

Table 2.1: Sources of Funds for Immunization and Vaccination Projects

Source of Income (Billion)-USD	Financial Years			
	2016	2017	2018	2019
Fund from Donor	42,248,000	39,512,000	50,745,161	65,703,473
Government contribution	3,073,500	3,592,000	4,375,421	4,191,611
Other income	-	-	-	-
Total	**45,321,500**	**43,104,000**	**55,120,582**	**69,895,084**

Source: Data collected from IVD (2020)

From **Table 2.1**, it is shown that, Government's contribution has been increasing as years go up, however, the amount decreased in 2019. However, the contribution of the Government is less than fund from donor.

2.6.2 Allocated Human Resources at the Ministry of Health and PO-RALG for Immunization and Vaccination Projects

The Ministry of Health for the period of five years (2014/15 to 2018/19) allocated 34 staff to Division of Preventive Services to facilitate the implementation of Immunization and Vaccination projects.

On the other hand, PO-RALG has a coordinator who is required to coordinate the implementation of Immunization and Vaccination activities from the Division of Health, Social Welfare and Nutrition Services. Under this Division, there is one project coordinator who is responsible for the day to day activities such as coordinating vaccination campaigns, introduction of new vaccines and supervision. The

coordinator is also responsible for monitoring implementation of Immunization and Vaccination activities through Vaccine Information Management System (VIMS).

CHAPTER THREE

AUDIT FINDINGS

3.1 Introduction

This chapter presents audit findings on the performance of the MoHCDGEC and the President's Office-Regional Administration and Local Government (PO-RALG) in implementation of immunization and vaccination project.

The findings address four (4) specific audit objectives described in Section 1.3.1 of this report encompassing:

i) Planning by the Ministry of Health;

ii) Timeliness in disbursement and utilization of funds by the Ministry of Finance and Planning, and the Ministry of Health to facilitate implementation of planned activities;

iii) Implementation of immunization and vaccination activities by the Ministry of Health, PO-RALG and Health Facilities; and

iv) Supervision and monitoring of activities by the Ministry of Health.

3.2 Planning for the Immunization and Vaccination Activities

This section covers planning for the resources; planning for advocacy; and setting of targets to ensure adequate coverage of immunization and vaccination services. It covers strategies in place to safeguard the quality of immunization and vaccination services.

3.2.1 Allocation for the Required Resources was Not Sufficient

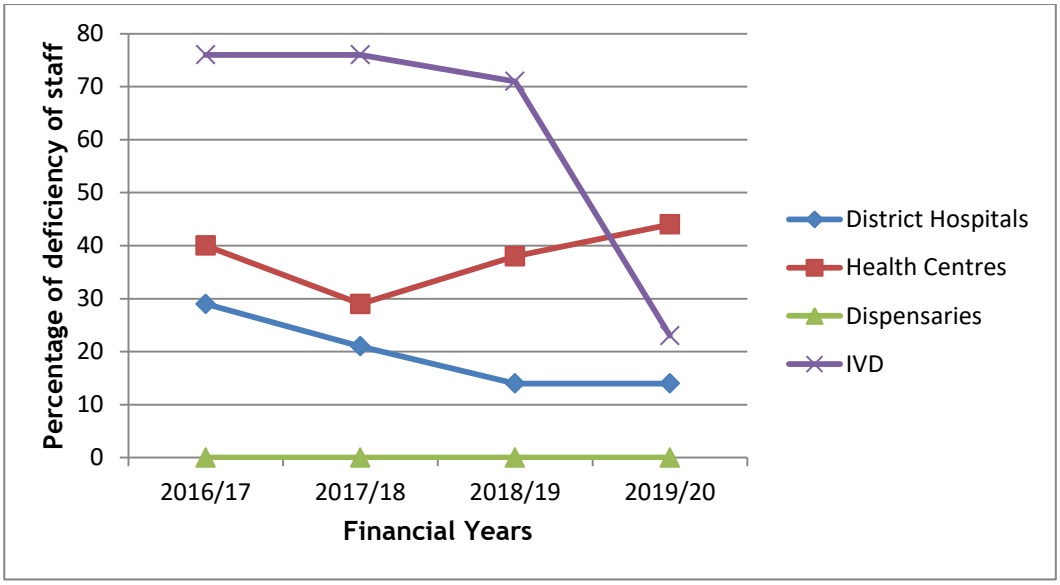
According to Health Sector Strategic Plan IV (2015 2020), the MoHCDGEC and PO-RALG are supposed to have adequate staffing, budget and tools to facilitate management and implementation of various health projects at all levels in order to achieve quality provision of health services which include immunization and vaccination services.

Review of Multi - Year and Annual Plans and interviewed officials from both ministries and visited regions and LGAs showed that despite of the planning for required resources weaknesses were noted in the allocated resources. This resulted into deficiency of human resources, financial resources and tools as further described below:

i. Deficiency of Human Resources

Review of comprehensive multi-year plan 2016-2020 indicated deficiency in the number of staff responsible for immunization and vaccination activities. For the visited areas during this audit, the shortages were reported at all levels with exception of Dispensaries. However, reported shortages were higher at the IVD unit with deficiency of more than 70% for the financial years 2016/17 to 2018/19, followed by health facility level which ranged from 14 to 44% for the financial year 2016/17 to 2019/20. The deficiency at IVD dropped to 23% in 2019/20. (See **figure 3.1**).

Figure 3.1: Deficiency of Staff at IVD and visited Health Facilities



Source: Data collected from visited areas(2019/2020)

Based on **figure 3.1**, the deficiency is more pronounced at the IVD whose staffing levels stood at less than one third of the requirement for the 3

years covered in this audit. However, the deficiency dropped in the financial year 2019/20.

The deficiency at the HC level has been declining from 40% in 2016/17 to 29% in 2017/18 and increased in the 2019/20 to 44% whereas District Hospitals had a decreasing trend of deficiency ranging from 29% in 2016/17 to 14% in 2019/20.

The analysis of information collected from the visited health facilities as per presented Figure 3.1 shows that, there was no deficiency in the number of require health workers at the dispensary level for the financial year 2016/17 to 2018/19. This is further detailed in **Appendix 6** which provides statistics regarding the required and available number of staff at IVD and **Appendix 7** provide the same statistics at District Hospitals, Health Centres and Dispensaries.

However, review of Health Sector Strategic Plan IV Mid Term Review (2019) showed that, at the national level, there was high deficiency of staff at Dispensary level which stood at 69% followed by health centres level which had deficit of 45%. District and Regional Hospitals had deficit of 19% and 21% respectively as shown in **Table 3.1.**

Table 3.1: Human Resource Distribution at National Level

Facility level	Number of Required Human Resource	Number of Available Human Resources	Deficiency	% of deficiency
Dispensaries	99,060	30,625	68,435	69
Health Centres	32,487	17,954	14,533	45
District Hospital	21,600	17,443	4,157	19
Regional Hospital	14,226	11,373	2,853	21

Source: Health Sector Strategic Plan IV Mid Term Review (2019)

Review of Health Sector Strategic Plan IV Mid Term Review (2019); and Tanzania Programme Support Rationale Report (2018) showed the reason for such deficiency was freeze of employment in 2015-2016

followed by removal of ghost workers from payroll and those with fake certificates.

Review of a letter with reference number CCD.162/355/01/'C'20 from PO-RALG to President Office Public Service Management dated 16th October, 2017 showed that the Certificate verification exercise affected 3,310 health workers in the country which contributed to a huge shortage of around 50 percent of health staff[21] national wide.

These gaps affected the effective delivery of immunization and vaccination services as there was a tendency for cancellation of outreach sessions almost every month. In all 21 visited health facilities. Reviewed Supportive Supervision Reports from 7 visited regions showed that, shortage of staff resulted into failure to frequently perform routine vaccine activities such as Acute Flaccid Paralysis (AFP) and Febrile Rash Illness (FRI) at both facility and community level which is critical for reporting the absence of poliovirus circulation for polio-free certification. Also, shortage of staff resulted into failure to conduct outreach/mobile services which are important in the Reach Every Child (REC) strategy.

Despite having inadequate number of staff, the audit also noted inadequate skills to 44 out of 136 staff dealing with immunization and Vaccination activities in visited Health Facilities. The audit noted that these health workers providing vaccination and immunization services in health facilities lacked skills in vaccine and cold chain management as it was observed in 11 out of 21 visited Health Facilities. This was also evidenced by both Programme Support Rationale Report (2018) which reported presence of staff in Health facilities with inadequate knowledge and skills on vaccine handling.

Supportive Supervision Reports from all 7 visited regions also reported presence of Health Care Workers with in adequate skills on Vaccine and Immunization. For instance, at Jajiro Dispensary in Mwanza region a team conducting supportive supervision observed a Healthcare worker on duty for that day who lacked skills on cold chain management which

[21] HSSP IV 2015-2020.

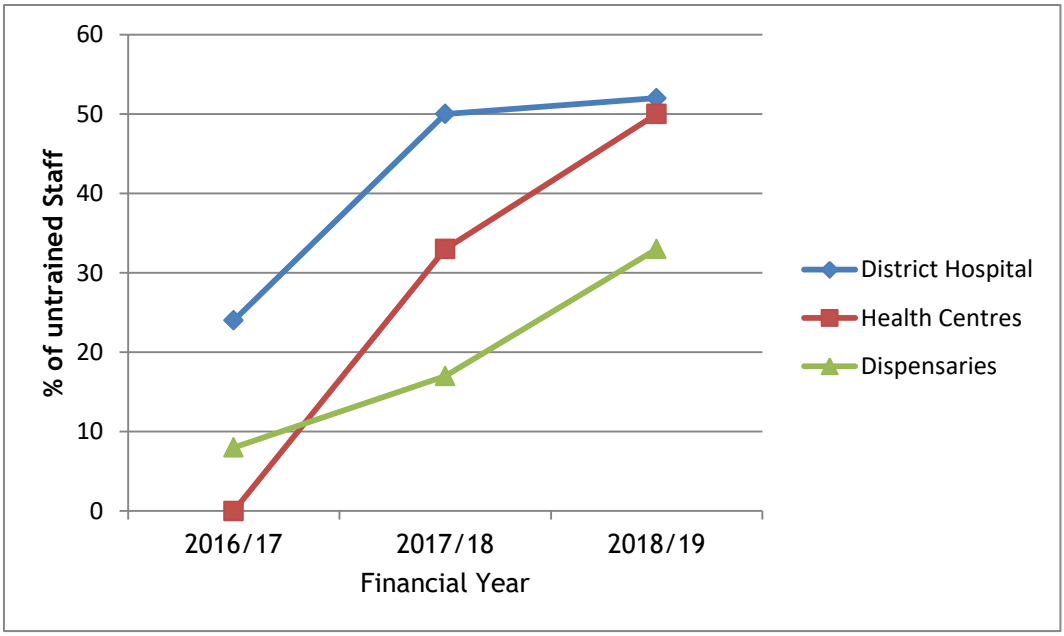
resulted into raise of temperature above +8 degree centigrade for 7 days. Reports further pointed that in Kigoma region, Health Care providers from 4 dispensaries namely Bangwe, Rusimbi, Kigoma and Msufini were not able to describe the maximum acceptable dropout rate[22], also not able to explain basic surveillance terminologies such as Acute Flaccid Paralysis and Febrile Rash Illness (FRI) which are critical initial conditions showing presence of polio disease.

Inadequate knowledge and skill is likely to have been caused by lack of regular formal training on vaccine and cold chain management especially for the newly recruited staff. Review of Comprehensive Multiyear Plan (2016-2020) indicated that, there was no training planned to be conducted to newly recruited staff since 2013. However, it was noted that, they received on the job trainings which were not enough to equip them with sufficient knowledge on managing vaccine effectively.

Figure 3.2(a) provides the status of trained health workers on immunization and vaccination management in visited Health Facilities.

[22] Deviation in a number of children between the first and the last doses

Figure 3.2(a): Trained Health Workers on Immunization and Vaccination in Visited Health Facilities



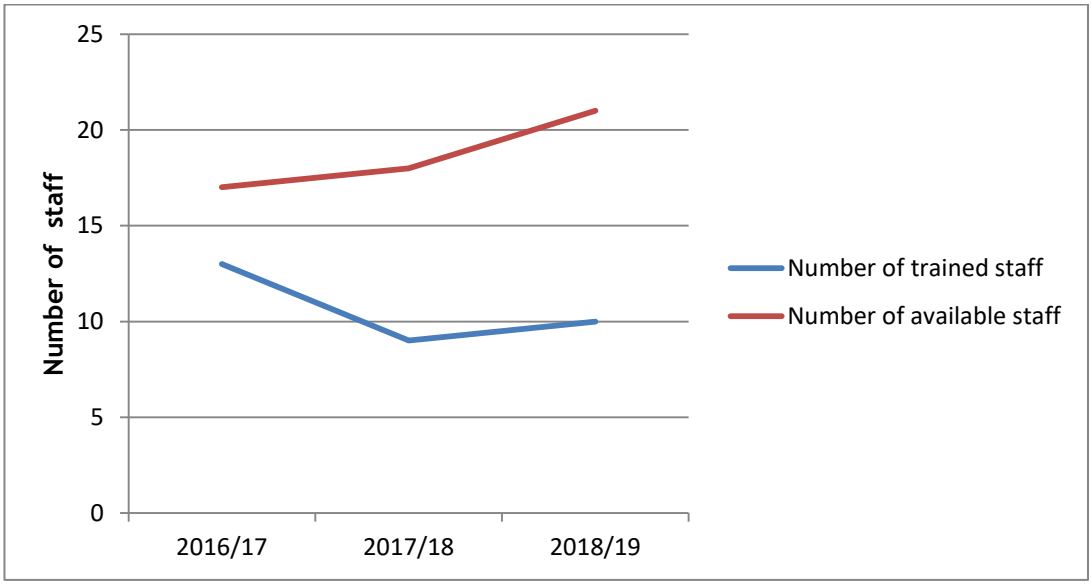
Source: Data collected from visited Health Facilities (2019/2020).

Figure 3.2(a) shows that untrained Healthcare workers existed in District Hospitals, Health Centres and Dispensaries with varying proportions. In District Hospitals consistently, had a higher proportion of untrained staff with an increasing trend ranging from 24% in 2016/17 to 52 in 2018/19.

Likewise, the proportion of untrained in Health Centres increased from zero in 2016/17 to 50 in 2018/19 whereas for dispensaries the increase was from 8% in 2016/17 to 33% in 2018/19.

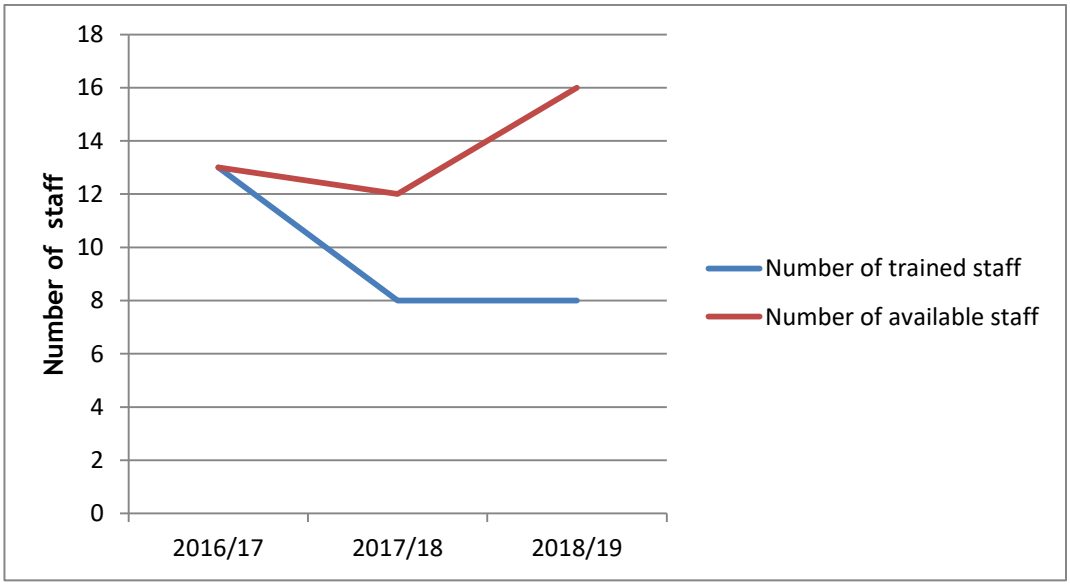
Figure **3.2(b) - (d)** below provides the status of number of trained staff on immunization and vaccination management versus available number of staff in visited District Hospital, Health Centres and Dispensaries.

Figure 3.2(b): Trained Health Workers on Immunization and Vaccination in Visited District Hospitals



Source: Data collected from visited District Hospital (2019/2020).

Figure 3.2(c): Trained Health Workers on Immunization and Vaccination in Visited Health Centres

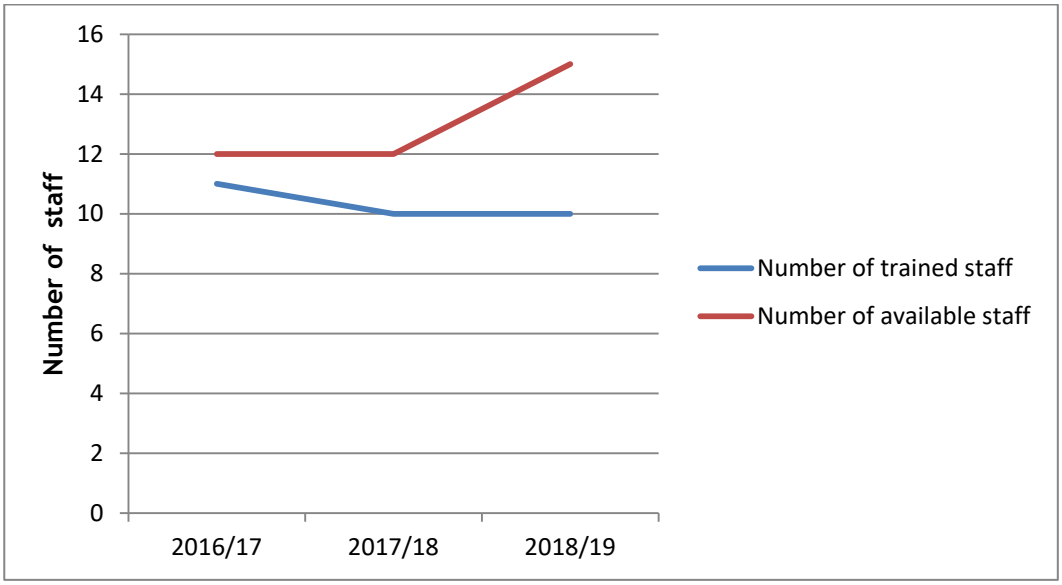


Source: Data collected from visited Health Centres (2019/2020).

Based on **Figure 3.2 (b) and (c)** there was a constant increase in demand for staff at District Hospital and Health Centre levels. However, in both cases the number of available trained staff had a declining trend. This led to widening of the gap between requirements and availability of trained staff as shown in **Figure 3.2(a).**

Also from **Figure 3.2(d)**, it is shown that, there was a constant number of available staff for the first two financial years, however, the number increased in the subsequent years. Also, the number of trained staff had a declining trend.

Figure 3.2(d): Trained Health Workers on Immunization and Vaccination in Visited Dispensaries



Source: Data collected from visited Dispensaries (2019/2020).

It was noted that trainings were conducted when there was introduction of new vaccines, the situation that makes few health workers to get opportunity to attend immunization and vaccination trainings. Failure to attend training for health workers resulted into lack of updated knowledge on immunization and vaccination issues.

ii. Inadequate Financial Resources

Review of IVD Annual Plans and interviews with officials of the Ministry of Health showed that, the Ministry of Health received funds in kind from GAVI as per planned budget to facilitate implementation of some immunization and vaccination activities which include procurement of vaccines, syringes and safety boxes.

It was further noted that, the Ministry of Health received funds from the government for procurement of vaccines. However, the review of MTEF from the Ministry of Health showed that, in two successive financial years, the amount disbursed by the government was less compared to planned budget as shown in **Table 3.2**.

Table 3.2: Fund for Procurement of Vaccines from Tanzanian Government

Financial Years	Budget Amount (TZS - billion)	Released Amount(TZS)	Difference (TZS)
2016/17	16	16.87	+0.87
2017/18	33	29.65	- 3.35
2018/19	30	9.72	-20. 28
Total	**79**	**56.24**	**-23.63**

Source: Data collected from MTEF of IVD (2016/17 to 2019/20)

Table 3.2, shows that, in the financial year 2018/19, the Ministry of Health received less than a one third of the budgeted fund amounting to TZS 30 Billion. It is also noted that, the budget of IVD on procurement of vaccines increased from TZS 16 to 33 billion in the financial year 2017/18 but decreased to 30 in the financial year 2018/19. Interviewed officials from the Ministry of Health revealed that, fluctuation of the budget was determined by the amount of funds approved by the Ministry of Finance to the Ministry of Health. This was verified through the review of Budget Speech from 2016/17 to 2018/19 of the Ministry of Health. Based on the review it was noted that, there was an increase in budget from TZS 518 Billion in the financial year 2016/17 to TZS 1.1 Trillion in 2017/2018. However, for the financial year 2018/19 the budget decreased to TZS 866.2 Billion.

The audit also interviewed officials of the Ministry of Finance and Planning (MoFP) on the fluctuation of the budget and they showed that, the disbursement of fund depends on the availability of fund which is determined by the amount of revenues collected by MoFP. According to Section 45(b) of Budget Act of 2015, funds disbursement to vote shall be based on performance, approved budget and funds availability. Since budget is an estimate, it will be used to guide the disbursement of fund based on the collected revenues.

Further, according to Progress Reports of the visited facilities, funds were disbursed to District Hospital upon request from respective hospitals. Review of progress reports showed that, out of 6 visited District Hospitals, 5 budgeted for immunization and vaccination activities and 3 received funds as per their requests for the 3 years under review. The only exception was Ruangwa and Vwawa District Hospital where the funds disbursed varied between 12 and 52 percent of the amount requested for Ruangwa while for Vwawa there was a difference of 77 percent. Kibondo District Hospital did not budgeted at all for immunization and vaccination activities as it relied on the activities performed by Health Centres and Dispensaries. This is as shown in **Table 3.3.**

Table 3.3: Summary of fund disbursement in the visited District Hospitals

Name of District Hospital	Financial year	Budgeted amount (TZS Million)	Actual amount received (TZS Million)	Deficit (TZS Million)	% of deficit
Misungwi Hospital	2017/18	NA-	NA-	NA-	0
	2018/19	40.4	40.4	0	0
	2019/20	1.5	1.5	0	0
Ruangwa Hospital	2017/18	8.8	6.5	2.37	27
	2018/19	8.0	7.0	1	12
	2019/20	3.4	1.6	1.8	52
Mvumi Hospital	2017/18	4.8	4.8	0	0
	2018/19	3.6	3.6	0	0
	2019/20	1.8	1.8	0	0

Name of District Hospital	Financial year	Budgeted amount (TZS Million)	Actual amount received (TZS Million)	Deficit (TZS Million)	% of deficit
Siha Hospital	2017/18	0.2	0.2	0	0
	2018/19	0.342	0.342	0	0
	2019/20	0.462	0.462	0	0
Kibondo Hospital	2017/18	0	0	0	NA
	2018/19	0	0	0	NA
	2019/20	0	0	0	NA
Vwawa	2017/18	64.15	14.48	49.67	77
	2018/19	1.732	1.732	0	0
	2019/20	2.44	2.44	0	0

Source: Data from Fund Expenditure Reports at visited district hospitals.

Further, review of Mid Term Expenditure Framework of PO-RALG indicated that despite PO-RALG having a role of supervising and coordinating vaccination activities at Regional Secretariats and LGAs there was no budget which was set aside to facilitate implementation of these activities. The reason for this was lack of coordination on funding for immunization and vaccination activities between the two Ministries (Ministry of Health and PO-RALG).

Failure to have specified budget for supervising and coordinating immunization and vaccination activities resulted into failure of PO-RALG to frequently reach and provide support to RS and LGAs on immunization and vaccination issues as they only depend on the submitted reports. Furthermore, interviewed officials from PO-RALG and reviewed Supportive Supervision Reports showed that, activities such as cold chain management and distribution of vaccines and vaccines supplies were not supervised by PO-RALG in each quarter as required[23].

As a result, PO-RALG was unable to address challenges that Health Facilities were facing including poor monitoring of temperatures as

[23] PO-RALG is required to supervise activities of CHMTs on quarterly basis (Guideline for Supportive Supervision by RHMTs)

explained in sections 3.2.4 (ii). Further, review of Supervision Reports of June, 2019 from PO-RALG indicated that, irregular supervision also resulted to uneven distribution of vaccines and vaccines supplies to health facilities as some were noted to have more stock compared to the number of beneficiaries.

iii. Deficiency of Equipment

To ensure smooth provision of Immunization and Vaccination services, it requires use of tools such as Tally sheets, Monthly report forms, Vaccine ledger, Fridges, Vaccine carriers, Fridge tags/thermometers, freeze tags, RCH cards, HPV cards, HPV register and MTUHA No. 7.

It was noted that, the Regional Immunization and Vaccine Officers (RIVOs) use the Vaccine Information Management Systems (VIMS) to place vaccine request orders to Immunization and Vaccine Development (IVD) Programme Offices after checking the need for vaccines from available stock. After receiving request order from RIVOs, IVD Programme officer distributes the vaccines to RIVOs who distribute them to District Immunization and Vaccine Officers (DIVOs) on quarterly basis. Thereafter, DIVOs distribute the vaccines to health facilities on monthly basis.

Interviewed officials from the Ministry of Health and PO-RALG and thereafter physical observation in the regions revealed shortage of equipment and tools such as vehicles, vaccination tools and vaccine storage facilities needed to facilitate smooth implementation of Immunization and Vaccination activities. According to Vehicle Delivery Registers it was noted that, shortage of vehicles was 50 out of 184 required (27.2 percent), while the shortage for vaccination storage[24] facilities was 1515 out of 2900 (52.2 percent).

The shortage of vaccination tools, storage facilities and vehicles for the visited Health Centres and District Hospitals are presented in **Table 3.4.**

[24] Vaccination storage facilities here refer to Refrigerators

Table 3.4: Status of Tools for Immunization and Vaccination Activities at Visited Health Facilities

Name of Health Facility	Name of Equipment	Financial Years							
		2016/17		2017/18		2018/19		2019/20	
		Available	Shortage	Available	Shortage	Available	Shortage	Available	Shortage
District Hospitals	Vaccination Tools	32	3	32	3	37	0	35	2
	Vaccination Storage Facilities	20	2	20	2	22	2	22	2
	Vehicles	2	5	2	5	3	4	3	4
Health Centres	Vaccination Tools	1722	16	1728	16	1754	20	1758	1
	Vaccination Storage Facilities	21	0	21	4	29	0	29	0
	Vehicles	4	3	2	5	3	4	1	6

Source: Vaccination tool registers from IVD (2020)

From **Table 3.4**, it is shown that, in general there was severe shortage of vehicles in the visited District Hospitals and Health Centres for all financial years. Recent data for the financial year 2018/19 and 2019/20 showed that, only 3 of the 7 visited District Hospitals had vehicles. The situation was worse in the visited health centres where the number of vehicles decreased from 3 in 2016/17 to 1 in 2019/20. In fact, only 2 of the 7 visited health centres had a vehicle.

Based on review of GAVI Grant Report – 2018 and physical observations made to visited health facilities, it was noted that Isansa Health Centre in Mbozi District kept vaccines for Itumpi and Iwalanje dispensaries which

did not have refrigerators for storage. Moreover, review of list of health facilities providing immunization and vaccination services revealed that, 50 out of 71 dispensaries did not have refrigerators for storage of vaccines.

Interviewed officials from the Ministry of Health reported that this was likely caused by limited investment in immunization and vaccination activities by the government inspite of the increase in the Ministry of Health budget. Consequently, the Ministry of Health relied too much on donor support for storage facilities and vehicles.

3.2.2 Inadequate Planning for Advocacy on Immunization and Vaccination

The Ministry of Health and Development Partners[25] are required to engage in a public awareness campaign from National to the household levels to sensitize the people about their rights and responsibilities on matters relating to health which include vaccination and immunization activities[26]. Moreover, the Ministry of Health is required to increase community awareness on immunization services to equal or above 90 percent by December 2020[27].

Interview held with officials from the Ministry of Health showed that, advocacies were planned and conducted at national and community levels. These advocacies were conducted using social and behaviour change communication materials; posters and fliers; and public awareness meeting and media.

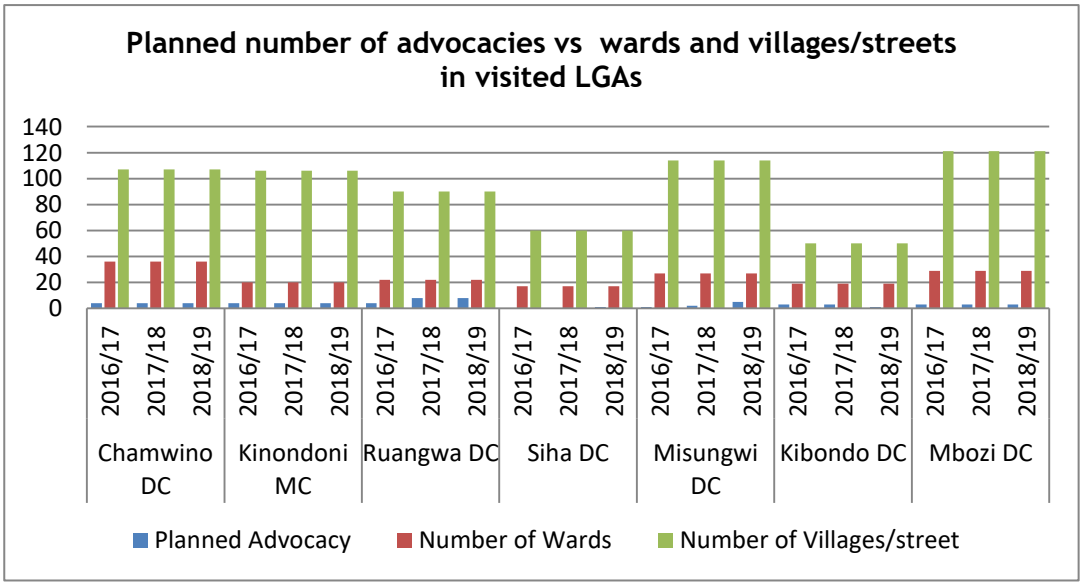
Review of the IVD annual plans (2016-2019) indicated that, there were plans for conducting advocacy at schools, urban slums population, low performing LGAs, fishing and nomad's communities through engagement of, private sector, CSOs, Red Cross, Lions Club and religious leaders. However, the advocacy plan did not spell out the frequency and coverage in terms of vaccination types and the targeted population.

[25] Unilateral or Multi-lateral Organizations, Civil Society and the Private Sector
[26] National Health Policy (2003), Page 9; Health Sector Strategic Plan IV 2015-2020, Page 26: Immunization Strategic Plan (2014-2020); and Comprehensive Multi- year Plan for Immunization and Vaccination (2016), Page 44,
[27] Comprehensive Multi-year Plan (2016-2020), section 4.2.6, page 44.

Review of RHMT and CHMT Reports also showed the same weaknesses as it was not clear on the targeted population and types of vaccination to be advocated. It was also noted that Chamwino planned to conduct 16 advocacy activities each year and Ruangwa planned 8 advocacy activities each year, while the rest have less than 4 advocacy activities. The situation was worse at Siha DC as it did not plan for advocacy in 2016/17 and 2017/18. For the financial year 2018/19 and 2019/20 the planned advocacy activities was only one (1) for each quarter in Siha and Kibondo District Councils.

It was further noted that, the planned advocacy activities in all the 7 visited LGAs did not take into consideration the number of Wards and villages. This is because in all 7 visited LGAs number of planned advocacy was less compared to the number of wards and villages/street as shown in **Figure 3.3.**

Figure 3.3: Planned Advocacy Activities versus number of Wards and Villages/Streets in Visited LGAs



Source: Data collected from visited Councils (2019/2020)

Furthermore, based on the interview with officials from visited health facilities it was not clear as to how all wards and villages were reached

with advocacy activities taking into consideration few numbers of planned advocacy activities and few numbers of staff with vaccination skills.

3.2.3 Set Targets do not ensure adequate coverage of immunization and vaccination services

According to WHO Immunization Strategic Plan 2014-2020, the Ministry of Health is supposed to strengthen mechanism to ensure unreached and new population groups are covered with immunization and vaccination. Similarly, the Ministry of Health is required to attain coverage of above 90 percent of all antigens by 2020[28].

Interviews with Ministry of Health officials indicated that, MoHCDGEC had set targets to reduce morbidity, mortality and disability caused by vaccines preventable diseases through the provision of high quality immunization services based on the set targets of 90 percent for all antigens.

Review of Immunization Performance and Data Desk Review of 2018 showed that, in general the Ministry of Health surpassed the set targets for all categories of immunization and vaccination as the performance ranged from 75 to 122 percent.

The high performance was also confirmed in the 7 visited regions where the level of performance for immunization and vaccination to children under the age of five years ranged from 83% to 115% as shown in **Table 3.5)**.

[28] Comprehensive Multi Year Plan for Immunization and Vaccination (2016)

Table 3.5: Status of Provision of Immunization and Vaccination Services to Children under the age of 5 years in Visited Regions

Name of Region	Financial Year	Set Target	Achievement per Target	Differences	Percentage of Achievement
Dodoma	2016/17	52,558	55,212	-2654	105
	2017/18	54,362	54,135	-227	99.6
	2018/19	62,654	62,747	93	100
Dar es Salaam	2016/17	NA	NA	NA	NA[29]
	2017/18	94,281	95,322	1,041	101
	2018/19	91,427	102,892	11,465	113
Lindi	2016/17	8,389	7,010	-1,379	84
	2017/18	32,628	32,724	96	100
	2018/19	28,952	32,378	3,426	112
Kilimanjaro	2016/17	13,776	11,416	-2,360	83
	2017/18	13,356	12,130	-1,226	91
	2018/19	13,944	11,833	-2,111	85
Mwanza	2016/17	29,737	27,101	-2,636	91
	2017/18	30,634	30,692	58	100
	2018/19	40,474	46,654	6,180	115
Kigoma	2016/17	92,256	89,329	-2,927	96.8
	2017/18	89,512	87,304	-2,208	97.5
	2018/19	106,044	97,149	-8,895	92
Songwe	2016/17	10,422	11,204	782	107
	2017/18	11,001	10,757	-244	98
	2018/19	10,815	11,735	920	108

Source: NBS data for population (2016/17-2019/20)

From **Table 3.5**, it is shown that, there is over performance on some of the set targets. Interviewed officials reported that they managed to achieve the set targets due to emphasize on mobile clinics and out-reach services. However, review of Progress Reports showed over performance was caused by under-estimation of the set targets since they used population projection from NBS without consideration of previous performance as criteria when setting targets.

[29] No Data due to System Closure

Furthermore, it was noted that, there was a mismatch in the set targets of surviving infant's population at District level as received from Immunization and Vaccination Department and District Immunization and Vaccination Officers of the respective visited LGAs as shown in **Table 3.6**.

Table 3.6: Comparison of the Set Target for Surviving Infants Population from IVD and DIVO in Visited LGAs

District	Calendar Year	Surviving infants as per NBS as received from IVD	Surviving infants as per NBS as received from DIVOs[30]	Deviation	% of deviation
Chamwino	2017	13,670	17,270	3,600	26.3
	2018	16,102	17,211	1,109	6.9
	2019	16,505	17,721	1,216	7.4
Kinondoni	2017	46,466	34,284	-12,182	26
	2018	33,506	33,506	0	0
	2019	33,246	33,246	0	0
Ruangwa	2017	5,098	5,098	0	0
	2018	3,760	3,756	-4	0
	2019	3,805	3,805	0	0
Siha	2017	4,726	3,925	-801	17
	2018	5,037	5,037	0	0
	2019	5,157	5,157	0	0
Misungwi	2017	15,254	16,180	926	5
	2018	21,379	21,384	5	0
	2019	22,087	22,087	0	0
Kibondo	2017	10,993	10,993	0	0
	2018	14,002	14,002	0	0
	2019	14,431	14,431	0	0
Mbozi	2017	19,624	19,624	0	0
	2018	17,762	17,818	56	0.32
	2019	18,281	18,276	5	0.03

Source: NBS data for population (2016-2020)

[30] DIVOs are District Immunization and Vaccines Officers

Based on **Table 3.6**, it is shown that, the percentage deviation ranges from 0.3 to 26.3 percent. Huge deviation on the number of surviving infants were noted at Chamwino and Kinondoni Local Government Authorities.

It was noted that, the reason for such deviation is lack of consistency on issued set target from IVD to some of the districts. While the issued target sometime decreased in the subsequent year for instance Mbozi from 19,624 in 2017 to 17,762 in 2018; but in other LGAs it increased dramatically e.g. in Kibondo DC from 10,993 in 2017 to 14,002 in 2018.

3.2.4 Inadequate Mechanism in place to ensure Provided Immunization and Vaccination Services are Effective

WHO Immunization Strategic Plan (2014-2020) requires health workers engaged in immunization and vaccination services to be skilled in all aspects of vaccine administration, cold chain and logistics. Further, Comprehensive Multiyear Plan for Immunization and Vaccination (2016) requires the Ministry of Health to improve Vaccine Management Performance as well as increase and maintain adequate storage capacity for vaccines and related supplies.

Review of IVD Annual Plans (2016-2019) showed that, to ensure effectiveness of supplied vaccines and immunization the Ministry of Health used the following mechanisms: Availability of good storage and distribution vaccine facilities; effective vaccine management assessment; control of temperature of vaccines on day to day basis; and conducting refresher trainings to new comers and conducting trainings when they introduce new vaccines.

However, it was noted that these mechanisms were not always followed since: nurses were not updated with vaccination knowledge; there were inadequate storage of vaccines; delays in distribution of vaccines; and untimely provision of vaccines to beneficiaries. These are further detailed below:

i. Nurses Responsible for Immunization and Vaccination Activities Not Updated with new Knowledge

Review of Comprehensive Multi-year Plan (2016-2020) and Training reports from the financial year 2016/17 to 2019/20 from IVD revealed that, the Ministry did not planned in every year to conduct trainings to nurses responsible for immunization and vaccination activities at health facility level. This is because reviewed Comprehensive Multi-year Plan (2016-2020) showed that, training activities were budgeted for the year financial year 2019 only.

Interviews with officials in the visited health facilities indicated lack of skills on vaccine management to most of health workers. For instance, a visit conducted to Siha Health Centre in Kilimanjaro region on 21st January, 2020 found that, the newly appointed Assistant Nursing Officer (ANO) was not trained on immunization and vaccination. The same scenario was reported[31] at Dodoma Municipal Council in 2018 where by District Immunization and Vaccination Officer (DIVO) lacked skills on immunization and vaccination since he was newly appointed. Further, it was noted that in 11 out of 21 visited health facilities nurses responsible for provision of immunization and vaccination were not regularly updated on the new improvement under this area.

Interviewed officials at the visited health facilities showed that, due to limitations of budget they did not adequately plan for training in their Annual Plans. This was verified in the visited regions and LGAs where none of the RHMT and CHMT planned for staff training on immunization and vaccination activities. Failure to regularly update nurses with vaccination knowledge could likely contribute to mishandling/mismanagement of vaccines. This was confirmed by observations made at various Healthcare facilities where vaccines were found to be stored at temperature of out of the required range of +2 to +8 degree centigrade as explained in the next Section. Upon enquiries, officials failed to explain the temperature storage requirements.

[31] Integrated Supervision Report, Dodoma Region, 2018

ii. Inadequate Storage of Vaccines

Standard Operating Procedures (SOPs) for Cold and Freezer Rooms, requires the Immunization Store Keeper to ensure that the temperature for cold rooms is between +2 to +8 degree Centigrade and for freezer is between -15 to -25 degree Centigrade.

Observation made in the visited health facilities and reviews of Programme Audit Report of January, 2018 indicated cases of inadequate temperature control for some health facilities.

At Mwananyamala Hospital the auditor observed temperature out of the range on 2nd January, 2020. Similar situation was observed in other 5 visited Health Facilities namely: Mbekenyera Health Centre (Ruangwa DC), Handali Health Centre (Chamwino DC), Siha Health Centre (Siha DC), Ngarenairobi Dispensary (Siha DC) and Buigiri Dispensary (Chamwino DC), Kifura Health Centre, Kigendeka Dispensary (Kibondo DC), and Maweni Referral Hospital (Kigoma).

At Myovizi Dispensary in Mbozi District the situation was worse as it was noted that, the fridge tag (temperature monitoring device) was not functioning for almost 3 months from November 2019 to the time the facility was visited in February, 22nd 2020. During this period, temperatures were out of required range. It was noted that, temperature went above +10 degree centigrade three times on 28th September, 2019, 2nd October, 2019 and 21st November, 2019. Furthermore, on 28th September, 2019 and 2nd October, 2019 the temperature was high for more than 12 hours. This is further explained in **Table 3.7**.

Table 3.7: Trend of Temperature recording by Fridge Tag at Myovizi Dispensary in Mbozi DC

Date of temperature recording	Average temperature (Degree Centigrade)	Maximum temperature (Degree Centigrade)	Duration out of range	Alarm trigger time
21-11-2019	+6.4	+10.3	6h 21 min	06:08 h
02-10-2019	+8.6	+10.6	12h 20 min	06:20 h
29-09-2019	+7.6	+8.2	3h 29 min	03:04 h
28-09-2019	+8.6	+11.1	16h 34 min	05:58 h

Source: Fridge Tag Temperature Records of visited health facilities (February, 2020)

Likewise, the Supportive Supervision Report from visited regions reported that 7 health facilities in Songwe and 2 in Mwanza had temperature out of the required range.

Review of Supportive Supervision Reports from District Immunization and Vaccination Officers (DIVOs) in the visited areas revealed some health facilities stored vaccines in fridges that allow freezing (frost) which is contrary to WHO Standards. This is as shown in **Photo 3.1.**

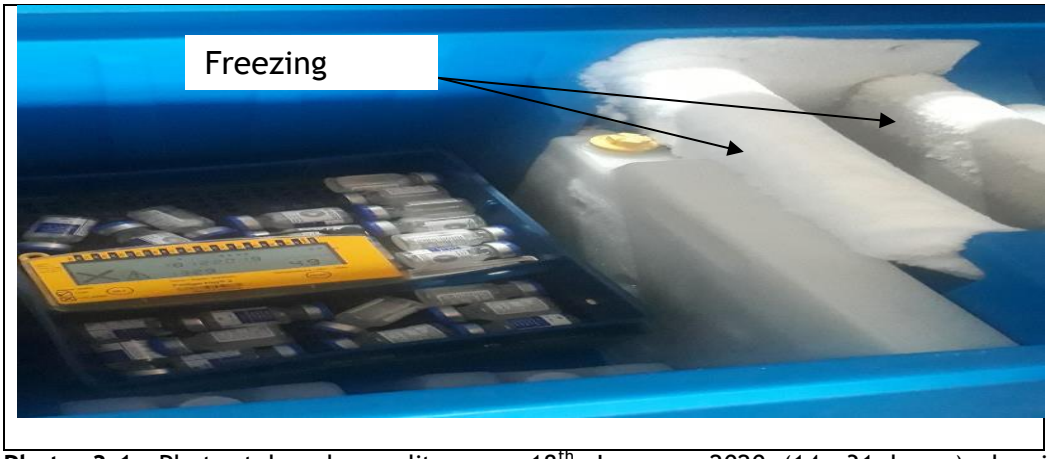


Photo 3.1: Photo taken by auditors on 18th January, 2020 (14: 31 hours) showing Formation of frost inside a fridge which is used to store vaccination at Mbekenyera Health Centre in Ruangwa District.

Review of Standard Operating Procedures (SOPs) on Immunization and Vaccination showed that, storage of vaccines in a fridge which allow frost reduces potency of the vaccines. The situation that may result to

inadequate immune response and poor protection against vaccine preventable diseases.

Furthermore, review of Supportive Supervision Reports revealed lack of separate dry store for vaccine related supplies at Chamwino, Siha and Mbozi LGAs. Reports also showed lack of Walk In Cold Room at Songwe region and malfunctioning of the Walk In Cold Room at Lindi Regional Vaccine Store due to breakdown of control panel which was caused by electricity fault. It was also noted that, Myovizi Dispensary did not have both fridge tag and freeze tag.

According to Supportive Supervision Reports in Mwanza and Songwe regions, vaccines were arranged without considering temperature sensitivity and Refrigerator for storage of vaccine was out of order.

Review of Gavi Grant Report – 2018 and information from interviewed officials in the visited health facilities pointed out that, the lack of regular maintenance and untimely repair of the cold chain equipment (mostly fridges) were the reasons for inability to keep the vaccines within the recommended temperature range. Interviewed officials of the visited facilities showed that, failure to budget for maintenance is the reason for lack of regular maintenance and repairs as they failed to buy the required spare parts. Furthermore, it was noted that the sheets for monitoring temperature of the vaccines in some of the health facilities for instance at Maweni Regional Referral Hospital in Kigoma were not available or not used.

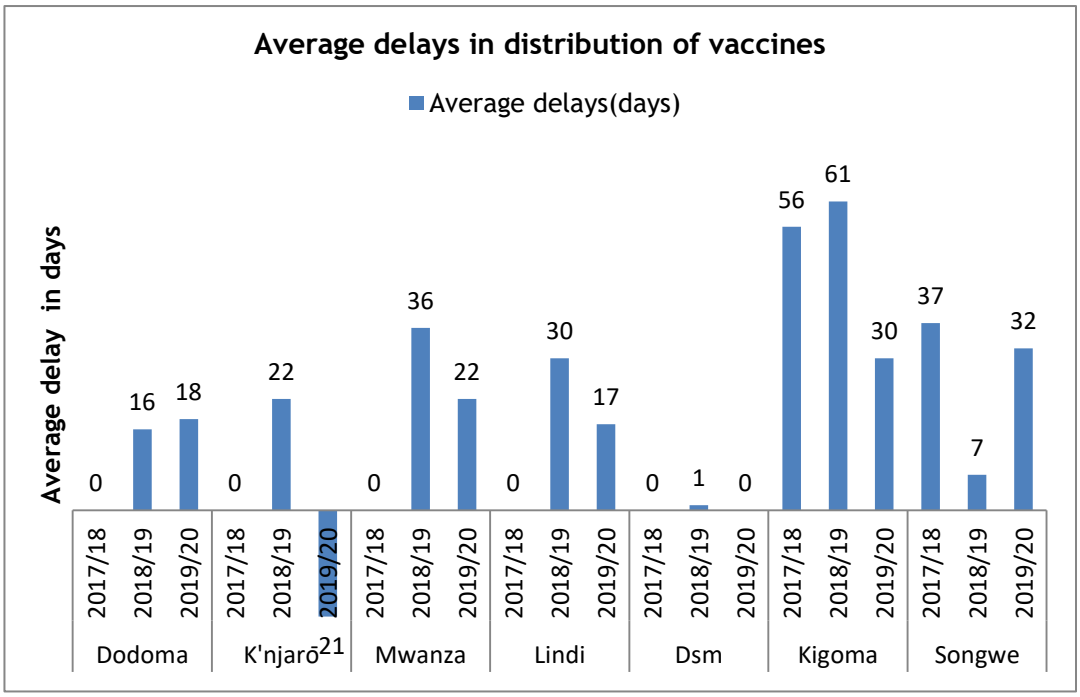
This is like to result into loss of vaccine potency which may cause inadequate immune response in patients and poor protection against vaccine preventable diseases.

iii. Delays in Distribution of Vaccines

Review of IVD Annual Plan of 2018 revealed that, at Medical Stores Department (MSD) there are 2 refrigerated trucks that are used for transportation of vaccines to all regions. It was noted that, these trucks are not enough to facilitate distribution of vaccines to different parts of

the country. As a result, there were delays in distribution of vaccines to regions as shown in **Figure 3.4**.

Figure 3.4: Summary of Timelines for Distribution of Vaccines to Region Vaccine Stores



Source: Vaccine Delivery Registers (2019/20)

From **Figure 3.4**, it is shown that, 4 out of 7 visited regions experienced a delay of 30 days or more. The highest number of days vaccines were delayed was 61 days in Kigoma region in the financial years 2018/19. Interviews with Regional Immunization and Vaccination Officer (RIVO) in Kigoma region pointed that, this magnitude of delay was caused by delay in distribution of vaccine from the central level.

According to Joint Appraisal of Tanzania (2017), delays in distributing vaccines and related commodities contributed to vaccines stock out in health facilities. This affected the scheduled dates for various sessions of vaccinations which might affect the effectiveness of immunization and vaccination to beneficiaries. This was verified through the review of Supportive Supervision Report and visit to health facilities as it was noted

that, Ruangwa, District Hospital, Mbekenyera Health Centre and Kigoma Referral Hospital cancelled immunization services due to stock out of vaccines and vaccines related materials.

iv. Presence of expired Vaccines / and Use of Obsolete Vaccines in Health Facilities

Reviewed Supportive Supervision Reports from visited regions showed presence and use expired vaccination and immunization by some health facilities. Nyamilama Health Centre in Mwanza region was reported to have 2 bottles of BCG which were expired for the past 5 months. Up to August, 2018 when supportive supervision team (RHMT) conducted visit these bottles were found stored in the fridge which pose a risk of being exposed to vaccine preventable diseases to 40 children upon using them as it loose vaccine potency hence may not provide immune. See **Photo 3.2** which was taken by the supervision team.

Photo 3.1: Expired Vaccines bottles which were found stored in the Fridge at Nyamilama Health Centre in Mwanza Region. Picture from Integrated Supportive Supervision Report, Mwanza Region, 2018

Similarly, 3 bottles of BCG vaccines which were used prior to inspection day were found in the fridge at Nyamilama Health Centre indicating that those vaccines had been used. This is contrary to the standards which require opened vaccines bottle for BCG to be used within 6 hours only, and if not finished has to be thrown away.

In addition, Vaccines Distribution Reports from Mwanza region (2017) reported presence of obsolete vaccines at Vaccine Vial Monitor stage 3 as observed during vaccination and immunization sessions at Jojiro Dispensary. Similar situation was found and reported by the supervision team at Magu District Vaccine Stores (DVS) who observed 10 obsolete[32] polio vaccine vials[33]. This implies that, 200 children were potentially at risk.

[32] Vaccines were in stage 3 of Vaccine Vial Monitor (VVM) which is not recommended for use.

[33] Vial means a bottle of vaccine

Furthermore, review of Supportive Supervision Report for Kigoma region (April 2019) showed that, at Nkundutsi Dispensary, there were expired vaccines namely: Measles Rubella (140 doses), Pentavalent (88 doses), and Tetanus (140 doses). A similar case was observed at Bugaga Dispensary which had 20 doses of Tetanus vaccines.

Interviews with RIVOs and DIVOs in the visited regions and districts respectively showed that, the change of Vaccine Vial Monitor (VVM) and expiration of vaccines in those facilities were caused by failure to adhere to First in First out (FIFO) principle when such vaccines were used and failure to monitor temperature of vaccines in refrigerators respectively.

v. Vaccines Not Timely Provided to Beneficiaries as Required

Interviewed officials in the visited health facilities indicated untimely provision of immunization and vaccination services. All visited health facilities reported that, immunization and vaccines were not always provided to beneficiaries as per established schedules. For example, at Makanjiro Dispensary and Nkuwe Health Centre both in Ruangwa District, vaccination services were not timely provided to beneficiaries due to stock out of Measles Rubella vaccines. **Table 3.8** provides details.

Table 3.8: Summary of Planned Versus Actual Dates for Provision of Vaccination Services at Makanjiro and Nkuwe Health Facilities

Name of Health facilities	Planned date of Measles Rubella Immunization service	Actual date of provision of Immunization services due to stock out	Delay (days)
Makanjiro Dispensary	30-12-16	23-01-17	24
	30-08-17	25-09-17	26
	31-01-18	20-02-18	20
	27-02-18	21-03-18	22
	29-03-18	23-04-18	25
	29-11-19	12-02-20	75
Nkuwe Health Centre	27-10-16	15-11-16	75
	29-04-17	09-05-17	75
	21-10-19	19-02-20	75

Source: Vaccine registers of Ruangwa District Hospital (2019/20)

From **Table 3.8**, it is shown that, the vaccination services to beneficiaries were delayed for periods ranging from 20 to 75 days. Rescheduling may result in 'missed opportunity' since not all parents or care takers will come back on the re-scheduled date. As a result, children who are beneficiaries of the services were exposed to a risk of being infected with diseases which could be prevented through vaccines.

Review of Supportive Supervision Reports from Visited Health Facilities showed that, at Gungu Health Centre one of the parents found at the facility during supervision day complained about attending to the facility 5 times without receiving vaccination services. Another parent was told to come back on the subsequent month for vaccination services.

Observations made in the visited health facilities showed that the possible reason for untimely provision of vaccination services to beneficiaries was stock out of vaccines or vaccines related materials such as vaccine syringes. For instance 4 out 21 visited Health Facilities showed stock out of vaccination syringe (BCG) for a period of 1 to 2 months as shown in **Table 3.9.**

Table 3.9: Stock out of Vaccination Syringes Up to February, 2020

Name of visited health facility	Period of stock-out
Myovizi Dispensary (Mbozi)	2 months
Isansa Health Centre	1.5 months
Kibondo District Hospital	1.5 months
Vwawa Regional Referral Hospital	1 month

Source: Dry Store Ledgers of visited health facilities (2019 & 2020)

3.3 Accessibility and Utilization of Funds by Implementers

According to Guidance 5.3 of Public Investment Management Operational Manual (2015), the Ministry of Finance and Planning is supposed to ensure funds are disbursed to the project from fund providers timely and in the budgeted amount. Such disbursed funds are supposed to be utilized according to existing guidelines in relation to the disbursed funds.

3.3.1 Untimely Disbursement of Funds to Implementers

Review of financial documents from the Ministry of Health, PO-RALG and visited regions revealed delays in releasing funds to facilitate implementation of immunizations and vaccination activities. Delays were noted at different levels from Ministries to health facilities as further described hereunder:

i. Delays in Funds Disbursement were Noted at the Ministerial Level

Review of budget and progress reports noted delays in disbursement of funds to both the Ministry of Health and PO-RALG to facilitate implementation of various immunization and vaccination activities as shown in **Table 3.10** and **3.11**.

Table 3.10: Status of Disbursement of Government Funds at the Ministry of Health

Financial Year	Quarter	Planned Disbursement date	Actual date when fund was released	Delay (Days)
2016/2017	1st	01-07-2016	29-7-2016	29
	2nd	01-10-2016	07-10-2016	7
	2nd	01-10-2016	11-11-2016	41
	2nd	01-10-2016	01-11-2016	31
2017/2018	1st	01-07-2017	21-08-2017	51
	1st	01-07-2017	18-09-2017	79
	2nd	01-10-2017	27-12-2017	87
	3rd	01-01-2018	27-03-2018	85
	4th	01-04-2018	27-06-2018	87
2018/2019	1st	01-07-2018	01-11-2018	123
	2nd	01-10-2018	29-01-2019	120
	3rd	01-01-2019	04-03-2019	62
	4th	01-04-2019	-	-
2019/2020	1st	01-07-2019	26-09-2019	87
	2nd	01-10-2019	20-12-2019	80
Average Total Delays				**69**

Source: Data collected from MTEF of IVD (2016/17 to 2019/20)

Based on **Table 3.10**, the delay in fund disbursement ranged from 7 days in second quarter of the financial year 2016/17 to 123 days in the first quarter of the financial year 2018/19 with an average delay of 69 days. It is also noted that, delay in fund disbursement increased from the financial year 2016/17 to 2018/19 and slightly decreased in the financial year 2019/20.

According to interviews with officials from the Ministry of Health, the delay of fund disbursement was caused by the Ministry of Finance to timely disburse the funds. Interviewed officials of the Ministry of Finance and Planning showed that, delay in disbursement of fund depends on revenues collected in respective months. This is because, MoFP implements the cash budget for which disbursed fund depends on availability of funds.

Table 3.11: Status of Funds Disbursement at the PO-RALG from MoFP

Financial year	Quarterly	Required date of fund disbursement	Actual date of fund disbursement	Delay in fund disbursement (Days)
2017/2018	1st	01-07-2017	06-02-2018	220
	2nd	01-Oct-2017	No fund received[34]	N/A
	3rd	01-Jan-2018	No fund received[35]	N/A
	4th	01-04-2018	04-Apr-2018[36]	3
		01-04-2018	11-Jun-2018[37]	71
2018/2019	1st	01-07-2018	09-Aug-2018	39
	2nd	01-Oct-2018	05-Nov-2018	35
	3rd	01-Jan-2019	29-Mar-2019	87
	4th	01-Apr-2019	06-May-2019	35
2019/2020	1st	01-07-2019	10-01-2020	193
	2nd	01-Oct-2019	10-01-2020	101

Source: Fund Disbursement Records

[34] Fund for this quarter was disbursed in quarter 4
[35] Fund for this quarter was disbursed in quarter 4
[36] Fund disbursed was for 2nd and 3rd quarter
[37] Fund disbursed was for 4th quarter

Based on **Table 3.11**, the highest delay was noted in the first quarter of the financial year 2017/18 which was 220 days (more than 7 months). Improvement was noted in the financial year 2018/19 as there was the highest delays of87 days (almost 3 months) but this increased to 193 (more than 6 months) in the first quarter of the financial 2019/20.

Interviewed officials from PO-RALG indicated that, the delay of fund disbursement to PO-RALG was caused by delay in completing the verification exercise on the performance of LGAs which was conducted by Internal Auditor General. Failure to timely assess LGAs performance affected funds disbursement to both PO-RALG and LGAs.

Other reported reason was delays in signing of Side Agreement which saves as an approval for the disbursement of Health Basket Fund to LGAs, Regional Secretariats, PO-RALG and the Ministry of Health. Side Agreement was supposed to be signed before the commencement of respective financial years. However, in all the three financial years under review, there was no Side Agreement that was signed before the commencement of respective financial years. Delays in signing Side Agreement ranged from 1 to 2 months as shown in **Table 3.12.**

Table 3.12: Summary of Timeliness for Signing Side Agreement

Financial Year	Planned date for signing Side Agreement	Actual date for signing Side Agreement	Delay (Months)
2016/17	Before July, 2016	5-08-2016	1
2017/18	Before July, 2017	11-09-2017	2
2018/19	Before July, 2018	03-09-2018	2
2019/20	Before July,2019	30-09-2019	2

Source: Signed Side Agreements (2016/17 to 2019/20)

Further review of Side Agreements for the financial year 2016/17 to 2019/20 showed that, the Ministry of Finance was the one to start signing the Side Agreement, however, the Ministry did not sign the Side Agreements timely thus causing subsequent delays in signing of the Side Agreements by PO-RALG, the Ministry of Health and Development Partners.

ii. Untimely Disbursement of Fund to Visited Districts Hospitals and Health Centres

Analysis to assess the timeliness in disbursement of funds to the visited District Hospitals showed delays ranging from 10 days to more than 7 months. The delay was noted to be more pronounced in the second quarter of the financial year 2018/19 at Misungwi District Hospital where there was a delay of 221 days (more than 7 months).

Analysis showed that, about 50 percent of the disbursement to the visited District Hospitals were delayed for more than 3 months.

For the visited health centres, the delays ranged from 10 to more than 6 months. The delays were higher for the first quarter of financial year 2019/20 at Handali Health Centre (Chamwino DC), Mbekenyera Health Centre (Ruangwa DC), and Kifura Health Centre (Kibondo DC).
Delays in disbursement of project funds lead to untimely implementation of project activities hence the goal of timely execution of immunization and vaccination was not achieved[38].

3.3.2 Funds Disbursed to Implementers were Not as per the Budgeted Amount

Review of fund disbursement records showed that the amount of funds disbursed to implementers was less than the requests made. This was noted at Ruangwa and Vwawa District Hospitals as shown in **Table 3.3.**

The same situation was noted in the visited Health Centres. It was noted that 3 out of 7 visited Health Centres received less amount of funds compared to the request made (See Table 3.13). The situation was worse at Mbekenyera which had a deviation ranging from 82 to 95 percent. Other Health Centres with high deviation (50 percent) were Handali and Misasi.

[38] Tanzania Comprehensive Integrated EPI Review (July, 2015).

Table 3.13: Summary of Fund Disbursed Versus Requested Amount in the Visited Health Centres

Name of Health Centre	Financial year	Budgeted amount (TZS Millions)	Actual amount received (TZS Millions)	Difference (TZS)	% of deviation
Handali-Chamwino	2017/18	1.8	1.8	0	0
	2018/19	3	3	0	0
	2019/20	3	1.5	1.5	50
Tandale-Kinondoni	2017/18[39]	0	0	0	0
	2018/19	5.28	5.28	0	0
	2019/20[40]	0	0	0	0
Mbekenyera-Ruangwa	2017/18	2.8	0.5	2.3	82
	2018/19	30	1.5	28.5	95
	2019/20	13.7	1.2	12.5	91
Siha-Moshi	2017/18	0	0	0	N/A
	2018/19	1.3	1.3	0	0
	2019/20	0.47	0.47	0	0
Misasi-Health Centre	2017/18	0.8	0.7	0.1	14
	2018/19	0.55	0.55	0	0
	2019/20	0.72	0.36	0.36	50
Kifura-Kibondo	2017/18	2.1	2.1	0	0
	2018/19	0	0	0	0
	2019/20	1.4	1.4	0	0
Isansa-Mbozi	2017/18	0	0	0	0
	2018/19	1.265	1.265	0	0
	2019/20[41]	0	0	0	0

Source: Financial records of the visited health facilities (2019/2020)

The reason for not receiving funds as per request made was due to the fact that, the disbursed funds depend on the amount of fund disbursed by donor to the government based on priorities of the donor. Also, the

[39] In this year the facility budgeted through user fee.
[40] In this year the facility budgeted through Central government fund.
[41] The Facility budgeted through NHIF fund.

interviewed officials of PO-RALG showed that, health facilities receive funds based on their performance.

3.4 Inefficient Implementation of Immunization Activities

This audit noted inadequate implementation of vaccination activities at Ministerial and Health Facilities level as further details below.

3.4.1 Not all Planned Immunization and Vaccination Activities were Implemented by the Ministry of Health

Review of IVD Annual Plan 2016-2019 and Joint Appraisal of Tanzania (2016-2018) showed that, the Ministry of Health planned to implement various immunization and vaccination activities which were categorized into Cold chain logistic and supply; Capacity building; new vaccine introduction; Supplementary Immunization Activities(SIA); service delivery; surveillance; demand creation and communication; monitoring and evaluation; program management; and financing.

However, it was noted that the Ministry of Health did not implement all planned activities as per developed plans. Details of the implementation status of planned activities are as shown in **Figure 3.14.**

Table 3.14: Status of Implementation of Planned Immunization and Vaccination Activities at the Ministry of Health

Year	Total Planned activities	Fully implemented activities	Partially implemented activities	Not Implemented Activities
2017	31	17	4	10
2018	26	15	8	3
2019	77	34	1	42

Source: Annual Implementation Status of IVD (2017-2019)

From Table **3.1**, it is shown that, the Ministry of Health for duration of three years from 2017 to 2019 did not fully implement the immunization and vaccination activities as planned. For the year 2019 more than half of the planned activities were not implemented. Furthermore, there were

13 activities which were not implemented to the fullest from 2017 to 2019.

According to Annual Implementation Status of IVD (2017-2019) and Progress Reports, it showed that, the activities that were not fully implemented from 2017 to 2019 include: monthly and quarterly Immunization Technical Working Group (TWG) meetings; national media seminars; surveillance of vaccine preventable diseases; supportive supervision on immunization services; and procurement of fuel for IVD Vehicles/Generator. Others include: distribution of vaccines; maintenance of vehicles; support payment of IVD utilities for office and warehouses; and support Internal Travel for IVD staff.

Interviewed officials from the Ministry of Health reported that, for the year 2017, failure to implement all planned activities was due to freeze of fund from GAVI. This was caused by non-adherence to established government accounting system as well as procurement regulations. For the year 2018 and 2019 it was caused by delay in release of funds from GAVI and lack of funds from government[42].

3.4.2 Vaccines Stock Out were Noted in Visited Health Facilities

Review of vaccines ledgers and physical observation conducted in visited health facilities on January and February 2020 revealed stock-out of vaccines. **Table 3.15** provides the status of availability of vaccines as noted on the visit days.

[42] GAVI Programme Audit Report, 2018

Table 3.15: Status of Vaccines Availability During Visiting Days by the Audit in Respective Health Facilities

Name of visited region	Name of visited health facility	Name of vaccines not available
District Hospital	Vwawa	Polio (OPV) and Measles Rubella(MR)
	Ruangwa	Measles Rubella (MR)
	Siha	-
	Misungwi	-
	Mvumi DDH	-
	Kibondo	-
Health Centre	Misasi	-
	Siha	-
	Tandale	-
	Handali	-
	Mbekenyera	Measles Rubella(MR), and Polio (OPV)
	Kifura	-
	Isansa	Measles Rubella (MR), Tetanus (TT), Polio (OPV), Penta, and Rota
Dispensaries	Makanjiro	Measles Rubella(MR)
	Buigiri	-
	Kijitonyama	-
	Ngarenairobi	-
	Mwanangwa	-
	Kigendeka	-
	Myovizi	Rota, Polio (OPV), PCV

Source: Data collected from visited health facilities (2019 & 2020)

From **Table 3.15**, it was found that, 6 out of 21 visited health facilities lacked some of the vaccination. Five out of these 6 health facilities lacked Measles Rubella vaccines while 4 out of these 5 facilities lacked Polio (OPV) vaccines. Other vaccines that were out of stock were Rota, Penta and PCV.

Review of Joint Appraisal of Tanzania (2017) revealed that, stock out of vaccines related commodities in some of the health facilities were due to delays in distribution of vaccination stocks at regional level as shown in **Figure 3.4** of **Section 3.2.4**.

Lack of vaccines in the visited facilities led to postponement of vaccination sessions and eventually affected the provision of routine immunization and vaccination services as explained in Section 3.2.4.

3.4.3 Communities were Not Sufficiently Sensitized on the Importance of Vaccination

Review of Joint Appraisal of Tanzania Report and IVD Annual Plans (2019) revealed that, Immunization and Vaccination Development Department conducted advocacies only when new vaccines were introduced. It was also noted that, the campaigns conducted covered only measles, rubella and HPV vaccines while other vaccinations such as BCG, TT, PCV, IPV and Pentavalent were not covered[43].

Further assessments were done to establish the extent of advocacy activities conducted at the visited districts**.** The results showed that**,** Chamwino DC in each year conducted only 4 out of 16 planned advocacies for the financial year 2016/17 to 2018/19. Ruangwa DC planned to conduct 4 advocacies in 2016/17 and 8 advocacy in 2017/18 and 2018/19 but did not conduct any. For the financial years 2016/17 to 2017/18, Siha DC did not conduct any advocacy because it did not plan to have them. Only Misungwi, Kibondo and Mbozi had managed to implement all planned advocacy activities. This is further shown in **Table 3.16.**

[43] Human Papilloma Virus Vaccine Advocacy Meeting Report (2016-2019), African Vaccination Week (2016-2019) and Primary Health Care (PHC) Meeting Report (2019)

Table3.16: Number of Advocacy Planned Versus Conducted at Visited LGAs

Visited district	Financial Year	Number of planned advocacy	Number of advocacy conducted
Chamwino	2016/17	16	4
	2017/18	16	4
	2018/19	16	4
Kinondoni	2016/17	4	0
	2017/18	4	3
	2018/19	4	4
Ruangwa	2016/17	4	0
	2017/18	8	0
	2018/19	8	0
Siha	2016/17	0	0
	2017/18	0	0
	2018/19	1	1
Misungwi	2016/17	1	1
	2017/18	2	2
	2018/19	5	5
Kibondo	2016/17	3	3
	2017/18	3	3
	2018/19	1	1
Mbozi	2016/17	4	4
	2017/18	4	4
	2018/19	4	4

Source: CHMT and RHMT Progress Reports from Visited Regions

Inadequate number of conducted advocacies was mainly caused by less priority being given to these activities. Thus, when there was a budget cut advocacies were easily taken out of the priority areas. Low coverage of advocacy on immunization and vaccination activities is like to result into low coverage on immunization and vaccination services as noted at

Kilimanjaro region as there was a drop out on the second dose of Human Papilloma Virus (HPV) for 11 percent in 2017[44].

3.4.4 Inadequate Coordination on Immunization and Vaccination Issues

Immunization and Vaccination Annual Plan of 2019 requires the Ministry of Health to strengthen program coordination and governance. It was noted that coordination was done through Inter-Agency Coordinating Committee (ICC) and National Immunization Technical Advisory Group (NITAG).

IVD Annual Plan (2016-2019), showed that, the ICC meetings were planned and conducted as per plans. However, review of conducted ICC meeting minutes for the financial year 2016/17 to 2017/18 revealed inadequate participation of PO-RALG in ICC meetings. PO-RALG did not attend the meetings for two consecutive years despite being main implementer of the vaccination activities through District Hospitals, Health centres and Dispensaries.

Since ICC is the responsible body for decision making and endorsement of proposals regarding immunization and vaccination activities, failure of PO-RALG to attend to these meetings contributed to lack of approval of activities that PO-RALG planned on implementation of immunization and vaccination activities. Furthermore, PO-RALG could not share to the meeting the progress made and challenges faced by District Hospitals, Health Centres and Dispensaries for those two years. Also, failure of PO-RALG to attend ICC meetings resulted into failure to have the platform to make decision and discussing sensitive issues concerning vaccines.

It was further noted that, in the two financial years of 2016/17 and 2017/18, only 2 out of 8 ICC meetings were conducted while for the financial year 2018/19, there was no evidence showing that ICC meetings were conducted. The infrequent ICC meetings deprived the IVD programme the opportunity to discuss and resolve important matters and

[44] Joint Appraisal of Tanzania Immunization Report,2017

share important issues concerning immunization and vaccination performance in the country.

On the other hand, coordination of vaccination activities was done through National Immunization Technical Advisory Group (NITAG) meetings which were supposed to be held twice per year. However, the review of IVD Annual Plan (2018), revealed that, NITAG meetings were not regularly conducted. The last meetings were conducted in 2017 and 2018 and it was only one meeting per year. It was further noted that, NITAG meetings were not planned, hence were convened on ad - hoc basis. Interviewed officials from IVD responded that, this was attributed by low priority given on the NITAG. Consequently, this led to failure for the Ministry of Health to receive recommendations that could enable the Ministry to make evidence based immunization and vaccination related policy and program decision.

3.5 Inadequate Monitoring of Immunization and Vaccination Activities

National Health Policy (2007) requires the Ministry of Health and PO-RALG to supervise and monitor implementation of planned activities as part of quality improvement in health services in order to meet established quality goals, to identify problems (opportunities for improvement) and to ensure that improvements are initiated and maintained.

However, it was noted that, the Ministry of Health and PO-RALG did not adequately monitor the vaccination activities; RHMT and CHMT did not adequately monitor vaccination activities in their respective areas; and inadequate action were taken to improve the noted weaknesses. This is further described below:

3.5.1 Inadequate Monitoring of Immunization and Vaccination Activities by the Ministry of Health and PO-RALG

Review of Comprehensive Multi-Year Plan (2016-2020) showed that, the Ministry of Health set monitoring indicators, targets, goals and modalities

to ensure effective monitoring of vaccination activities. Both the Ministry of Health and PORALG monitored vaccination activities through the Vaccines Information Management System (VIMS) and supportive supervision.

However, review of Supportive Supervision Reports showed supportive supervision was not adequately because not all planned supportive supervision activities at the Ministry of health were implemented. In the financial year 2016/17 and 2017/18 the Ministry of Health did not conduct supportive supervision to all regions, while for the financial year 2018/19 the Ministry of Health conducted supportive supervision to only 10 out of 26 regions.

Review of Annual Work Plan (2016/17 to 2019/20) from PO-RALG showed that, PO-RALG planned to conduct supportive supervision to all regions on vaccination activities, however, the planned supportive supervision were not all conducted. This is as elaborated in **Table 3.17.**

Table3.17: Status of Supportive Supervision Conducted by PO-RALG

Financial Year	Number of regions	Number of regions supervised	Number of regions not supervised
2016/17	26	1	25
2017/18	26	0	26
2018/19	26	8	18
2019/20	26	2	24

Source: PO-RALG Annul Work Plan (2016/17 to 2019/20)

Table 3.17, shows that, the total number of regions supervised by PO-RALG from 2016/17 to December, 2019 was less than half of all the regions in the country. While the highest number of supportive supervision activities conducted was in the financial year 2018/19 where by only 8 out 26 regions were covered, no region was supervised in 2017/18.

It was noted that, the reason for lack of supervision was lack of specific budget by PO-RALG to facilitate coordination and supervision activities as shown in Section 3.2.1 (ii). It was further noted that, GAVI, the main

source of funds for immunization and vaccination does not support supportive supervision activities. This activity depends on the Government funds which were not sufficient even for other activities during the whole period covered by the audit.

3.5.2 Inadequate Monitoring of Immunization and Vaccination Activities by RHMT, CHMT

Regional Health Management Team (RHMT) is required to supervise Council Health Management Team (CHMT) on quarterly basis. In turn, the Council Health Management Team (CHMT) supervises the provision of health care including immunization and vaccination activities at district hospitals, health centres and dispensaries.

Review of RHMT reports indicated that, in all the 7 visited regions, RHMTs managed to supervise nearly all CHMTs in their respective areas. This is as shown in **Table 3.18.**

Table 3.18: Number of CHMT Supervised by RHMT

Financial Year	Number of CHMT	Number of CHMT supervised by RHMT	Coverage (%)
2016/17	39	37	95
2017/18	39	38	97
2018/19	39	39	100

Source: Data collected from visited RHMT (2019/20)

From **Table 3.18**, it is shown that, the coverage of CHMT on supportive supervision ranged between 95 to 100 percent which is good.

Similar situation was observed on supportive supervision conducted by CHMTs to Health centres as the coverage stood above 80 percent as shown **Table 3.19**

Table 3.19: Number of Health Centres Supervised by CHMT

Financial Year	Number of Health Centres	Number of Health Centres supervised by CHMT	Coverage (%)
2016/17	27	22	81
2017/18	27	23	85
2018/19	27	25	93

Source: Data collected from visited CHMT (2019/20)

This high performance was attributed by adherence to the joint supervision schedules by the RHMT and CHMT which was a result of introduced performance based Health Basket Fund. The amount of funds to be disbursed to implementers is determined by the level of performance achieved[45].

However, it was noted that dispensaries were not adequately supervised compared to the Health Centres. The coverage of conducted supportive supervision ranged from 57 to 71 percent. In the financial year 2016/17 and 2017/18 the coverage stood at 57 percent. This is as shown in **Table 3.20**

Table 3.20: Number of Dispensaries Supervised by CHMT

Financial Year	Number of Dispensaries	Number of Dispensaries supervised by CHMT	Coverage (%)
2016/17	318	182	57
2017/18	319	182	57
2018/19	329	233	71

Source: Data collected from visited CHMT (2019/20)

The audit found that, causes for inadequate supervision to dispensaries was shortage of funds as shown in **Section 3.3.2** which made it difficult to cover all dispensaries as their number is larger compared to health centres. Lack of reliable transport was also noted as only 3 out of 7 CHMT in the visited regions had vehicles as shown in **Section 3.2.1**. Some were

[45] Memorandum of Understanding between Government of the United Republic of Tanzania and Development Partners Contributing to the Health Basket Fund in support of Achieving results under Health Sector Strategic Plan IV July 2015-June 2020.

using ambulances to facilitate this activity which is very risky should an emergency case arise in the respective health facilities while the ambulance was away.

Based on the interview with officials from visited regions it was further noted that, poor weather conditions, unconducive geographical conditions and remoteness of some health facilities led to failure to supervise all health facilities in each quarter as required. In Kigoma region insecurity was reported as a bottleneck as cases of robbery were reported to be un-controlled.

3.5.3 Frequently Observed Gaps were Noted without Adequate Actions Taken to Improve the Performance of Observed Gaps

According to National Health Policy (2007), the Ministry of health is required to be responsible for monitoring and evaluation in the health sector though eyes on and hands off as an observer and taking corrective action on all matters pertaining to health.

Moreover, the Ministry of Health is required to improve sharing lessons learnt of key results in vaccination and immunization program and to ensure draw backs are identified and acted upon timely[46].

From the review of Supportive Supervisions Reports in the visited regions and observation made during the visit, it was noted that during supportive supervision both RHMT and CHMT provided feedback to the supervised Health Facilities and made recommendations based on the observed gaps. However, it was noted that there were several observed gaps which occurred frequently with no serious action taken apart from recommending on the improvements. It was noted that there were several actions that could be taken by either RMO's or DMO's including transfers, change of position and issuing warning letters to irresponsible DIVO,RIVO and facilities in charges when cases like this occurred. None of the reviewed supportive supervision reports conducted by either RHMT or CHMT has reported on this. Furthermore, reviewed Supportive Supervision

[46] **Tanzania Quality Improvement Framework in Health Care (2011-2016).**

reports did not show the progress made on the previous noted gaps despite of the noted re-occurrence of the gaps.

For instance one of the frequently noted gap was poor documentation of vaccines information. It was noted that due to poor documentation of vaccines and vaccines related material there were overstocks or understocks of vaccines in the respective health facilities.

Other noted frequently observed gaps were inadequate monitoring of temperature and absence of routine follow up on Acute Flaccid Paralysis (AFP) and Febrile Rash illness (FRI) at the facility and community level. The absence of routine follow up on AFP and FRI could affect early detection of polio disease, should it happen.

CHAPTER FOUR

CONCLUSION

4.1 Introduction

This chapter provides general and specific conclusions in relation to the findings presented in chapter three. The conclusion is based on four focus areas namely: Planning; Disbursement of funds; Implementation of immunization activities; and monitoring.

4.2 General Conclusion

Efforts are still needed to improve the immunization and vaccination services. This is because, the Ministry of Health and PO-RALG do not efficiently manage the implementation of immunization and vaccination activities that ensure preventive care services are improved and immunizable diseases are controlled.

Immunization and vaccination activities are challenged by inadequate allocation of resources i.e. finance, tools and human resources which are critical for smooth implementation. Vaccines and immunization services are poorly managed by healthcare workers because of lack of skills on proper management which affect the quality of vaccines. Health facilities are faced with stock out of vaccines and its related supplies especially Measles rubella, Polio, Tetanus, Rota, Penta and PCV thus compromising the provision of vaccination and immunization services. Communities are not well sensitized on the importance of immunization and vaccination. This led to low coverage for some vaccines such as Human Papilloma Virus (HPV) as reported in Kilimanjaro Region which had a drop rate of 11% for HPV2 in 2017, as well as cancellation of scheduled vaccination services of up to 2 months as noted at Nkuwe Health Centre and Makanjiro Dispensary in Ruangwa DC.

4.3 Specific Conclusions

The following are the specific conclusions:

4.3.1 Inefficient Planning for the Immunization and Vaccination Activities

It is concluded that both the Ministry of Health and PO- RALG have shown efforts in planning for required resources, however, more efforts are needed to strengthen the mechanisms in place to ensure provision of required resources. Inadequate allocation for required resources resulted into budget deficiency in tools, human resources as well as budget. At the National level the deficit of human resources stood at half[47] of the requirement of health staff, while the deficit for financial resources at the Ministry of Health went up to two thirds of the requested amount. On the other hand, PO-RALG had no specified budget which led to in-effective monitoring of vaccination activities to Regional Secretariats and Local Government Authorities.

Less priority was given to the required tools to facilitate proper management of vaccines and immunization which resulted into absence of some tools such as freezers and fridge tags, temperature control charts, fridges and syringes especially BCG. Absence of these tools resulted into inadequate control of temperature as sometimes temperatures were noted to go beyond the required level of +8 degree centigrade.

In addition, advocacy activities were not adequately planned for as the number of planned advocacy activities neither corresponded to the number of villages/streets nor the number of wards. Only Chamwino DC managed to plan for 4 advocacy activities for each quarter, while the rest had less than 8 advocacy activities per year. It could be enough if LGAs would plan to conduct at least one advocacy activity per month.

[47] Health Sector Strategic Plan IV Mid Term Review (2019)

4.3.2 Inefficient Mechanism to Ensure Timely Disbursement of Funds to Implementers

The Ministry of Health failed to liaise with the Ministry of Finance to ensure timely disbursement of funds which resulted into delays in disbursement of funds to the Ministry of Health, PO-RALG and health facilities. The timeliness in disbursement of funds to visited District Hospitals and health centres showed delays which ranged from 10 to more than 6 months. As a result, there were delays in the implementation of immunization and vaccination services.

4.3.3 Planned Immunization Activities were Not Adequately Implemented

Both the Ministry of Health and PO-RALG did not adequately implement the planned immunization and vaccination activities. This is because Health care facilities do not conduct vaccination and immunization activities to the fullest for various reasons including stock out of vaccines such as Measles Rubella, OPV, IPV, BoPV in more than half of visited health facilities.

There was improper functioning of cold chain since vaccines were managed at temperature out of the recommended range, of either below +2 or above +8 degree centigrade which affects the vaccine potency. Some health facilities were reported to use expired vaccines.

Furthermore, both the Ministry of Health and PO-RALG did not prioritize the coordination of vaccination and immunization activities. This is reflected by a small number of conducted Inter-Agency Coordinating Committee (ICC) and National Immunization Technical Advisory Group (NITAG) meetings and a small number of participants in these meetings.

4.3.4 Inadequate Monitoring of Immunization and Vaccination Activities by the Ministry of Health and PO-RALG

The Ministry of Health and PO-RALG did not adequately monitor immunization and vaccination activities. This is shown by inadequate number of supportive supervisions conducted at both the Ministry of Health and PO-RALG. Despite the improvement shown by the Ministry of Health to supervise RHMT, and RHMT to supervise CHMT efforts were still needed to improve supervision activities at dispensaries. This is because the level of supervision to dispensaries is less than optimal (71 percent). While there were dispensaries which have not been visited by CHMT for a period of more than 6 months, RHMT and CHMT did not take necessary actions despite observing gaps which were frequently noted during supervision. This lack of deterrent actions encourages failure of Health Facilities to address the noted gaps.

CHAPTER FIVE

AUDIT RECOMMENDATIONS

5.1 Introduction

The audit findings and conclusion showed weaknesses on the implementation of immunization and vaccination project activities. This chapter contains recommendations to the MoHCDGEC and PO-RALG.

The National Audit Office believes that these recommendations if fully implemented will improve the management of immunisation and vaccination project activities.

5.2 Specific Recommendations

5.2.1 Planning for Resources to Facilitate Implementation of Immunization and Vaccination Activities

The MoHCDGEC should:

1. Conduct thorough needs analysis which will be based on the actual size of population of the targeted groups to avoid under-estimation/over-estimation in the targets set for immunization and vaccination activities.
2. Ensure adequate planning for availability of vaccine stocks and its related supplies at central and regional vaccine stores.

PO-RALG should:

1. Ensure adequate planning for timely distribution of vaccines to district vaccine stores, and to Health facilities to allow continuity in the provision of immunization and vaccination services.

The MoHCDGEC in Collaboration with PO-RALG should:

1. Strengthen the mechanism for deploying skilled health workers in health facilities especially those located in remote areas to

improve the availability of quality immunization and vaccination services.

2. Ensure regular formal trainings and refresher training are conducted on vaccine and cold chain management especially for the newly recruited staff.
3. Strengthen community advocacy in order to increase coverage by ensuring all eligible groups for vaccination are reached.

5.2.2 Improving Accessibility and Utilization of Funds by Implementers

The MoHCDGEC in collaboration with PO-RALG should:

1. Liaise with MoFP to ensure funds are timely disbursed to allow timely implementation of immunization and vaccination activities. This includes to ensure timely availability of both reports of achievement of agreed service delivery performance indicators and verification that enable timely release of funds by Development Partners and MoFP.

5.2.3 Improving Efficiency on Implementation of Immunization and Vaccination Project Activities

The Ministry of Health in Collaboration with PO-RALG should:

1. Ensure regular maintenance of the cold chain equipment to ensure vaccines are stored within the recommended temperature range.
2. Ensure speeding up installation of remote temperature monitoring system (RTM) in all health care facilities to enable instant sharing of information in case temperature goes out of range so as to take corrective action timely.

5.2.4 Strengthening Monitoring of Immunization and Vaccination Activities

The MoHCDGEC in Collaboration with PO-RALG should:

1. Strengthen supportive supervision especially to health centres and dispensaries in order to track the progress made and observe anomalies originating from implementation of immunization and vaccination services at various health facilities.

2. Ensure that healthcare facilities implement recommendations issued during supportive supervisions with a view to rectify observed gaps.

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APPENDICES

Appendix 1: Responses from the Audited Entities

This part covers the responses from the two audited entities namely, the MoHCDGEC and PO-RALG. The responses are divided into two i.e. general comments and specific comments in each of the issued audit recommendations. This is detailed in appendices 1(a) and 1(b) below:

Appendix 1(a): Responses from the MoHCDGEC

General Comment

Generally, the management of the MOHCDGEC agrees with the conclusion and recommendations made by the CAG with respect to the performance audit of immunization and vaccine development program, and will ensure the proposed recommendations are implemented within the indicated timelines.

Specific Comments

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
1	Conduct thorough needs analysis which will be based on the actual size of population of the targeted groups to avoid under-estimation/over-estimation in the targets set for immunization and vaccination activities.	The MOHCDGEC acknowledge that, the NBS population estimates for some Councils are under or over-estimated. However, according to Statistics Act No.9 of 2015, NBS is responsible for production, coordination, supervision and dissemination of all official statistics in the country, and therefore, the MOHCDGEC will not generate its own estimates, but continue using the NBS data.	• MOHCDGEC will communicate with NBS to ensure the projected target population reflects the actual population sizes at each council for proper and accurate planning of immunization services, to avoid under/over estimation. • MOHCDGEC will communicate with PORALG to ensure all councils use the NBS data given to MOHCDGEC to avoid each Councils having its own target from different source.	2020/2021
2	Ensure adequate planning for availability of vaccine stocks and	Stock outs at central or regional vaccines stores were contributed by delayed	• MOHCDGEC will communicate with Ministry of Finance and Planning, to ensure timely	2021/2022

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
	its related supplies at central and regional vaccine stores.	disbursement of funds by the Ministry of Finance and Planning.	disbursement of funds for procurement of vaccines and related supplies. • MOHCDGEC will utilize additional refrigerated trucks for distribution, to reduce the lead time at regional stores and stock outs.	
3	Strengthen the mechanism for deploying skilled health workers in health facilities especially those located in remote areas to improve availability of quality immunization and vaccination services.	Management agreed with recommendation	• MOHCDGEC will provide training to health workers in health facilities including REC (Reach Every Child) training, new comers training, VPD surveillance training, Data management training and Vaccine Management training. • The Ministry will communicate with PO RALG, to include in their budget training of newly appointed immunization coordinators and vaccinators.	2020-2022
4	Ensure regular formal trainings and refresher training are conducted on vaccine and cold chain management especially for the newly recruited staff.	Management agreed with recommendation	MOHCDGEC will solicit funds for providing cold chain and vaccine management training to immunization coordinators and vaccinators.	2021-2024
5	Strengthen community advocacy in order to increase	Management agreed with recommendation	• MOHCDGEC will conduct commemoration of	2020/2023

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
	coverage by ensuring all eligible groups for vaccination are reached.		African Immunization week to all Regions and councils in Tanzania mainland and Zanzibar, to sensitize communities for immunization services • Community sensitization through zonal Media seminar and radio/Tv spots will be conducted by MOHCDGEC • Engagement of CSO`s to sensitize community in vaccination issues. • Development and dissemination of messages to the community through M-health platforms.	
6	Liaise with MoFP to ensure funds are timely disbursed to allow timely implementation of immunization and vaccination activities. This includes to ensure timely availability of both reports of achievement of agreed service delivery performance indicators and verification that enable timely release of funds by Development Partners and MoFP.	Management agreed with the recommendation	Advocacy meetings involving senior officials from MOHCDGEC and MOFP will be conducted to discuss timely disbursement of immunization funds and sustainability of immunization and vaccination services.	2020 -2023
7	Ensure regular maintenance of the	Management agreed with	• MOHCDGEC will conduct technician	2020-2023

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
	cold chain equipment to ensure vaccines are stored within the recommended temperature range.	recommendation	training to impact knowledge and skills of regional and council technicians to be able to repair and carry out maintenance of cold chain equipment. • Ministry will communicate with PORALG to ensure regular maintenance of cold chain equipment. • MOH will support major maintenance where regional and Districts technicians failed, after receiving the request for support from Regional and District level.	
8	Ensure speeding up installation of remote temperature monitoring system (RTM) in all health care facilities to enable instant sharing of information in case temperature goes out of range so as to take corrective action timely.	Management agreed with the recommendation	The MOHCDGEC will mobilise resources for procurement and installation of RTM devices to all health facilities in the country.	2020-2023
9	Strengthen supportive supervision especially to health centres and dispensaries in order to track the progress made and observe anomalies	Management agreed with recommendation	The MOH will continue conducting supportive supervision and the reports will be used to improve the weaknesses and challenges identified. The MOH will also communicate with PORALG to ensure	2020-2023

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
	originating from implementation of immunization and vaccination services in health facilities.		quality supportive supervision by using ODK system and provide mentorship to health workers where are lacking skills.	
10	Ensure that healthcare facilities implement recommendations issued during supportive supervision with a view to rectify observed gaps.	Management agreed with recommendation	• All feedback and written reports will be shared/provided to PO-RALG and respective Councils for follow-up of the gaps identified during supervision. • MOHCDGEC will conduct targeted supervision to selected districts and health facilities to follow up on the implementation of the anomalies identified during last supervision.	2020-2023

Appendix 1(b): Responses from PO-RALG

General Comment

PO-RALG agrees with the audit recommendations and will ensure all recommendations are implemented to address the bottlenecks as advised by the auditors.

Specific Comments

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
1	Ensure adequate planning for timely distribution of vaccines to district vaccine stores, and to Health facilities to allow continuity in provision of immunization and vaccination services.	To ensure the RASs and DEDs through their plans reviews to set annual budget for immunization services including distribution of vaccines	To instruct RASs and DEDs to allocate budget for advocating immunization services. To remind the DEDs through RASs to use available government structures at LGAs to conduct distribution of vaccines.	June-September 2020
2	Strengthen the mechanism for deploying skilled health workers in health facilities especially those located in remote areas to improve availability of quality immunization and vaccination services.	PO-RALG will instruct the Regional Administrative Secretaries and District Executive Directors to conduct analysis on the available human resource and conduct redistribution of Health care workers and in respect to the identified gaps and facility needs so as to ensure equitable	1.To write a letter to RASs and DEDs to identify areas with critical shortage of health care workers 2.To instruct RASs and DEDs to review plans allocate budget for redistribution and employment in their plans 2021/2022 3. To request	PO-RALG will instruct the Regional Administrative Secretaries and District Executive Directors to conduct analysis on the available human resource and conduct redistribution of Health care workers and in respect to

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
		immunization and vaccination services	the employment permits from the Ministry of Public Services	the identified gaps and facility needs so as to ensure equitable immunization and vaccination services
3	Ensure regular formal trainings and refresher training are conducted on vaccine and cold chain management especially for the newly recruited staff.	To liaise with the Ministry of Health, Community Development, Gender, Elderly and Children to plan and conduct orientation of the newly appointed Regional and District Immunization Officers. Ensure the RASs and DEDs to include in their annual budget the activity of orientation of newly recruited staff in their areas	1.To liaise with MoH and plan on trainings of newly appointed RIVOs and DIVOs those 2.To instruct RASs and DEDs to allocate budget for orientation of newly recruited staff at facility level	From July, 2020
4	Strengthen community advocacy in order to increase coverage by ensuring all eligible groups for vaccination are reached.	To ensure the RASs and DEDs through their plans review to set annual budget for immunization services and advocacy	1. To instruct RASs and DEDs to allocate budget for advocating immunization services. To remind the DEDs through RASs to use available government structures at	From April 2020

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
			LGAs to conduct advocacy for immunization services and document	
5	Liaise with MoFP to ensure funds are timely disbursed to allow timely implementation of immunization and vaccination activities. This includes to ensure timely availability of both reports of achievement of agreed service delivery performance indicators and verification that enable timely release of funds by Development Partners and MoFP.	Agreed	Writing letters to PST before the beginning of each quarter to request timely disbursement of funds so that implementation can be done on time	From April 2020
6	Ensure regular maintenance of the cold chain equipment to ensure vaccines are stored within the recommended temperature range.	To liaise with Ministry of Health, Community Development, Gender, Elderly and Children to plan for acquiring cold chain spare parts and their distribution to the Regions, and provision of technical support whenever needs arise. Also to instruct RASs and DEDs to set budget for regular maintenance of cold chain equipments.	Updating a list of non-functional refrigerators and the required items to repair them 2.Requests MoH for supply of spare parts to repair the refrigerators 3.Reminding DEDs to allocate budget and conduct regular maintenance and share reports to higher levels	From April, 2020
7	Ensure speeding up installation of remote temperature monitoring system (RTM) in all health	To liaise with Ministry of Health, Community	To write a letter to PS MoH to request speed up of	01-03-2020

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
	care facilities to enable instant sharing of information in case temperature goes out of range so as to take corrective action.	Development, Gender, Elderly and Children to plan for distribution of Remote temperature monitoring devices and their installation in health facilities	planned distribution and installation of remote temperature monitoring equipments and requests for the plan of the same for the remaining facilities	
8	Strengthen supportive supervision especially to health centres and dispensaries in order to track the progress made and observe anomalies originating from implementation of immunization and vaccination services in health facilities.	PORALG will instruct the Regional Administration to undertake routine and sporadic supportive supervision to Council Health Management Teams in order for them to supervise health facilities to implement immunization plans and utilize resources for supportive supervision of immunization and vaccination activities as planned.	1. To liaise with MoFP for timely disbursement of funds to facilitate health activities, including immunization 2. Instruct Regions, Districts and Health facilities to improve allocation of resources in their financial year plans. 3. PO-RALG to incorporate into financial year 2021/2022 and onwards budgets for supervision of immunization and vaccination activities.	01-09-2021
9	Ensure that healthcare facilities implement recommendations issued	Council Health Management Teams to	To request quarterly supervision	From April 2020

No	Recommendation	Comments of the Ministry	Action to be Taken	Implementation Timelines
	during supportive supervision with a view to rectify observed gaps.	undertake regular supportive supervision to the health facilities to mentor the health providers to ensure they comply to recommendations issued during supportive supervisions	reports from Regions and Councils, the reports which show progress of implementation of recommendations given to health facilities and measures taken if no compliances to the agreed recommendations.	

Appendix 2: Detailed Main Audit Questions with Sub-Questions

Audit Question 1	**Does the Ministry of health have mechanisms in place to efficiently plan prior to the implementation of Immunization and Vaccination project activities?**
Sub-Audit Question 1.1	Does the Ministry of Health efficiently plan for the resources to facilitate implementation of immunization and vaccination project activities?
Sub-Audit Question 1.2	Does the Ministry of health efficiently plan for the advocacy to ensure there is effective coverage on provision of Immunization and Vaccination to the community?
Sub-Audit Question 1.3	Does the Ministry of Health set targets to ensure there is efficiently coverage and that provided immunization and Vaccination services are effective?
Sub-Audit Question 1.4	What are the strategies in place to ensure provided Immunization and Vaccination services are of good quality and are effective?
Audit Question 2	**Do the Ministry of Finance and Planning, and Ministry of Health have efficient mechanisms in place to ensure timely disbursement and utilization of funds to facilitate implementation of Immunization and Vaccination project activities?**
Sub-Audit Question 2.1	What are the mechanisms used by the Ministry of Finance and the Ministry of Health to ensure timely disbursement of Immunization and Vaccination funds?
Sub-Audit Question 2.2	Are the funds to facilitate implementation of Immunization and Vaccination project activities timely disbursed to implementers by the Ministry of Finance?
Sub-Audit Question 2.3	Do the Ministry of Health and PO-RALG ensure that disbursed funds are timely utilized and that are used for the intended activities?
Audit Question 3	**Do the Ministry of Health, PO-RALG and health facilities efficiently implement Immunization and Vaccination project activities?**
Sub-Audit Question 3.1	Do the Ministry of Health and PO-RALG efficiently implement planned Immunization and Vaccination Activities?
Sub-Audit Question 3.2	Do Health Facilities efficiently implement planned Immunization and Vaccination Activities?
Sub-Audit Question 3.3	Do the Ministry of Health, PO-RALG and Health facilities ensure procurement procedures (as per project manuals and PPA) are adhered and that cost effective aspect of procured goods and services is achieved?

Sub-Audit Question 3.4	Are Immunization and Vaccination services provided by the Ministry of Health and PO-RALG through health facilities effective?
Sub-Audit Question 3.5	Is there effective coordination in the execution of Immunization and Vaccination projects activities to ensure achievement of intended results?
Audit Question 4	**Does the Ministry of Health have mechanisms in place to conduct supervision, monitoring and evaluation of implemented Immunization and Vaccination project activities?**
Sub-Audit Question 4.1	Does the Ministry of Health set monitoring indicators, targets, goals and modalities to ensure effective monitoring of Immunization and Vaccination project activities?
Sub-Audit Question 4.2	Does the Ministry of Health adequately monitor and evaluate the performance of implemented Immunization and Vaccination projects activities?
Sub-Audit Question 4.3	To what extent does the Ministry of Health take actions to improve the performance of observed gaps during monitoring of executed Immunization and Vaccination project activities?

Appendix 3: Tanzania Immunization Schedule

The Tanzanian Immunization Schedule Antigen	Tanzania Mainland
BCG, OPV 0	At birth or first contact
OPV1, DTP-HepB-Hib1,PCV 1, Rota 1	6 Weeks of age
OPV2, DTP-HepB-Hib2, PCV 2, Rota 2	10 Weeks of age
OPV3, DTP-HepB-Hib3 , PCV3, IPV	14 Weeks of age
MR 1	9 Months of age
MR 2	18 Months of age
Vitamin A: 1st dose	9 Months of age
Vitamin A: 2nd dose	15 Months of age
Vitamin A: 3rd dose	21 Months of age
TT 1	First contact
TT 2	1 Month after the 1st dose
TT 3	6 Months after the 2nd dose
TT 4	1 Year after the 3rd dose
TT 5	1 Year after the 4th dose
HPV 1	9 years
HPV 2	6 months after 1st dose

Source: Tanzania Comprehensive EPI Review (July, 2015), Comprehensive Multi-Year Plan (2016-2020)

Appendix 4: Documents Reviewed and Reasons for Review

Entity	Name of Document	Reason
Ministry of Health	Strategic Plans Project/Program Strategic Plans,2016-2019	To examine set strategies at Ministerial level and assess how they address issues regarding Immunization and Vaccination and activities.
	National Health Policy	Too ascertain how immunization and vaccination activities has been spelt out
	Project Activity Plans from 2016 to December 2019 Project action plans 2016-2019	Assess to what extent the Ministry have planned to implement identified activities regarding vaccination and immunization program.
	Approved Medium Term Expenditure Framework from 2016 to December 2019	To assess the set budget to facilitate implementation of vaccination and immunization activities.
	Implementation and Project Performance Reports from 2016 to December 2019	To examine to what extent immunization and vaccination activities has been implemented by the Ministry of health.
	Monitoring and Evaluation Reports 2016/2019 Supervision reports	To examine level of monitoring implemented by the Ministry regarding immunization and vaccination project activities.
	Internal audit report	To identify existing shortfalls regarding immunization and vaccination project activities and corrective action taken
	Project Guidelines and manuals	To assess whether vaccination and immunization projects activities are implemented as per standards and guidelines
	Program Joint Appraisal reports, Program Support Rationale and EPI review	To assess immunization and vaccination project performance status
	Procurement Correspondences	To assess whether procurement of goods and services were conducted in accordance with PPA act and regulation

Entity	Name of Document	Reason
	Succession plan and Staff establishment plan	Assess the manpower to facilitate implementation of various immunization and vaccination project activities
Ministry of Finance	Strategic Plans,2016-2019	To assess to what extent the MoFP have strategies to ensure timely disbursement of project funds
	Internal audit Reports(2016-2019)	To identify existing shortfalls regarding immunization and vaccination project activities and corrective actions taken
	Fund disbursement records	To identify fund flow to IVD, PO –RALG and health facilities with regard to implementations of immunization and vaccination project activities.
PO-RALG	Supportive Supervision reports from RHMT and CHMT	To examine level of monitoring implemented by the RHMT and CHMT regarding immunization and vaccination project activities.
	Performance reports	Examine level of performance monitoring of Health facilities I LGA's.
	Annual plans and progress reports	To assess how coordination activities has been planned and progress made on planned activities
	Medium Term Expenditure Framework and Fund disbursement records	To assess allocated budget for coordination of immunisation and vaccination project activities
Regional Health Management Team (RHMT)and Council Health Management Team(CHMT)	RHMT&CHMT annual plan	To assess planned activities regarding implementations of immunisation and vaccination activities
	Supportive Supervision Reports	To assess level on monitoring and evaluation of implemented immunisation and vaccination activities in health facilities and actions taken.

Entity	Name of Document	Reason
	RHMT&CHMT Budget documents	To assess allocated budget to facilitate implementations of immunisation and vaccination activities.
Selected health facilities (Regional District level, Health Centre and Dispensaries)	Performance reports	Assess level and quality of services offered at visited health facilities
	Guidelines and manuals on vaccines and immunization.	To assess whether vaccination and immunization projects activities are implemented as per standards and guidelines
	Procurement Correspondences	To assess whether procurement of goods related to vaccination has been conducted in accordance with PPA act and regulation.
	MTUHA	To assess records of beneficiaries who receive immunization and vaccination services in comparison with target that has been set.
	Comprehensive Hospital Operational Plan	To assess if immunization activities has been indicated in health facilities activities and budget.
	Fund disbursement records	To assess if disbursed funds were as per request made and timely utilization funds
	Vaccine ledgers	To assess the available stock of vaccine tally with the available stock

Appendix 5: Interviewed Official

Organization	Official to be interviewed	Reason(s)
Ministry of Health (IVD)	Immunization and Vaccination Programme Manager	To obtain information about execution of Immunization and Vaccination programme at the Ministry of Health level such as: • Coverage of Immunization and Vaccination programme • Monitoring and Evaluation; • Supervision
	Human resources and communication officer	To obtain information about available human resources and deficiency at IVD
	Procurement and Logistic officers	To obtain information on procurement of goods and services at IVD.
	Programme accountants	To obtain information pertaining to flow of funds from government and donors to facilitate execution of immunization and vaccination program
Ministry of Finance and Planning	Responsible officials dealing with disbursing funds GoT and donors	To obtain information about execution of Immunization and Vaccination programme at the Ministry of Finance and Planning level such as: Disbursement of fund to finance the programme;
PO-RALG	Immunization and Vaccination programme coordinator	To obtain information about execution of Immunization and Vaccination programme at PO-RALG such as: Overseeing of the LGAs and Health facilities as programme implementers.
RHMT in selected regions	Members of RHMT responsible for Immunization and Vaccination programme (Regional Immunization and Vaccination Officer - RIVO)	To obtain information about execution of Immunization and Vaccination programme at Regional Secretariat level such as Supportive Supervision
CHMT in selected	Members of CHMT responsible for	To obtain information about execution of Immunization and

Organization	Official to be interviewed	Reason(s)
districts	Immunization and Vaccination programme (District Immunization and Vaccination Officer - DIVO)	Vaccination programme at Local Government Authority level Supportive Supervision
Referral hospitals	Medical Officer In - charges	To obtain information about execution of Immunization and Vaccination programme at Regional Referral Hospital level
	Responsible officials at Reproductive and Child Health unit(RCH)	To obtain information on execution of immunisation and vaccination services to the targeted groups.
District hospitals	Medical Officer In - charges	To obtain information about execution of Immunization and Vaccination programme at District Hospital level
	Health Secretary	To obtain information on how activities relating to immunisation and vaccination activities are included in CHOP and its respective budget
	Accountants	To asses Funds disbursed to facilitate execution of immunisation and vaccination activities and utilisation capacity
	Responsible officials at Reproductive and Child Health unit(RCH)	To obtain information on execution of immunisation and vaccination services to the targeted groups.
Health centres	Medical Officer In - charges	To obtain information about execution of Immunization and Vaccination programme at Health centres level such as: coverage, accessibility and utilization of fund
	Responsible officials at Reproductive and Child Health unit(RCH)	To obtain information on execution of immunization and vaccination services to the targeted groups.
	Accountants	To assess Funds disbursed to

Organization	Official to be interviewed	Reason(s)
		facilitate execution of immunisation and vaccination activities and utilisation capacity.
Dispensaries	Medical Officer In – charges	To obtain information about execution of Immunization and Vaccination programme at Dispensaries level such as: coverage, accessibility and utilization of fund
	Responsible officials at Reproductive and Child Health unit(RCH)	To obtain information on execution of immunisation and vaccination services to the targeted groups

Appendix 6: Deficiency of Staff at the IVD Unit

Financial Year	Number of staff required	Actual number of staff available	Deficiency	Percentage (%) of Deficiency
2016/17	54	13	41	76
2017/18	54	13	41	76
2018/19	65	21	46	71
2019/20	43	33	10	23

Source: IVD Staff Needs assessment Report (2016/17 to 2019/20)

Appendix 7: Statistics of staff at the visited Health Facilities

Financial Year	Health Facilities	Required number of staff	Available number of staff	Deficiency	Percentage of Deficiency (%)
2016/17	District Hospitals	14	10	4	29
	Health Centres	15	9	6	40.0
	Dispensaries	10	10	0	0
2017/18	District Hospitals	14	11	3	21
	Health Centres	14	10	4	29
	Dispensaries	10	10	0	0
2018/19	District Hospitals	14	12	2	14
	Health Centres	16	10	6	38
	Dispensaries	11	11	0	0
2019/20	District Hospitals	14	12	2	14
	Health Centres	16	9	7	44
	Dispensaries	11	11	0	0
Total		**159**	**125**	**34**	