Memorandum on the United Republic of Tanzania Programme Audit report

The attached Audit and Investigations report sets out the conclusions of the programme audit of Gavi's support to the United Republic of Tanzania's Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC), executed by the Immunisation and Vaccine Development (IVD) Programme in Mainland and Zanzibar, along with other implementing partners.

The audit team reviewed these stakeholders' management of Gavi support to the routine immunisation programme provided during the period 1 January 2017 to 31 December 2022. The audit scope including the following grants: Health Systems Strengthening, COVID-19 Vaccine Delivery Support (CDS) funds, as well as other vaccines and cold chain equipment.

Funds directly executed by WHO and UNICEF were not subject to our programme audit and were considered out of scope, in accordance with the United Nations single audit principle. In addition, there was a limitation of scope where the team did not receive additional information and documentation for Gavi funds received by partners which are then sub-contracted back to the government for execution amounting to USD 10,220,333.

The report's executive summary (pages 5 to 7) summarises the key conclusions, details of which are set out in the body of the report:

1. There is an overall audit rating of **"needs significant improvement"**, which means, "One or few significant issues were noted. Internal controls, governance and risk management practices have some weaknesses in design or operating effectiveness such that, until they are addressed, there is not yet reasonable assurance that the objectives are likely to be met."
2. In total, twenty-four issues were identified in the following areas: (i) governance and oversight; (ii) programme management (iii) vaccine supply management; (iv) supply chain and data management systems (v) immunisation data management; and (vi) budgeting and financial management.
3. To address the risks associated with the issues, the audit team raised 32 recommendations of which 10 were rated as high priority.
4. Key findings were that:
    a. There were gaps in vaccine management processes and forecasting challenges leading to low stock at national level and stockouts at sub national level.
    b. There were gaps in the development, upgrade and deployment of the national vaccine logistics management information system.
    c. There were challenges in implementing the Tanzania Immunisation Registry used as the

digital registry to track immunisation services. This Registry no longer operated at the time of the audit and as such, value for money may not have been achieved.

d. An outdated denominator was used to set immunisation targets leading to inaccurate reporting. In addition, although a data quality improvement plan was developed, thereafter follow-up mechanisms and tools were not developed, including: a suitable monitoring framework, with milestones/indicators to track the plan's implementation.
e. Gavi determined that expenditures totalling USD 33,172 were ineligible or unaccounted for.
f. In addition, ineligible payments totalling USD 15,424, were charged to the mainland EPI programme account. Although the funds were eventually refunded, the audit team concluded that the risk of management override of controls needs to be mitigated.

The findings of the programme audit were discussed with the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) and implementing partners. They accepted the audit findings, acknowledged the gaps identified, and committed to implement a detailed management action plan.

On 11 November 2024, Gavi wrote to the government requesting reimbursement for USD 33,172, an amount which was determined to be misused, as well as asking the MoH to develop and commit to implementing a management action plan addressing the additional findings. The Gavi Secretariat continues to work with the Ministry of Health to ensure that their commitments are implemented, and to agree on how to make the programme whole.

Geneva, November 2024

PROGRAMME AUDIT REPORT

United Republic of Tanzania
October 2024

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1. Executive Summary

1.1 Overall audit opinion

Audit opinion:

The audit team assessed the Ministry of Health's management of Gavi support during the period 1 January 2017 to 31 December 2022 as **"Needs significant improvement"** which means, "Internal controls, governance and risk management practices have some weaknesses in design or operating effectiveness such that, until they are addressed, there is not yet reasonable assurance that the objectives are likely to be met."

Through our audit procedures, we have identified high risk issues relating to: vaccine management, supply chain and data management systems, immunisation data management, and budgeting and financial management. To address the risks associated with the issues, the audit team raised 31 recommendations. The recommendations need to be addressed by implementing remedial measures according to the agreed management actions.

1.2 Summary of key audit issues

Table 1: Key audit issues – Tanzania Mainland

Table 2: Key audit issues in Zanzibar

** The audit ratings attributed to each section of this report, the level of risk assigned to each audit issue and each recommendation, are defined in Annex 2 of this report.*

1.3 Summary of issues

Through our audit procedures, we have identified 8 high risk and 14 medium risk issues relating to the programme governance, management and oversight, vaccine management, supply chain and data management systems, immunisation data management, and budget and financial management processes. The high-risk issues are summarised below, followed by the detailed observations in section 4 and section 5 of this report.

Vaccine management

The quantities of doses in vaccine procurement forecasts were systematically higher than the actual number of doses received. As of November 2023, the National Vaccine Store's (NVS) buffer stocks of pentavalent, IPV, measles rubella and PCV were nearly exhausted, with less than one month's stock of these vaccines at the Immunisation and Vaccine Development (IVD) central vaccine store. Stock outs continued to be an intermittent, recurring issue between 2018 and 2022 at both national and the sub-national level.

The country's forecasting challenges were attributed to the absence of a formally documented process and use of incomplete information in the forecasting tool, as the country relied on estimates, given that wastage levels were unknown, and stock records at sub-national levels were incomplete or inaccurate at times. This meant that procurement estimates completed by the country were not fully validated by Gavi, resulting in a net reduction in the planned supply pipeline. Additionally, the country's cofinancing payment for vaccines was out of sync for the period up to 2022, due to the differences between the country's and Gavi's financial year, resulting in the late receipt of cofinancing funds and delivery delays for cofinanced vaccines.

Although significant investments were directed towards improving the vaccine supply chain and ensuring the availability of vaccines in optimal conditions, the country needs to revamp its vaccine management processes to ensure it has sufficient doses available to support its immunisation objectives.

Supply chain and data management systems

Supply chain management system: The country uses "Vaccine Information Management System" (VIMS) as its logistics management information system. VIMS was launched in 2015 through a collaborative partnership of three Gavi supported extended partners and was rolled out to national, regional and district levels. The audit team identified several gaps in the management and sustainability of this system.

There are challenges in handing over VIMS to the government, since the key partner supporting the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) still retained operational control over the system's source code and continued to play an active role in the development, management and support of the system, thus delaying the handover. The system also operated using an outdated version, with software components that were not supported, exposing it to security vulnerabilities and compatibility weaknesses. The audit team noted several dummy records in the live system, which may result in data errors, leading to reports being unreliable or unable to support decision-making.

Immunisation data systems: Over the past five years, the MOHCDGEC used the Tanzania Immunisation Registry (TImR) as its digital registry to track immunisation services. The system was first developed in 2016, and Gavi began supporting the system's scale up in 2019, so that by 2021 it had been rolled out to 32% of the country's health facilities. However, the audit team noted that in November 2023, the system's server was offline, and the facilities visited by the audit team has ceased to use TImR in 2022. This was attributed to the high costs of running the platform. In addition, the MOHCDGEC's ICT unit faced difficulties in adapting to the new platform, due to gaps in understanding and in its ability to use TIMR's advanced technology.

While the government and partners are working together to revitalise TImR (version 2), with a particular focus on using open-source platforms, the previous challenges and lessons learnt from implementing TImR (version 1) should be documented, so that these can incorporated in the next version's development.

While some challenges in the roll-out and management of Gavi-supported systems could be partially attributed to the COVID-19 pandemic, there were also management weaknesses, with the immunisation programme being overly reliant on partners to provide operational support. Additionally, the total cost of ownership of these systems remains unknown. This presents a risk that in future, the Government may be unable to fully absorb the systems' operational costs, including the necessary, periodic upgrades. The Government needs to work together with the partners concerned, to determine

such costs and ensure that the Government's own technical teams are made capable to run these systems, and assure their future sustainability.

Immunisation data management

An outdated denominator was used to set immunisation targets leading to inaccurate reporting. The audit team noted variances between the number of surviving infants in VIMS (target) and the National Bureau of Statistics' (NBS) projected surviving infants. Additionally, 126 out of 184 districts reported their DTP3 coverage for 2022 as exceeding 100%, challenging the accuracy of their respective denominator.

The audit team noted that while the challenges in the immunisation data are known, until they are addressed, this could impact the credibility of the reported immunisation administrative coverage. A data quality improvement plan (DQIP) was developed in January 2021, covering the period 2021 to 2025. However, a monitoring framework for this plan, with suitable milestones/indicators to track its implementation, was not developed. Consequently, out of 23 improvement plan actions: only 4 have been fully implemented, 8 were partially implemented, and 11 have not yet been implemented.

Overall, the gaps in immunisation data management compromised the quality of data used in decision-making, targets set could not be supported by underlying reviews, and achievements may have been over-reported. Reliance on inaccurate or over-reported immunisation coverage data can result in incorrect programmatic interventions and the misallocation of resources, which could negatively impact the effectiveness of the immunisation programme and the health of the target population.

Budgeting and financial management

Between 2017 and 2022, Gavi directly disbursed USD 26.8 million in cash to MOHCDGEC in relation to the Health Systems Strengthening (HSS) and COVID-19 Delivery Support (CDS) grants. An additional USD 16.8 million was disbursed through the UN partners of which USD 10.2 million was sub-contracted to other implementers including the MOHCDGEC. The audit team was unable to review any of these sub-contracted expenditures, as the UN partners did not provide general information to help trace these transactions via the Government's accounts in time. This limitation of scope is explained further in Section 2.3 of this report.

The audit team reviewed a sample of USD 2.5 million expenditures incurred at the MOHCDGEC central level, sub-national level (regions and councils), at PORALG, and in Zanzibar. The team concluded that expenditures totalling USD 33k were ineligible or unaccounted for (Table 3 below).

The audit team noted two erroneous payments. While both of these were of relatively low value and were eventually corrected, they were not detected in a timely manner. This suggested the ineffectiveness of the national controls implemented and management's potential override. If such weaknesses remain unaddressed, in the future Gavi may lose trust and confidence in the Government's ability to manage and account for Gavi funding.

1.4. Financial consequences from the audit

The audit team reviewed a sample of expenditures totalling USD 2.53 million drawn from the six-year audit period (2017-2022), representing 34% of the total expenditures that were directly incurred by MOHCDGEC during this period. This review resulted in questioning expenditures totalling USD 33,172, equivalent to 1.3% of the audit sample. These amounts primarily relate to: unaccounted for disbursements, ineligible expenditures related to VAT payments, and fuel expenditures. The table below summarises the amounts questioned by the team.

Table 3: Summary of expenditures questioned by the audit team

Category of questioned expenditures	Amount questioned (TZS)	Amount questioned (USD)	Report reference
Ineligible expenditures – VAT (IVD Central level)	3,796,135	*1,716*	4.6.1
Ineligible expenditures (NAOT reports)	5,758,988	*2,603*	4.6.1
Unaccounted HSS disbursements as per PORALG SOE	63,842,858	*28,854*	4.6.1
Total expenditures questioned	**73,397,981**	***33,172***	

1.5 Cash balances as of 31 December 2022

Table 4: Unspent cash as of 31 December 2022, by grant

Implementer	Balance of unspent funds (USD)
MOHCDGEC	*18,038,720*
UNICEF	*1,272,648*
WHO	*23,861*
Total	***19,335,229***

2. Objectives and scope

2.1 Audit objectives

In line with the respective Partnership Framework Agreement and with Gavi's transparency and accountability policy, all countries that receive support are periodically subject to programme audit, for which the primary objective is to provide reasonable assurance that the resources were used for intended purposes in accordance with Gavi's agreed terms and conditions and were applied to the designated objectives.

As a result, the audit team assessed the various processes and programme management arrangements governing Gavi's support (vaccines and cash grants) for which the respective entities were responsible, so as to: assess whether the current design of the governance structures are effective in providing oversight over the immunisation programme, assess the effectiveness of the coordination, collaboration and implementation arrangements of Gavi-funded programme activities, review the design and operating effectiveness of the assurance mechanisms within the financial and fixed assets management processes, review the effectiveness of data management and data quality processes to ensure that data used for decision making is complete and accurate and review design and operating effectiveness of vaccine chain processes to ensure delivery of vaccines to the intended recipients.

The team also reviewed the relevance and reliability of the internal control systems relative to the accuracy and integrity of the books and records, management, and operational information; the effectiveness of operations; the physical security of assets and resources; and compliance with national procedures and regulations.

2.2 Audit scope

The audit period in scope covered six years from 1 January 2017 to 31 December 2022. However, for purposes of COVID-19 response and vaccination roll out this period was extended up to 30 June 2023. The total cash and vaccine support provided by Gavi to the United Republic of Tanzania (URT) as of 31 December 2022 is presented in Table 5 below.

Table 5: Cash, technical assistance, equipment and vaccines support (2017 – 2022) in USD

Cash grants	2017	2018	2019	2020	2021	2022	Total
HSS	6,052,661	3,998,831	3,558,516	5,792,763	38,223	97,482	19,538,476
ISS	-	(6,951)	-	-	-	-	(6,951)
MR Op Costs	(1,267,760)	-	4,599,470	(1,637,310)	-	-	1,694,400
VIG	(26,987)	-	-	-	-	-	(26,987)
HPV demo	1,699,874	-	-	(9,225)	-	-	1,690,649
COVAX CDS	-	-	-	-	6,752,492	15,123,961	21,876,453
Total cash (a)	**6,457,788**	**3,991,880**	**8,157,986**	**4,146,228**	**6,790,715**	**15,221,443**	**44,766,040**
Technical assistance support							
Total TCA (b)	**-**	**-**	**236,092**	**1,594,145**	**1,948,998**	**1,159,771**	**4,939,006**
Equipment support							
CCEOP	-	4,836,819	-	3,671,275	-	(2,823)	8,505,271
COVAX CCE	-	-	-	-	998,290	237,009	1,235,299
Total equipment (c)		**4,836,819**	**-**	**3,671,275**	**998,290**	**234,186**	**9,740,570**
Vaccines support							
HPV	7,547,794	(1,497,150)	6,967,560	5,236,576	5,476,954	5,988,194	29,719,928
IPV	1,928,230	2,010,138	16,097,430	6,047,863	4,107,349	3,146,174	33,337,184
Measles	748,515	737,116	309,524	(3,929)	-	-	1,791,226
Measles-Rubella	-	-	5,327,633	1,572	29,304	(1,601)	5,356,908
OCV	-	-		-	2,063,853		2,063,853
Pentavalent	3,344,507	1,851,493	3,566,657	2,697,891	5,543,919	4,336,455	21,340,922
PCV	19,509,280	29,565,004	9,511,582	11,317,424	22,962,252	15,661,470	108,527,012
Rota virus	7,113,585	6,505,909	9,307,169	5,270,788	10,481,770	1,062,307	39,741,528
Injection Safety	(330,110)	722,333	986,066	(108,016)	-	-	1,270,273
COVID-19	-	-	-		43,388,515	268,624,272	312,012,787
Total vaccines (d)	**39,861,801**	**39,894,843**	**52,073,621**	**30,460,169**	**94,053,916**	**298,817,271**	**555,161,621**
Total (a+b+c+d)	**46,313,514**	**48,723,542**	**60,467,699**	**39,871,817**	**103,791,919**	**315,432,671**	**614,607,237**

Table 6: Total Gavi cash disbursements to Tanzania by recipient and by grant (2017 to 2022) in USD

Cash grants	Fund Recipient	Total	Audit comments:
HSS	UNICEF	*6,432,109*	Out of scope
	UNICEF	*4,091,813*	Funds subcontracted to government. See limitation of scope (section 2.3)
	UNICEF SD	*2,301,628*	Out of scope
	CHAI	*1,586,909*	Included in scope
	Rocque	*135,705*	Included in scope
	MOHCDGEC	*4,990,312*	Included in scope
Sub-total HSS (f)		***19,538,476***	
MR follow-up campaign op. costs	WHO	*4,599,470*	Funds subcontracted to government. See limitation of scope (section 2.3)
Sub-total MR (g)		***4,599,470***	
HPV demo	WHO	*1,529,118*	Funds subcontracted to government. See limitation of scope (section 2.3)
	WHO	*190,772*	Out of scope
Sub-total HPV (h)		***1,719,890***	
CDS	MOHCDGEC	*21,778,540*	Included in scope
	JSI	*97,914*	Included in scope
Sub-total CDS (i)		***21,876,454***	
Total cash disbursements (f+g+h+i)		***47,734,290***	
MR follow up op. costs/VIG	MOHCDGEC	*(2,905,070)*	Relates to refunds for misuse from previous audit
ISS	WHO	*(6,951)*	Refund of unused funds
VIG	WHO	*(26,987)*	Refund of unused funds PCV VIG
HPV demo	MOHCDGEC	*(29,240)*	Relates to refunds for misuse from previous audit
Refunds (j)		***(2,968,250)***	
Total net cash (f+g+h+i+j)		***44,766,040***	

Table 7: Details of TCA Funding to partners (Amount in USD)

Partner	2018	2019	2020	2021	2022	Total
WHO			*285,818*	*533,410*	*175,000*	***994,228***
UNICEF			*334,152*	*305,515*	*356,832*	***996,499***
CHAI				*108,884*	*335,394*	***444,278***
JHU		*78,431*	*49,932*	*381,663*	*120,700*	***630,727***
JSI		*126,616*	*583,411*	*434,205*	*165,295*	***1,309,527***
PATH			*227,418*	*143,272*		***370,690***
University of Oslo			*2,374*	*9,075*	*6,550*	***17,999***
Rocque	-	*31,045*	*111,040*	*32,974*	-	***175,058***
Total TCA	-	***236,092***	***1,594,145***	***1,948,998***	***1,159,771***	***4,939,006***

2.3 Limitation of scope – Funds disbursed through Gavi Alliance partners

Table 8: Details of funds sub-contracted by the UN partners to sub-grantees including the MOHCDGEC and its provinces (amount in USD)

Partner	Gavi funds received by the UN partners	Gavi funds subsequently sub-contracted to sub-grantees, including the MOHCDGEC.
UNICEF - HSS	*10,523,922*	*4,091,813*
WHO - HPV	*1,719,890*	*1,529,118*
WHO - Measles	*4,599,470*	*4,599,402*
Total sub-contracted amounts from UN	***16,843,282***	***10,220,333***

Funds directly executed by WHO and UNICEF were not subject to our programme audit and were considered out of scope, consistent with the United Nations single audit principle.
In accordance with the Partnership Framework Agreement (PFA) agreement section 22.2 of Annex 2, all Gavi funds received by the MOHCDGEC are subject to audit by Gavi. This includes Gavi funds first received by partners which the partners then sub-contract to the government for execution.
The audit team requested general information from the UN partners on the funds they sub-contracted to the government and other sub-grantees, prior to the start of the audit in October 2023, to be able to identify the related transactions in the books of the government and other sub-grantees. However, the team did not receive the necessary details on these sub-contracted funds, hence a limitation of scope was invoked.

2.4 Audit approach

This programme audit was conducted in two phases, a one week in-country scoping visit between 24 and 28 July 2023, followed by three weeks fieldwork conducted between 30 October 2023 and 16 November 2023.

Overall, the audit team visited 1 National Vaccine Store, 5 regional offices and vaccines stores, 19 district offices and vaccine stores, and 50 health facilities on Tanzania's mainland. In addition, the team also travelled to Zanzibar and visited its central vaccine store, 2 islands, 3 district offices and vaccine stores, and 6 health facilities under that jurisdiction. See Annex 4 for the full list of sites visited by the audit team.

During this engagement, the team interacted with key stakeholders including: the EPI team also known as the Immunisation and Vaccine Development (IVD) Programme; Gavi Alliance partners including World Health Organisation (WHO), United Nations Children Fund (UNICEF), and World Bank; expanded partners including JSI, USAID and PATH; and other stakeholders including the President's Office, Regional Administration and Local Governments (PORALG), the Office of the Auditor General and the MOHCDGEC's internal audit team.

Following sharing its initial draft report with the country, the audit team conducted a follow-up visit from 26 to 28 August 2024, to validate additional supporting documents.

2.5 Progress on previously identified audit issues

Gavi undertook its first programme audit between November 2016 and February 2017. This second programme audit was conducted in 2023 and noted various improvements in areas such as: programme management and oversight, vaccine and supply chain management, procurement management, financial management, and monitoring and evaluation.

Gavi's previous audit highlighted gaps in financial management. To address these, the IVD team was strengthened with the recruitment of a grant coordinator, as well as three accountants being assigned to IVD – with the responsibility for operationally managing Gavi funds.

The Government recently implemented EPICOR, an Integrated Financial Management Information System (IFMIS) which is now fully operational and used by IVD. Suitable cost categories for Gavi-funded activities were configured into EPICOR and beginning from the fiscal year 2021/2022 the HSS activities were included in the national budget of Tanzania. The Government also established suitable accounting and reporting standard procedures for funds used at sub-national levels. As a result, and following the outcome of a Gavi monitoring review, beginning June 2021 Gavi resumed channelling its funds directly to MOHCDGEC.

Several key Gavi Grant Management Requirements (GMRs) were addressed, although some remain pending as highlighted in issue 4.1.2. In addition, there were also some prior audit issues which are not yet fully addressed including: (i) enhancing the role of ICC; (ii) vaccine and supply chain management challenges; and (iii) the recovery of Gavi funds used to pay taxes.

While some controls and mitigating actions had been designed in response to the prior issues, these actions were not yet fully implemented, or the design of the controls did not adequately address the nature of the risks presented at the national and/or sub-national levels. Details of the remaining issues to be addressed are included in section 4 of this report.

2.6 Exchange rate

Most cash and in-country expenditures were incurred using the Tanzanian Shilling (TZS). For information purposes and as part of the summary of this report, overall total amounts are reflected in United States Dollars (USD). For the expenditures reviewed, the rate applied was based on the average exchange rate used in the National Audit Office of Tanzania (NAOT) audit reports. The overall average exchange rate equated to TZS 2,212.65 against USD 1.00.

3. Background

3.1 Introduction

The United Republic of Tanzania is a union between Tanganyika and Zanzibar. It is the largest country in the East African region with a surface area of about 945,087 km. The Tanzania Mainland (formerly Tanganyika) is divided into 26 regions and 184 councils/districts) whereas Zanzibar is made up of 2 islands and 11 councils/districts[1]. Tanzania's 2022 Population and Housing Census (PHC) estimates the country's population to be 61,741,120, with the mainland contributing 97% and Zanzibar contributing 3% of the individuals. This Mainland is bounded by – Uganda and Kenya to the north, by the Indian Ocean to the east, by Mozambique, Malawi, and Zambia to the south and southwest, and by Burundi, and Rwanda to the west.

Economy

Tanzania is categorised as a lower middle-income country (LMIC) with a GDP growth rate that reached 4.6% in 2022 and is expected to rise to 5.1% in 2023, supported by the implementation of structural reforms to strengthen the competitiveness of the economy, improve the business and investment environment, and reduce the cost of regulatory compliance. Growth is projected to reach the long-run potential of about 6 percent in 2025. Tanzania's headline inflation was substantially lower than many regional economies and kept declining since the beginning of 2023. The inflation rate fell from 4.4% in June 2022 to 3.3% in July 2023, driven by: the easing of global commodity prices, government subsidies on fuel and fertilizer products, and the stability of the Tanzania shilling vis-à-vis the US dollar[2].

3.2 National health sector

Tanzania is decentralised by devolution (D-by-D), where some functions, power, and authority have been moved from central to the local government authorities (LGAs) to improve the delivery of health services. At the central level, the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) retains the overall responsibility for the health and social welfare services, including defining the priorities for services in the health and social welfare sector. Specifically, MOHCDGEC is responsible for setting national standards, conducting performance audits, and building the capacity of facilities for LGAs. It also provides technical guidance to health organisations involved in service delivery. The MOHCDGEC also collaborates with the President's Office Regional Administration and Local Government (PO-RALG) and the President's Office Public Service Management, to recruit and deploy human resources for health throughout the country. The MOHCDGEC also mobilises resources and has the lead in policy and international relations in health and social welfare.

At the regional level, there is the Regional Health Management Team (RHMT) and the social service section under the Regional Secretariat, which translates, coordinates and advises on the implementation of health policy in the regions, monitors and manage the provision of health services and builds the capacity of LGAs in health service delivery.

At the district level, the LGAs are responsible for planning, delivering, and overseeing public services. There are various local authority organs, including a full council that has the mandate to deliberate on and approve district health plans and budgets, and the Council Health Service Board (CHSB), which perform several functions, including discussing and amending district health plans and budgets and identifying and soliciting financial resources for running council health services. The Council Health Management Team (CHMT) is another organ that prepares the Comprehensive Council Health Plans (CCHP); ensures the provision of transport, drugs, and medical supplies to health facilities; conduct supportive supervision to the health facilities and ensure the provision of quality health services in the district.

Also at the grassroots level, the Health Facility Governing Boards (HFGB) and its various associated committees are important decentralised structures, which perform several functions, including discussing and approving the health facility plans and budget; identifying and soliciting financial resources for running the facility; and advising and recommending on human resources concerning recruitment, training, selection, and deployment to relevant authorities. The LGAs and health facilities, many of which are owned by the LGAs. have responsibilities in social accountability and in establishing partnerships with communities, NGOs and private providers in health and social welfare. They are the main interface between citizens and Government in day-to-day life.

The health system is organised in a pyramidal structure, with tertiary health facilities at the top and the primary health facilities (PHC) at its base.

[1] Tanzania National Immunisation Strategy (2021-2025)

[2] Tanzania Overview: Development news, research, data | World Bank-Visited on 7 November 2023

3.3 Immunisation in Tanzania

The Immunisation and Vaccine Development (IVD) programme is a sub-section under the Reproductive and Child Health (RCH) Section, which is one of the four sections of the Preventive Services Department under the Directorate of Preventive Services of the Ministry of Health, Community Development, Gender, Elderly and Children. The IVD programme is headed by the Programme Manager and has six units, namely: (i) service delivery and new vaccine introduction; (ii) capacity building and demand generation; (iii) supply chain, cold chain, and logistics; (iv) vaccine-preventable disease surveillance; (v) programme management, planning, and administration; and (vi) monitoring and evaluation.

The overall responsibilities of the IVD include the formulation of vaccine-related policy guidelines and standards for strategic planning and budgeting. Other functions include storage and distribution of vaccines down to the Regional Vaccine Stores (RVS), monitoring, training, supportive supervision, facilitating procurement of vaccines, equipment, and related supplies as well as ensuring adherence to quality service delivery.

At the sub-national level, the IVD works with the Regional and Council Health Management Teams (RHMT & CHMT), which are under the Regional and District Medical Officers (RMOs & DMOs), respectively. Regional and District Immunisation and Vaccination Officers (RIVOs and DIVOs) based at the regional and district level, are the focal person responsible for coordination and implementation and of all immunisation activities.

The IVD programme is supported by several local and international development partners. and works under close coordination of the National Immunisation Coordination Committee, the equivalent of an inter-agency coordinating committee (ICC). This committee was established in 1995 to provide a forum for immunisation partners to discuss EPI-related issues and is chaired by the Permanent Secretary for Ministry of Health. In addition, the National Immunisation Technical Advisory Group (NITAG), established in September 2016, is an important body responsible for providing scientific recommendations to enable the MOHCDGEC to make evidence-based immunisation-related policy and programme decisions.

According to the National Immunisation Strategy (NIS) 2021-2025, Tanzania has managed to maintain high immunisation coverage of over 90% for the third dose of Diphtheria, Tetanus, Pertussis (DTP) and all the other vaccine antigens given to children under the age of one year. The latest UNICEF/WHO Estimates of National Immunisation Coverage (WUENIC)[3] for Tanzania show an increase in DTP1 from 83% in 2021 to 91% in 2022 and DTP 3 from 81% in 2021 to 88% on 2022. The data also shows a decline in second dose of Rota vaccine from 77% in 2021 to 67% in 2022. The decline in Rota coverage is related to the global supply constraints of the Rotarix vaccine, which resulted in a forced switch to a different formulation of the vaccine – Rotavac.

As of December 2022, the IVD provided vaccinations against twelve vaccine preventable diseases free of charge to its citizens. See Annex 5 for immunisation schedule.

3.4 Immunisation supply chain structure

The United Republic of Tanzania operates a four-tier vaccine distribution system from the Central Vaccine Store to the service delivery points. Tanzania's annual task of forecasting and quantifying the demand for routine immunisation (RI) vaccines is a function of IVD, with support from UNICEF. The revolutionary Republic of Zanzibar conducts its own forecast, however, the quantity of vaccines that are funded by Gavi are incorporated into the forecast for the United Republic of Tanzania. Vaccines funded by Gavi, Mainland and Zanzibar are procured by UNICEF.

Vaccines funded by the Revolutionary Republic of Zanzibar are delivered directly to their Central Vaccine Store in Unguja. In parallel, vaccines funded by Gavi are delivered directly to Medical Stores Department (MSD) in Dar es Salaam. MSD is an autonomous department under the Ministry of Health, Community Development, Elderly and Children established by the Act of Parliament No. 13 of 1993 [CAP 70 R.E. 2002]. The Department is responsible for the procurement, storage and distribution of essential medicines, vaccines and related supplies and medical supplies for public health facilities.

On the mainland, vaccines and dry supplies are delivered through Dar es salaam's seaport and international airport and cleared by the Government Procurement Services Agent. Vaccines and dry supplies continued to be received by MSD up

[3] WUENIC data 2022

until 1st July 2023, at which point the mandate to store and distribute these supplies was transferred from MSD over to IVD Mabibo. Since then, all vaccine consignments are received at IVD Mabibo.

A pull system (i.e. demand driven) is used for distribution of vaccines from the MSD[4] to Regional Vaccine Stores (RVS) including Zanzibar Central Vaccine Store in Unguja. Vaccines orders from the RVS are submitted electronically to the IVD logistics unit through the Vaccine Information Management System (VIMS) for review and approval. The logistics unit sends written instructions by letters to MSD to process the approved order quantities for the respective RVS. Vaccines are distributed quarterly from MSD to 28 RVS, Zanzibar Central Vaccine Store, Unguja and directly to the following district stores within Dar es Salaam; Temeke, Kigamboni, Ilala, Ubungo, and Kinondoni municipalities. Receipts by the Zanzibar Central Vaccine Store are limited to only receiving Gavi-funded vaccines from MSD. Vaccines procured by the Revolutionary Republic of Zanzibar are delivered directly to the Zanzibar Central Vaccine Store.

Vaccines from RVS are distributed to District Vaccine Stores (DVS) after the DVS submit their orders via VIMS. RVS use what distribution infrastructure they have available, to deliver vaccines to DVS quarterly. Health facilities (service delivery points) sit at the last (fourth) tier, as vaccine recipients in the distribution chain. Distribution of vaccines from DVS to health facilities follows a pull system, where individual health facilities place orders in VIMS with their vaccine allocation being subsequently decided based upon their consumption of vaccines during the monthly review period and reported stock levels at the end of the period. The DVS then delivers the vaccines to their health facilities in their jurisdiction.

COVID-19 vaccines were stored at IVD store in Mabibo from where they were distributed to peripheral stores for onward distribution to COVID-19 vaccination sites.

Whereas the Tanzania mainland used VIMS for ordering and reporting its vaccines use, in Zanzibar ordering was placed using manual methods, as the web-enabled VIMS was not functioning properly for Zanzibar at the time of the audit. The District Vaccine Data Management Tool which contained logistics elements was not utilised for ordering vaccine refills because of incomplete information

3.5 Immunisation data

The IVD programme's data collection and processing is done using both paper-based and electronic tools (e.g. primary systems include: HMIS (MTUHA), DHIS2 and VIMS). Similarly, the capture and analysis of surveillance data is done using a mixed processing system. The regular use of these systems and tools allows routine immunisation data to be collected and recorded on daily basis by all vaccinating health facilities, using their standard data collection and monitoring tools; including: Child health cards, HIMS register book 7 (MTUHA-7) and the IVD tally sheet.

Immunisation data at the service delivery point (Health Facility) is entered in Book 7 Child Register (Rejesta Ya Watoto). The register captures parameters like Name of Child, Date of Birth, Place of Birth, Mother's name and date of administration of the respective vaccines. The data is then summarised in a tally sheet in a booklet called Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7). The form tallies the number of doses administered per day by gender. In a parallel arrangement, data from the Child register is also entered in the Monthly Report for Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo).

Data from Matching Form Book 7 is summarised in the Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) that summarises data on all children related issues including immunisation. This is equivalent to the monthly HMIS report that is entered in DHIS2 by the HMIS focal person at the district. Data from Monthly Report for Immunisation Monitoring Tally Sheet is summarised in the Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) which captures data on immunisation services only and is entered in VIMS by the DIVO at district level.

Tanzania uses technological solutions including the Vaccine Information Management System (VIMS), Tanzania Immunisation Registry (TIMR), District Health Information Software 2 (DHIS2) and in 2021 developed CHANJO COVID to enhance immunisation programmes. VIMS was developed on Open LMIS framework aimed at integrating and improving workflows from electronic tools previously used including Stock Management Tool (SMT), Cold Chain Inventory Tool, District Vaccine Data Management Tool (DVD-MT), and monthly IVD facility reporting forms into a single cohesive system. VIMS was launched in 2015 and is currently rolled out at National, Regional and District Level. VIMS was developed through a collaborative partnership of JSI, CHAI and PATH.

[4] Although the mandate for vaccine distribution was transferred to IVD Mabibo as of 1st July 2023, MSD was still distributing the remaining stock in its custody as at the time of the audit in November 2023.

The Tanzania Immunisation Registry (TIMR) was launched in 2016 as a digital registry to track immunisation services. The system's key features included patient identity, healthcare worker information, patient visits, and diagnostic data which supported the management of immunisation data, allowing healthcare providers to track vaccination schedules, monitor vaccine coverage, and identify under-immunised populations. However, TIMR had stopped functioning in 2022. As of 2022, TIMR had been deployed in 3,736 health facilities of 11,734 in Tanzania.

District Health Information Software 2 (DHIS2) was launched in 2016 through the Directorate of Policy and Planning under MOHCDGEC. DHIS2 is the primary national health management information system for the republic of Tanzania. The system includes modules for tracking immunisation data, among other health indicators which supports the Ministry of Health (MOHCDGEC) to monitor health trends, plan health services, and allocate resources more effectively. To date DHIS2 has been rolled out in all 184 districts in Tanzania. In response to the COVID-19 pandemic, Tanzania launched CHANJO COVID in 2021, to support the registration of vaccine beneficiaries, scheduling of vaccination appointments, monitoring of vaccine doses administered and generation of vaccination certificates. The Chanjo covid tracker however faced challenges to capture the data adequately and as such the C19 data will be integrated under the TIMR 2.0 mechanism.

3.6 Covid-19 context, response and impact

COVID-19 is a disease caused by a novel coronavirus first reported on 31 December 2019. It was later named as the severe acute respiratory syndrome-Coronavirus 2 (SARS-CoV-2). On 30 January 2020, the World Health Organisation (WHO) declared Coronavirus Disease 2019 (COVID-19) as a Public Health Emergency of International Concern (PHEIC).

In response to the pandemic threat, the Government established three coordination committees, two at the policy level constituting of national task force led by the Prime Minister and the inter-ministerial committee led by the Chief Secretary. The national task force team recommended the use of five COVID-19 vaccines under WHO Emergency Use Listing (EUL) in Tanzania. These included: Pfizer, Moderna, Johnson & Johnson (Janssen), Sinopharm and Sinovac. After joining the COVAX Facility in June 2021, Tanzania launched the introduction of COVID-19 on 28th July 2021 by Her Excellency Hon. Samia Suluhu Hasan, the President of the United Republic of Tanzania, targeting special and priority groups.[5]

Despite a slow start in its COVID-19 vaccination efforts, during 2022 Tanzania made rapid progress in expanding its vaccination coverage from 15 percent in June 2022 to 70 percent of the eligible population vaccinated as of end of September 2022.

In late 2022, WHO developed guidelines for considerations for integrating COVID-19 vaccination into immunisation programmes and primary health care beyond the pandemic. Additionally, in May 2023, WHO declared that COVID 19 was no longer a public health Emergency of International Concern (PHEIC). In accordance with WHO integration guidelines, Tanzania drafted guidelines for integration of COVID-19 with routine immunisation and primary health care interventions. The country has not yet finalised these guidelines to integrate a sustainable COVID-19 vaccination programme within its routine immunisation programmes, primary health care (PHC), and other relevant health services.

3.7 Gavi's relationship with Tanzania

In July 2013, Gavi signed a Partnership Framework Agreement with Tanzania which provides a framework for the management of Gavi support to the country. During the six-year audit period, 2017 to 2022, Gavi provided cash support amounting to USD 44.8 million including Health System Strengthening grants (USD 19.5 million), COVID-19 vaccine Delivery Support (USD 21.9 million), MR supplementary immunisation activities (USD 1.7 million) and vaccine introduction grants (USD 1.7 million). Gavi also provided vaccines and ancillaries support in-kind, amounting USD 555.2 million, and a cold chain equipment grant (including COVAX CCE) amounting to USD 9.7 million in the same period, 2018 to 2022. See details in Table 5.

At the Global Vaccine Summit on 4 June 2020, Gavi launched the COVID-19 Vaccines Advance Market Commitment (COVAX AMC) as the first building block of the COVAX Facility. The Gavi COVAX AMC is the innovative financing instrument that supports the participation of 92 low- and middle-income economies in the COVAX facility – enabling access to donor-funded doses of safe and effective COVID-19 vaccines.[6] Tanzania was one of the eligible low-income

[5] Updated NDVP-Version 3 January 2022

[6] About Gavi COVAX AMC

countries and the country signed onto Gavi's Standard Terms and Conditions for COVAX Advance Market Commitment (AMC) Group participants. Through the COVAX, Tanzania received COVID-19 vaccines valued at USD 312 million, cash for COVID-19 Vaccines Delivery Support amounting to USD 21.9 million and COVAX Cold Chain Equipment support valued to USD 1.2 million in the period 2021-2022.

Gavi also funded additional catalytic technical assistance to strengthen the Tanzania national immunisation programme to a tune of USD 4.9 million in the period 2017 – 2022. Details of TCA Funding to partners is presented in Table 7.

3.8 Entities involved in implementation of Gavi grants

The national EPI is responsible for the country's immunisation programme including: routine immunisation, SIAs (preventive and reactive), outbreaks and pandemic response. The MOHCDGEC also collaborates with the President's Office Regional Administration and Local Government (PO-RALG), this office being responsible for overseeing the implementation of programme activities at the sub-national level.

Following the results of the 2016 Gavi programme audit, during the period 2017 to May 2021 Gavi's funds were channelled through UNICEF. In June 2021, Gavi resumed channelling funds through MOHCDGEC following the outcome of a Gavi monitoring review, and the Ministry of Health started spending Gavi provided funds via national systems in July 2021.

The additional catalytic technical assistance funds are channelled through Alliance Partners (WHO and UNICEF), and other extended partners like CHAI, PATH, JSI, JPHIEGO and Rocque Advisory.

3.9 Key achievements and good practices

Tanzania has made good progress in improving its national EPI over the years. The following good practice examples were noted by the audit team:

a) Tanzania Mainland.

Vaccine management and supply chain - IVD completed the refurbishment of a fully furnished warehouse at Mabibo which was partly financed using Gavi performance-based financing reward. The warehousing and distribution operations for vaccines and related supplies transitioned from Medical Stores Department (MSD) to IVD vaccine store in Mabibo with effect from 1st July 2023.

IVD installed 14 UCC refrigerators adapted to freezing the Pfizer mRNA vaccine and 10 WICRs. These were put into service from December 2021 and 2022 respectively and a temperature mapping assessment was conducted for cold rooms at IVD in 2022.

In addition, the forecasting process involves key stakeholders including UNICEF who provided the forecasting tool and technical expertise on running the forecast. As a best practice in the forecasting process, the country was able to test the accuracy of the forecast in Q4 of 2022 using the UNICEF country forecast versus actual demand tool.

From the team's visits, it was noted that across all sub-national levels, temperature monitoring was done using remote temperature monitoring devices (RTMDs). Cold chain storage was available, the equipment was functioning and was tracked using VIMS, and there was sufficient capacity and proper hygiene was practiced in vaccine stores.

Immunisation data management and systems: In 2019, the country developed a digital health strategy which recognised the need for implementing digitisation in support the immunisation programme. Currently the VIMS and DHIS2 data systems have been implemented and are used in all districts visited, along with suitable data personnel available at both regional and district levels. COVID 19 vaccination data is recorded in Chanjo Covid system which is designed on the DHIS2 platform.

Programme management and oversight: The country developed a National Immunisation Strategy for the period 2021-2025 and Gavi Grant Management Requirements (GMRs) which allowed for funding to revert back to the Government were met. In addition, an independent WHO assessment validated the effectiveness of the Tanzania Immunisation Technical Advisory Group (TITAG). Also, a credible performance was recorded in 2022, since according to its WUENIC results, Tanzania reduced its zero dose children by 0.2 million over the year.

Financial Management: The country improved its financial management processes by implementing the Epicor accounting system to manage Gavi funds (previously manual), and cash payments at central level were eliminated with as all transactions were managed through the Gavi approved commercial bank account. The accounting team increased from one accountant in 2017, to five accountants by 2023 who now manage Gavi cash support. There was increased oversight from the National Audit Office of Tanzania (NAOT) which audited two significant Gavi grants for financial years 2021 and 2022, for which the resultant management letters were communicated to IVD. At sub national level, there was evidence of review of comprehensive community health plans on PlanRep by PORALG, communication and guidelines for utilisation of funds on financing provided to Districts from PO-RALG.

b) Zanzibar

Vaccine management: The distribution of vaccines within Zanzibar is funded by the Zanzibar Government. The audit team noted that in 2022 the stock ledger was updated to record more complete data, temperature monitoring systems including remote warning were implemented and power backup measures were installed. At the sub-national level, good temperature monitoring practices were observed, cold chain equipment functioned appropriately at districts and HFs visited, and supervision plans, checklists and support supervision reports were in place at the district level.

Immunisation data management and systems: All of the health facilities visited by the team recorded their immunisation data into DHIS2 and had assigned data officers. Data tools used include regesta ya watoto (children's register), tally sheets, and immunisation monthly summary sheets. In addition, there were adverse event following immunisation (AEFI) reporting forms at both the district level and the health facilities visited.

Programme management and oversight: Zanzibar developed tools to facilitate the integration of its COVID-19 vaccination with its routine immunisation activities. These include the daily reporting form, support supervision checklist, microplanning template and tally sheets

4. Audit Findings – Tanzania Mainland

4.1 Governance and oversight

4.1.1 The governance and oversight mechanisms need to be strengthened

Context and Criteria

Tanzania's Immunisation and Vaccines Development (IVD) programme is under the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC). The IVD programme is a subsection under the Reproductive and Child Health (RCH) section, part of the Preventive Services Department under the Directorate of Preventive Services of the MOHCDGEC. According to the Tanzania Health Sector Strategic Plan 2021-2026, the IVD is supported by the President's Office Regional Administration and Local Government (PORALG) in overseeing the implementation of activities at local government level. MOHCDGEC develops and disseminates health policies and guidelines, while the President's Office Regional Administration and Local Government (PORALG) is responsible for their implementation.

The inter-agency coordination committee (ICC) was established in 1995 to improve coordination among partners in support of the immunisation programme and the control of vaccine preventable diseases. The ICC's terms of reference (ToRs) were revised in 2018 in accordance with Gavi's recommendations. These ToRs outline details including the committee's mandate, structure, role, membership, decision making, and meeting modalities. The ICC is expected to meet quarterly.

Per the ICC's ToRs, "the ICC is crucial in providing support to the national immunisation programme, in overseeing commitment and support for immunisation services in the country. Such an oversight spans from supporting and endorsing programme reviews and the development of multi-year strategic plans, to providing technical support and monitoring implementation, as well as reporting on progress, achievements and constraints." The IVD programme also has a Technical Working Group (IVD TWG) with six sub-committees. Membership of the IVD TWG and sub-committees is drawn from across IVD staff, EPI partners and other MOHCDGEC departments. The IVD TWG and sub-committees have separate ToRs.

Condition

We noted the following gaps in the performance and oversight roles of the ICC:

ICC meetings were infrequent, and participation was insufficient during meetings: The audit team reviewed the frequency of ICC meetings, participation of membership, deliberations and action points from the ICC meeting minutes to assess the adequacy and effectiveness of the oversight role. We noted the following opportunities for improvement in the ICC oversight role:

- The audit team noted that four of the 11 meetings were chaired by the Chief Medical Officer of MoHCDGEC instead of the Ministry's Permanent Secretary. In addition, the Permanent Secretary of PORALG did not attend any of the ICC meetings, and PORALG was represented by either the Director and/or Assistant Director of Health. As the ICC is a key decision-making body governing the EPI programme, the lack of senior leadership from various ministries, MoHCDGEC departments or partners might undermine its decision-making ability.
- For the audit period 2018-2022, ICC convened only 11 out of the possible 20 meetings during that period, as shown by the meeting minutes. Over this period, the meetings were held at an intermittent frequency, as follows: two in 2018, one in 2019, three in 2020, two in 2021 and three in 2022.

Recommendation 1

To strengthen governance and oversight over programme management, MOHCDGEC management with support from partners should:

- adapt the ToRs for the governance and oversight bodies to the operating context and ensure that they are signed off and approved.
- ensure that all members of ICC and IVD TWG are oriented on their terms of reference and mandate.
- develop an IVD TWG tracking system and dashboard to track the implementation of the action points raised at their meetings, and

• Although the ICC ToRs state that an ICC quorum is achieved when two-thirds of the member institutions attend, for two such meetings held on 19 March 2020 and 21 August 2020, the expected quorum was not met. These ICC meetings were primarily only attended by MOHCDGEC and TMDA representatives, with a total attendance of 34 and 14 members respectively. The other members/institution of the ICC listed in the ToRs did not attend the meetings. • The ICC ToRs were revised in 2018 following Gavi's recommendations in 2017. However, there is no evidence that the revised TORs were approved or signed prior to their dissemination to the members. ***Gaps in the operating effectiveness of the IVD TWG:*** In addition, the audit team noted the following gaps in the operating effectiveness of the IVD TWG: • For the audit period 2018-2022, the TWG convened only 8 out of the possible 20 meetings, as shown by the meeting minutes. There were no meetings in 2018, 2019, 2020, three were held in 2021 and five in 2022. • The IVD TWG's sub-committees are required to meet monthly. However, for the audit period 2018-2022 only 8 out of the possible 360 meetings were held (six for the logistics and cold chain sub-committee and twice for the surveillance sub-committee). • The ToRs for IVD TWG and its sub-committees were officially approved or signed by the respective MoHCDGEC officials. • In January 2022, technical assistance funding to CHAI, resulted in the revision of the logistics and cold chain sub-committee ToRs. However, as of November 2023, IVD did not have a copy of the revised TORs. ***No defined process for monitoring of implementation of ICC and IVD TWG recommendations:*** The audit team noted the absence of a well-defined process, for tracking and following up on the implementation of ICC and IVD TWG recommendations, as well as monitoring their status. Although action points from the previous meeting minutes were reviewed at the next meeting, there was no mechanism or dashboard to formally track the progression the action points of ICC meetings.	ensure that issues are escalated to the ICC for decision making where necessary; and • develop a coordination dashboard to track the implementation and follow up of the ICC action points. This dashboard should document the owner and timeframe for each item, for the purposes of accountability at subsequent ICC meetings.
Root Cause • There was lack of a mechanism of monitoring the operating effectiveness of the ICC. The ICC ToRs outlined several indicators including chairmanship, membership, level of participation, feedback on implementation of recommendations, among others for assessing the performance and functionality of the ICC. However, was no evidence of that the ICC secretariat tracked and monitored these indicators. • THE IVD TWG and its sub committees were not operational between 2018-2020. • ICC members were not trained on their Terms of Reference. • There is no evidence of official communication from MOHCDGEC to the different constituents requesting for appointment of ICC members and alternates. • Meetings for the TWG and sub-committees were made on short notice resulting in members not having ample time to prepare for attendance. • There were weaknesses in archiving documents (minutes, ToRs). • The impact of COVID-19 pandemic in 2020.	Management comments See detailed management comments – Annex 19

Risk / Impact / Implications	Responsibility	Deadline / Timetable
• Inadequate oversight may impact on the ability of the programme to achieve its objectives. • Some of the critical issues affecting programme implementation are never escalated and discussed at the ICC meeting impacting the performance of the EPI.	MOHCDGEC/EPI	31 December 2024

4.1.2 Grant Management Requirements (GMRs) and recommendations from various reviews are still outstanding

Context and Criteria

In 2016, the Gavi Audit and Investigations unit carried out a programme audit of Gavi-funded programmes in Tanzania and issued a set of recommendations. In addition, the Office of the Auditor General carries out annual external audits on Gavi funded programmes and issues management letters with recommendations for implementation.

In 2017, Gavi carried out a Programme Capacity Assessment (PCA) of the MOHCDGEC, covering the following two areas: financial management - including an evaluation of the funding mechanism; and vaccine cold chain management. In 2018, the PCA process concluded by agreeing on a set of Grant Management Requirements (GMRs) with the MOHCDGEC.

Over the past 8 years, Tanzania conducted two effective Vaccine Management (EVM) assessments. In 2021, it achieved 74% in its EVM assessment, and previously in 2015, it achieved 86%. The EVM initiative provides information needed to monitor and assess vaccine supply chains and to help countries to improve their supply chain performance. Prior to 2019, countries were assessed against nine vaccine management criteria. Since 2019, an updated version of the EVM assessment tool has been in use, expanded to include thirteen supply chain criteria, nine relating to operations and four related to management.

EVM assessments help to design a tailored plan of improvement, with specific activities and timelines of completion to help countries address the challenges and areas identified in the assessment. It is imperative that countries prioritise, budget for, and implement such plans to strengthen their supply chain operations. In addition, the IVD carried out a review of the EPI function in 2020.

Condition

Delays in implementing the GMRs: Although significant progress has been made in addressing Grant Management Requirements, including addressing all the GMRs required to allow Gavi funding to revert back into government systems, the audit team noted that 7 out of 33 GMRs were not fully implemented (refer to Annex 12 for detailed status of the GMRs). Examples of GMRs not fully implemented include:

- ICC meetings – Although the ICC meetings took place during the period under review, these were not held every quarter as required by the ToRs.
- The EPI should maintain a fixed asset register (FAR) for assets procured with Gavi funds. This register should include assets maintained both at the national and sub-national levels. The audit team noted that the EPI's register was incomplete.
- Asset verifications to be carried out at least annually, reconciling the physical assets to the FAR at all levels of the health system.
- Gavi grants shall be audited by the National Audit Office each year, and the final audit report should be submitted to Gavi not later than 6 months after the end of the fiscal year. Although the delay was a result of Covid and Gavi allowed for an extension.

Some 2016 Gavi programme audit recommendations were not implemented: While some progress was made in addressing recommendations from the previous programme audit, we noted that eight out of fourteen recommendations were not fully implemented (refer to Annex 13 for detailed status of open audit recommendations). As such significant issues like enhancing the role of ICC, weaknesses in effective vaccine management and use of Gavi funds to pay for taxes, remain unaddressed. Our audit also noted these as recurring issues as per findings 4.1.1, 4.3.1 and 4.6.1.

Recommendation 2

To enhance the oversight over implementation of recommendations from various reviews, MOHCDGEC/IVD management should:

- develop a tracking system at the EPI operational level and ensure all recommendations are input, given a priority ranking (high, medium, low), and that recommendations repeated in various reviews are included in tracker with one action and action owner to close off the action. For example, where recommendations are repeated in the EVM improvement plan and programme audit report, the recommendations should be aggregated and agreed action should address the issues noted in both reports.
- ensure that activities from the EVM improvement plan are costed and prioritised for implementation.

Recommendations from the National Audit Office Team (NAOT) audits have not been fully implemented: The HSS II audit report for the period 1 July 2020 to 30 June 2021 was signed on 13 June 2022 and the HSS II & CDS audit reports for the period 1 July 2021 to 30 June 2022 were signed on 13 February 2023. The audit reports were accompanied by management letters which express an opinion on the control environment. From our review of the management letters issued we noted that 11 out of the 17 recommendations had not been fully implemented (Refer to Annex 14 for detailed status of the outstanding NAOT recommendations). These issues are also reflected in this programme audit report. Refer to finding number 4.6.1. ***Delays in implementation of recommendations from the 2020 EPI review:*** 15 out of the 20 EPI review recommendations had not been fully implemented. Examples of key pending recommendations include (refer to Annex 15 for detailed status of EPI review): • Review and disseminate immunisation practice guidelines on eligibility criteria and schedule for vaccination, and daily provision of immunisation services at HFs. • Where feasible, ensure delivery of immunisation services is integrated with other services to better serve the population. • Strengthen defaulters tracing, missed opportunity, and tracking of zero dose children by developing guidelines and job aids to achieve universal health coverage. • Improve capacity on interpersonal communication and demand creation skills at all levels. • Develop a written disposal plan and implement disposal of obsolete refrigerators in collaboration with VETA, Ministry of Finance, and other related authorities. ***Delayed implementation of the 2021 EVM assessment recommendations*:** There was a decline in the overall EVMA score from 86% in 2015 to 74% in 2021. Declines were registered for the following criteria; temperature monitoring, storage and transportation capacity, facility infrastructure and equipment, maintenance and repair, distribution of vaccines and dry goods, vaccine management and waste management (See Annex 6). The decline in the scores was attributed to use of the new EVM 2.0 tool that added more standards to each of the nine criteria. A review of the EVMA improvement plan showed that 21% of the activities were "in progress", 34% had "not started" and 45% were "completed". Some of the key activities that have not been started included: • Effective vaccine management assessment at IVD Mabibo, • Obtaining resources for preventive maintenance at Unguja, • Improve VIMS and RTM to capture and visualise the EVM recommended iSC KPI, • Application of VIMS at all levels in Zanzibar, • In coordination with the quality improvement team, reinforce adherence to the support supervision requirement during supervision with the focus on immunisation related materials/guidelines/Standard Operating Procedures (SOPs) for effective follow up. Consequently, these issues remain outstanding and were observed by the audit team in the period following the EVM assessment and are documented in Finding 4.3.	• develop a dashboard at the ICC oversight level taking into consideration contractual recommendations like GMRs vs assurance recommendations and allocated to an action owner with timelines for implementation. • include semi-annual status reporting on implementation at the ICC meetings; and share status updates with Gavi after endorsement from ICC.

<table>
<tr><td>Root Cause
• There is no mechanism in place to track the implementations of the recommendations from various reviews.
• Inadequate oversight over the implementation of recommendations by the ICC.
• NAOT reports are not presented at the MOHCDGEC audit committee and ICC.
• There is no linkage between the MOHCDGEC audit committee and ICC.
• Recommendations are not assigned to action owners for follow up to ensure timely implementation.
• Limited oversight, follow up and tracking of EVMA improvement plan by the cold chain and logistic subcommittee.
• The EVM improvement plan was not costed, and activities have not been prioritised.
• The Covid 19 pandemic impacted the implementation of EVM recommendations.</td><td colspan="2">Management comments
See detailed management comments – Annex 19</td></tr>
<tr><td>Risk / Impact / Implications
• Outstanding issues from audit and other reviews lead to unresolved internal control weaknesses which undermine programme implementation and grant performance.
• Inadequate oversight may impact on the ability of the programme to achieve its objectives</td><td>Responsibility
MOHCDGEC/EPI</td><td>Deadline / Timetable
31 December 2024</td></tr>
</table>

4.2 Programme management

4.2.1 Coordination and monitoring of PEF Targeted Country Assistance (TCA) and other partner led programme activities needs improvement

Context and Criteria

Targeted country assistance (TCA) complements Gavi's support for vaccines and health system strengthening. TCA aims to bridge capacity gaps by leveraging the core competencies of Gavi Alliance partners based in-country. The nature of such support is usually determined based on a country's needs identified through country level discussions such as the joint appraisal or full portfolio planning. The support is often provided through: (i) the provision of technical expertise and information sharing; or (ii) delivering training or consulting services. The proposed TCA activities are consolidated into an annual joint plan for TCA activities (the One TA plan), aligned with the relevant programmatic areas. Subsequently, the impact of the TCA support is assessed as part of each country's overall grant performance indicators.

Gavi's PEF TCA guidance (2019-2020) and 2022-2025 outlines the roles and responsibilities of key stakeholders in the PEF-TCA planning, monitoring, and reporting processes. These roles and responsibilities of PEF-TCA stakeholders are critical for ensuring the success and impact of TCA. Some of the key responsibilities of MOHCDGEC/EPI include leading the OneTA plan development process, overseeing the identification of TCA needs and assignment to the core and expanded partners, and convening quarterly meetings to review progress on TCA implementation.

To ensure ownership of the TCA process, EPI and MOHCDGEC should consistently be involved and engaged throughout the TCA process, including planning and monitoring performance. The guidance foresees mutual accountability to be embedded in the PEF model through established programmatic and financial reporting requirements for the partners as well as regular in-country reviews of the progress and performance of TCA jointly by EPI, implementing partners and other country stakeholders. Part of this is the Interagency Coordinating Committee (ICC) quarterly review of the TCA implementation progress.

The guidance also states that the data provided should also be checked for accuracy and validity – with the formal confirmation of MOHCDGEC/EPI for consistency of data from various sources (e.g., milestones on portal, Joint Appraisal reports, supervision reports, etc.). Further review and confirmation of the capacities built through TCA support should also be demonstrated by evidence-based assessments, including overall programme performance improved through TCA support (e.g., coverage, equity, supply chain, data quality (DHIS2), financial management, etc.,).

Section 6 of the MoUs signed between Gavi and the core partners (WHO and UNICEF) stipulates that: the ICC is responsible for monitoring performance of activities implemented by WHO/UNICEF. In addition, the partners are required to provide reports to MOHCDGEC on the implementation of respective activities, and to collaborate with the MOHCDGEC so as to incorporate reporting on their TCA activities, into the standard Gavi reporting prepared by MOHCDGEC, and submitted to Gavi.

For the period under review, 2018 – 2022, Tanzania received USD 4,939,006 Targeted Country Assistance (TCA) funding – see Table 7 for details. The resultant TCA activities were implemented by WHO and UNICEF (both core alliance partners), and six expanded partners.

Section 64, sub-section 5 of the Public Procurement Act (2022) states that "force account" is a process where civil works are carried out by a public or semi-public departments or agencies by using their personnel and equipment or in collaboration with any other public or private entity.

Condition	Recommendation 3
The audit noted the following gaps in the implementation of the TCA activities: ***Inadequate coordination between TCA implementing partners:*** While the government and MOHCDGEC are the intended beneficiaries of TCA, there was no evidence of review of TCA activities at the IVD TWG meetings as per the available 8 meeting	To strengthen the coordination and monitoring of PEF/TCA partners, the MOHCDGEC/EPI management in coordination

minutes during the period 2018 to 2022. There was no evidence that the progress and performance was reviewed by the ICC quarterly as per the Gavi PEF TCA guidelines. Consequently, there was no involvement of senior leadership at MOHCDGEC in the oversight and monitoring over Gavi supported TCA.

Inadequate visibility by MOHCDGEC on the implementation progress of TCA/TA plan with no formalised process to validate the achievement of TCA milestones: There was no evidence of review, monitoring and validation of TCA activity milestones and deliverables by IVD or MOHCDGEC. Reports on TCA activity milestones and deliverables were not shared with and/or reviewed by the MOHCDGEC before reporting in the Gavi portal.

The audit noted that 17 out of 104 TCA activities were delayed as per the milestone report from the Gavi portal. The delayed activities were spread across most of the critical thematic areas (i.e., programme management, governance, service delivery, information systems, cold chain and logistics). Examples of delayed activities include, to:

- Inform regularly and disseminate global and regional guidance (i.e. SAGE) with NITAGs and RITAGs, and support NITAG working groups on COVID-19 vaccines was delayed by 883 days.
- Support the MOHCDGEC in the documentation and publication of lessons learned and best practices, on existing and emerging issues related to the implementation of the TImR system and data use interventions was delayed by 1,096 days.
- Conduct equity assessment to identify gap in reaching communities for immunisation services following COVID-19 outbreak in 2020 was delayed by 699 days.

While some of the delays could be attributed to the impact of the COVID-19 pandemic, the audit team noted that there was no mechanism to track implementation to ensure that critical activities were expedited. Additional reasons for the delays documented in Gavi's reporting portal included:

- Implementation of EPI campaigns such as MR and polio.
- Delayed approvals by MOHCDGEC such as for the selection of CCE in year 2.
- Delays in delivery of the required server for hosting EPICOR.
- Delays in procurement of tablets due to supply issues which affected the country wide rollout of Electronic Immunisation System (EIS).

***Weaknesses in oversight provided by CHAI over procurements and construction works executed by the Amana Regional Referral Hospital tender board*:** The MOHCDGEC partnered with CHAI to implement a phase 2 project for the rehabilitation, extension and construction of the IVD warehouse, with financial support from Gavi. On 23rd March 2022, MOHCDGEC appointed Amana Regional Referral Hospital tender board to complete the remaining works through "force account" after the initial contractor (PEK Brother's Limited) issued a "notice of termination of contract." During this period, the audit team noted the following weaknesses in the oversight by CHAI over the procurements and construction work executed by Amana Regional Referral Hospital tender board:

with all implementing partners (i.e., core and expanded) should:

- use existing coordination forums such as TWGs or JA to bring together all TCA implementing partners and EPI to review performance regularly and assess progress of implementation of OneTA plan as per the approved workplan.
- ensure that the TCA implementation progress and performance is reviewed by the ICC quarterly as per the Gavi PEF TCA guideline.
- ensure that implementation of all Gavi-funded priorities allocated to technical partners as part of the targeted country assistance, are reviewed and validated against the status report of PEF TCA milestones.

Recommendation 4

To ensure country ownership and consistent involvement and engagement of the EPI and MOHCDGEC throughout the TCA process, the MOHCDGEC/EPI management should undertake a proper review and validation, on each activity completed by the implementing partners, based on the annual work plan approved by the MOHCDGEC instead of only relying on the reports submitted by partners.

Recommendation 5

To ensure accountability and transparency, CHAI should expedite the external audit of the past phase 2 project, and any remaining fund balances should be fully accounted for or paid back to the programme

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- The contract with Amana Regional Referral Hospital tender board did not include a defect liability period provision, to ensure that any structural faults discovered after construction, are remediated at the contractor's expense.
- While clause 6.3 of the contract between Gavi and CHAI required CHAI to ensure that an external audit of the project was done within six months of contract completion, no audit had been conducted at the time of our review. Works were completed in March 2023 and CHAI had not committed funds for the audit as per the final financial report submitted to Gavi on the 3rd of May 2023.
- The fund balance of USD 168,765 is yet to be refunded to Gavi (or reallocated to other grant activities) since the completion of the activities in March 2023.

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Root Cause

- Absence of oversight and governance mechanisms to identify and highlight critical activities and accountability. Progress and performance in implementing TCA activities, is not reviewed by the ICC every three months as per the Gavi PEF TCA guideline.
- IVD's roles and responsibilities for coordinating and monitoring the Technical Assistance activities are not well defined.
- Gavi TCA guidelines were not fully adopted.
- Country ownership is limited due to roles being undefined in the MoUs signed between Gavi and Partners.
- Partners report directly to Gavi through the PEF portal, and copies of deliverables are not obtained by IVD and/or MOHCDGEC.

</td><td colspan="2">

Management comments

See detailed management comments – Annex 19

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Risk / Impact / Implications

- Without proper accountability it is possible that the One TA plan may not achieve its desired outcomes.
- TCA investments may not be followed through.
- MoHCDGEC may not be able to substantiate with evidence that the justifications for the delays were comprehensive and appropriate due to lack of a formal milestone validation process.
- In the absence of effective engagement by MOHCDGEC/IVD, partner facilitated TCA activities may not be delivered with a view of ensuring sustainability.
- Failure to have a defect liability clause may lead to financial loss as faults within a short period of time may be repaired by IVD.

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Responsibility

MOHCDGEC/EPI

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Deadline / Timetable

31 December 2025

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4.3 Vaccine management

4.3.1 Vaccine storage and distribution operations may be hampered, due to delays in transitioning operations from MSD to IVD

Context and Criteria

In September 2015[7], in response to the 2015 EPI review and EVM assessment conclusions, the MOHCDGEC management decided to transfer the management of vaccines from MSD to IVD[8]. MSD and IVD created a task force to oversee the transition, to ensure that the supply chain was not disrupted. The task force consisted of personnel from the Ministry and the immunisation partners. In addition, the IVD Technical Working Group (IVD TWG) was nominated as the project's steering committee, to provide additional oversight over the process. The IVD TWG was also required to enlist additional members with suitable technical expertise in areas such as: warehousing, ICT, fleet management, vaccine management, or any other expertise deemed necessary by those concerned.

To support the transition process, Gavi approved reallocation of 2014 and 2016 performance-based financing, to pay for the rehabilitation and renovation of the IVD warehouses, and for the procurement of refrigerated trucks, among other items. The ICC also approved the warehouse transition project and corresponding budgets. The steering committee, led by the IVD programme manager, was tasked with the responsibility of keeping the ICC abreast on the status of the transition activities, for their endorsement.

The roadmap for the transfer included three critical phases, namely the;

1. Rehabilitation and expansion of warehouses including sourcing a suitable vendor for the rehabilitation and expansion process.
2. Procurement of WICRs, WIFRs, non-refrigerated and refrigerated trucks to support the storage and distribution activities. Procurement was completed by UNICEF using funds from Gavi HSS and PBF while WHO and CHAI were responsible for installation. This phase also included installation of warehouse information systems which included activities of system design and customisation, capacity building, data management, testing and deployment; and
3. Operational phase III – which involved capacity building activities, like the development of Standard Operating Procedure (SOPs), training of staff on warehousing management and warehouse management information system, orientation of staff on vaccine management, worksite risk analysis and management and response. During this final phase, the vaccines and related supplies remaining in storage were to be moved from MSD to IVD, for onwards distribution thereafter.

The project initial concept, conceived more than 8 years ago, was considerably delayed, as all three operational phases were scheduled to be completed in 2019.

The official handover from MSD to IVD started on 1st July 2023, at the start of the financial year 2023/2024, with IVD warehouse the designated location for storing new vaccine arrival shipments while MSD continued to distribute the stock it received prior to July 2023

Condition

Key activities required to run an efficient and effective warehouse operation were delayed: Some key activities planned to be done during the project's phases I, II and III, remain incomplete. Examples include:

- Formulation and approval of an organisational structure aligned with the recommendations as outlined in the roadmap for the transition of vaccine and related supply management from MSD to IVD.

Recommendation 6

To improve the oversight over the transition activities of vaccines and related supplies from MSD to IVD, the steering committee should regularly review the defined roadmap and track the remaining planned activities to ensure that these are implemented and completed.

[7] A road map towards shifting the management of vaccines and related supplies from MSD to IVD, 2017

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- Hiring of personnel to oversee the full operations of the new IVD store – as of November 2023, the recruitment of two warehouse officers, three warehouse assistants, and four warehouse attendants was pending.
- Approval and signoff of the standard operating procedures (SOPs) to guide operations.
- The costing model for vaccine storage and distribution services and other related costs was not yet defined.
- No distribution schedules to provide guidance to regions and districts, regarding reporting deadlines and anticipated delivery dates.

Consequently, as of November 2023, the storage of vaccines still straddled both stores – i.e. at MSD for existing stock (460,950 doses of Pentavalent vaccine, 47,086 doses of HPV and 7,684 doses of PCV), and all new arrivals were kept at the IVD vaccine store in Mabibo resulting in additional operational expenses due to operation of two parallel storage facilities. This occurred despite the available redundant cold chain storage capacity at IVD, which included 5 WICRs and 14 ultra-cold chain refrigerators, with a total storage capacity of approximately 11.6 k Liters, that were not in use and had been switched off. IVD/MOHCDGEC continues to incur storage costs (3.7%), dispatch costs (0.8%), and distribution costs (5.2%) of the remaining invoice value of vaccines at MSD.

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Recommendation 7

To ensure continuity of vaccine storage and distribution operations following the transfer of operations from MSD to IVD, IVD management should:

- conclude the development of its organisational structure, secure the necessary sign off, recruit and train the necessary staff, in relevant aspects of vaccine management.
- conclude the approval and dissemination of SOPs for vaccine management.
- develop optimal distribution schedules and plans for the country-wide distribution of vaccines and related supplies.

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Root Cause

- Delayed completion of the Mabibo warehouse due to the COVID-19 pandemic
- While a transition roadmap exists, clarity around responsibility for the handover oversight and the management of vaccines and related supplies was limited.
- Limited technical assistance (TA) support was provided to IVD, as the technical assistance provided by UNICEF was had left the organisation as of the time of the audit
- The vaccines held at MSD were included in their 2023/2024 financial statements, making it problematic to transfer them to the IVD Warehouse prior to concluding and closing their financial records

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Management comments

See detailed management comments – Annex 19

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Risk / Impact / Implications

- Disruption of vaccine supply chain following shifting the mandate from MSD to IVD.
- Additional storage, dispatch and distribution charges were incurred by IVD.

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Responsibility

MOHCDGEC/EPI

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Deadline / Timetable

31 December 2024

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4.3.2 Consistent low stock (below buffer) leading to vaccine stock outs

Context and Criteria

Demand forecasts are a prerequisite for estimating vaccine and related supplies needs, to ensure programme continuity. Forecasting the quantities and types of vaccines needed is a key driver for the planning what quantity vaccines is required, to fulfil routine demand and surge needs, such as during vaccination campaigns and supplementary immunisation activities.

In Tanzania, the forecasting what vaccines and related supplies is done every year during the period July to September. This process involves completing the UNICEF forecasting tool with the following inputs:

- Target Population provided by the National Bureau of Statistics - the country has been using projections of the 2013 census to get estimates of the target population, but beginning 2024 the country will use data from its 2022 census;
- Estimated coverage which ranges from 95 - 100%, as the country aims to vaccinate every eligible child;
- Estimated wastage rates based on WHO estimates;
- Buffer/safety stock quantity; and
- The current stock on hand at the time that the forecast is generated. Past stock balances were drawn from the following months: August 2017 (for 2018 forecast[9]), August 2018 (for 2019 forecast[10]), August 2019 (for 2020 forecast[11]), September 2020 (for 2021 forecast[12]), September 2021 (for 2022 forecast[13]) and September 2022 (for 2023 forecast[14]).

The forecasting process includes stakeholders drawn from the Logistics Technical Working Group (Logistics TWG), UNICEF and the IVD team. The logistics TWG reviews the outputs from the forecasting process. Subsequently, this forecast is shared with Gavi, the UNICEF supply division and the Chief Pharmacist of MOHCDGEC, the latter in order to incorporate details into the health budget for Government-funded components

Condition

Variances between the quantity of doses forecasted and received: The audit team reviewed the forecast reports for various vaccines samples during the period 2018 to 2023 and noted significant variations between the forecasted quantities and the received quantities. For pentavalent vaccine, there was an average 13% difference between the forecasted and received quantities while for PCV there was an average 43% difference between the forecasted and received quantities.

Table 9: Variances between forecasted quantities and received quantities for pentavalent vaccine 2018-2023

Year	Pentavalent Vaccine			Pneumococcal Conjugate Vaccine		
	Forecasted Quantity	Sum of Received Quantity	Variance	Forecasted Quantity	Sum of Received Quantity	Variance
2018	5,365,500	6,752,500	-26%	6,622,400	4,547,600	31%
2019	5,644,500	3,471,500	38%	4,659,300	6,703,200	-44%

Recommendation 8

To ensure availability of adequate supplies of vaccines in-country, the MOHCDGEC/IVD management should:

- conduct periodic reviews of its stock levels across the country, and regularly review forecasts in collaboration with UNICEF and Gavi, to refine assumptions for subsequent forecasts.
- develop forecasting SOPs to inform the forecasting process at the central level.

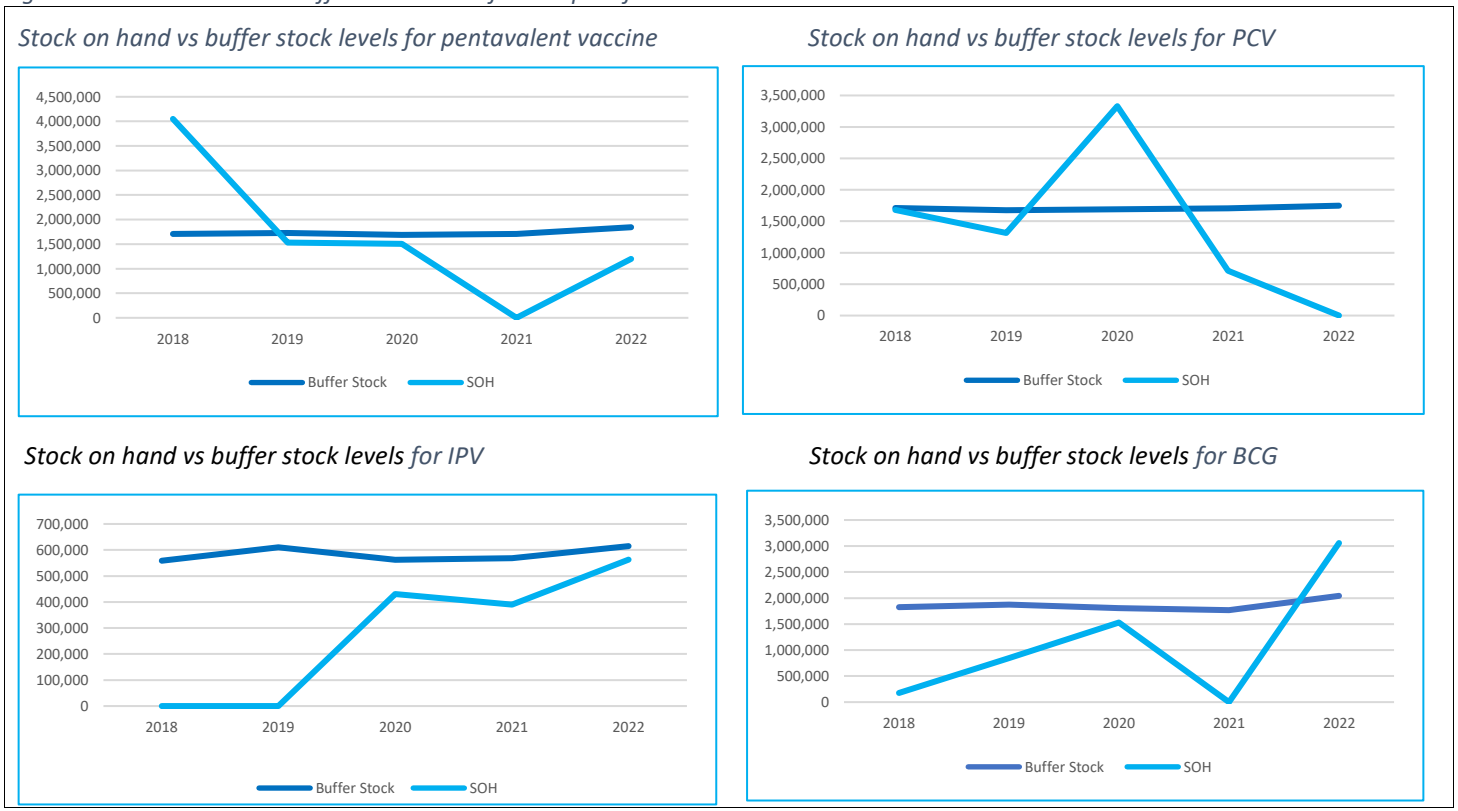
[9] Tanzania Immunisation Forecast 2018
[10] Tanzania Immunisation Forecast 2019
[11] Tanzania Immunisation Forecast 2020
[12] Tanzania Immunisation Forecast 2021
[13] Tanzania Immunisation Forecast 2022
[14] Tanzania Immunisation Forecast 2023

2020	6,116,585	4,267,400	30%	6,716,635	1,914,800	71%
2021	9,700,666	8,968,500	8%	9,927,186	5,305,200	47%
2022	9,222,500	7,948,500	14%	8,813,643	2,614,080	70%
Total	**36,049,751**	**31,408,400**	**13%**	**36,739,164**	**21,084,880**	**43%**

Stock on hand at the CVS was consistently below the required buffer levels as indicated in annual sampled forecasts reviewed: The audit team reviewed the stock levels for pentavalent, IPV, PCV and BCG vaccines at the time the country's annual forecast were generated, usually in September for the respective years, and noted that the stock on hand was below the buffer stock levels for:

- 4 out of 5 years for Pentavalent vaccine
- all 5 years for IPV
- 3 out of 5 years for PCV
- 4 out of 5 years for BCG, a non-Gavi supported vaccine.

Figure 1: Stock on hand vs buffer stock levels for sample of vaccines



Consequently, the audit team noted the following at national and sub-national levels:

Low stock and stock outs: In November 2023, the stock on hand was below the minimum stock levels for the sampled vaccines except for PCV, and there was zero stock of rotavirus vaccine, as indicated in the below table.

Table 10: Stock on Hand at MSD and IVD Vaccine Stores

#	Vaccine	AMC[15]	Physical Stock as of 6 Nov 2023	Months of stock
1	PCV	145,483	593,121	4.08
2	Rotavirus vaccine	370,331	0	0.00
3	DTP-HepB-Hib	581,949	245,115	0.42
4	Measles and rubella vaccine	469,086	198,350	0.42
5	IPV poliomyelitis vaccine 5 doses	193,983	142,600	0.74

Stock outs at sub-national level: The audit team noted incidents of vaccine stock outs of varying magnitude at the PVS, DVS and health facilities, from the period reviewed (2018-2022). Stock outs of at least one of the sampled vaccines (Pentavalent, IPV, rotavirus and PCV vaccines) were recorded in all sites visited, namely 4 out of 4 RVS, 19 out of 19 DVS and 50 out of 50 HFs. Pentavalent vaccine was stocked out at 32 of 50 health facilities with an average number of stock-out days of 50 and maximum number of stock out days at a single facility of 269. IPV was stocked out at 31 of 50 health facilities with an average number of stock out days of 17 and the maximum number of stock out days at a single site of 118; rotavirus vaccine was stocked out at 47 of 50 health facilities with an average number of stock out days of 30 and maximum number of stock out days of 155; while PCV was stocked out at 37 of 50 health facilities with an average number of stock out days of 13 and the maximum number of stock out days of 109. (Annex 9). Similarly on Zanzibar, stock outs of at least one of the sampled vaccines were identified at 2 of 3 DVS and 6 of 6 health facilities.

Root Cause

- The country received less than the forecasted vaccine quantities because of adjustments done by Gavi.
- Mismatch between country's financial year and Gavi's financial year resulting in late receipt of co-financing funds and late deliveries of co-financed vaccines.
- Exogenous rotavirus supply challenges.
- Despite one accuracy test conducted in Q4 2022 using the UNICEF country forecast versus actual demand tool, there is no documented process for regularly assessing forecasting outputs, or for using the generated information to guide periodic revisions of forecast assumptions.
- The lack of forecasting SOPs leaves the country dependent on the guiding principles embedded within the forecasting tool, which are generalised and insufficient to guide the users to navigate the entire forecasting process.

Management comments

See detailed management comments – Annex 19

[15] Average Monthly Consumption

Risk / Impact / Implications	Responsibility	Deadline / Timetable
Inadequate forecasting resulting in insufficient buffer stock. As a consequence, the stock outs of various antigens at national and sub national level, resulting in missed vaccination opportunities at service delivery levels which impacts the effectiveness of the immunisation programme.	MOHCDGEC/EPI	31 December 2024

4.3.3 Inventory management practices at national and sub-national level need improvement

Context and Criteria

The use of systems that allow for the dynamic management of inventory and inform operational and strategic decisions is a key action among the priority areas of the Gavi's immunisation supply chain (iSC) 2021-2025 strategy. Good inventory management helps vaccine stores to know the quantity of the respective vaccines received, quantity issued and quantity in stock at any given point in time. Therefore, stock data should be appropriately recorded for reference and decision making.

Section 1 sub section 1.1 of Tanzania Effective Vaccine Management SOP (EVM-SOP-E6-07) states that: diluents, syringes, safety boxes, spare parts and other immunisation supplies must be stored correctly in the dry stores, to ensure that all products are safely stored within the temperature and humidity levels specified for the product type.

Section 1 sub section 1.2 of the Effective Vaccine Management SOP (EVM-SOP-E6-03) states that: All stores should conduct a physical stock count of all vaccines, diluents, syringes, and safety boxes at least once a month and it is recommended that physical stock count must be done at the end of every month. Stock records (both manual stores ledger and electronic system) must be updated immediately after the stock count has been completed and entries entered in red. A valid reason for every adjustment if any must be recorded in the stock control system and physical stock count must be conducted before placing orders/requisitions, so that the closing balance of previous month can inform the computation of the quantity to order during the ordering month.

Condition

Inadequate management of dry goods storage at the IVD stores (Mabibo): During the audit team visit at the IVD central store, we observed that 5,651,450 doses of J&J vaccines which had expired in September and October 2023 were found in the warehouse taking up valuable space, whilst spare needles and syringes were stored on the warehouse veranda (Figure 2 on Annex 7). Although the needles and syringes were stored on pallets off the floor, exposure to external conditions could lead to their deterioration over time, rendering them unsuitable for use.

Expiries of COVAX vaccines: Tanzania started its COVID-19 vaccination campaign in Q1 2021. The total number of COVID-19 doses received could not be established as the data retrieved in VIMS had gaps, as noted in section 4.4.3. However, there were significant expiries of COVID-19 vaccines at the IVD store in particular expirations of J&J doses as noted above (Figure 3 on Annex 7). Other expiration particulars include: 443,160 doses of Pfizer vaccines which expired in September 2023, and 272,550 doses of J&J which are projected to expire sometime between November 2023 and February 2024.

Physical counts didn't match the stock ledgers at sub-national vaccine handling points: The audit team noted variances between the physical stock and the manual vaccine registers or stock cards at about half of the sites visited, including 3 out of 4 RVS, 10 of 19 DVS and 20 of 50 HFs (Annex 8a).

Unexplained stock adjustments at sub-national stores: The audit team reviewed stock ledgers at the different vaccine handling points and noted that stock adjustments were made especially after conducting physical counts. However, the reasons for the stock adjustments were neither explained nor the stock adjustments investigated to establish the root causes for the stock differences. Unexplained stock adjustments were noted at the below vaccine handling points and detailed in Annex 8b.

Recommendation 9

To maintain all vaccine and related supplies in good condition, IVD should adhere to good storage practices.

Recommendation 10

To improve inventory management practices at sub-national level, IVD should:

- ensure vaccine handling points conduct regular physical counts, properly document stock transactions and archive their stock records and that inventory data informs decision making;
- strengthen support supervision initiatives by documenting supportive supervision visits, providing feedback, and following-up on agreed action items.

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Table 11: Unexplained stock adjustments at sub-national stores

Vaccine handling point	No. with unexplained adjustments	Total number
RVS	1	4
DVS	9	19
HF	18	50

Root Cause

- There was no evidence of period end physical count at all levels for the period under review.
- Poor archiving and storage of vaccine records.
- No documented feedback on support supervision.
- A decline in demand for COVID-19 vaccines, after the WHO declared the end to COVID-19 as a global health emergency in May 2023.
- Limited training and capacity gaps in vaccine stock management at all levels.

Management comments

See detailed management comments – Annex 19

Risk / Impact / Implications

- Risk of commodity loss due to adverse weather conditions
- Expired vaccines taking up valuable storage space.
- Poor accountability over the movement of vaccines

Responsibility

MOHCDGEC/EPI

Deadline / Timetable

31 December 2025

4.3.4 Cold chain management practices need to be strengthened

Context and Criteria

Maintaining the quality of cold chain commodities relies on the functionality of the cold chain system. Cold chain management is a central aspect of the national immunisation programme, by ensuring the integrity of the cold chain as vaccines travel down the supply chain, to reach the beneficiaries. Tanzania has developed numerous SOPs which regulate the management of the vaccine cold chain. These SOPs cover processes ranging from the receipt of doses to their storage, distribution, and ultimately their administration to the end beneficiary.

The SOP on Using vaccine vial monitors (TAN-EVM-SOP-E8-02) requires that the responsible officer check the VVM status of a sample of each batch of vaccine consignments, by comparing the observed VVM status with the VVM status recorded on the issue voucher, and reporting any differences if any, to the supplying store.

Section 4.2 of the Temperature monitoring SOP states that: "*a minimum of four 30-day electronic temperature monitoring devices should be placed in the cold room shelves in front of the vaccine in places where the lowest temperatures are found."* It is further stated that "*a temperature mapping study must be conducted to determine the coldest places in the room to avoid unnecessary freezing of vaccines. Section 4.8 requires the responsible officer to download weekly temperature data for all cold chain equipment from the electronic temperature monitoring devices."*

The SOP on Looking after cold and freezer rooms (TAN-EVM-SOP-E5-02) lists daily, weekly, monthly and annual tasks for planned preventive maintenance of cold chain equipment and underscores the need for these tasks to be adhered to, to ensure that the equipment functions optimally, given its role as an important component of the national immunisation programme

Condition

VVM status not checked on arrival of vaccines: From the team's review of vaccine receipt documents, there was no evidence that the VVM status was verified during the receipt and distribution of vaccines at 4 out of 19 DVS and 10 out of 50 health facilities.

Continuous temperature monitoring devices were not available: The audit team inspected the WICRs at the IVD vaccine store and observed that while there is a long-term plan to connect the WICRs to the Remote Temperature Monitoring system in VIMS for continuous temperature monitoring, the system was not operational at the time of our review.

Temperature mapping and calibration of cold chain trucks was not done: The audit team observed that there was no documentation of temperature mapping for the WICRs at all four of the RVS.

Preventive maintenance activities for CCE were not conducted: The audit team noted that there no evidence that daily, weekly and monthly preventive maintenance activities were conducted as required in the maintenance plan. In addition, 1 out of 4 RVS and 4 out of 19 DVS didn't present preventive maintenance plans or evidence of preventative maintenance activities. Of the sampled facilities, 24% of CCE at RVS, 9% CCE at DVS and 5% CCE at health facilities were non-functional.

Redundant cold chain storage capacity at IVD: 5 of the 19 WICRs and 14 ultra-cold chain equipment units at the IVD store were not in use and switched off at the time of our visit. However, IVD management indicated that they consulted the Haier Local Service Provider and the manufacturer on possible adjustments, and the response from the manufacturer was that any adjustment made on

Recommendation 11

To ensure adherence to the cold chain and equipment management SOPs, IVD should ensure completion, approval, dissemination and training of relevant staff on the SOPs.

Recommendation 12

To ensure that the cold chain equipment functions effectively, and that the integrity of the cold chain is maintained, MOHCDGEC /IVD should:

- support cold chain officers at all levels to generate and implement preventive maintenance plans. It should also design, print and disseminate equipment maintenance logs to each site, for them to document the preventive and curative activities they carry out on their CCE units.
- connect the WICRs to the remote temperature monitoring system in VIMS, and train cold chain

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<td>temperature ranges to meet used for storage of routine vaccines will be at the country's risk as they cannot guarantee the performance.

Long turn-around time (TAT) to repair CCE: At the sub-national stores, the audit team noted long turnaround time of over 21 days for repair of CCE when they broke down at 2 out of 4 RVS, 5 out of 19 DVS and 4 out of 50 health facilities limiting the cold chain storage capacity at these stores.</td>
<td colspan="2">officers/storekeepers to routinely download the data and check for any temperature excursions.
• ensure that WICRs are subjected to routine temperature mapping

Recommendation 13
To ensure that the MOHCDGEC/IVD uses its available cold chain resources optimally, it should:

• review the cold chain capacity needs at all levels and generate a CCE plan; and
• improve equipment repair turn-around time, by training and deploying cold chain technicians to different regions and districts.</td>
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<td>Root Cause
• Non-compliance with the cold chain management SOPs which were not signed off and approved.
• Sub-optimal functionality of the temperature monitoring module in VIMS.
• Lack of job aids on cold chain management for the personnel working at the vaccine handling points.
• Redundant cold chain capacity at the IVD vaccine store, is partly attributed to operating two different vaccine storage facilities in parallel, as explained in section 4.3.1. Also, some CCE units are now surplus to requirement, since they were procured in support of the COVID-19 pandemic response (i.e. some units are no longer used).
• Limited number of cold chain technicians at sub-national level.</td>
<td colspan="2">Management comments

See detailed management comments – Annex 19</td>
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<td>Risk / Impact / Implications
• Failure to check the VVM status on arrival of the vaccines means that any temperature changes during transportation may go undetected.
• Lack of preventive maintenance leads to increased risk of equipment breakdown and loss of equipment service life</td>
<td>Responsibility

MOHCDGEC/EPI</td>
<td>Deadline / Timetable

31 December 2025</td>
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4.4 Supply chain and data management systems

4.4.1 Multiple data management systems are not interlinked

Context and Criteria

The Tanzanian Government, through the Ministry of Health, Community Development, Gender, Elderly and Children, is using digital technologies to improve health outcomes at both individual and population levels, with the resultant data offering evidence-based decision-making for health systems. Building on the earlier National eHealth Strategy, the National Digital Health Strategy for 2019–2024 aims to further these efforts. This latest strategy focuses on achieving universal health coverage and the health-related Sustainable Development Goals (SDGs). The strategy consists of 5 strategic goals and 10 priorities, with a notable emphasis on priority number 5, which highlights the need for "seamless and secure data exchange between health information systems" through the implementation of initiatives like: Interoperability across different systems, both within health as well as other sectors, the "Health facility registry" and the "Health commodity registry".

Over the years, Tanzania has embraced technological solutions including the: Vaccine Information Management System (VIMS), Tanzania Immunisation Registry (TImR), District Health Information Software 2 (DHIS2) and CHANJO COVID, in order to enhance its immunisation programmes and improve vaccine delivery and data management. These immunisation systems are part of a broader public health effort to combat preventable diseases and improve overall health outcomes in the country.

Launched in 2015, the Vaccine Information Management System (VIMS) version 2, was developed upon an Open LMIS framework, and includes customisation such as the Warehouse Management System (WMS). VIMS in response to the immunisation programme's needs, aiming to track vaccines, immunisation commodities, cold chain assets and manage routine immunisation data. VIMS was developed through a collaborative partnership of JSI, CHAI and PATH. CHAI and PATH who supported the development of user requirements and aimed to integrate and improve workflows, into a single cohesive system. Various standalone electronic tools which were used in the past include the: Stock Management Tool, Cold Chain Inventory Tool, District Vaccine Data Management Tool, and the monthly IVD facility reporting forms. At present, VIMS is rolled out across the health system, including National, Regional and District Levels.

Launched in 2016, the Tanzania Immunisation Registry (TImR) is a digital registry used to track immunisation services. As of 2022, TImR had been deployed in 3,736 health facilities of 11,734 in Tanzania. The system's key features included patient identity, healthcare worker information, patient visits, and diagnostic data which supported the management of immunisation data, allowing healthcare providers to track vaccination schedules, monitor vaccine coverage, and identify under-immunised populations. However, TImR had stopped functioning in 2022 and was still nonfunctional at the time of the audit in November 2023.

Launched in 2016, the District Health Information Software 2 (DHIS2) via the Directorate of Policy and Planning under MOHCDGEC, DHIS2 is the primary national health management information system for Tanzania. The system includes modules for tracking immunisation data, among other health indicators to help the MOHCDGEC: monitor health trends, plan health services, and allocate resources more effectively. To date DHIS2 has been rolled out across all 184 districts.

Launched in 2021, the CHANJO COVID system was developed in response to the COVID-19 pandemic, to support the registration of vaccine beneficiaries, scheduling of vaccination appointments, monitoring of vaccine doses administered and to generate of vaccination certificates.

Over the period concerned (2018 to 2022) Gavi has also supported such systems by investing: USD 453,089 on VIMS and USD 798,046 on TImR.

Condition	Recommendation 14
Multiplicity of immunisation systems with limited interoperability: Although the Tanzania digital health policy framework[16] acknowledges the necessity for systems integration, Vaccine Information Management System (VIMS), the District Health Information Software 2 (DHIS2), and the Chanjo Covid systems are not integrated. This lack of cohesion between these systems, limits data visibility, traceability and has a negative impact on the use of data for decision-making due to the siloed nature of the data in each of these systems. ***Lack of harmonised health data master lists:*** The Tanzania Digital Health Strategy for 2019-2024, includes the requirement to establish a standardised health data master list by June 2021 across all health systems. However, by the time of the audit in November 2023, this master list was not yet developed. In addition, the health facility register had not been fully incorporated into the Vaccine Information Management System (VIMS). The absence of a standardised list is a barrier to the harmonisation of health data management and impedes system interoperability. ***Server capacity is insufficient for current and future data needs:*** The current server infrastructure supporting VIMS and DHIS2 lacks the necessary scalability to meet both current and expanding data requirements. The audit team noted suboptimal system performance, as evidenced by the protracted loading times for national immunisation reports - sometimes taking more than 1 hour – leading to delays in the retrieving necessary information and constraining the use of data for decisions. As at November 2023, there was an ongoing process to procure new servers to address these capacity gaps, so as to improve the performance and efficiency of immunisation data systems. However, to effectively resolve the server capacity gaps, a data growth projection assessment should be conducted to quantify current and future server infrastructure requirements.	To ensure system integration the MOHCDGEC/IVD management, in collaboration with stakeholders, should: • develop a comprehensive integration plan to connect the Vaccine Information Management System (VIMS), the District Health Information Software 2 (DHIS2), Chanjo COVID and other HIS systems in accordance to interoperability standards (such as HL7 or FHIR) to ensure seamless data exchange between these systems. • consider upgrading the existing server infrastructure to enhance its scalability and performance. This could involve moving to cloud-based solutions which offer better scalability and reliability, while ensuring the necessary data security implications. • conduct regular IT infrastructure performance audits to ensure that systems can handle increasing data loads and user demands. • prioritise the creation of a standardised product master list as outlined in the Tanzania Digital Health Strategy for 2019-2024. In relation to this, the digital facility register should also be integrated with VIMs.
Root Cause • Incomplete implementation of the digital health strategy 2019 – 2024. Key milestones such as: the development of a change management plan, digital health commodity register, shared client record should have been completed between 2020-2022 but were not done. In addition, the midterm review on status of implementation, which was planned for 2021, was not accomplished. • IVD does not have an actual strategic plan for managing the implementation of its systems and defining the different hardware and software needs. Currently, there is no plan to manage the projected infrastructure needs, including assessing the long-term data growth requirements of the systems. • The operation of immunisation and logistics systems operated in siloes, without any linkages between immunisation logistics and coverage data, though the data sources are related.	Management comments See detailed management comments – Annex 19

[16] (Tanzania Digital Health Strategy 2019 -2024)

• No infrastructure assessment to inform current and future growth data needs.		
Risk / Impact / Implications • Limited integration of systems may lead to data redundancies and lack of full immunisation data visibility. • The absence of standardised and integrated master lists may pose challenges to the harmonisation of health data management and further impedes the interoperability of systems. • Slow loading reports lead to delays in retrieving important information and compromises the use of data for decision-making.	Responsibility MOHCDGEC/EPI	Deadline / Timetable 31 December 2025

4.4.2 The revitalisation of the Tanzania Immunisation Registry (version 2) should incorporate lessons learnt from TImR version 1

Context and Criteria

The Better Immunisation Data (BID) initiative, led by PATH and supported by the Bill & Melinda Gates Foundation, aimed at enhancing health outcomes through improved data and informed decision-making. In 2013, this initiative partnered with the MOHCDGEC to enhance their immunisation data collection, quality, and utilisation. In 2014, Tanzania developed its Electronic Immunisation Registry (EIR), tailoring it to the country's needs and based a common set of requirements gathered across ten countries as part of the BID Initiative's product vision. During the Tanzania EIR's pilot phase in the Arusha region, the launch encountered challenges, with the lessons learned subsequently informing and resulting in additional modifications to the system's requirements.

In 2016, the Tanzanian EPI adopted a new and improved Electronic Immunisation Registry (TImR), built on the Open IZ platform, in effect a free version of the framework on which the system was developed. TImR features both a mobile application and a web portal functionality. Using this mobile application, healthcare professionals could register children for vaccinations, track administered vaccines, and identify children who were behind schedule for their shots. The web-based portal of TImR enabled the generation of routine, aggregated reports, which are sent to data managers at the district level and central level.

TImR version 1 was developed by a Canadian firm using the Open Immunise (Open IZ) platform, with Bill & Melinda Gates Foundation (BMGF) funding. OpenIZ was the precursor technology for SanteDB, a paid version which is an enhanced data model and is a highly scalable modern platform for managing immunisation at a country and sub-national levels. TImR underwent a transition to the Sante Suite platform in 2021. The transition to Sante Suite DB happened in 2020/2021 because OpenIZ contained clinical data repository and disconnected clients which formed the basis of SanteDB. The SanteDB project was created because, during deployment, several enhancements were identified for OpenIZ which required a significant expansion of the technology which OpenIZ could not support.

Between 2019 to 2021, PATH received Gavi funding totalling USD 798,046 to support maintenance and customisation of the EIR and transitioning this register into a digital system with the following objectives:

- Support and build the capacity of the ICT, monitoring and evaluation (M&E), and IVD programmes in transitioning into completely paperless data collection, processing, and reporting from the PHC to the national levels.
- Enhance the ability of the TImR system to routinely collect, analyse, and report data related to factors leading to immunisation inequities, such as mother's education, income level, distance from facility or outreach post, and the family's place of residence.
- Build the capacity of the ICT in-house development team in TmR software maintenance and customisation.
- Provide technical capacity and linkages of the TImR system and the country's Civil Registration and Vital Statistics (CRVS) system for improved denominator of the children to be immunised.
- Support the mainland (M&E and IVD programmes) to develop an institutionalise data use accountability on immunisation data from the PHC to the national levels for improved coverage and equity.
- Support and build the capacity of the Ministry of Health of Zanzibar in customisation and implementation of the EIR for improved coverage and equity.
- Support the MOHCDGEC in documentation and publication of lessons learned and best practices on existing and emerging issues related to the implementation of the TImR system and data use interventions

Condition ***TImR was not functional at the time of the audit and as such, value for money may not have been realised on Gavi's investment***: Gavi through PEF/TCA provided funding amounting to USD 798,046 through PATH to support the MOHCDGEC in Tanzania and Zanzibar for maintenance and customisation of the EIR and transitioning into a fully digital system - TIMR, which was meant to enhance the ability to routinely collect, analyse, and report immunisation data. The transition from a free platform (Open IZ) to a paid for platform (Sante Suite) had significant financial implications for MOHCDGEC including license fees and the cost of acquiring the source code by MOHCDGEC at the time of transition estimated at TZS 1 billion. This was financially untenable for the Ministry of Health (MOHCDGEC). In addition, the MOHCDGEC ICT team faced some difficulties in adapting to the new platform due to gaps in its understanding and its capability in using the advanced technology of TIMR. Consequently, as of November 2023, the system was not in use, the server was offline, and health facilities had ceased use of TImR in 2022. We noted that PATH, together with IVD and MOHCDGEC, had started work on the revitalisation of TImR (version 2), with focus on utilising open-source platforms like DHIS2 or Google at the time of the audit. This is intended to address the challenges encountered with the previous system- TImR V1.	Recommendation 15 To ensure the sustainability of Gavi's system investments and that value for money is obtained, the MOHCDGEC/IVD management with support from partners should: • carry out an independent analysis for any future systems funded by Gavi (including the user licensing and system maintenance and support costs) to determine (i) the overall cost of implementing the system(s) and whether its benefits outweigh the investment costs and (ii) whether the country is able to sustain the system(s) investments and effectively after the project is fully rolled out. • prior to implementing TImR version 2, conduct a system value assessment to determine the various functional and nonfunctional requirements for the immunisation register endorsed by MOHCDGEC. This assessment should highlight the various features and gaps which the platform of choice will offer. • as part of overall sustainable capacity building initiatives, the IVD and MOHCDGEC ICT teams should take part in the development and customisation of the system, to ensure that skills transfer is planned for from the onset.
Root Cause • A comprehensive cost-benefit analysis and review of the total cost of ownership was not conducted for TImR, as part of the transition to the paid for platform. Consequently, the sustainability of incurring ongoing operations costs associated with maintaining the system using a paid service were not planned for. • Lack of capability by the MOHCDGEC ICT unit in functionally managing TImR version 1's upgrades and customisations	Management comments See detailed management comments – Annex 19

Risk / Impact / Implications	Responsibility	Deadline / Timetable
• Lack of a functional digital immunisation register may result in difficulty in monitoring vaccine coverage and insufficient immunisation tracking of who has been vaccinated and what vaccines have been given. • There is a risk that Gavi's initial investment may not have attained value for the funds invested	MOHCDGEC/EPI	31 December 2025

4.4.3 There were gaps in the development, upgrade, and deployment of VIMS

Context and Criteria

Gavi provided PEF funding to JSI through PEF/TCA amounting to USD 553,777 to support strengthening Tanzania's Electronic Immunisation system (USD 453,089) and development of a Real Time Temperature Monitoring (RTM) dashboard (USD 100,688).

VIMS was developed through a collaborative partnership of JSI, CHAI and PATH, and aimed to integrate and improve workflows from electronic tools previously used including Stock Management Tool (SMT), Cold Chain Inventory Tool, District Vaccine Data Management Tool (DVD-MT), and monthly IVD facility reporting forms into a single cohesive system. The Vaccine Information Management System (VIMS), which developed on Open LMIS framework and currently running version 2.0 with customisation for features like Warehouse Management System (WMS), was launched in 2015 in response to the Tanzanian Immunisation and Vaccine Development (IVD) Programme's needs, aiming to track vaccines, immunisation commodities, cold chain assets and managing routine immunisation data. Currently, VIMS is rolled out at National, Regional and District Level.

ISO 22600:2014 Health informatics – Privilege Management and Access Control (Part 1 through 3) implementation guideline provides an advisory standard for policy-based access control. The section on audit log states that: *all actions based on user-defined events must be recorded and all or a specified set of recorded audit information, upon request or at a set period, must be electronically displayed or printed for user/administrative review*. In addition, ISO/IEC 9001 - Quality Management Systems focuses on quality management systems and principles, including the need for continual improvement, which involves updating systems to enhance performance, quality of service and security of systems.

Gavi developed target software standards for vaccine supply chain information systems to include support for user centred learning and feedback within systems as well as the need for maintenance of quality data in systems.[17]

Condition

The audit team noted the following gaps in VIMS:

No comprehensive VIMS transition plan from JSI to MOHCDGEC: Although efforts have been made such as the development of a migration plan and the preparation of a handover checklist to migrate hosting VIMS to the Ministry of Health's (MOHCDGEC) data centres, JSI is still a key contributor to the enhancement of the Vaccine Information Management System (VIMS) through delivering technical assistance support, capacity building, and systems fortification for IVD programme. In addition, JSI continues to retain operational control over the VIMS source code and continues to play a pivotal role in ongoing management and development of VIMS. A comprehensive transition plan has not been developed – ideally such a plan would include the total cost of ownership for the server infrastructure, hardware acquisition and upkeep, software updates, bug resolution, and the deployment of technical support resources. Without a clear transition plan, the country is not able to confirm if it can sustain the system investment needs.

Use of outdated platform versions in VIMS may lead to increased security risks, reduced compatibility with new systems and potential failures in system performance: Although VIMS uses the latest version 3.15, it is still operating an outdated version 2.0 of the Open LMIS framework. Moreover, the technical stack running the VIMS platform includes software components (e.g. JAVA 1.7 and ANGULAR JS), which are no longer supported by the developers. The use of obsolete technologies not only hampers system performance and functionality, but also raises the system's vulnerabilities to security and compatibility issues.

Recommendation 16

To ensure the optimal utilisation of VIMS, the MOHCDGEC/ IVD management in collaboration with JSI should:

- create a detailed transition plan that includes the quantification of all operational costs such as server infrastructure, hardware acquisition and maintenance, software updates, bug resolution, and technical support.
- conduct source code validation and formal assessment to validate the shared source code against the live / production system's code.
- ensure the full transfer of control over the code ownership (including Github repositories) from JSI to the MOHCDGEC/IVD, to ensure the Ministry's autonomy and ownership of the system.

[17] Gavi targeted software standards

Unvalidated source codes: On 29th October 2023, JSI provided the IVD/MOHCDGEC team with the source code for VIMS. However, no formal assessment was conducted to verify the authenticity of the shared code against the live system's code currently in operation. Also, JSI still retains ownership and control over the repository in GitHub[18] where the VIMS code is stored. Technically JSI also still has control of the system's ongoing management and development, a key responsibility which should be with the MOHCDGEC/ IVD teams. ***There were no comprehensive user audit logs:*** There were no audit logs to track user actions in the VIMS application, so as to support troubleshooting any security issues, in support of restoring the system in the event of a breach. ***Nonfunctional training environment for VIMS system impacting the proper use of the system:*** Although the VIMS' SOPs included a provision for a training environment to enhance user competency through practice, this was not operational by the time of the audit. ***Presence of unvalidated / dummy records in-live VIMS system:*** Some dummy records still exist within the live VIMS environment. This potentially could have a negative impact on the end-user experience and data integrity, such as by resulting in the misinterpretation of data or creating errors in reporting. Consequently, the audit noted the following implications from the VIMS system user perspective: ***Incomplete development of VIMS to run an optimised business process:*** The audit team identified discrepancies in the application of VIMS, raising concerns about users' dependence on the system to efficiently manage warehouse operations. Examples of issues included stock reports displaying negative balances, the system's incapacity to execute basic data queries/reports from the front end for effective data analysis and decision-making, and insufficiencies in users' proficiency in operating the system. Additionally, it was observed that the Warehouse Management System (WMS) module in VIMS lacked the capability to maintain a continuous, integrated stock ledger, making it impractical to retrieve stock balances for a specific date in the past. Also the WMS system could not generate picking lists for commodities. ***Inaccurate and incomplete COVID-19 transactions in VIMS:*** The audit team faced challenges in obtaining comprehensive data on COVID-19 dose from VIMS, preventing the execution of a stock reconciliation for COVID-19 doses in the system. For example, a report generated from WMS indicated that IVD had distributed 94 million doses of COVID-19 vaccines, which was impossible as it exceeded the total receipts of 37 million doses recorded.	• consider upgrading the technical stack to the latest versions and implement a phased upgrade of the Open LMIS components to the latest version, depending on the compatibility of any customisations made. • put in place a record comprehensive audit logs that record all user actions on the front end, in line with ISO 22600:2014 and Gavi/TGF software standards. • operationalise the training environment as stipulated in the VIMS' SOPs, to improve user competency and efficiency. • conduct a thorough review of the live system to remove all dummy records to maintain data integrity. Additionally, establish robust data validation processes to prevent such events occurring again in the future.
Root Cause • Limited quality reviews of immunisation systems. Sanity checks and quality reviews on systems were not performed to identify issues like test data on systems, errors with functionality of systems, inactive links on systems. • Inadequate skills training on utilisation and support of VIMS while in some situations, training of IVD warehouse staff on VIMS has not translated into on job improvement as they relied on IT staff to run the system. • Transfer of the source code for VIMS from the developer (JSI) to IVD was delayed, consequently, the continuous system modification and troubleshooting of operational emerging glitches. • Reported VIMS error that resulted in the doubling of quantities when users were issuing COVID-19 vaccines.	Management comments See detailed management comments – Annex 19

[18] (About GITHUB, n.d.) GitHub is an online software development platform that is used for storing, tracking, and collaborating on software projects. It makes it easy for developers to share code files and collaborate with fellow developers on open-source projects.

• Delayed focus on VIMS optimisation due to competing priorities during the pandemic.		
Risk / Impact / Implications • Increased security risks due to operating outdated software components, exposes VIMS to heightened security vulnerabilities. • The absence of comprehensive audit logs to track user actions, compromises the ability to troubleshoot security issues effectively and can help restore the system in the event of a breach. • The existence of dummy records in the live system, negatively impacts upon data integrity. • Without a clear understanding of the costs involved in maintaining the system, there is a risk of underfunding critical components, potentially leading to future limitations that could impair the system's functionality.	Responsibility MOHCDGEC/EPI	Deadline / Timetable 31 December 2025

4.4.4 Weaknesses in the DHIS2 and Chanjo Covid systems

Context and Criteria

In 2016, DHIS2 was launched by the MOHCDGEC's Directorate of Policy and Planning. DHIS2 is Tanzania's primary national health management information system. It includes modules for tracking immunisation data, among other health indicators in support of the MOHCDGEC to monitor health trends, plan health services, and allocate resources effectively. DHIS2 has been rolled out in all 184 districts in Tanzania. DHIS2The system is hosted centrally in the MOHCDGEC's data centres and plays a key role in managing the aggregated data for routine immunisation for health facilities. Additionally, DHIS2 also helps to enhance disease surveillance, by also linking up with several other specialised systems as follows, each of which contribute to the healthcare landscape:

- eIDSR (Electronic Integrated Disease Surveillance and Response): Developed using USSD technology, eIDSR is seamlessly linked with DHIS2 for the prompt reporting of infectious disease data. This response tool significantly enhances the detection and response time, to disease outbreaks and is used across all health facilities.
- HRHIS (Human Resources for Health Information System): HRHIS is an important system designed to report human resource data from all Tanzanian health facilities. The system helps to: assess human resource challenges, manage the distribution of healthcare personnel, and to plan and evaluate HR interventions, thereby streamlining the health sector's workforce management.
- MFL (Master Facility List): The MFL is as a comprehensive register of health facilities and maintains detailed records about their profile. This system is useful in keeping track of facility-specific information, and assists in the disposition, planning and allocation of resources.
- eLMIS (Logistics Management Information Systems): eLMIS is a supply chain system dedicated to the distribution and stocking of pharmaceuticals and other medical commodities. Its integration with DHIS2 ensures a streamlined and efficient supply chain management for public healthcare.

In 2021, in response to the COVID-19 pandemic, Tanzania launched the CHANJO COVID system, to support: the registration of vaccine beneficiaries, scheduling vaccination appointments, the monitoring of doses administered and the generation of vaccination certificates

Condition

We noted the following weaknesses in the DHIS2 and CHANJO COVID systems:

The DHIS2 platform is outdated and is no longer supported by the developer: DHIS2 is currently running and operating version 2.36, which is an outdated version that is no longer supported since December 2022. The latest version of the DHIS2software version 40, is available.[19] The Department of Policy and Planning (DPP) lacks the in-house capacity to manage system upgrades and customisation, instead it relies upon external support from the University of Dar es Salaam for such services. Such reliance on an external provider for upgrades and software development, could result in continuity and performance issues in using the system.

Errors in the data validation tool which may lead to significant data inaccuracies and inconsistencies: The audit team noted errors in the data validation tool. For example, the tool was not able to pick out data outliers and frequent crashes while querying data inconsistencies which can compromise the reliability of data-driven decision-making and reporting.

Recommendation 17

To ensure optimal utilisation of the DHIS2 , the MOHCDGEC/IVD management should:

- invest in building its internal capacity for system management, including training in-house technical teams to run upgrades and software-customisation related tasks.
- develop and implement an ongoing training program for technical teams, focusing on current DHIS2 features and best practices in data management.
- update DHIS2 to the latest software version, to access current updated features and functions.
- enhance CHANJO COVID's validation processes by integrating field validations and linking with NIDA for

[19] This DHIS2 release (V40) signifies a shift in the version numbering convention, where the "2" is now a permanent part of the name DHIS2. Currently all previous versions have been aligned to the new format dropping the "2."

<table>
<tr><td colspan="2">Inadequate DHIS2 training of technical teams at district level: The last training for technical teams supporting the districts was conducted in 2014. The lack of training could result in a decline in the technical teams' ability to address evolving challenges within the system, potentially impacting the effectiveness of support.

Suboptimal system validation checks in Chanjo Covid system: There was no validation for critical fields like user registration. In addition, the system is not linked with the National Identification Authority (NIDA) to support verification of identity details. This may lead to errors in certificate generation.</td><td colspan="2">identity verification. Regularly update and test these features to ensure accuracy and security.</td></tr>
<tr><td colspan="2">Root Cause
• Limited capacity for the in-house technical teams in performing system upgrades and software customisation tasks.
• Limited skills training for the technical teams.
• Limited quality reviews of the immunisation systems.</td><td colspan="2">Management comments

See detailed management comments – Annex 19</td></tr>
<tr><td>Risk / Impact / Implications
• Running the outdated DHIS2 version 2.36 limits the system's functionality and exposes it to security vulnerabilities.
• The lack of frequent training for those technical teams that support the health districts, may result in their decreased ability in addressing system challenges as they arise and evolve, impacting the effectiveness of the system.
• Compromised data integrity in CHANJO COVID, due to validation gaps, could result in errors in certificate generation.</td><td>Responsibility

MOHCDGEC/EPI</td><td>Deadline / Timetable

31 December 2025</td></tr>
</table>

4.5 Immunisation data management

4.5.1 An outdated denominator was used to set targets leading to inaccurate reporting

Context and Criteria

Gavi's HSS and NVS general guidelines (2015-2018), recommend that when using data on projections of live births, that Gavi-supported countries ensure it is consistent with external projections. Furthermore, the guidelines recommend that Gavi-supported countries conduct high quality national household surveys every five years.

Section 1.5 of the Health Information System Guidelines (2019) states that: "the health information system is a comprehensive and integrated structure that collects, stores, collates, analyses, and disseminates health and health-related data and information for monitoring and evaluating the performance of health interventions. The health information system consists of separate parts that are interrelated, interdependent, and work towards a common goal. The health information system consists of health institution–based data and population-based health data. Health institution–based data = administrative data + facility-based data + community-based data".

In conjunction with these guidelines, the audit team was informed that IVD used the National Bureau of Statistics population projections that are based on the 2012 census (projected surviving infants (age zero) in the projections). Although Tanzania carried out a Demographic and Health Survey and Malaria Indicator Survey (TDHS-MIS) and a national population census in 2022, these were not used to adjust or recalibrate IVD's denominator.

Although DHIS2 is the national health information management system, IVD with support from Gavi and its partners developed VIMS to record, manage and report its immunisation data. Consequently, immunisation data is currently reported via two systems DHIS2 and VIMS which operate in parallel. According to the IVD, VIMS is the more accurate, reliable source of immunisation data for decision-making. The routine immunisation data reported in VIMS is collected on daily basis from all vaccinating health facilities using the standard data collection and monitoring tools. At the end of each month, the monthly statement of immunisation services is compiled using monthly report forms. Health care workers aggregate their data from the IVD tally sheets as per the indicator requirements and fill in the IVD monthly summary form before submitting to it DIVOs who compile all monthly health facilities reports in their district/council and enter in VIMS. In a parallel arrangement, routine immunisation data reported in DHIS2 is collected on daily basis from all vaccinating health facilities using the standard data collection and monitoring tools include Data from the child register is also entered in the monthly report for immunisation monitoring tally sheet before its entered in DHIS2 by the HMIS focal person at the district

Condition

The audit team performed various tests at the national level to understand the methodology used for setting targets, how they are measured and the country's progress in reaching many infants under the age of 2years with immunisation services. The team sought to assess the accuracy of the target data sources, which are relied upon for decision making and how IVD was interpreting the outcomes achieved, given the issue with the denominator impacted upon by still using historic census figures. This assessment helped to review the MOHCDGEC's ability of determining to what extent it is meeting "the goal of leaving no one behind with immunisation". The audit team noted the following gaps:

***Variance between the number of surviving infants in VIMS (target) and the National Bureau of Statistics (NBS) projected surviving infants*:** The audit team obtained data extracts from VIMS and DHIS2 and compared the number of surviving infants input into VIMS (a similar number to that recorded in DHIS2) against the number of surviving infants projected by the NBS and noted the following variances as shown below:

Recommendation 18

To ensure the accurate and reliable reporting of immunisation targets, the MOHCDGEC/IVD management should:

- review the impact of the differences in projected number and VIMS/DHIS2 as it may be indicative of an erroneous denominator against which the immunisation targets are set.
- carry out a detailed immunisation specific data quality audit and use the findings from the audit to engage with the National Bureau of Statistics to come up with a model that incorporates changes in

Table 12: Variance between the number of surviving infants in VIMs and NBS projected surviving infants.

	NBS projected surviving infants.	Surviving infants in VIMS	Variance
2018	1,959,188	1,969,481	(10,293)
2019	2,006,509	2,018,646	(12,137)
2020	2,061,234	2,061,292	(58)
2021	2,121,522	2,128,568	(7,046)
2022	2,158,316	2,152,179	6,137
	10,306,769	**10,330,166**	**(23,397)**

Variance between BCG vaccinations and the number of surviving infants used as target population: In addition, the audit team used the number of children vaccinated with BCG which is a birth dose as a proxy for a more updated number of surviving infants to be used as a target However, when comparing this number of BCG vaccinations to the number of surviving infants recorded by IVD in VIMS, the audit team noted a significant variance equivalent to an average 20% shortfall, as summarised below.

Table 13: Variance between BCG vaccinations and the target population recorded in VIMS.

Years	BCG vaccinations	Surviving infants in VIMS	Variance	Percentage variance
2018	1,789,345	1,969,481	- 180,136	-10%
2019	2,615,303	2,018,646	596,657	23%
2020	2,650,149	2,061,292	588,857	22%
2021	2,761,276	2,128,568	632,708	23%
2022	3,051,960	2,152,179	899,781	29%
	12,868,033	**10,330,166**	**2,537,867**	**20%**

Consequently, we could not ascertain the accuracy of the denominator in VIMS to ensure that MOHCDGEC reaches all children under the age of 2 years with all immunisation services. Furthermore, there is an increase in the number of districts reporting coverages above 100% as summarised below:

	2018	2019	2020	2021	2022
Total number of Districts in Tanzania	184	184	184	184	184
Number of districts reporting DTP 1 coverage above 100% (Negative zero dose)	60	131	125	121	138
Number of districts reporting DTP 3 coverage above 100%.	49	119	99	102	126

the population when determining a denominator to use.

<table>
<tr><td>Root Cause
• IVD has never carried out an immunisation specific DQA.
• The IVD data management guidelines are still in draft form and not approved to enhance compliance.
• Although the M&E TWG ToRs require quarterly meetings, no evidence of meetings was provided for the entire audit period.</td><td colspan="2">Management comments

See detailed management comments – Annex 19</td></tr>
<tr><td>Risk / Impact / Implications
• Use of inaccurate data may result in imprecise administrative coverage data and may undermine the confidence placed upon reported administrative coverage data. The terms of the signed PFA with Gavi encourage precision.
• Given the trend of increasing numbers of districts reporting coverage above 100%, the programme may be unable to design interventions to identify zero dose children due to the use of incomplete target data.
• According to the IVD Measles Rubella updates presented on 20 October 2023, a total of 109 (56%) councils recorded a measles outbreak in 2023.</td><td>Responsibility

MOHCDGEC/EPI</td><td>Deadline / Timetable

30 June 2025</td></tr>
</table>

4.5.2 Inconsistencies in administrative immunisation coverage

Context and Criteria

Clause No. 8 (d) of the partnership framework agreement requires that all information provided to Gavi including its applications, progress reports, any supporting documentation, and other related operational and financial information or reports, is accurate and correct as the time such information is provided. In addition, Annex 1, Article 16 of the agreement sets out additional provisions on the monitoring and reporting, specifying that "the Government's use of Gavi's vaccine and cash support is subject to strict performance monitoring," such that: "Gavi seeks to use the Government's reports and existing country-level mechanisms to monitor performance."

Gavi's application guidelines also require Gavi-supported countries to improve data availability, data quality and use of data for their planning, programme management, understanding and documentation of results. The guidelines encourage the use of immunisation coverage data as an ongoing institutionalised process for better planning, improved programme performance and resource management.

Although DHIS2 is the national health information management system, IVD has also developed its vaccines immunisation management system to record, manage and report immunisation data. Consequently, immunisation data is recorded in two parallel systems (DHIS2 and VIMS). According to IVD, the data in VIMS is a more accurate and reliable source of immunisation data.

Condition

Anomalies in reported administrative coverage: Inconsistencies were noted in the VIMS administrative coverage data reported, when compared to the number of doses distributed by the Central Vaccine Store during the period under review. The total dose numbers distributed were adjusted using WHO recommended wastage rates. The audit team's analysis indicates that the number of children reported as vaccinated with Pentavalent, PCV and Rota over the five-year period 2018 to 2022, was consistently higher than the quantities of vaccines distributed. Such anomalous variances could be an indication of over-reporting.

Table 14: Mismatch between administrative coverage in VIMS and physical doses distributed

Antigen	Administrative coverage in VIMS (2018-2022)	Doses distributed (2018 to 2022)	Variance
Penta	30,511,184	28,209,500	2,301,685
PCV	30,139,744	28,113,008	2,026,736
Rota	19,176,969	15,957,655	3,219,314

Furthermore, the audit team noted that since 2019 the VIMS administrative data reported was consistently higher than the WUENIC data as summarised in the table below:

Table 15: Variances between VIMS and WUENIC data

	Penta 1&3			PCV 1-3			Rota 1&2		
Year	VIMS	WUENIC	Variance	VIMS	WUENIC	Variance	VIMS	WUENIC	Variance
2018	2,735,524	3,624,739	(889,215)	4,060,178	5,960,682	(1,900,504)	2,733,926	3,423,365	(689,439)
2019	4,285,918	3,710,417	575,501	6,363,036	6,060,348	302,688	4,223,919	3,504,283	719,636
2020	4,299,870	3,682,499	617,371	6,342,144	6,031,680	310,464	4,199,142	3,470,862	728,280
2021	4,421,780	3,569,959	851,821	6,461,566	5,703,226	758,340	4,329,029	3,352,278	976,751
2022	4,689,600	3,961,438	728,162	6,912,820	5,510,604	1,402,216	3,626,423	2,965,546	660,877
Total	**20,432,692**	**18,549,053**	**1,883,639**	**30,139,744**	**29,266,541**	**873,203**	**19,112,439**	**16,716,334**	**2,396,105**

Recommendation 19

To ensure that accurate, correct and reliable immunisation data is available for decision making, the MOHCDGEC/IVD management should:

- routinely triangulate the data available, including an assessment of administrative coverage data and vaccine availability/ utilisation to check for accuracy of data reported. Such analyses should be completed at both national and sub-national levels, and any data inconsistencies noted should be validated and explained.
- ensure that all primary data collection tools are completed correctly and that their information correlates across similar tools and sources.
- make sure that data verification and validation exercises are regularly undertaken at the health facility and district level.
- ensure adequate supervision at sub-national level over data collection and management components, including the follow-up of recommendations to address any data management gaps identified from the supervision visits

Variances between VIMS reported data and underlying data records at the service delivery points: The audit team visited 50 health facilities and carried out a comparison of the vaccinations recorded in VIMS, with the underlying supporting tools including the: immunisation register, tally sheets and monthly reports for pentavalent and IPV. The audit team noted difference between the these supporting documents and VIMS in all health facilities visited. See Annex 17a, 17b, 17c & 17d for details.

***Variances between coverages of vaccinations administered at the same time leading to missed vaccination opportunities*:** According to the immunisation schedule for Tanzania, children are supposed to receive Pentavalent 1 and PCV 1 at six weeks, Pentavalent 2 and PCV 2 at ten weeks and Pentavalent 3 and PCV 3 at 14 weeks. The audit team compared the Pentavalent 1, 2 and 3 coverage against PCV 1, 2 and 3 coverage for the five-year period 2018 to 2022 and noted variances as illustrated below:

Table 16: Variances between Penta and PCV coverages

Year	Penta 1 (a1)	PCV 1 (a2)	Variance (a1-a2)	Penta 2 (b1)	PCV 2 (b2)	Variance (b1-b2)	Penta 3 (c1)	PCV 3 (c2)	Variance (c1-c2)
2018	1,413,162	1,406,958	6,204	1,351,460	1,341,158	10,302	1,322,362	1,312,062	10,300
2019	2,181,038	2,180,624	414	2,113,108	2,099,376	13,732	2,104,880	2,083,036	21,844
2020	2,199,777	2,181,359	18,418	2,115,874	2,094,097	21,777	2,100,093	2,066,688	33,405
2021	2,264,130	2,223,496	40,634	2,186,167	2,134,253	51,914	2,157,650	2,103,817	53,833
2022	2,385,111	2,355,225	29,886	2,311,883	2,283,060	28,823	2,304,489	2,274,535	29,954
Total	**10,443,218**	**10,347,662**	**95,556**	**10,078,492**	**9,951,944**	**126,548**	**9,989,474**	**9,840,138**	**149,336**

Root Cause

- While some integrated data quality assessments were done, there was no field based data quality assessment that focused specifically on immunisation data.
- There were no data quality reviews done in 13/50 HFs visited by the team. For those health facilities where data reviews did take place, there was no evidence of any follow-up on the action points raised during the reviews.
- Data quality review checklists used by the health facilities are not designed to identify gaps in data, in terms of inaccuracies, inconsistencies and completeness, which undermines the effectiveness of the HR level data reviews.
- Multiple tools to be filled at HF i.e., five books (Book 7 Child Register, Monthly Report on Immunisation Monitoring Tally Sheet, Monthly Statement of immunisation services, Matching Form for Book 7 and Children's monthly monitoring report.
- The development of both sets of tools was done by different agencies (Book 7 – DPP; Immunisation cards – RCH, Tally sheets – IVD) and some data tools are incomplete and do not capture all antigens i.e., IPV and Rota 3; immunisation card.
- Limited monitoring, training, and supervision of staff at HF level
- Limited to no collaboration between RIVO/DIVOs and HMIS officers at district and regional levels
- Sub-optimal record keeping leading to missing data records.
- The system-based data quality checks in DHIS2 are not functional

Management comments

See detailed management comments – Annex 19

Risk / Impact / Implications

- Inconsistent immunisation and consumption data deters effective strategic decision making thus affecting grant performance and subsequent funding decisions.
- Unreliable vaccination coverage compromises the immunisation programme's ability to identify under immunised and children who are not immunised.

Responsibility

MOHCDGEC/EPI

Deadline / Timetable

31 December 2025

• Without an effective data verification and validation process, data anomalies will not be identified and promptly corrected– resulting in inaccurate or erroneous immunisation data entries and reporting. Unexplained data anomalies undermine the credibility of the reported immunisation administrative coverage. • Reporting inaccurate coverage via Gavi's performance framework is not compliant with the Partnership Framework Agreement. • Better alignment of pentavalent and PCV vaccines could bring opportunities to reach more children.		

4.5.3 Weaknesses in data quality assurance mechanisms

Context and Criteria

The general guidelines for country applications for Gavi-supported countries recommend that they improve their data availability, quality and analysis capabilities, as it is essential in using data to better plan, manage programmes and to accurately explain and document results. The guidelines encourage the use of immunisation coverage data as an ongoing institutionalised process, for better planning, improved programme performance and resource management. Countries are also encouraged to develop a strategic data improvement plan, based on their latest assessment, to identify key priority areas to be addressed, clarifying responsibilities, identifying resources needs and availability, timelines, and key milestones.

In 2020, MOHCDGEC tasked IVD in collaboration with the partners to conduct an EPI programme review, in order to help develop the National Immunisation Strategy (NIS). The findings from this review identified: low uptake and underutilisation of Electronic Immunisation Systems (EIS), ineffective implementation of data review meetings, lack of data ownership coupled with poor documentation among regional, and council managers and head of health facilities and delays in synchronisation the various systems. Based on these findings , the IVD initiated strategies such as a data verification exercise to address these gaps. The IVD conducted this verification exercise to validate its routine immunisation data, including vaccinations coverage, vaccine utilisation and the functionality of the M&E reporting system during the 7-month period June-December 2022. The objective of the data verification exercise, carried out between March and May 2023, was to assess the quality of routine immunisation data and inform the development of a robust Data Quality Improvement plan. Per the standard operating procedure for data verification exercises, this activity focused on recounting the vaccinations from the IVD tally sheet, reviewing vaccination monthly reports and the monthly vaccination data entered into VIMS, as well as checking the vaccine data recorded in the ledger.

Data Quality Assessments (DQA) conducted by immunisation programmes provide a self-assessment opportunity for countries to identify their data challenges and develop improvement plans. Since 2015, Gavi required countries to perform the DQA using WHO-endorsed methodologies. Although DQA is not an annual requirement, it is recommended to be done at least every three to five years.

Tanzania carried out an integrated data quality assessment in 2017. Data Quality Assessment (DQA) was conducted in 26 districts covering a total of total of 280 HFs. However, the main focus of the DQA was to independently validate HIV and AIDS, Malaria, TB and other key DHIS health indicators in comparison with routine health facility registers

Condition

***Slow implementation of recommended actions in the Data Quality Improvement Plan*:** In January 2021, Tanzania's Data Quality Improvement Plan (DQIP) was developed, covering the five-year period 2021 to 2025. The process was guided by desk reviews and data quality surveys conducted in selected districts. Based on the audit team's review of the DQIP, the following areas of improvement were noted:

- The recommended actions were not prioritised and costed to guide resource mobilisation and prioritisation of interventions.
- A monitoring framework with milestones/indicators to track the implementation of the DQIP was not developed. Consequently, only 4 out of 23 improvement plans have been fully implemented, 8 were partially implemented and 11 have not yet been implemented. Below are examples of actions which have not been implemented:
  - Conducting an external data quality assessment in selected facilities, councils, and regions.
  - Support facilities, councils, and regions to develop health profiles showing data quality measurements.
  - Conduct monthly meetings with DIVOs/RIVOs to assess the implementation status of data improvement plan.

Recommendation 20

To improve the availability, quality and use of data, the MOHCDGEC/EPI management should:

- carry out immunisation specific DQAs according to the WHO-endorsed methodology. This should include developing properly resourced DQIPs, after each DQA.
- ensure that the M&E TWG properly monitors all the activities identified in the DQIP and that these are implemented in a timely manner.
- budget for its outstanding DQIP action items and ensure that sufficient funding is allocated to all critical areas of the plan.

- Disseminate National health information system and data quality guidelines to guide data analysis, visualisation and data use for planning and decision making.
- Operationalisation of the data quality improvement plan
- Operationalisation of data quality improvement team to monitor implementation of data quality improvement plan.

Benefits from the data verification exercises have not been realised: IVD carried out phase one of a data verification exercise between March and May 2023 covering 13 regions. However, the preliminary report from this exercise did not include a detailed root cause analysis of the data management challenges/gaps identified, nor did it provide recommendations for improvement. In addition as at November 2023, the second phase of the exercise had not yet been implemented.

There was no immunisation-specific data quality assessment: IVD has never carried out an immunisation specific DQA, although there is one planned for April 2024. The last DQA carried out in 2017 was an integrated assessment, which focused on independently validating HIV/AIDS, Malaria, TB and other key DHIS health indicators against health facilities' registers. Only one immunisation indicator (the number of children immunised with Pentavalent 3) was included in the 2017 DQA. Although the prior DQA report summarised its key recommendations, these were not translated into a detailed data quality improvement plan.

Variances between immunisation data in VIMS and DHIS2: In addition to the national health information management system DHIS2, IVD opted to develop its own VIMS system, to record, manage and report on immunisation data. Consequently, immunisation data is currently recorded and tracked via two parallel systems (i.e. both DHIS2 and VIMS). According to IVD, the immunisation data in VIMS is a more accurate and reliable source for decision making. The audit team compared the immunisation data in VIMS and DHIS2 and noted several notable differences as summarised in the table below:

Table 17: Variances between VIMS and DHIS2 immunisation data – aggregated at national level

	Pentavalent			PCV			Rotavirus		
	DHIS2	VIMS	Variance	DHIS2	VIMS	Variance	DHIS2	VIMS	Variance
2018	5,804,523	4,086,984	1,717,539	86,755,473	4,060,178	82,695,295	3,873,007	2,733,926	1,139,081
2019	6,143,554	6,399,026	(255,472)	6,178,244	6,363,036	(184,792)	4,033,974	4,223,919	(189,945)
2020	6,001,466	6,415,744	(414,278)	6,197,585	6,342,144	(144,559)	4,111,590	4,199,142	(87,552)
2021	6,133,021	6,607,947	(474,926)	12,682,241	6,461,566	6,220,675	4,005,929	4,329,029	(323,100)
2022	6,381,248	7,001,483	(620,235)	6,634,185	6,912,820	(278,635)	3,448,777	3,690,953	(242,176)

Furthermore, the audit team visited 19 districts and compared a sample of each district's VIMS and DHIS2 immunisation data for the Pentavalent and IPV vaccines, and observed variances between the two systems' data across all of districts sites visited. Annex 16a & 16b.

<table>
<tr><td>Root Cause
• Insufficient oversight arrangements on the M&E function at EPI level. Although the M&E TWG ToRs require quarterly meetings, no evidence of such meetings occurring was provided for the entire audit period.
• The IVD data management guidelines are still in draft form.
• There were no data quality reviews undertaken in 13 of the 50 HFs visited. Where data reviews were undertaken, there was no evidence of that the reviews' action points were followed-up.
• The data quality review checklists used by the health facilities, are not designed to identify gaps in data in terms of inaccuracies, inconsistencies and completeness, leading to inadequate and ineffective data reviews at HF level.
• The data quality checks in DHIS2 are not functional.</td><td colspan="2">Management comments

See detailed management comments – Annex 19</td></tr>
<tr><td>Risk / Impact / Implications
• Key priority areas for data quality may not be addressed on time which could lead to inaccurate, incomplete, inconsistent, and unreliable immunisation data.
• Failing to implement critical data quality activities affects the quality of immunisation results and the overall direction and guidance that Management can provide to the programme.
• Without good quality DQAs, IVD is unable to demonstrate improvements in the quality of its coverage data.</td><td>Responsibility

MOHCDGEC/EPI</td><td>Deadline / Timetable

31 December 2025</td></tr>
</table>

4.6 Budgeting and financial management

4.6.1 Weaknesses in controls over expenditure supporting documents leading to questioned expenditure

Context and Criteria

Paragraph 20, Annex 2 of the PFA defines misuse of funds and supplies. It states that in respect of all funds, vaccines and related supplies provided under the Programme(s), the Government shall comply with obligations and requirements on the use of such funds and supplies, including the following:

- The Government shall use the funds and vaccines, and related supplies received from GAVI under a Programme for the sole purpose of carrying out the Programme Activities of such Programme.
- The Government shall ensure that there is no misuse or waste of, or corrupt, illegal, or fraudulent activities involving the funds and vaccines and related supplies; and
- The Government shall ensure that all expenses relating to the use or application of funds are properly evidenced with supporting documentation sufficient to permit GAVI to verify such expenses.

Condition

Questioned expenditures amounting to USD 33,172: During the audit in November 2023, the audit team reviewed a sample of expenditure documents at multiple sites including: MOHCDGEC central level, sub-national level (Regions and Councils), PORALG, and Zanzibar during the period under review (i.e., 1 January 2018 to 31 December 2022). The expenditures reported by MOHCDGEC totalled USD 7,510,411 of which 34% (USD 2,531,603) was audited by the team. In addition, the team reviewed the external audit reports and noted that the National Audit Office of Tanzania (NAOT) had questioned expenditures totalling USD 44,942 which resulted in an overall amount totalling USD 265,009 that was questioned due to the inadequacy of supporting documents, ineligible expenditures or unsupported expenditures. However, following the audit, MOHCDGEC looked for the missing documents and the audit team did a follow up visit in August 2024. As a result of this validation exercise, the total questioned costs reduced to USD 33,172 as summarised below (see Annex 18 for details):

Table 18: Summary of questioned expenditures

Grant	Inadequately supported	Ineligible	Unsupported	Total TZS	TOTAL (USD)
HSS -IVD Central	-	3,520,234	-	3,520,234	*1,591*
CDS- IVD Central	-	275,901	-	275,901	*125*
CDS- IVD Subnational	-	-	-	-	-
Sub-total	**-**	**3,796,135**	**-**	**3,796,135**	*1,716*
Results from NAOT review		5,758,988		5,758,988	*2,603*
Unaccounted HSS disbursements as per PORALG SOE	-	0	63,842,858	63,842,858	*28,854*
Total (TZS)	**-**	**9,555,123**	**63,842,858**	**73,397,981**	*33,172*
Total (USD)	**-**	***4,318***	***28,854***	***33,172***	

Recommendation 21

To ensure that funds are properly and adequately accounted for, the MOHCDGEC/IVD management should:

- ensure that all expenditures are adequately supported with relevant documents, such as: activity reports, attendance sheets, fuel/vehicle logbooks.
- ensure that the supervision of financial management practices at sub-national level is conducted.
- ensure that the financial management guidelines provided to Zanzibar and PORALG, clearly communicate the expected standard of accountability with regards to different cost categories.
- ensure that the Gavi financial reports are reviewed by either the Technical Assistance team or any other relevant officer, prior to the reports being submitted to Gavi.

<table>
<tr><td colspan="2">Ineligible expenditures (USD 4,319): The ineligible expenditures relate to the use of funds for activities not included in the approved budgets. This includes USD 1,716 which were Gavi funds used to pay taxes. A letter has been submitted to Tanzania Revenue Authority to claim for refund of this amount. The remaining amount of USD 2,603 relates to ineligible expenditure from the NAOT review which had not been specifically cleared by the auditors in the subsequent audit.

Unsupported expenditures (USD 28,854): This relates to the HSS funds disbursed to PORALG on 24th May 2021 which were not accounted for. These funds were not used and swept off the PORALG accounts into Ministry of Finance accounts at the end financial year 2021/2022 and are yet to be refunded.</td><td></td></tr>
<tr><td colspan="2">Root Cause
• There was no evidence of financial support supervision to review and validate statements of expenditure against underlying support documents in all Regions, Councils and Health Facilities visited by the audit team.
• There is no evidence of review of Central level accountability documents.
• The financial management guidelines shared with Zanzibar and PORALG upon disbursement of funds do not communicate what is required as supporting documents for the different cost categories.
• Gavi financial reports are prepared by the grant's coordinator and there was no evidence to confirm that reports are reviewed by either the Technical Assistance team or any other relevant officer before they are submitted to Gavi.
• The process of application of a tax exemption from TRA has not been completed as required by the GMRs.</td><td>Management comments

See detailed management comments – Annex 19</td></tr>
<tr><td>Risk / Impact / Implications
MOHCDGEC/IVD failure to ensure that Gavi’s funding was used for the intended purpose, in accordance with the terms and conditions of the Partnership Framework Agreement resulting in questioned expenditures amounting to USD 33,172 (unsupported and ineligible).</td><td>Responsibility
MOHCDGEC/EPI</td><td>Deadline / Timetable
30 June 2025</td></tr>
</table>

4.6.2 Weaknesses in budgeting and financial management at national level

Context and Criteria

In August 2020, Gavi and the Government agreed upon various grant management requirements including the following:

- The EPICOR-based Integrated Financial Management System implemented at the IVD will be used to manage the accounting and reporting of Gavi grants.
- IVD will prepare and submit financial reports to Gavi every six months, in accordance with Gavi's Guidelines on Financial Management and Audit Requirements.
- Programme of Financial Monitoring – IVD will prepare an annual plan for the financial monitoring of funds transferred to regions and councils including physical field visits.
- If needed, MOHCDGEC may seek technical assistance from Gavi to refine IVD accounting and financial procedures manual. The manual will be tailored to include, among other aspects, specific processes resulting from the implementation of EPICOR and roles for tax exemption procedures.
- In accordance with the provisions of the PFA dated July 2013, MOHCDGEC/IVD/POLARG will ensure that the relevant exemptions from taxes and duties are obtained from the respective ministries, departments/agencies. The MOHCDGEC will provide to Gavi any document(s) establishing the tax exemption required by the Partnership Framework Agreement and any other applicable tax exemption.
- The annual workplan plan of the internal audit department of MOHCDGEC shall include the audit of Gavi grants. HSS budget may include the operational costs to facilitate the internal audit reviews.

The Ministry of Finance and Planning guidelines for preparation of Plan and Budget, Part II Chapter 2 sub-section 2.4, states "Accounting Officers are instructed to prepare and submit Quarterly Progress and Annual Performance Reports on a quarterly basis". In addition, section 25 sub-section 4(a) of Tanzania's Public Finance Act (2001) requires the preparation of accounts and reports in accordance with Generally Accepted Accounting Principles (GAAP).

Following the results of the 2016 Gavi programme audit, during the subsequent period 2017 until May 2021, Gavi's funds were channelled through UNICEF. In June 2021, Gavi resumed channelling its funds through Ministry of Health and beginning May 2021, MOHCDGEC started spending Gavi funds using national systems to record the transactions. Between June 2021 and December 2022, MOHCDGEC received various Gavi grants as follows: USD 3,358,516 under HSS; USD 6,752,474 under CDS 1; and USD 15,026,011 under CDS 2.

MOHCDGEC also collaborates with the President's Office Regional Administration and Local Government (PORALG) and the President's Office Public Service Management to recruit and deploy human resources for health throughout the country. PORALG is responsible for the implementation of all health and immunisation interventions in the regions, districts, and health facility level.

To strengthen IVD's financial management capacity, Gavi contracted a Financial Management Consultant to provide technical assistance to MOHCDGEC and support Gavi's Country Programmes Team to work alongside the staff of the IVD department and the, to ensure a high level of implementation and funds absorption, and proper accountability over Gavi funds. The specific objectives of this technical assistance engagement included:

- Implementing proper accounting and reporting functionality for IVD using EPICOR Integrated Financial Management Information System.
- Monitoring to ensure proper accounting and reporting for activities at sub-national levels
- Establishing arrangements for accountability and reporting for President's Office Regional and Local Government.
- Supporting IVD and POLRAG to establish working arrangements for regional sub-treasuries and Regional Immunisation and Vaccine Officers.
- Establishing arrangements for accountability and reporting in Zanzibar

- Ensuring timely reporting with compliance with Gavi's requirements

Condition

We noted the following weaknesses in the budgeting and financial management at IVD:

***Low grant absorption*:** The average absorption across the HSS and CDS grants was 39% as of 31st December 2022 compared to 15% as of 31st December 2021. Following the institution of a financial management consultant (Rocque Advisory), the audit team noted good progress in the absorption of the HSS grant with an absorption rate of 97% by the time of the audit in November 2023 mainly as a result of inclusion of Gavi funds in MOH and

PORALG state budgets. However, although the process of disbursing CDS funds to regions and councils/districts took only 14 days, the absorption rate for CDS funds as of 3rd November was only 48%. Consequently, we noted activities funded under CDS 1 which had not been fully implemented as per the June 2023 financial reports submitted to Gavi. Examples of these include:

- Enhancement of existing electronic immunisation registry to include COVID-19 immunisation registry (USD 598,384)
- Automation of selected Health facilities to implement issuing of E-Pass for COVID-19 vaccination verifications (USD 96,636)
- Conduct high level Planning Meeting with Ministry of Finance, Ministry of Health, PORALG, Ministry of Education, and Zanzibar (USD 26,790)
- Conduct pre and post Covid 19 introduction evaluation meeting (USD 139,444).

EPI and Gavi have now developed a CDS acceleration plan to help accelerate the absorption of the in-country balances by end of 2025.

***Sub-optimal management of advances/disbursements to PORALG and Zanzibar*:** Funds advanced/disbursed to PORALG, Zanzibar and individuals at central level for the period under the audit were recorded as expenses and not tracked as advances. Consequently, no advances were recognised in the NAOT 2021 and 2022 Audited Financial Statements for the HSS and CDS grants. The audit team noted the following additional weaknesses in management of disbursements to PORALG and Zanzibar:

- PORALG and Zanzibar submit summarised statement of expenditure without copies of support documents. In addition, there is no evidence of review of expenditure support documents at PORALG, Zanzibar, Regions, Districts or Health Facilities by IVD to validate the statements of expenditure received.

Recommendation 22

To enhance financial reporting and accountability, MOHCDGEC/IVD management should:

- Document and apply lessons learned from the disbursement of CDS funds in order to fast-track HSS disbursements
- Follow up on implementation of activities for funds disbursed/advanced in collaboration with PORALG to ensure timely expensing and reporting at defined timelines
- IVD should ensure that financial monitoring of funds transferred to PORALG, region, councils, and Zanzibar are conducted including physical field visits review.
- Coordinate with Internal Audit to conduct regular internal audit reviews including review of underlying supporting documents.
- IVD should ensure that financial reports submitted to Gavi, and bank reconciliation reports are adequately reviewed and signed off by either the Technical Assistance team or any other relevant officer in order to ensure accuracy of the reports.

- Although advances are recorded in EPICOR as commitments, monitoring of advances to individuals to ensure that they are accounted for on a timely basis was being done manually in a book (last updated December 2022). In addition, there was no evidence of review of accountability documents before they were retired.
- IVD disbursed funds to PORALG amounting to TZS 814,319,353 (UDS 368,029) on 30th March 2022. By the time of the audit in November 2023 (20 months later), PORALG had only submitted a statement of expenditure accounting for TZS 525,507,212 (USD 237,501.3) leaving an unaccounted amount of TZS 288,812,023 (USD 130,527.65). However, an additional statement of expenditure accounting for TZS 193,225,230 (USD 87,327.52) was submitted by PORALG on 14th November 2023 during finalisation of the audit field work but had not been reviewed by IVD.

Funds amounting to USD 15,424 were paid from the Gavi bank account for non-Gavi activities without approval from Gavi: From our review of the expense ledgers, we noted that funds amounting to TZS 35,521,750 (USD 15,424) were paid off the Gavi bank account on 6th March 2022 to facilitate a team's participation at a Global financing facility conference held in France. The ineligible payment was recorded as an expense in the ledgers and included in the reports submitted to Gavi. The funds were only refunded on the bank account 11 months later on 17th February 2023.

Weaknesses in financial reporting: The audit team reviewed the HSS bi-annual report for December 2021 and the annual report of June 2022. In addition, the audit team reviewed the HSS financial report submitted by PORALG to the MOHCDGEC IVD for the period 1 July 2021 to 30 June 2022. We noted the following weaknesses in the reports:

- Although IVD prepared reports using the Gavi standard reporting template, these reports were not fully compliant with the Gavi's guidelines for financial management and audit requirements as outlined below:
  - The detail tab, which presents each activity per cost category, was not completed making it impossible to link expenditure to approved budget lines. In addition, the summary tab, which accumulates all costs per cost category, was manually input.
  - The reports did not include a detailed budget versus actual analysis.
- The closing balances from one reporting period are not carried over as opening balances in the next reporting period hence distorting the analysis done within the HSS summary tab.
- The report from PORALG does not present expenses per activity nor per Gavi cost categories, which makes it difficult to track the expenditure limits communicated in the guidelines by MOHCDGEC.
- There was no evidence of review of the statements of expenditure from regions and councils by PORALG before they are consolidated and submitted to MOHCDGEC.
- The audit team also reviewed the financial reports submitted to Gavi and noted the following errors:
  - There were variances between the financial reports submitted to Gavi, and the expenditures recorded in the EPICOR system, as shown in the table below:

Table 19: Variance between financial reports and EPICOR

Report period	Grant	Expenditure as per reports (USD)	Expenditure as per EPICOR (USD)	Variance
July 2021 to Dec 2021	HSS	544,247	466,089	78,159
Jan 2022 to June 2022	HSS	798,553	764,782	33,771
July 2022 to Dec 2022	HSS	443,029	428,053	14,976
July 2022 to Dec 2022	CDS	1,718,765	2,841,822	1,123,057

- There were variances between the financial reports submitted to Gavi and the NAOT audited financial reports, as shown in the table below:

Table 20: Variance between financial reports submitted to Gavi and NAOT reports

Report period	Grant	Expenditure as per reports (USD)	Expenditure as per audit report 30 June 2022	Variance
July 2021 to Dec 2021	HSS	544,247	1,390,536	(47,736)
Jan 2022 to June 2022	HSS	798,553		

No visibility on funds channelled through UN partners: UNICEF sub-contracted USD 4.1m Gavi funds to the MOHCDGEC and other public health institutions (including USD 0.1m to Zanzibar). Separately, WHO subcontracted to USD 6.1m to MOHCDGEC and other sub-grantees for various activities across two grants. With respect to these funds, the Government requested that Gavi obtain permission from them, prior to sharing its supporting documentation for the expenditures incurred. However, neither of these agencies responded or provided their consent. Consequently, documents relating to the expenditures incurred using these funds could not be reviewed by the audit team. See limitation of scope section 2.3.

Root Cause

- Delayed disbursement of HSS funds due to lengthy approval process. The process of disbursement of HSS funds to Regions and Councils took 15 months from initiation of the request to when the exchequer was issued, and funds sent to the Regions and Councils in 2021.
- Delays caused by the Covid 19 pandemic.
- While the role of the financial management Technical Assistance is defined in the Terms of Reference, the effectiveness of this assurance mechanism is yet to be fully realised.
- While ministerial mandates define the roles and responsibilities for MOHCDGEC and PORALG, weaknesses in operationalisation still exist where disbursements to PORALG are not tracked to ensure timely reporting.
- While the budget guidelines require reporting on quarterly, bi-annual, and annual, PORALG's reports to IVD did not follow these timelines.
- There was no evidence of financial support supervision to review and validate statements of expenditure against underlying support documents in all Regions, Councils and Health Facilities visited by the audit team.
- Gavi financial reports are prepared by the grant's coordinator and there was no evidence to confirm that reports are reviewed by either the Technical Assistance team or any other relevant officer before they are submitted to Gavi.

Management comments

See detailed management comments – Annex 19

<table>
<tr><td colspan="2">• The limits per cost categories communicated by MOHCDGEC to PORALG upon disbursement of funds are not subsequently communicated to the regions and districts.
• There was no evidence of review and sign off of bank reconciliation statements.</td><td></td></tr>
<tr><td>Risk / Impact / Implications
• Financial reports submitted to Gavi contain errors.
• Misuse of Gavi funds or wastage leading to financial loss</td><td>Responsibility
MOHCDGEC/EPI</td><td>Deadline / Timetable
30 June 2025</td></tr>
</table>

5. Audit Findings – Zanzibar

5.1 Governance and oversight

5.1.1 The governance and programme management arrangements should be streamlined

Context and Criteria

Zanzibar is a semi-autonomous country, made up of two Islands (Unguja and Pemba) and is part of the United Republic of Tanzania. The population of Zanzibar is 1,839,441 according to the projected Census of 2022 (with children under 5 years totalling 286,442, under one year totalling 77,569 and girls 14 years of age totalling 25,206). Immunisation services were initially introduced in Zanzibar to mitigate Tuberculosis, Poliomyelitis, measles, and smallpox. Zanzibar succeeded to eradicate smallpox and eliminated some vaccine preventable diseases as part of its vaccination programme execution. In 1981, the EPI services were established in Pemba Island and were further extended to Unguja in 1983. The Zanzibar Expanded Programme on Immunisation (EPI) is currently implemented by the Government of Zanzibar in collaboration with other development agencies like UNICEF, WHO and Gavi. Currently, Zanzibar has 185 immunisation services delivery points, 109 at Unguja and 76 in the Pemba zone.

The IVD Zanzibar is under the directorate of Preventive and supported by various immunisation partners. There is an Inter-Agency Coordinating Committee (ICC) chaired by Principal Secretary with membership from MOHCDGEC, MOF, MOE and representatives of International Agencies and development partners including UN agencies, CSOs, academics and other immunisation experts. The ICC has ToRs which requires it to meet on a quarterly basis. The Interagency Coordination Committee (ICC) plays a crucial role in providing governance, coordinating, and fostering collaboration among diverse stakeholders involved in immunisation efforts within a country. A fully operational ICC holds great significance for Gavi as it enables effective coordination, strategic planning, optimal allocation of resources, robust accountability measures, impactful advocacy, and fruitful partnerships. These collective endeavours are fundamental to the success of immunisation programs, ultimately leading to improved national health outcomes.

Although Gavi provides funding to Tanzania and Zanzibar under the United Republic of Tanzania and consolidated reports are expected from the country, Zanzibar is a self-governing state within Tanzania and as such has its own MOHCDGEC and IVD programme equivalent. Zanzibar received funds amounting to USD 271,281 for HSS and USD 166,271 for CDS from IVD Mainland during the audit period of 2018 to 2022. In addition, Zanzibar received funds amounting to USD 400,765 for CDS in 2023.

Zanzibar adopted the draft guidelines for integrating COVID-19 vaccination into routine vaccination and other primary health care interventions, which were developed and proposed by the mainland. The Zanzibar IVD has completed the following activities in line with the integration agenda: orientation of health workers, distribution of both routine immunisation and Covid 19 vaccines at the same time, development of integrated tools like daily reporting forms, support supervision checklists, micro plans and tally sheets.

Condition

The audit team noted the following opportunities for improvement in governance and programme management arrangements:

Lack of a National Immunisation Strategy: Gavi provided technical assistance funding to Zanzibar through WHO to support the development of its own National Immunisation Strategy for 2021-2025. However, by the time of the audit in October 2023, WHO had not yet recruited the consultant in support of this process. Consequently, the Zanzibar immunisation programme does not have any documented strategy.

Operational ineffectiveness of the ICC: Although the ToRs appointed the IVD unit in the role of secretariat to the ICC, with a mandate to document minutes and to track the implementation of ICC action points, the audit team was not provided with any meeting minutes for

Recommendation 23

To strengthen governance and oversight over its programme management, Zanzibar IVD, with support from the partners, should:

- follow up with WHO to speed up the recruitment of a consultant to support with the development of the NIS.

<table>
<tr>
<td>the ICC between 2018 and 2022. The only minutes provided were for a meeting held on 17 January 2017. In addition, the Zanzibar IVD did not have a TWG.

Integration of COVID-19 within routine immunisation: While the country has agreed to integrate and developed guidelines, the following programmatic gaps remain:

• The territory's demand forecasting process is not considering its current consumption levels. Consequently, 90% of the walk-in cold room provided by COVAX storage space was filled up with COVID-19 vaccines that were imminently due to expire at the end of December 2023. The actual number of doses could not be determined as there was no supporting documentation, and physical verification stock counts could not be done because of space constraints.
• There is need to understand and document who are the priority target populations. As of November 2023, Zanzibar was not tracking vaccinations as per the priority groups.
• There is currently no plan to include COVID-19 vaccination data within DHIS2 and DVDMT, for tracking and inform decision making. In June 2021, the government of Zanzibar working with the private sector, developed and started using the web-based system called COVID-19 Chanjo Rahisi. However, the system can only issue vaccination cards and does not support reporting. Consequently, COVID-19 data is reported using an excel spreadsheet tool.
• Although the Zanzibar IVD developed integrated microplanning templates, only 2 out of 11 districts had developed and submitted micro plans integrating COVID-19 into their routine immunisation.
• The guide for integrating COVID-19 vaccination with routine immunisation is not finalised and signed off.

The implementation arrangements between IVD mainland and IVD Zanzibar are not clearly defined: The audit team noted the following areas of improvement in the implementation arrangements between IVD mainland and IVD Zanzibar:

• The audit team was informed that collaborative meetings are held between IVD Zanzibar and IVD mainland but there was no evidence of meeting minutes to substantiate this assertion.
• The audit noted that IVD Zanzibar attended only two out of ten IVD TWG meetings as per the minutes provided and did not attend any ICC meetings held at the mainland.</td>
<td>• institute an immunisation TWG for operational issues and reactivate the ICC and ensure that it meets as per the ToRs.
• expedite the finalisation and sign off of the guidelines for integrating COVID-19 vaccination with routine immunisation.
• capture COVID-19 vaccination data within DHIS2 and DVDMT for tracking and informing decision-making.

Recommendation 24
To strengthen collaboration, IVD mainland and IVD Zanzibar should establish regular scheduled meetings between their respective units, to serve as a platform for discussing a range of common issues including workplans, implementation progress, reporting, and technical assistance</td>
</tr>
<tr>
<td>Root Cause
• Delayed recruitment of a consultant by WHO to develop the Zanzibar-specific NIS.
• Lack of participation in planning for funds disbursed to Zanzibar by the mainland.
• The ICC ToRs do not include IVD Zanzibar or MOHCDGEC Zanzibar as members of the ICC for Tanzania.
• The guide for integrating C19 vaccination with RI is not finalised and signed off.</td>
<td>Management comments

See detailed management comments – Annex 20</td>
</tr>
<tr>
<td>Risk / Impact / Implications
• Inadequate oversight may impact on the ability of the programme to achieve its objectives.
• Some of the critical issues affecting program implementation are never escalated and discussed at the ICC meeting leading to dismal performance of the EPI</td>
<td>Responsibility
MOHCDGEC/IVD Zanzibar

Deadline / Timetable
31 December 2025</td>
</tr>
</table>

5.2 Vaccine management

5.2.1 Improvements required in forecasting for vaccines and related supplies to ensure continuous availability of commodities

Context and Criteria

Zanzibar, with support from UNICEF, conducts annual forecasts for vaccines and related supplies. These forecasts are done using the UNICEF forecasting tool that captures the following data inputs: target population, estimated coverage, estimated wastage rate, buffer quantity and stock on hand at the time of generating the forecast. The output from the forecast for Gavi funded vaccines is incorporated into the overall national Tanzania forecast so that these vaccines can subsequently be delivered via mainland Tanzania. It is important for the forecasting process to involve all stakeholders, so they can provide useful input and ultimately improve the quality and accuracy of the forecast. The forecast is based on assumptions and therefore periodic reviews of the forecast are important to test whether the forecast is meeting programme requirements in terms of fair prediction of the quantities of vaccines required and when the vaccines should be shipped into the country.

Condition

Stakeholder engagement could not be evidenced based on the information provided in November 2023: Interviews with key personnel at Zanzibar IVD indicated that there was limited or no stakeholder engagement during the forecasting process. While the Zanzibar IVD team suggested it actively engaged with UNICEF, the mode and extent to which this partner was engaged in the forecasting process remains unclear. Similarly, there was no evidence for how other stakeholders, such as districts and Pemba Island were involved in the forecasting process.

Forecast reviews not conducted: There was no evidence of conducting forecast reviews, to check and evaluate the assumptions used in the vaccine forecasting process. Best practices like measuring forecasting accuracy to check the closeness of the forecast to the actual utilisation/consumption vaccines and related supplies were not undertaken

Recommendation 25

To ensure generation of an accurate forecast, the Zanzibar MOHCDGEC/IVD should:

- develop, disseminate and train relevant personnel on effective forecasting of vaccines and related supplies.
- engage relevant stakeholders in the forecasting process, including Pemba Island and various districts, to ensure that there is fair representation and ownership of the process, and its resultant output.
- conduct periodic reviews of the forecast to check and refine, if necessary, the assumptions used in the forecasting process.

Root Cause

- There were no forecasting SOPs to provide standardised guidelines and instructions for ensuring consistency in the execution of forecasting tasks and processes.
- Unclear ownership of the forecasting process to coordinate periodic reviews of the forecasting outputs.

Management comments

See detailed management comments – Annex 20

Risk / Impact / Implications

- Risk of over or under quantification of vaccine needs leading to expiries or stock outs respectively.
- Missed opportunity for stakeholders to input and refine the forecasting process.

Responsibility	Deadline / Timetable
MOHCDGEC/IVD Zanzibar	31 December 2025

5.2.2 Stock management at national and sub-national level need improvement

Context and Criteria

Section 1 sub section 1.2 of the Effective Vaccine Management SOP (EVM-SOP-E6-03) states that; "All stores should conduct a physical stock count of all vaccines, diluents, syringes, and safety boxes at least once a month and it is recommended that physical stock count must be done at the end of every month. Stock records (both manual stores ledger and electronic system) must be updated immediately after the stock count has been completed and entries entered in red. A valid reason for every adjustment if any must be recorded in the stock control system and physical stock count must be conducted before placing orders/requisitions so that the closing balance of previous month inform the computation of the quantity to order during the ordering month".

Condition

Non-functional and incomplete electronic and manual LMIS: Zanzibar central vaccine stores did not have a complete and reliable source of logistics data over the review period for the audit team to review and conduct specific data analyses. All the available sources of logistics data were either found with missing or no data; VIMS was corrupted and non- functional at the time of the audit, The Stock Management Tools (SMT) for the years 2019, 2020 and 2022 were not available, The District Vaccination Data Management Tool (DVD MT) which is submitted by the districts monthly to the Central office had incomplete fields for logistics data elements (receipts, issues, wastage and stock balances) for the period 2018-2022 and the manual stock ledgers were not updated over the review period.

Physical counts didn't match stock ledgers at sub-national vaccine handling points: The audit team conducted physical counts of sampled vaccines at national and sub-national levels. At Zanzibar central vaccine stores, Unguja, variances were noted between physical counts and stock ledgers as indicated in the below table. 1 out of 3 DVS had variances between physical count and stock ledgers.

Table 21: Physical Count verses the stock ledger balances of stock on hand, at Zanzibar central vaccine stores, Unguja

Name of Vaccine	Stock Count on 9th Nov 2023	Stock Ledger	Variance
Pentavalent vaccine	*125,960*	*137,700*	*(11,740)*
Inactivated Polio vaccine (IPV)	*84,200*	*90,105*	*(5,905)*
Pneumococcal Conjugate Vaccine (PCV)	*84,400*	*110,448*	*(26,048)*
Rota Virus Vaccine	*95,715*	*102,285*	*(6,570)*
J&J	*43,800*	*45,300*	*(1,500)*

Unreconciled stock during the review period: The audit team reconciled the supplies of various antigens it sampled, during the period January 2018 to October 2023, by considering the vaccine stock balance for opening stock, distributions, recorded adjustments, to come up with an expected balance which was then compared with the actual closing balance records for October 2023. The team's overall analysis of these data points identified significant variances, as vaccine stocks at Zanzibar central vaccine stores, Unguja and all 3 DVS visited, could not be reconciled for the period under review. The below table (Table 21) shows variances in the overall stock movements and the remaining physical stocks at the Zanzibar central vaccine store, Unguja. Details of variances at sub national level are included in Annex 11.

Recommendation 26

To improve the LMIS system, MOHCDGEC/IVD should:

- identify which of its eLMIS (SMT, DVDMT or VIMS) systems is the primary source of current data for logistics purposes.
- in the event that VIMS is selected as the primary system, the Government should work with the developer to reactivate the system, conduct test runs and roll the system out to all of the vaccine handling points on the island.
- run manual records alongside its eLMIS until such a time that it is demonstrated that the system is stable and reliable.
- ensure data is promptly input into the primary eLMIS system.

Recommendation 27

To improve inventory management practices at sub-national level MOHCDGEC/IVD should:

- ensure vaccine handling points conduct regular physical counts, properly document stock transactions and archive their stock records and that inventory data informs decision making;
- strengthen support supervision initiatives by documenting supportive supervision visits,

Table 22: Unreconciled stock differences at Zanzibar central vaccine stores, Unguja

Vaccine	Opening Balance Jan '18 (Doses)	Qty received (Jan '18 to Oct '23) (Doses)	Qty distributed (Jan '18 to Oct '23) (Doses)	Adjustments	Expected balance	Actual stock closing balance	Variance
Routine Immunisation							
Pentavalent	136,180	1,007,860	981,990	(4,450)	157,600	137,700	(19,900)
PCV	125,708	924,416	926,764	-	123,360	110,448	(12,912)
Rotavirus	80,468	872,744	722,028	(2)	231,182	117,800	(113,382)
IPV	32,000	370,860	328,128	(36,460)	38,272	90,105	51,833
HPV	9,100	120,410	137,774	-	(8,264)	6,816	15,080
COVID-19 Vaccines							
J&J	-	374,400	292,505	-	81,895	45,300	(36,595)
Sinopharm	-	9,800	9,800	-	-	-	-
Pfizer	-	49,482	67,048	(6,110)	(23,676)	-	23,676

Data source: Manual stock registers

Unexplained stock adjustments at the Zanzibar national and sub-national stores: The audit team reviewed stock ledgers at the different vaccine handling points and noted that stock adjustments were made especially after conducting physical counts. However, the reasons for the stock adjustments were neither explained nor the stock adjustments investigated to establish the root causes for the stock differences. The below table shows the cumulative stock adjustments made at Zanzibar central vaccine store Unguja using available stock ledgers. Unexplained stock adjustments were also noted at 3 out of 3 DVS in Zanzibar (Annex 8c).

Table 23: Unexplained stock adjustments at Zanzibar central vaccine stores, Unguja

Vaccine	Stock Balance prior to Physical Count	Stock Balance after Physical Count	Variance
Pentavalent Vaccine	223,840	205,600	18,240
IPV	139,027	122,265	16,762
Pneumococcal Conjugate Vaccine	122,653	110,642	12,011
Rota Virus Vaccine	23,417	17,035	6,382

Stock outs at Sub-national level: The audit noted incidents of vaccine stockouts of varying magnitude at the DVS and health facilities during the review period (2018-2022). Stock outs of at least one of the sampled vaccines (Pentavalent, IPV, Rota Virus Vaccine and PCV) were registered at 2 out of 3 DVS and 6 out of 6 health facilities. See details in Annex (for Mainland and Annex 10 for Zanzibar).

Potential expiries of COVID-19 vaccines: At Zanzibar Central vaccine store, Unguja, COVID -19 vaccines (Verocell), though not donated by COVAX, occupying approximately 90% of the COVAX donated WICR were due to expire in December 2023. The actual quantity of vaccines could not be determined because of incomplete records (See Figure 4 Annex 7: Potential expiries of COVID-19 vaccines at Zanzibar Central vaccine store, Unguja).

providing feedback, and following-up on agreed action items

<table>
<tr><td>Root Cause
• Shut down of the electronic logistics management information system (VIMS).
• There was no evidence that regular monthly end physical counts were conducted at all levels during the review period.
• Poor archiving and storage of vaccine records.
• Limited training and capacity gaps in vaccine stock management at all levels.
• Ineffective support supervision</td><td colspan="2">Management comments

See detailed management comments – Annex 20</td></tr>
<tr><td>Risk / Impact / Implications
• Lack of adequate accountability and visibility of vaccine transactions.
• Stock outs may lead to failure to meet programme and Gavi target of reaching the zero dose children</td><td>Responsibility
MOHCDGEC/IVD Zanzibar</td><td>Deadline / Timetable
31 December 2025</td></tr>
</table>

5.2.3 Cold chain management practices need to be strengthened

Context and Criteria

Section 4.2 of the Temperature monitoring SOP states that, "A *minimum of four 30-day electronic temperature monitoring devices should be placed in the cold room shelves in front of the vaccine in places where the lowest temperatures are found".* It is further stated that, "a *temperature mapping study must be conducted to determine the coldest places in the room to avoid unnecessary freezing of vaccines". Section 4.8 requires the responsible officer to download weekly temperature data for all cold chain equipment from the electronic temperature monitoring devices.*

The SOP on Looking after Cold rooms and freezer room (TAN-EVM-SOP-E5-02) enlists daily, weekly, monthly and annual tasks for planned preventive maintenance of cold chain equipment and underscores the need to adhere to these tasks to ensure optimum equipment functionality as a critical component of the national immunisation programme

Condition

Incomplete CCE inventory register: Zanzibar IVD did not maintain a separate register for the CCE. The audit team noted that some of the CCE were captured in the Fixed Asset Register (FAR). However, the FAR was incomplete, for example the 3 WICRs at Zanzibar central vaccine store, Unguja were not reflected in the register. Secondly, the register lacked vital information like the date of acquisition/installation of the CCE and functionality status.

No data use from continuous temperature monitoring devices: In the central vaccine store at Unguja, Zanzibar, the WICRs were fitted with continuous temperature monitoring devices. However, the data from these devices was not downloaded, reviewed, or utilised for decision-making purposes.

Unavailability of preventive maintenance plans and equipment maintenance logs: At the Zanzibar central vaccine store, Unguja, preventive maintenance plans were not available to show daily, weekly and monthly preventive maintenance activities conducted on the respective CCE. Additionally, the CCE did not have equipment maintenance logs to show the preventive and curative activities conducted on the respective CCE.

Obsolete CCE: During the audit visit at Zanzibar central vaccine store, Unguja, the audit team observed a number of non-functional and obsolete CCE lying in the corridors of the vaccine store with no plan to dispose of them.

Recommendation 28

To ensure effective cold chain equipment management, MOHCDGEC/IVD should:

- develop an asset register for the CCE and periodically update it with all CCE on the island including their functionality status.
- support cold chain officers at all levels to generate and implement preventive maintenance plans, design, print and disseminate equipment maintenance logs to document preventive and curative activities subjected to the respective CCE

Recommendation 29

To ensure decommissioning and disposal of obsolete CCE, MOHCDGEC/IVD Zanzibar should develop and implement a decommissioning plan.

Root Cause

- Training of the existing logistics staff has not translated into on-the-job improvement.
- Absence of Cold Chain Equipment decommissioning plan.

Management comments

See detailed management comments – Annex 20

Risk / Impact / Implications

- No accurate mechanism of tracking the physical location and condition of CCE.
- Risk of fluctuations of cold chain conditions without detection.
- Decrease in lifespan of the CCE.

Responsibility	Deadline / Timetable
MOHCDGEC/IVD Zanzibar	31 December 2025

5.3 Immunisation data management

5.3.1 Weaknesses in data management

Context and Criteria

The Gavi HSS and NVS General guidelines (2015-2018), recommend that Gavi supported countries ensure that the country's population projection of live births is consistent with external projections. Furthermore, the guidelines recommend that Gavi supported countries conduct high quality and national representative household survey every five years.

Section 1.5 of the Health Information System Guidelines (2019) state that the health information system is a comprehensive and integrated structure that collects, stores, collates, analyses, and disseminates health and health-related data and information for monitoring and evaluating the performance of health interventions. The health information system consists of separate parts that are interrelated, interdependent, and work towards a common goal. The health information system consists of health institution–based data and population-based health data. Health institution–based data = administrative data + facility-based data + community-based data. They include patient and facility records (including infrastructure, supplies, human and financial resources), disease surveillance and facility surveys whereas population-based data = censuses + vital statistics + household and budget surveys + demographic surveillance. Basing on this, Zanzibar was required to set targets basing on projections from the National Bureau of Statistics. The United Republic of Tanzania carried out a Demographic and Health Survey and Malaria Indicator Survey (TDHS-MIS) and a national population census in 2022. However, this was not used to adjust the denominator.

According to the IVD, the 2012 population projections were found to be consistently below the target population in the districts as per the immunisation data reported. Therefore, in 2019, IVD held a meeting with the bureau of statistics to agree on a more reasonable method for setting targets. Consequently, it was agreed that Zanzibar starts to use previous years immunisation data and grow it using the population growth rate provided by the bureau of statistics when setting current year targets. The audit team noted a reduction in the number of districts reporting coverage above 100% over the years.

Zanzibar records immunisation data in both DVDMT and DHIS2. Data in DVDMT is entered at district level and submitted to national level for consolidation on a monthly basis. Data in DHIS2 is entered at HF level. The June 2014 draft HMIS guidelines for Zanzibar indicate that data should be analysed at the point where it is collected. In addition, the guidelines state that feedback is a right to all partners who take part in data management. The feedback including results of self-assessment, daily activities, etc. should be shared with co-health workers at staff meetings, during supervision, survey, community feedback to health committees and others health-related sectors. The analysed data need to be displayed in the form that can be readily seen, understood, and discussed at all health services gathering and community meetings. For example, with DHIS2 information can be presented in the form of Tables, Graphs, Maps, and score cards.

Data Quality Assessments (DQA) conducted by immunisation programmes provide a self-assessment opportunity for countries to identify their data challenges and develop improvement plans. Since 2015, Gavi required countries to perform the DQA using WHO-endorsed methodologies. Although DQA is not an annual requirement, it is recommended to be done at least every three to five years.

Condition

The audit team performed various tests at national level to understand the methodology used for setting targets, how they are measured and the country's progress in reaching many infants under the age of 2years with immunisation services. We further sought to assess the accuracy of the source of data relied upon for decision making and how IVD was navigating the denominator issue due to the use of old census figures. These tests were critical to review the ability of MOHCDGEC and Gavi to meet the goal of leaving no one behind with immunisation. The audit team noted the following gaps:

Recommendation 30

To ensure accurate and reliable reporting of immunisation targets, MOHCDGEC/IVD management should:

- review the impact of the differences in numbers as it may be indicative of an

Target population data may not be accurate due to variance between BCG vaccinations and the number of surviving infants used as target population: The audit team used the number of children vaccinated with BCG which is a birth dose as a proxy for a more updated number of surviving infants to be used as a target. The number of BCG vaccinations was compared to the number of surviving infants input by IVD in DVDMT and noted a 24% variance as summarised in the table below. Consequently, we could not ascertain the accuracy of the denominator in DVDMT to ensure that MOHCDGEC reaches all children under the age of 2 years with all immunisation services given that DTP 1 was 84% and DTP 3 at 81% in 2022.

Table 24: Variance between BCG vaccinations and Target population in DVDMT

Years	BCG Vaccinations	Surviving infants in DVDMT	Variance	Percentage Variance
2018	81,180	54,556	26,624	33%
2019	82,144	60,712	21,432	26%
2020	80,000	66,291	13,709	17%
2021	88,342	68,676	19,666	22%
2022	91,563	71,165	20,398	22%
	423,229	**321,400**	**101,829**	**24%**

***Variances between coverages of vaccinations administered at the same time leading to missed vaccination opportunities*:** According to the immunisation schedule for Zanzibar, children are supposed to receive Pentavalent 1 and PCV 1 at six weeks, Pentavalent2 and PCV 2 at ten weeks and Pentavalent 3 and PCV 3 at 14 weeks. The audit team compared coverage data for Pentavalent 1,2 and 3 against coverage data for PCV 1,2 and 3 for the period 2018 to 2022 and noted variances as illustrated below:

Table 25: Variances between Penta and PCV coverages

Year	Penta	PCV	Variance
2018	159,677	160,756	(1,079)
2019	169,043	168,809	234
2020	163,927	159,947	3,980
2021	174,404	173,677	727
2022	174,545	175,161	(616)
Total	**841,596**	**838,350**	**3,246**

Anomalies in reported administrative coverage: Inconsistencies were noted in the administrative coverage data reported in DVDMT as compared to the doses distributed by the Central Vaccine Store during the review period. The total vaccine distributed were adjusted with WHO recommended wastage rates. The results indicated that the number of children reported as vaccinated for Pentavalent, PCV and Rota over the years from 2018 to 2022 was consistently higher than the quantities of vaccines distributed. The variances could be an indication of over-reporting.

erroneous denominator against which the immunisation targets are set.

- carry out immunisation specific DQAs following the WHO-endorsed methodologies. This should include developing costed DQIPs, after each DQA.

Table 26: Mismatch between administrative coverage in DVDMT and doses distributed

Antigen	Doses administered (2018-2022)	Doses Distributed (2018 to 2022)	Variance
Penta	841,596	818,159	23,437
PCV	838,350	759,497	78,853
Rota	557,491	531,257	26,234

Variances between DHIS2 reported data and underlying data records at the service delivery points: The audit team visited 6 health facilities and carried out a comparison of reported vaccinations in DHIS2 against underlying records like immunisation register, tally sheets and monthly reports for pentavalent and IPV. The audit team noted variances between immunisation data source documents and DHIS2 in all health facilities visited. See Annex 17 c & 17d for details.

There was no data quality assessment that focussed on immunisation data: The audit team reviewed the integrated HMIS data quality review reports for July-September 2022, July-September 2021, October-December 2021 and January-March 2023 and noted the following gaps:

- The assessments focused on availability of tools & completeness of tools. There was no focus on data triangulation, review of data quality assurance mechanisms at HF level and accuracy of reported data.
- There is no evidence that feedback was provided to the districts and HFs after the assessment.
- There are no Data quality improvement plans with clear activities/actions to be undertaken to address the gaps noted

Root Cause

- Data reviews carried out only focus on data timeliness and completeness of reporting without emphasis on data quality aspects like triangulation of coverage data to logistics/distribution data, reconciliations between tally sheets and monthly reports.
- Lack of evidence for data quality feedback from districts to facilities. This is mainly due to lack of a structured mechanism/form/report to use to provide written feedback.
- There was no evidence that the data recorded was reviewed or, where necessary, corrected, and subsequently validated during support supervision at 3/3 districts
- No evidence of guidelines and checklists for Data Quality Assessment at 3/3 districts.
- No evidence of data quality reviews at 6/6 HFs
- Missing and incomplete data records.

Management comments

See detailed management comments – Annex 20

Risk / Impact / Implications

- Use of inaccurate data may result in inaccurate administrative coverage data which is non-compliant with the terms of the signed Partnership Framework Agreement and may undermine the confidence in the reported administrative coverage data.
- Key priority areas for data quality may not be addressed on time which could lead to inaccurate, incomplete, inconsistent, and unreliable immunisation data.
- Without good quality DQAs, IVD is unable to demonstrate improvements in the quality of its coverage data.
- Better alignment of pentavalent and PCV vaccines could bring opportunities to reach more children.

Responsibility: MOHCDGEC/IVD Zanzibar

Deadline / Timetable: 31 December 2025

5.4 Budgeting and financial management

5.4.1 Weaknesses in budgeting and financial management

Context and Criteria

The agreed upon August 2020 GMRs include the following:

- The EPICOR-based Integrated Financial Management System implemented at the IVD will be used to manage the accounting and reporting of Gavi grants.
- IVD will prepare and submit financial reports to Gavi every six months in line with Gavi Guidelines on Financial Management and Audit Requirements.
- Programme of Financial Monitoring - IVD will prepare an annual plan for the financial monitoring of funds transferred to regions and councils including physical field visits.
- If needed, MOHCDGEC may seek technical assistance from Gavi to refine IVD accounting and financial procedures manual. The manual will be tailored to include, among other aspects, specific processes resulting from the implementation of EPICOR and roles for tax exemption procedures.
- In accordance with the provisions of the PFA dated July 2013, MOHCDGEC/IVD/POLARG will ensure that the relevant exemptions from taxes and duties are obtained from the respective ministries, departments/agencies. The MOHCDGEC will provide to Gavi any document(s) establishing the tax exemption required by the Partnership Framework Agreement and any other applicable tax exemption.
- The annual workplan plan of the internal audit department of MOHCDGEC shall include the audit of Gavi grants. HSS budget may include the operational costs to facilitate the internal audit reviews.

The Ministry of Finance and Planning guidelines for preparation of Plan and Budget, Part II Chapter 2 sub-section 2.4, states “Accounting Officers are instructed to prepare and submit Quarterly Progress and Annual Performance Reports on a quarterly basis”. In addition, section 25 sub-section 4(a) of Tanzania’s Public Finance Act (2001) requires the preparation of accounts and reports in accordance with Generally Accepted Accounting Principles (GAAP).

To strengthen the financial management capacity at IVD, Gavi contracted a Financial Management Consultant to provide Technical Assistance to MOHCDGEC and support the Country Programmes Team to work alongside the staff of the Immunisation and Vaccine Development Department and the Ministry of Health to ensure a high level of implementation and funds absorption, and proper accountability for Gavi provided funds. The specific objectives of the Technical Assistance included:

- Implementing proper accounting and reporting functionality for IVD using EPICOR Integrated Financial Management Information System.
- Monitoring to ensure proper accounting and reporting for activities at sub-national levels.
- Establishing arrangements for accountability and reporting for President’s Office Regional and Local Government.
- Supporting IVD and POLRAG to establish working arrangements for regional sub-treasuries and Regional Immunisation and Vaccine Officers.
- Establishing arrangements for accountability and reporting in Zanzibar.

Ensuring timely reporting with compliance with Gavi’s requirement

Condition

Low absorption of Gavi provided funds: The average absorption across the HSS and CDS grant was 45% as of 31 September 2023. The audit team noted that it took 6 months for HSS funds amounting to TZS 678,203,600 (USD 306,511) to be processed for use by IVD Zanzibar. In addition, IVD Zanzibar was not adequately involved in the design of activities and budgets for funds received from IVD mainland. Consequently, Zanzibar received funds for activities like payment of top ups to Community Health Volunteers (CHV) and recruitment of staff (Ass. Accountant, Immunisation supply chain officer) which could not be implemented in a timely manner.

Weaknesses in financial reporting: The audit team sampled and reviewed the HSS and CDS financial report for the period July 2021 to June 2022 sent to IVD mainland and noted the following weaknesses in the reports:

- Although a financial reporting template was developed and implemented in 2023, the following gaps still exist:
  - The template does not present expenses per Gavi cost categories which makes it difficult to track the expenditure limits communicated in the guidelines by MOHCDGEC-IVD (mainland).
  - The template does not have an option for tracking expenditure against approved budget and explanations for variances between budget and reported expenditure. Consequently, it is difficult to reconcile expenditure to approved budget activities and amount.
  - The HSS template does not have a section for reporting cash balances.
- Late submission of report to IVD Mainland. Contrary to the Gavi financial management guidelines which require annual financial reports to be submitted 3 months after end of fiscal cycle, the report for financial year ended 30 June 2022 was submitted on 24 January 2023. Additionally, there was no quarterly financial report submitted to IVD Mainland which contradicts the Ministry of Finance and Planning guidelines.
- The statements of expenditure are not attached with the relevant supporting documents. Additionally, there was no evidence to suggest that review of expenditure documents was done by either the IVD Mainland finance team or the Financial Management Technical Assistance team. Consequently, there was inadequately supported expenditure amounting to TZS 28,164,320 (USD 12,729) from the review of a sample of expenditure.
- Ineffective review of finance reports. While the reports were signed off as reviewed by the program manager, chief accountant and grants coordinator on 16 February 2023, there were variances between the finance reports and the ledgers:

Table 27: Variance between financial reports and ledgers

Grant	Expense as per financial report (USD)	Expense as per Ledgers (USD)	(Under)/Over reporting
CDS	137,219	149,136	(11,917)
HSS	71,904	58,118	13,786
Total	**209,123**	**207,254**	**1,869**

- Inaccurate bank reconciliations: The audit team noted the following variances between bank reconciliations and the cash book balances.

Recommendation 31

To enhance financial reporting and accountability, MOHCDGEC/IVD management should:

- follow up with the service provider to expedite the installation of quick books system.
- ensure that financial reports submitted to IVD mainland, and bank reconciliation reports are adequately reviewed in order to ensure accuracy of the reports.
- review the system for managing fuel including, but not limited to, guidelines for managing the consumption of fuel.

Table 28: Variance between bank reconciliations and cashbook balances

Month/Year	Cashbook balance as per Reconciliation	Cashbook balance	Variance (TZS)	Variance (USD)
Dec 2021	995,645,757	946,906,065	48,739,692	19,894
Jan 2022	909,752,357	860,908,241	48,844,114	19,936
April 2022	610,963,316	562,592,464	48,370,852	19,044
June 2022	668,985,715	792,493,828	(123,508,113)	(48,625)
Sept 2022	672,173,969	622,134,277	50,039,692	19,701

Funds amounting to USD 5,878 were paid off the Gavi bank account for non-Gavi activities without approval from Gavi: The audit team noted that TZS 14,400,000 (USD 5,878) was paid off a Gavi bank account for non-Gavi funded activity on 29th April 2022 to pay staff allowances. The payment was recorded as an expense in the ledgers and included in the reports submitted to IVD mainland. The funds were only refunded on the bank account 18 months later on 10th October 2023.

Weaknesses in the management of bulk fuel procured at central IVD Zanzibar level: As a control for management of fuel, fuel coupons are issued whenever there is a request to implement activities where fuel was budgeted. A record of the fuel requested is maintained in both a manual fuel control book and an excel worksheet. The audit team noted the following gaps:

- The fuel coupons, manual fuel control book and the excel worksheets maintained do not track fuel used per activity.
- The vehicle log sheets attached could not be reconciled to the manual control book nor the excel worksheets maintained. Consequently, it is difficult to link usage of fuel per activity and the reasonableness of the fuel allocated leading to gaps in accountability for fuel

Root Cause

- While the role of the financial management Technical Assistance is defined in the terms of reference, the effectiveness of this assurance mechanism is yet to be fully realised as initial focus was placed on managing the low absorption challenges.
- Frequent changes in the accountant for the period up to 2022 leading to capacity gaps
- Delayed installation and training in the quick books system by the service provider.
- It took 6 months for HSS funds amounting to TZS 678,203,600 (USD 306,511) to be processed for use by IVD Zanzibar.
- There is no evidence of spot checks/financial support supervisions by IVD-mainland.
- There is no evidence of review of expenditure documents by the FM TA.
- There was no evidence of review and sign off of bank reconciliation statements.

Management comments

See detailed management comments – Annex 20

Risk / Impact / Implications

- Misuse of Gavi funds or wastage leading to financial loss

Responsibility	Deadline / Timetable
MOHCDGEC/IVD Zanzibar	31 December 2025

6. Annexes

Annex 1 : Acronyms

AEFI	Adverse Events Following Immunisation
AZ	Astra Zeneca
BCG	Bacillus Calmette Guerin
COVID-19	COVID-19
CCE	Cold Chain Equipment
CCEOP	Cold chain equipment optimisation plan
CDC	Centre for Disease Control
CDS	Covid 19 Delivery Support
COSO	Committee of Sponsoring Organisations of the Treadway Committee
COVAX	Covid 19 Vaccine Global Access
CVS	County Vaccine Store
DFID	Department for International Development
DG	Director General
DHIS	District Health Information System
DQA	Data Quality assessment
DQIP	Data Quality improvement plan
DTP	Diphtheria, Tetanus, Pertussis
EAW	Early Access Window
EPI	Expanded Programme for Immunisation
EVMA	Effective Vaccine Management Assessment
FAR	Fixed Asset Register
FCDO	Foreign, Commonwealth and Development Office
FPP	Full Portfolio Proposal
FY	Financial Year
GAVI	Global Alliance for Vaccine and Immunisation
GBP	Great Britain Pound
GDP	Gross Domestic Product
GF	Global fund
GMR	Grant Management Requirement
HCW	Health Care Worker
HF	Health Facility
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HPV	Human Papillomavirus
HR	Human resources
HSS	Health Sector Strengthening
HSSP	Health Sector Strengthening Plan
HSWG	Health Sector Working Group
ICC	Interagency Coordination Committee
IP	Implementing Partner
IPV	Inactivated poliovirus Vaccine
iSC	Immunisation Supply Chain
ISS	Integrated support Supervision
JAR	Joint Annual Review
LMIS	Logistic Management Information System
MCV	Meningococcal Vaccine
MOFP	Ministry of Finance and Planning

MOHCDGEC	Ministry of Health Community Development Gender, Elderly and Children
MR	Measles Rubella
MYP	Multi Year Plan
NDVP	National Deployment Vaccine Plan
NGO	Non-Governmental Organisation
NVS	National Vaccine Store
ODK	Open Data Kit
OPV	Oral Polio Vaccine
PCA	Programme Capacity Assessment
PEF	Partnership Engagement Framework
PFA	Partnership Framework Agreement
PIRI	Periodic Intensification of Routine Immunisation
RI	Routine Immunisation
SARA	Service Availability and Readiness Assessment
SARS	Severe Acute Respiratory Syndrome
SDG	Sustainable Development Goals
SDP	Service Delivery Points
SIA	Supplementary Immunisation Activities
SMT	Stock Management Tool
SOP	Standard operating procedures
SVS	State Vaccine Store
TA	Technical Assistance
TB	Tuberculosis
TCA	Targeted Country Assistance
TWG	Technical Working Group
UHC	Universal Health Coverage
UN	United Nations
UNICEF	United Nations Children Fund
USAID,	United States Agency for International Development
USD	United States Dollar
VAR	Vaccine Arrival Report
VCB	Vaccine Control Book
VIG	Vaccine Introduction Grants
VPD	Vaccine Preventable Diseases
VVM	Vaccine Vial Monitor
WHO	World Health Organisation
WICR	Walk in Cold Room
WUENIC	WHO / UNICEF estimates of national immunisation coverage
YF	Yellow Fever

Annex 2 : Methodology

Gavi's audits are conducted in accordance with the Institute of Internal Auditors' ("the Institute") mandatory guidance which includes the definition of Internal Auditing, the Code of Ethics, and the International Standards for the Professional Practice of Internal Auditing (Standards). This mandatory guidance constitutes principles of the fundamental requirements for the professional practice of internal auditing and for evaluating the effectiveness of the audit activity's performance. The Institute of Internal Auditors' Practice Advisories, Practice Guides, and Position Papers are also be adhered to as applicable to guide operations. In addition, the Audit and Investigations (A&I) staff will adhere to A&I's standard operating procedures manual.

The principles and details of the A&I's audit approach are described in its Board-approved Terms of Reference and Audit Manual and specific terms of reference for each engagement. These documents help our auditors to provide high quality professional work, and to operate efficiently and effectively. They help safeguard the independence of the A&I's auditors and the integrity of their work. This Manual contains detailed instructions for carrying out its audits, in line with the appropriate standards and expected quality.

In general, the scope of A&I's work extends not only to the Gavi Secretariat but also to the programmes and activities carried out by Gavi's grant recipients and partners. More specifically, its scope encompasses the examination and evaluation of the adequacy and effectiveness of Gavi's governance, risk management processes, system of internal control, and the quality of performance in carrying out assigned responsibilities to achieve Stated goals and objectives.

Annex 3 : Definitions – audit opinion, audit rating and prioritisation

A. Overall audit opinion

The audit team ascribes an audit rating for each area/section reviewed, and the summation of these audit ratings underpins the overall audit opinion. The audit ratings and overall opinion are ranked according to the following scale:

Effective	**No issues or few minor issues noted**. Internal controls, governance and risk management processes are adequately designed, consistently well implemented, and effective to provide reasonable assurance that the objectives will be met.
Partially Effective	**Moderate issues noted.** Internal controls, governance and risk management practices are adequately designed, generally well implemented, but one or a limited number of issues were identified that may present a moderate risk to the achievement of the objectives.
Needs significant improvement	**One or few significant issues noted.** Internal controls, governance and risk management practices have some weaknesses in design or operating effectiveness such that, until they are addressed, there is not yet reasonable assurance that the objectives are likely to be met.
Ineffective	**Multiple significant and/or (a) material issue(s) noted.** Internal controls, governance and risk management processes are not adequately designed and/or are not generally effective. The nature of these issues is such that the achievement of objectives is seriously compromised**.**

B. Issue rating

For ease of follow up and to enable management to focus effectively in addressing the issues in our report, we have classified the issues arising from our review in order of significance: High, Medium and Low. In ranking the issues between 'High,' 'Medium' and 'Low,' we have considered the relative importance of each matter, taken in the context of both quantitative and qualitative factors, such as the relative magnitude and the nature and effect on the subject matter. This is in accordance with the Committee of Sponsoring Organisations of the Treadway Committee (COSO) guidance and the Institute of Internal Auditors standards.

Rating	Implication
High	At least one instance of the criteria described below is applicable to the finding raised: • Controls mitigating high inherent risks or strategic business risks are either inadequate or ineffective. • The issues identified may result in a risk materialising that could either have: a major impact on delivery of organisational objectives; major reputation damage; or major financial consequences. • The risk has either materialised or the probability of it occurring is very likely and the mitigations put in place do not mitigate the risk. • Management attention is required as a matter of priority. • Fraud and unethical behaviour including management override of key controls.
Medium	At least one instance of the criteria described below is applicable to the finding raised: • Controls mitigating medium inherent risks are either inadequate or ineffective. • The issues identified may result in a risk materialising that could either have: a moderate impact on delivery of organisational objectives; moderate reputation damage; or moderate financial consequences. • The probability of the risk occurring is possible and the mitigations put in place moderately reduce the risk. • Management action is required within a reasonable time period.
Low	At least one instance of the criteria described below is applicable to the finding raised: • Controls mitigating low inherent risks are either inadequate or ineffective. • The Issues identified could have a minor negative impact on the risk and control environment. • The probability of the risk occurring is unlikely to happen. • Corrective action is required as appropriate.

Annex 4 : Sites visited by the audit team

Mainland

Regions (5)	Districts (19)	Health Facilities (50)
Dar Es Salaam	Ilala, Temeke, Ubungo, Kigamboni	Kinyerezi, Mnazi Moja, Buza, Mbande, Consolata Sisters, Kwembe, Kibwegere, Kimara, Kigamboni, Buyuni, Chekeni Mwasonga
Dodoma	Dodoma City Council, Chamwino, Kondoa, Bahi	Mundemu, Ibihwa, Kingale, Bolisa, Msanga, Buigiri, Haneti, Nala, Delta
Mbeya	Mbeya DC, Chunya, Rungwe, Kyela	Mbalizi dispensary, Inyala HC, Chunya District hospital, Chalangwa HC, Matundasi, Tukuyu District hospital, Ikuti HC, Ndaga, Kyela District hospital, Ipinda HC
Mwanza	Ilemela, Kwimba and Ukerewe	Hungumalwa, Nyamwilolelwa, Luhanga, Mwankulwe, Nyanghonge, Muriti, Kagunguli, and Nakatunguru
Kigoma	Kasulu DC, Kasulu TC, Kigoma DC, Kigoma MC	Ujiji, Bangwe, Rusimbi, Bitale HC, Simbo, Mwadiga, Kasulu Town, Kiganamo, Kigondo, Kitanga DC, Nyakitonto HC, Kalela dispensary

Zanzibar

Islands (2)	Districts (3)	Health Facilities (6)
Unguja	Kaskazini B, Magharibi A	Kiongwe HC, Misufini HC, Kianga HC, Selem HC
Pemba	Micheweni	Micheweni Hospital, Tumbe Dispensary

Annex 5: Immunisation Schedule

Antigen	Period
BCG OPV0	At birth
OPV1	At 6 weeks
PCV1	
DTP HepB-Hib 1	
Rota1	
OPV 2	At 10 weeks.
PCV 2	
DTP HepB-Hib 2	
Rota 2	
OPV 3	At 14 weeks.
PCV 3	
IPV 1	
DTP HepB-Hib 3	
Rota 3	
Measles 1	At 9 months
Measles 2	At 18 months
HPV	Between 9 to14 years for girls

Annex 6: EVMA

a) Comparison of EVMA scores for 2015 and 2021

		Infrastructure	Equipment	Information technology	Human resources	Policies & procedures	Financial resources	Outputs	Performance	Overall Score 2021	Overall score 2015
		C1	C2	C3	C4	C5	C6				
Vaccine arrivals	E1			50	100	6		61		54	43
Temperature management	E2			66	90	30		64	95	77	91
Storage and transportation capacity	E3	85	53		98	35		82	100	73	95
Facility infrastructure and equipment	E4	78	78	78			26	77		76	92
Maintenance and repair	E5			55	90	35	23	72	80	69	90
Stock management	E6			97	93	38		72	68	83	88
Distribution of vaccines and dry goods	E7		66	91	73	26	26	73	91	52	94
Vaccine management	E8				76	35		8		66	94
Waste management	E9		70		77	84	33	67	90	68	88
Annual needs forecasting	M1				75	32		94	93	81	
Annual work planning	M2				75	34	59	78	13	68	
Supportive supervision	M3	99	100	92	69	31	19	88		83	
iSC performance monitoring	M4			97	79	37		44		60	
TOTAL		79	73	83	85	48	40	70	85	74	86

b) Status of implementation of EVMA

	Strategic goals/Activities	Status of Implementation
SG1	**C1: Infrastructure- Ensure efficient, effective and sustainable immunisation supply chain system at all levels by 2025**	
1	In coordination with the district immunisation officer DIO, map all facilities without mobile phone and advocate to procure a facility mobile phone and use the facility budget to cover the monthly cost.	In progress
2	In coordination with the responsible departments/ partners (Ministry of water WASH department, USAID,), advocate/ solicit funds to enable facilities to have reliable source of water.	In progress
3	Provision/ Ensure availability and Reinforce use of hand washing facilities including sanitizer.	Completed
4	In coordination with councils (and use the database of RTM), map the internet connection of different service providers depending on signal strength at given locality.	Not started
5	Advocacy for SN, LDs and SPs to include the internet bundle and airtime budget in their fiscal budget (Integration/collective budget for all services that require internet within the facility).	Completed
6	The logistic team to develop the vaccine and dry goods' stores assessment checklist based on EVM and programme standards	Completed
7	Disseminate the checklist to the PORALG to conduct the assessment at all the national/ provincial and district stores.	Completed
8	IVD to analyse the results and develop the rehabilitation plan with prioritisation of actions/ stores.	In progress
9	Share the plan with the department of policy and planning to mobilise resources and manage funding.	Not started
10	Advocate for additional funds with donors and local government authorities to implement the plan.	Not started
11	In coordination with the maintenance department, prepare/develop preventive and repair maintenance plan at all levels as per the EVM requirements (fault reporting mechanism, documentation of all activities, availability of spare parts, technicians, funds).	Not started
12	Advocate for budget line for preventive/ maintenance at Unguja	Not started
13	Reinforce proper record keeping after maintenance and monitor during supervisory visits	Completed
14	Install the cold rooms stored at the airport at the IVD	Completed
SG2	**C2: Equipment- Functional and adequate cold chain space for vaccines storage with at least 90% uptime for CCE performance and adequate cold chain space for targeted population.**	
1	Conduct temperature mapping study	Completed
2	Transfer vaccines from MSD to IVD	Completed
3	EVM assessment to the IVD after shifting.	Not started
4	Advocate for fund to procure and install smoke alarm system and manual fire systems at IVD, Unguja, regional and district levels.	Not started
5	In coordination with local governments, ensure that regular maintenance for fire extinguishers is taking place at all facilities and monitor during supervision	In progress
6	Financial and technical support are available to conduct the study	Completed
7	Conduct the study and take corrective actions according to the report.	Completed
8	Update VIMS to capture all required fields in CCE inventory and generate required reports/ KPIs (ex. Functionality of CCE, maintenance history of the equipment, spare parts,)	In progress
9	Capacity building of VIMS users (in updating CCE inventory & analysing reports) and strengthen the frequent update of the inventory as recommended at each level during supervision and through follow up.	Completed
10	Based on the updated CCE inventory, conduct a gap analysis and develop CCE rehabilitation plan (consider the procurement of freeze protection refrigerators with RTM devices).	Completed
11	Advocate with partners to cover the implementation cost of the CCE rehabilitation plan.	Not started
12	Assign one focal person at each level (IVD, Unguja PR2, SNs and LDs) to monitor the CCE inventory update at its lower level.	Completed
13	Update the CCE maintenance plan (repair and PPM) at the national level so to address the gaps identified in EVMA.	In progress

	Strategic goals/Activities	Status of Implementation
14	Short term: Outsource the maintenance services Long term: train enough cold chain technicians at all levels and ensure enough funds and spare parts are available to conduct both PPM and repair maintenance.	In progress
15	identify Region/district with no generator, advocate and ensure one is installed with all specifications.	In progress
16	Ensure PPM for generators is updated and implemented.	In progress
17	Advocate for procuring warm coats and monitor adherence of using it especially that the coats are sometimes are available but not used.	Completed
18	Advocate for procurement of mechanical handling equipment (Forklift) where applicable at Unguja/ regional stores.	Not started
19	Use the fleet assessment results to identify the gaps (capacity, maintenance, spare parts, fire extinguishers, GPS…) then develop an improvement plan and advocate for funds to implement.	In progress
20	In coordination with the transportation officers, advocate for the development/ update of the PPM of vehicles and ensure enough funds are available.	Not started
21	Share with transport officers a vehicle inventory template with all required fields and advocate for its use and frequent update.	Not started
22	Orient drivers on how to handle vaccines during transportation and ensure a transport contingency plan is available at all vaccine transportation vehicle.	In progress
23	Advocate for the use of temperature monitoring devices (30DTRs) as backup during transportation with refrigerated vehicles.	Completed
24	Based on the results of the planned waste management assessment, prepare a plan to improve the waste management practices at both the LD and SPs and ensure enough PPE are available at all sites (to be aligned with the result of the incinerators piloting project conducted by the environmental health department).	In progress
25	Train all responsible staff on the best practices of proper immunisation waste management and share the updated SOPs.	In progress
26	Strengthen the dry supply distribution to ensure that the recommended safety boxes are used at all facilities.	Completed
27	Share the EVM results about the general waste management with the quality improvement team and environmental health department and advocate for having general storage facilities that complies with the minimum requirements.	Completed
SG3	**C3: Information Technology- Strengthen Supply Chain System to Ensure Efficient, Effective, and Sustainable Vaccine Management - sustainability, data use, timely, quality**	
1	**Short term:** Improve VIMS and RTM to capture and visualise the EVM recommended iSC KPI (Forecast accuracy, OTIF (on time, in full), functionality of CCE, temperature alarm rates).	Not started
2	Advocate for the use of VIMS at all levels in Zanzibar.	Not started
3	Capacity building for all VIMS users to effectively use generated reports and KPI of both VIMS & RTM (update the current user guidance to be more informative).	Completed
4	**Long term:** Rolling out VIMS plan at the facility level: Ensure the right infrastructure is available at the facility level (internet, IT devices) Train all responsible personnel Effective supervision to ensure proper use of the system.	Not started
5	Strengthen documentation at both Unguja and MSD/ IVD by ensuring that all shipping documents are available with the VAR (especially the lot release certificate).	Completed
6	Adopt the product arrival report PAR and train responsible staff at both Unguja and MSD/ IVDA on how to use it then monitor implementation (should be part of the updated SOP)	Completed
7	Procurement of RTMs to cover the remaining SNs, LDs and SPs in Tanzania mainland and Zanzibar.	Completed
8	Train the responsible staff on the installation and use of RTMs (DIVOs doing the installation and orienting the health care workers on how to read the RTM).	Completed
9	Strengthen the documentation process of the RTM results on monthly basis at PRs, SNs, LDs with cold rooms by developing the report through RTM, training staff and ensuring documentation is taking place.	Completed
10	Based on an updated inventory, procure enough 30 DTRs, distribute to all facilities in need and train all responsible staff on how to read it.	In progress
11	Temperature monitoring devices to be integrated in the inventory of VIMS (RTMs, 30 DTRs).	Completed
12	Re-emphasise the use of the standardised WHO temperature monitoring form by the DIVOs and ensure it is printed and disseminated to all the SPs with enough forms at each site. Monitor compliance through supportive supervision.	Completed
13	Update and disseminate the supportive supervision checklist (hardcopies and electronic) across all levels and advocate and monitor its use.	Completed
14	Update the supervisory training guidelines and feedback mechanism and train supervisors on the new checklist and the effective feedback mechanism (capacity gaps as some DIVOs are new).	In progress
15	Advocacy at district level to reinforce the conduction of comprehensive supportive supervision and outreach services according to the plans.	Completed
16	Integrate supportive supervision & Outreach immunisation activities with RMNCH & Nutrition activates in order to leverage resources.	Completed
17	Plan and budget for conducting temperature mapping for all WICR/ WIFR at all levels.	Not started
18	Build the national capacity of the cold chain technician on conducting temperature mapping so to be responsible on doing this activity in the future.	Not started
19	Update the current planning reporting tool so to function properly.	Not started
20	Train responsible staff at all levels on using the new tool and ensure the annual workplan is reviewed on quarterly basis through monitoring and effective supervision.	Not started
21	IVD and Partners to conduct ICT devices need assessment at all levels, budget and allocate resources for procuring enough equipment used in vaccine management (laptops/ desktop with antivirus and UPS when needed, printers, tablets, phones).	Completed
22	Advocacy for SN, LDs and SPs to include procuring antivirus and UPS for computers in their fiscal budget.	Completed
23	Plan for targeted assessments as part of monitoring the cIP progress.	Not started
SG4	**C4: Human Resources: Strengthen human resource availability and capacity for immunisation services at all levels by 2027.**	
1	Long term: Based on the human strategy for human resources, advocate for enhancing equitable distribution of staff (Urban/ rural) who carry out immunisation activities according to the MOH guidelines and in relation to the needs (ensure qualified staff are available).	Not started
2	Short term: 1- Enhance contractual recruitment of temporarily/retired health professional to provide immunisation services at facility level in special circumstances (applicable only at some districts/ can be identified during supervision or monitoring). 2- Motivate volunteers (guidelines already prepared for freshly graduates) to work at facilities with shortage in staff number.	In progress
3	**National level:** **Short term:** Advocate for the acceleration of the process of increasing staff number at IVD from 40 to 66 as requested (consider outsourcing through partners for additional staff at certain units like training unit). Update the job description for the current staff	Completed

	Strategic goals/Activities	Status of Implementation
	Long term: Review the staffing levels, prepare a staffing plan and advocate to fill the gaps (in training unit, human resource unit, technicians,).	
4	In coordination with the training department, conduct a training need assessment then update the training programme.	Not started
5	Update the training package based on the EVM recommendations.	Completed
6	Conduct supply chain trainings at all levels based on the training plan.	Completed
7	Print and disseminate training package to all levels	Completed
8	Train enough staff at the national IVD to conduct immunisation supply chain training data reviews and verification.	Completed
9	Develop and implement monitoring and evaluation framework for iSC training programmes.	Completed
10	Revitalise and monitor database for all immunisation related trainings.	Not started
11	Enhance pre- and in-service and continuous education programmes on immunisation linked to staff and health sector need (iSC to be part of the curriculum for professions that can be involved in immunisation services).	Not started
12	Review and implement the comprehensive mentorship programme on effective vaccine management.	In progress
13	Identify mentors and conduct training.	Not started
14	Update the E-Learning training modules based on the updated training packages and upload in the MoH E-Learning Platform.	Not started
15	As the retention plan is already in place, assess the retention mechanism at all levels, in coordination with the HR department.	Not started
SG5	**C5: Policies and Procedures: Improve availability and use of standard materials for immunisation vaccine management at all levels by 2025**	
1	Update/ Develop immunisation supply chain management guidelines/SOPs in local language based on the EVM recommendations (including mentorship programme for immunisation related activities).	Completed
2	Print and disseminate the new updated guidelines/ SOPs to all levels.	Completed
3	Train all staff on the use of the new guidelines/ SOPs at all levels.	Completed
4	Identify MoH-IVD focal person for reviewing and updating guidelines/SOPs in local language.	Not started
5	Identify, orient and deploy mentors on immunisation related activities.	Not started
6	Develop M&E framework for mentorship programme for immunisation services.	Not started
7	In coordination with the QIT (quality improvement team), reinforce adherence for the 5S requirement during supervision with the focus on immunisation related materials/guidelines/SOPs for effective follow-up.	Not started
8	1- Establish MOU and advocacy to Fastrack receipt and clearing of vaccines at the port of entry. 2- MoU with GPSA with all the required fields	Not started
SG6	**C6: Financial resources- Reinforce and sustain timely financing of immunisation services at all levels by 2025**	
1	Advocate for sufficient budget for immunisation activities (maintenance, supervision) and timely receipt of funds.	Completed
2	Advocate for timely release of budget for immunisation activities (custom clearance, fuel and PPM of vehicles so to prevent stock out and delays in shipments,.) by sharing evidence-based studies/ cases.	Completed
3	Advocate for the immunisation financial sustainability in alignment with NIS 2021-2025.	In progress
4	Use the available and planned assessments (fleet, CCE rehabilitation plan, EVM cIP) to advocate for additional funds for activities with no secured funds.	In progress

Summary

Activities	Number	
In progress	19	21%
Completed	41	45%
Not Started	31	34%
Total	**91**	

Annex 7: Vaccine Supply Chain pictorial evidence

Figure 2: Needles and Syringes at IVD Mabibo

Figure 3: Expired COVID-19 vaccines at IVD Mabibo

Figure 4: Potential Expiries of COVID-19 Vaccines at Zanzibar Central Vaccine Store, Unguja

Annex 8: Variance analysis, stock adjustments and reconciliations

Annex 8a: Variance analysis, stock adjustments and reconciliations

	Pentavalent			IPV			Pneumococcal Conjugate Vaccine (PCV)		
Regional Vaccine Store	Quantity counted (A)	Quantity recorded Vaccine Register/ Stock Card (B)	Variance (A-B)	Quantity counted (A)	Quantity recorded Vaccine Register/ Stock Card (B)	Variance (A-B)	Quantity counted (A)	Quantity recorded Vaccine Register/ Stock Card (B)	Variance (A-B)
Mwanza	160240	160240	0	26190	26190	0	304224	304224	0
Mbeya	52630	52230	400	29550	28055	1495	65452	65454	-2
Dodoma Region	91792	82660	9132	58745	59025	-280	62652	93904	-31252
Kigoma	39720	47030	-7310	1135	31720	-30585	23948	28942	-4994

	Pentavalent			IPV			Pneumococcal Conjugate Vaccine (PCV)		
District Vaccine Store	Quantity counted (A)	Quantity recorded Vaccine Control Book (B)	Variance (A-B)	Quantity counted (A)	Quantity recorded Vaccine Control Book (B)	Variance (A-B)	Quantity counted (A)	Quantity recorded Vaccine Control Book (B)	Variance (A-B)
Ilemela	9400	12400	-3000	5050	4350	700	9600	14524	-4924
Kwimba	23590	23590	0	9900	9900	0	20584	20584	0
Ukerewe	12850	12850	0	6360	6360	0	17848	17848	0
Mbeya DC	7630	9950	-2320	1860	3345	-1485	13616	11808	1808
Chunya	6780	6780	0	1175	1150	25	2188	2188	0
Rungwe	8330	8330	0	3440	3440	0	9644	9644	0
Kyela	5530	5530	0	2445	2445	0	2144	2144	0
Dodoma City Council	490	490	0	6950	6950	0	15220	15220	0
Chamwino District council	20100	25270	-5170	7600	9454	-1854	25600	4038	21562
Kondoa Town Council	3710	3710	0	1050	1050	0	2340	2400	-60
Bahi District Council	1940	1940	0	4455	4455	0	14260	15562	-1302
Kasulu District Council	11750	11750	0	0	0	0	14724	14878	-154
Kasulu Town Council	9950	8570	1380	1265	2265	-1000	2200	2100	100
Kigoma Municipal Council	9760	21240	-11480	3640	12955	-9315	6960	13294	-6334
Kigoma District Council	7090	22620	-15530	2190	4620	-2430	1072	3406	-2334
Ilala	28850	28850	0	12240	12240	0	28856	28860	-4
Temeke	38340	38340	0	13800	13800	0	33712	33712	0
Ubungo	20610	20610	0	6380	6380	0	15812	15812	0
Kigamboni	5680	5680	0	2100	2100	0	2900	2900	0

	Pentavalent			IPV			Pneumococcal Conjugate Vaccine (PCV)		
Health Facility Name	Quantity counted (A)	Quantity recorded Vaccine Control Book (B)	Variance (A-B)	Quantity counted (A)	Quantity recorded Vaccine Control Book (B)	Variance (A-B)	Quantity counted (A)	Quantity recorded Vaccine Control Book (B)	Variance (A-B)
Nyamwilolelwa	200	210	-10	50	75	-25	244	264	-20
Luhanga	40	40	0	85	85	0	16	16	0
Hungumalwa	150	150	0	0	0	0	0	0	0
Nyanghonge	110	110	0	90	90	0	164	164	0
Mwankulwe	270	280	-10	165	180	-15	216	220	-4
Nakatungulu	270	270	0	190	190	0	212	212	0
Muriti	100	100	0	120	100	20	204	200	4
Kagunguli	20	20	0	320	315	5	72	80	-8
Mbalizi District Hosp	110	70	40	185	40	145	164	176	-12
Inyala HC	105	121	-16	70	70	0	177	177	0
Chunya DH	300	300	0	635	635	0	352	352	0
Chalangwa	0	0	0	120	120	0	144	144	0
Matundas	590	590	0	260	260	0	376	376	0
Tukuyu	310	310	0	135	135	0	388	388	0
Ikuti	150	160	-10	215	220	-5	336	344	-8
Ndaga	10	10	0	50	50	0	100	100	0
Kyela DH	390	390	0	240	240	0	168	168	0
Ipinda	60	70	-10	175	34	141	116	30	86
Delta dispensary	20	30	-10	30	30	0	52	56	-4
Nala dispensary	140	140	0	30	30	0	180	180	0
Haneti Health centre	260	440	-180	30	30	0	348	348	0
Buigiri dispensary	40	40	0	10	10	0	44	44	0
Msanga Dispensary	100	110	-10	25	25	0	100	100	0
Bolisa dispensary	30	30	0	45	45	0	36	36	0
Kingale Dispensary	100	100	0	130	130	0	140	140	0
Ibihwa dispensary	110	110	0	155	155	0	304	304	0
Mundemu Health Centre	100	100	0	75	75	0	92	92	0
Bangwe Dispensory	280	280	0	145	145	0	260	260	0
Bitale Health Centre	130	130	0	335	335	0	128	140	-12
Kalela Dispensary	40	40	0	50	50	0	312	312	0
Kasulu Town Council Hospital	170	170	0	120	120	0	196	196	0
Kigondo Dispensary	180	180	0	65	65	0	208	208	0
Kitanga Dispensary	450	480	-30	0	100	-100	600	600	0
Mwandiga Dispensary	50	50	0	90	90	0	44	44	0
Rusimbi Dispensary	330	250	80	275	280	-5	320	320	0
Nyakitonto Health Centre	60	60	0	0	0	0	120	120	0
Kiganamo Health Centre	740	820	-80	170	215	-45	656	744	-88
Simbo Dispensary	70	70	0	235	235	0	124	124	0
Ujiji Health Centre	0	0	0	20	20	0	120	120	0
Kinyerezi	210	210	0	320	320	0	412	412	0
Mnazi Moja	220	220	0	250	250	0	149	149	0
Buza	470	470	0	210	210	0	216	216	0
Consolata Sisters	100	100	0	180	180	0	144	144	0
Mbande	20	20	0	170	170	0	160	160	0
Kibwegere	270	270	0	115	115	0	288	288	0
Kimara	760	760	0	340	340	0	824	824	0
Kwembe	220	220	0	250	250	0	149	148	1
Buyuni	40	40	0	75	75	0	64	64	0
Chekeni Mwasonga	20	20	0	160	160	0	8	8	0
Kigamboni	360	360	0	320	320	0	380	380	0

Annex 8b: Unexplained stock adjustments at RVS, DVS & HFs on Tanzania mainland

Vaccine Storage Facility		Total Unexplained Variances (Doses)			
		Pentavalent	IPV	PCV	Rota Virus
RVS	Mbeya	-	(36,100)	83,100	-
DVS	Kwimba	900	195	-	1,665
	Mbeya	-	-	-	16,775
	Chunya	1,772	-	900	-
	Kyela	16,580	205	11,388	(630)
	Dodoma City Council	300	1,260	-	2,400
	Bahi DC	-	(935)	-	(6,900)
	Ilala	2,000	-	-	-
	Temeke	-	-	-	(6,075)
	Ubungo	(1,720)	-	-	5,179
HF	Luhanga	-	-	32	-
	Nakatungulu	-	-	-	18
	Chunya	230	180	376	216
	Chalangawa	-	24	347	741
	Matundas	-	-	(12)	(158)
	Kyela DH	-	-	-	154
	Ipinda	-	(45)	-	-
	Delta	-	-	8	-
	Nala	(110)	-	-	-
	Bugiri	-	-	12	-
	Msanga	-	-	(108)	-
	Ibihiwa	-	-	-	130
	Simbo	10	5	-	285
	Mnazi Moja	-	15	(66)	(68)
	Mbande	-	-	38	40
	Kibwegere	360	(180)	580	234
	Buyuni	-	-	-	75
	Kigamboni	-	-	-	20

Annex 8c: Unexplained stock adjustments at Zanzibar DVS

DVS	Penta			IPV			PCV			ROTA		
	Stock Record	Physical Count	Variance	Stock Record	Physical Count	Variance	Stock Record	Physical Count	Variance	Stock Record	Physical Count	Variance
Kaskazini	6,240	5,700	540	2,430	2,430	0	6,868	6,308	560	5,149	5,149	0
Magharib	10,360	10,360	0	6,990	6,990	0	6,590	6,590	0	5843	5843	0
Micheweni	13,150	13,500	-350	1,450	1,340	110	4,350	4,250	100	5,650	5720	-70

Annex 9: Stock outs of vaccines at sub-national level on Tanzania mainland

	Region			District			Health Facilities		
Vaccine	No. of RVS with stock outs	Average Duration of Stockout	Max Days Out of Stock	No. of DVS with stockouts	Average Duration of Stockout	Max Days Out of Stock	No. of HFs with stockouts	Average Duration of Stockout	Max Days Out of Stock
Pentavalent vaccine	2/4	50	68	5/19	32	97	32/50	12	269
Inactivated Polio vaccine	3/4	45	114	13/19	21	130	31/50	17	118
Rota	3/4	57	164	14/19	48	186	47/50	30	155
PCV	2/4	52	76	9/19	26	74	37/50	13	109

Annex 10: Stock outs of vaccines at sub-national level on Zanzibar Island

Vaccine	District			Health Facilities		
	No. of District Vaccine Stores with stock outs	Average duration of Stockout (days)	Max no. of stock out (days)	No. of Health Facilities with stock outs	Average duration of Stockout (days)	Max no. of stock out (days)
Pentavalent vaccine	2/3	20	29	6/6	7	16
Inactivated Polio vaccine	2/3	15	15	6/6	17	36
PCV	2/3	31	31	6/6	21	45
Rota	2/3	76	32	6/6	38	89
J&J	2/3	30	39	6/6	46	86

Annex 11: Stock reconciliation at Zanzibar sub-national level

DVS	Vaccine	Expected Stock Balance	Stock Record	Variance
Kaskazini B DVS	Pentavalent	2400	450	1,950
Magharib A DVS	Pentavalent	890	730	160
Micheweni District	Pentavalent	1750	120	1,630
Kaskazini B DVS	PCV	79	85	(6)
Magharib A DVS	PCV	692	768	(76)
Micheweni District	PCV	4,916	1,480	3,436
Kaskazini B DVS	Rota virus Vaccine	1,508	308	1,200
Magharib A DVS	Rota virus Vaccine	1,460	1,350	110
Micheweni District	Rota virus Vaccine	(9,022)	180	(9,202)
Kaskazini B DVS	IPV	2070	185	1,885
Magharib A DVS	IPV	10	-	10
Micheweni District	IPV	9065	150	8,915

Annex 12: Detailed status of outstanding GMRs

	GMR	Remarks
1	MOHCDGEC to continue to ensure effective oversight functions of the ICC: Develop an ICC planning process to ensure timely agenda setting, documentation sharing and to secure engagement of all relevant stakeholder prior to any ICC decision taking	ICC meetings took place during the periods under review. However, the ICC meetings were not carried out 4 times in a year as required by the ToRs.
2	Considering PORALG's increased capacity, relevant staff at PORALG should continue to be included in the ICC discussions and deliberations. Financial technical expertise of the ICC shall be strengthened to support the ICC in providing oversight over financial management of Gavi funds	There was improvement noted in involvement of PORALG in the ICC from 2021 onwards. The Deputy DHS was noted to be in attendance in most of the meetings. However, there is need to involve the PORALG PS in this meeting as the ICC is a high-level decision-making body.
3	Financial and programmatic reports shall be presented and approved by the ICC before submitting to Gavi	Discussions of financial and programmatic performance was noted the ICC meetings. However, the discussions were based on what secretariat presented. The discussions were not for specific financial and programmatic reports.
4	Upon continuation of funding through the GoT, the annual workplan plan of the internal audit of MOHCDGEC shall include the audit of Gavi grants. HSS budget may include the operational costs to facilitate the internal audit reviews.	The internal audit workplans do include GAVI component. However, no internal audit was done from 2021-2022 based on the reports provided. Internal audit covering IVD (and not the regions) was done in Q4 (April to June) of 2023.
5	**Annual external audits** • During the period when Gavi will be disbursing funds through UNICEF, UNICEF external audit requirements will apply • Thereafter, Gavi grants shall be audited by the National Audit Office annually. • MOHCDGEC/IVD shall include in the Gavi grant budgets the operational costs for the external audit of Gavi grants and communicate this to NAOT accordingly. • The final audit report shall be submitted to Gavi not later than 6 months after the end of the fiscal year. • Gavi reserves the right to reject the audit report and demand a repeat audit and/or appoint a private audit firm in case the audit report by NAOT does not meet the expected standards. • Gavi will issue Terms of Reference (ToRs). • Copies of the audit reports, management letters and responses of the IVD in addressing previous audit findings will be submitted to Gavi. • The MOHCDGEC shall submit the financial statements for audit to the NAOT not later than three months after the end of the fiscal year • Gavi reserves the right to conduct its own additional audits of Gavi income and expenditure, which are carried out by the Gavi Programme Audit team.	Although all the other conditions were met, the NAOT audit reports were not submitted after 6 months as required.
6	The MOHCDGEC shall maintain where available at a reasonable cost, all risk property insurance on the Programme assets (including vaccines and related supplies, vehicles, cold chain equipment, etc.) and comprehensive several liability insurances with financially sound and reputable insurance companies. Where no insurance is available at reasonable costs, the country may utilise its own funds to self-insure to cover the replacement of Programme assets in case of damage or loss. The MOHCDGEC will provide Gavi with evidence, including coverage type and amounts and costs, of any insurance cover obtained.	Insurance has not been obtained for the CCE managed by MOHCDGEC/IVD
7	• EPI should maintain a fixed asset register (FAR) for all assets procured using Gavi funds. This register should have assets maintained at national and sub-national level.	IVD maintains a fixed asset register (FAR) within the EPICOR system for all assets procured using Gavi funds. This register has assets maintained at national

	GMR	Remarks
	• IVD will ensure that a comprehensive Fixed Asset Register (FAR) is maintained in the accounting system (EPICOR) for all assets procured through Gavi grants to GoT, including those procured through UNICEF and WHO, when applicable. • FAR will be maintained at the national, districts and health facility levels. If unfeasible at some locations, MOHCDGEC shall ensure it maintains those assets in a FAR to ensure all Gavi assets are captured in an appropriate register. • Asset verifications will be carried out at least annually, reconciling the physical assets to the FAR at all levels.	and sub-national level. However, during our review we noted the following: **The Fixed Asset Register (FAR) at IVD was incomplete**. The audit team noted that out of the 1,239 units of Solar Direct Drive (SDD) model TCW40R procured and distributed under the phase 2 of the Cold Chain Equipment Optimisation Platform (CCEOP), only 90 units are presented in the FAR. Similarly, out of the 275 units of On- Grid (ILR) model HBC-80 procured, only 106 are presented. In addition, out of the 3,266 Cold Chain Equipment, 2,285 of them do not have a location indicated. Additionally, visibility of the 981 CCE that have the location indicated is only up to the regional level. **Annual asset verifications were not carried out in the year 2018, 2019, 2020, and 2022:** Although the Public Asset Management Guideline Section 18 states "Verification by Accounting Officer shall be conducted after every three months as a measure to strengthen the internal controls", an asset verification was only carried out in 2021 to establish the status of obsolete equipment. However, there was no link between the CCE identified during this exercise and the CCE included in the FAR. Consequently, we were not able to reconcile the verification report to the FAR. **No insurance covers any of the programme fixed assets:** Although the audit team was informed that the process to insure programme assets had begun, there was no evidence provided for review.

Annex 13: Detailed status of the outstanding recommendations (8 of these) from the previous Gavi programme audit

	Recommendation	Remarks
1	Officers responsible for vaccine storage and handling comply with: Timely recording of vaccine movements is supported by stock issuance vouchers, Regular physical stock counts, Sock records are maintained to ensure compliance with EEFO – expiry dates & batch numbers and issue vaccines in strict compliance with EEFO	The gaps were still noted in the current audit. It is imperative for MOHCDGEC/IVD to strengthen controls around vaccine management.
2	MOHCDGEC is recommended to prioritise scaling up of the ongoing initiatives of VIMS and BIDS which aim to streamline data reporting processes and tools	There were still gaps noted in the development, upgrade and deployment of VIMs.
3	MOHCDGEC to strengthen its existing plan for cold chain maintenance by including cost component, identifying source of funds to cover the costed plan, and by enforcing, at the sub-national level, maintenance plans for cold chain equipment	Gaps were still noted in the regular maintenance of CCE especially at sub-national levels.
4	MOHCDGEC should ensure high value assets funded by Gavi grants where insurance is available at reasonable costs. In addition, the MOHCDGEC should maintain an updated register of all assets procured using Gavi support. MOHCDGEC should ensure that the assets are routinely updated at the sub-national level.	Insurance for Gavi funded assets is yet to be obtained.
5	MOHCDGEC should increase the involvement of its IA function in relation to Gavi-funded programmes. The IA function should be involved in the programme lifecycle to identify and agree on the audits, spot reviews and advisory roles to support the MOHCDGEC management.	MOHCDGECIA audits also cover the Gavi grants as per the workplans. However, the only internal audit done during the audit period, as per reports provided, covered the IVD head office. This did not include a review of the programme at other levels. There were also no spot checks done during the period under review.
6	MOHCDGEC in its capacity as a chair of the ICC, enhances the ICC roles by developing a detailed guideline that provides a framework for the operation of ICC.	ToRs for the ICC were revised. However, no guidelines or SOPs were developed to provide a framework for operations of the ICC.
7	To mitigate the future risk of Gavi funds being mismanaged, MOHCDGEC should: Manage Gavi grants, which are disbursed to the regions, either within the existing government accounting/financial system or enter into a MoU with the regions, through PO-RALG.	MOHCDGEC is yet to have a framework or MoU with PORALG. There was no evidence of PORALG's review of the financial reports from lower levels. PORALG only consolidated the reports.
8	MOHCDGEC, in consultation with Gavi's Country Programme Team, engages with NAOT to discuss the shortcoming in the audit reports submitted to Gavi.	Some of the shortcomings noted in the previous audit, i.e, expensing of advances, were still noted in the audit reports provided. Additionally, the audit reports were not submitted to Gavi within the required period. The shortcomings have thus not been handled.

Annex 14: Detailed status of the outstanding NAOT audit recommendations

	Recommendation	Remarks
	Partially implemented recommendations	
1	Ensure that all planned activities are implemented without further delay	Under absorption was still noted during the current audit.
2	Consider all factors including human resources when formulating budgets to avoid under absorption and under performance.	
	Recommendations not implemented	
3	MOHCDGEC and council management to ensure prompt repairs of vehicles and maintain registers with all vehicle information.	There was no evidence that this recommendation was implemented.
4	MOHCDGEC and Magu and Shinyaga district council management to strengthen controls on vehicle usage.	There was no evidence that this recommendation was implemented.
5	Management of Njombe town council to account for 2,432 liters of diesel worth TZs 5,758,988.	There was no evidence that this recommendation was implemented.
6	MOHCDGEC to sign MOU with local government and sub implementers for effective programme implementation.	The MoU has not been signed.
7	IVD management to ensure all future procurements are supported EFD (E-Fiscal Devices) receipts.	There was no evidence that this recommendation was implemented.
8	Management to create awareness to citizens on necessity to complete 2nd dose of Covid 19 vaccines.	There is slow uptake of C19 vaccines
9	Management to follow-up with responsible authority to obtain disposal permit for expired vaccines. Management to use FEFO for slow moving vaccines to avoid expiries.	Expiries of Covid 19 vaccines were noted at the CVS.
10	Management of IVD Zanzibar to ensure all payments vouchers have supporting documents.	Gaps in fuel management wee noted by the audit team.
11	Management of IVD Zanzibar to strengthen controls over fuel management and to have documents supporting fuel requested, issued and activities implemented.	Gaps in fuel management wee noted by the audit team.

Annex 15: Detailed status of the outstanding 2020 EPI recommendations

	Recommendation	Remarks
	Recommendations not implemented	
1	Review and disseminate immunisation practice guidelines on eligibility criteria and schedule for vaccination, and daily provision of immunisation services at HFs	Evidence of implementation of this recommendation was not provided during the audit.
2	Where feasible, ensure delivery of immunisation services is integrated with other services to better serve the population.	The Covid 19 Integration had not yet been fully rolled out to the sub-national levels.
3	Strengthen defaulters tracing, missed opportunity, and tracking of zero dose children by developing guidelines and job aids to achieve universal health coverage.	Evidence of implementation of this recommendation was not provided during the audit.
4	Improve capacity on interpersonal communication and demand creation skills at all levels	Due in December 2025.
5	Develop a written disposal plan and implement disposal of obsolete refrigerators in collaboration with VETA, Ministry of Finance, and other related authorities	Due in December 2023. However, the disposal plan of obsolete CCE was developed and used in the pilot study in Morogoro region in 2022 followed by the roll out in the remaining regions which are at the stage of seeking approval of the board of condemnation as per the disposal/Unserviceable guidelines and finance regulations.
	Partially implemented recommendations	
6	Advocate for ring-fenced resources for the delivery of immunisation services at region and council levels	Implementation Ongoing. Due in December 2025.
7	Instill accountability measures for immunisation services at all levels	Close monitoring of performance of the Immunisation Coordinators at Regional and Council levels takes place, and those who are identified to be unaccountable in their assigned responsibilities are replaced. In the period of 2018 to 2023, 4 Regional Coordinators from Morogoro, Kigoma, Dodoma and Tanga were replaced. But also, the Regional Administrations are being asked through letters to give reasons for poor performance in their Regions or Councils.
8	Strengthen utilisation of new technologies, electronic systems, and innovations in improving data accessibility, processing, and use	Currently electronic Child immunisation register is undergoing upgrades to V2.
9	Ensure integration of immunisation data systems with other existing data systems.	Process has started with procurement of server to host EIS system in- country thereafter will be integrated into DHIS2 through HIM. -Data harmonisation with eIDSR for VPD surveillance data. Migration of server to local hosting was delayed due to long process to procure servers.
10	Conduct periodic data performance review and quality assessment at all levels	The audit team noted gaps in data management.
11	Operationalise the IVD central warehouse including hiring and training of staff for key warehouse operations	Full operationalisation of IVD- Central Vaccines Store (CVS) commenced in July 2023 with the inventory management of covid -19 vaccines in 2021.
12	Ensure availability of vehicles for vaccines distribution at all Councils, and availability of cold chain equipment for newly established facilities	A total of 69 vehicles will be received by Jan 2024 to support distribution in regions and councils. A total of 2796 CCEs were procured, installed, and commissioned.
13	Strengthen VPD surveillance for eliminated and eradicated diseases (Polio, Maternal tetanus, etc.) to ensure the achievements are maintained	This is a continuous process. Currently the status is as follows: -Training of District & Regional surveillance focal persons ongoing. -Training of Health Care Workers from high Priority sites in Dar es salaam, Tabora, Unguja & Pemba ongoing. -Development of SOPs for VPD surveillance is done – Pending finalisation - Development and Printing of 3000 SCD for AFP, FRI & NNT is ongoing. Already distributed to all outbreak regions i.e. Kagara, Katavi, Kigoma, Mbeya, Rukwa and Songwe and additional regions in Dar

	Recommendation	Remarks
		es salaam, Iringa, Morogoro, Dodoma. The printing is ongoing and there after distribution to all regions. -Update of the Guidelines for AFP, FRI and NNT. These are pending finalisation. -Piloting of AFP & FRI sample referral using Courie (Postal Tanzania)
14	Strengthening and advocate for VPD outbreak prepared and response plan to high-level leaders in the Ministry and Harmonisation with other sections.	This is a continuous process. Currently the status is as follows: Updated Polio outbreak and response plan in accordance with Incidence Management system (IMS) in Tanzania. There's collaboration with Epidemiology unit for outbreaks investigation and response
15	Strengthen Adverse Events Following Immunisation (AEFI) surveillance at all levels (regional, council, facilities) to adequately functional notify, report all suspected AEFI	This is a continuous process. Currently the status is as follows: Development of AEFI reporting book for facility level country wide is done. Roll out of the Vigimobile for reporting of AEFIs in 7 regions has been done. Planned next roll out to 14 regions including the Polio outbreak regions.

Annex 16: Variances between VIMS and DHIS2

Annex 16a: Variances between VIMS and DHIS2 – Pentavalent vaccinations

Antigen: Penta			Total No. of vaccinations		Var 3
Region	District	Month	VIMS report	DHIS2 Record	
Mwanza	Ilemela	Jun-18	3679	3611	68
	Ilemela	Jun-20	4311	4156	155
	Ilemela	Jun-22	5542	5152	390
	Kwimba	Jun-18	4539	3998	541
	Kwimba	Jun-20	7396	4544	2,852
	Kwimba	Jun-22	7251	3028	4,223
	Ukerewe	Jun-18	3781	3299	482
	Ukerewe	Jun-20	5846	4203	1,643
	Ukerewe	Jun-22	5932	3524	2,408
Mbeya	Kyela	Jun-18	2533	2467	66
	Kyela	Jun-20	2479	2574	(95)
	Kyela	Jun-22	2920	2731	189
	Chunya	Jun-23	0	299	(299)
	Chunya	Jun-23	3368	258	3,110
	Chunya	Jun-23	3366	370	2,996
	Rungwe	Jun-18	2368	2339	29
	Rungwe	Jun-20	2092	2065	27
	Rungwe	Jun-22	2299	2139	160
	Mbeya DC	Jun-18	0	3536	(3,536)
	Mbeya DC	Jun-20	1135	3329	(2,194)
	Mbeya DC	Jun-22	1324	3525	(2,201)
Dodoma	Dodoma City Council	Jun-18	3813	4040	(227)
	Dodoma City Council	Jun-20	6121	5516	605
	Dodoma City Council	Jun-22	5664	4986	678
	Chamwino District Council	Jun-18	4247	3419	828
	Chamwino District Council	Jun-20	4814	4435	379
	Chamwino District Council	Jun-22	4928	4643	285
	Kondoa Town Council	Jun-18	437	479	(42)
	Kondoa Town Council	Jun-20	720	764	(44)
	Kondoa Town Council	Jun-22	718	533	185
	Bahi District Council	Jun-18	14441	2436	12,005
	Bahi District Council	Jun-20	2956	2905	51
	Bahi District Council	Jun-22	3188	2745	443
Kigoma	Kasulu District Council	Jun-18		5547	(5,547)
	Kasulu District Council	Jun-20	5948	6175	(227)
	Kasulu District Council	Jun-22	8107	6494	1,613
	Kasulu District Council	Jun-23	7254	7192	62
	Kasulu Town Council	Jun-18			-
	Kasulu Town Council	Jun-20	2493	2162	331
	Kasulu Town Council	Jun-22	2628	2441	187
	Kasulu Town Council	Jun-23	2682	2446	236
	Kigoma Municipal Council	Jun-18		71	(71)
	Kigoma Municipal Council	Jun-20	2132	2214	(82)
	Kigoma Municipal Council	Jun-22	2069	2102	(33)
	Kigoma Municipal Council	Jun-23	2696	2696	-
	Kigoma District Council	Jun-18	0	1831	(1,831)
	Kigoma District Council	Jun-20	2460	2318	142
	Kigoma District Council	Jun-22	2214	1985	229
	Kigoma District Council	Jun-23	2504	2223	281
Dar-es-salaam	Ilala	Jun-18	11200	11545	(345)
	Ilala	Jun-20	10250	10936	(686)
	Ilala	Jun-22	11764	12128	(364)
	Temeke	Jun-18	11061	11061	-
	Temeke	Jun-20	13183	12373	810
	Temeke	Jun-22	13502	13849	(347)
	Ubungo	Jun-18	6790	6728	62
	Ubungo	Jun-20	10354	9170	1,184
	Ubungo	Jun-22	7436	7389	47
	Kigamboni	Jun-18	1689	1755	(66)
	Kigamboni	Jun-20	1850	1960	(110)
	Kigamboni	Jun-22	2287	2396	(109)

Annex 16b: Variances between VIMS and DHIS2 – IPV vaccinations

Antigen: IPV			Total No. of IPV vaccinations		Var 3
Region	District	Month	VIMS report	DHIS2 Record	
Mwanza	Ilemela	Jun-18	1075	904	171
	Ilemela	Jun-20	1428	1280	148
	Ilemela	Jun-22	1735	1641	94
	Kwimba	Jun-18	1242	675	567
	Kwimba	Jun-20	2679	1201	1,478
	Kwimba	Jun-22	2415	668	1,747
	Ukerewe	Jun-18	1064	589	475
	Ukerewe	Jun-20	1831	1138	693
	Ukerewe	Jun-22	1776	1176	600
Mbeya	Kyela	Jun-18	847	344	503
	Kyela	Jun-20	762	647	115
	Kyela	Jun-22	932	841	91
	Chunya	Jun-23	0	0	-
	Chunya	Jun-23	1045	84	961
	Chunya	Jun-23	5070	122	4,948
	Rungwe	Jun-18	660	588	72
	Rungwe	Jun-20	627	588	39
	Rungwe	Jun-22	779	696	83
	Mbeya DC	Jun-18	0	641	(641)
	Mbeya DC	Jun-20	1115	747	368
	Mbeya DC	Jun-22	1340	1037	303
Dodoma	Dodoma City Council	Jun-18	573	366	207
	Dodoma City Council	Jun-20	1987	1298	689
	Dodoma City Council	Jun-22	1829	1572	257
	Chamwino District Council	Jun-18	1382	532	850
	Chamwino District Council	Jun-20	1384	984	400
	Chamwino District Council	Jun-22	1578	1353	225
	Kondoa Town Council	Jun-18	47	136	(89)
	Kondoa Town Council	Jun-20	239	185	54
	Kondoa Town Council	Jun-22	229	179	50
	Bahi District Council	Jun-18	632	449	183
	Bahi District Council	Jun-20	957	929	28
	Bahi District Council	Jun-22	1092	986	106
Kigoma	Kasulu District Council	Jun-18		969	(969)
	Kasulu District Council	Jun-20	1648	1501	147
	Kasulu District Council	Jun-22	2597	2084	513
	Kasulu District Council	Jun-23	2409	2246	163
	Kasulu Town Council	Jun-18			-
	Kasulu Town Council	Jun-20	831	820	11
	Kasulu Town Council	Jun-22	876	792	84
	Kasulu Town Council	Jun-23	894	789	105
	Kigoma Municipal Council	Jun-18			-
	Kigoma Municipal Council	Jun-20	731	731	-
	Kigoma Municipal Council	Jun-22	667	667	-
	Kigoma Municipal Council	Jun-23	1041	1041	-
	Kigoma District Council	Jun-18		539	(539)
	Kigoma District Council	Jun-20	883	796	87
	Kigoma District Council	Jun-22	672	663	9
	Kigoma District Council	Jun-23	796	820	(24)
Dar-es-salaam	Ilala	Jun-18	3407	2214	1,193
	Ilala	Jun-20	5849	2856	2,993
	Ilala	Jun-22	3785	3735	50
	Temeke	Jun-18	3557	2017	1,540
	Temeke	Jun-20	3922	3082	840
	Temeke	Jun-22	4032	3982	50
	Ubungo	Jun-18	2203	2196	7
	Ubungo	Jun-20	3176	3152	24
	Ubungo	Jun-22	2483	2484	(1)
	Kigamboni	Jun-18	402	483	(81)
	Kigamboni	Jun-20	550	554	(4)
	Kigamboni	Jun-22	586	686	(100)

Annex 17: Variances between data collection records

Annex 17a: Variance between data collection records - Pentavalent

Region	District	Health Facility	Month	Book 7 Child Register (Rejesta Ya Watoto) Total No. of immunisations *(a)*	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data* Total No. of immunisations *(b)*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data* Total No. of immunisations (c)	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report Total No. of immunisations (d)	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report* Total No. of immunisations (e)	VIMS report Total No. of immunisations *(g)*	DHIS2 Record Total No. of immunisations (h)	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Mwanza	Ilemela	Nyamwilolelwa	Jun-18	-	-	63	-	-	-	63	-	-	-	-	(63)
Mwanza	Ilemela	Nyamwilolelwa	Jun-20	50	66	57	57	-	-	57	16	66	50	57	(57)
Mwanza	Ilemela	Nyamwilolelwa	Jun-22	77	97		97	-	-	97	20	97	77	97	(97)
Mwanza	Ilemela	Luhanga	Jun-19	135	152	122	152	152	-	152	17	-	(17)	-	(152)
Mwanza	Ilemela	Luhanga	Jun-20	163	175	175	175	175	-	175	12	-	(12)	-	(175)
Mwanza	Ilemela	Luhanga	Jun-22	218	-	-	214	214	-	214	(218)	(214)	4	-	(214)
Mwanza	Kwimba	Hungumalwa	Jun-18	-	66	66	66	-	66	-	66	66	-	66	66
Mwanza	Kwimba	Hungumalwa	May-21	124	252	252	252	-	252	127	128	252	124	252	125
Mwanza	Kwimba	Hungumalwa	Nov-22	165	366	365	366	-	255	119	201	366	165	366	136
Mwanza	Kwimba	Nyanghonge	Jun-18	-	54	54	54	54	54	89	54	-	(54)	-	(35)
Mwanza	Kwimba	Nyanhongo	Jun-20	25	88	91	93	91	88		63	(3)	(66)	2	88
Mwanza	Kimba	Nyanhongo	Jun-22	-	48	48		48	111	48	48	-	(48)	(48)	63
Mwanza	Kimba	Manbulge	Sep-18	62	60	60	47	60	164	60	(2)	-	2	(13)	104
Mwanza	Kimba	Manbulge	Apr-20	-	113	119	120	119	161	119	113	(6)	(119)	1	42
Mwanza	Kimba	Mwankulwe	Sep-22	23	-	73	83	70	162	-	(23)	(70)	(47)	13	162
Mwanza	Ukerewe	Nakatungulu	Sep-18	176	166	146	166	166	166	67	(10)	-	10	-	99
Mwanza	Ukerewe	Nakatungulu	Jun-20	198	159	161	159	159	159	125	(39)	-	39	-	34
Mwanza	Ukerewe	Nakatungulu	Jun-22	209	229	195	229	229	244	229	20	-	(20)	-	15
Mwanza	Ukerewe	Muriti	Jul-19	120	227	114	225	225	230	224	107	2	(105)	-	6
Mwanza	Ukerewe	Muriti	Aug-20	122	171	138	171	169	250	201	49	2	(47)	2	49

Region	District	Health Facility	Month	Book 7 Child Register (Rejesta Ya Watoto) Total No. of immunisations *(a)*	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data* Total No. of immunisations *(b)*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data* Total No. of immunisations (c)	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report Total No. of immunisations (d)	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report* Total No. of immunisations (e)	VIMS report Total No. of immunisations *(g)*	DHIS2 Record Total No. of immunisations (h)	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Mwanza	Ukerewe	Muriti	Sep-22	130	164	150	164	164	171	164	34	-	(34)	-	7
Mwanza	Ukerewe	Kagunguli	Jun-18	167	163	126	162	162	162	162	(4)	1	5	-	-
Mwanza	Ukerewe	Kagunguli	Jun-20	135	132	127	180	132	180	130	(3)	-	3	48	50
Mwanza	Ukerewe	Kagunguli	Jun-22	146	160	117	160	160	207	207	14	-	(14)	-	-
Mbeya	Mbeya DC	Mbalizi District Hosp	Jun-18	-	126	-	-	124	-	124	126	2	(124)	(124)	(124)
Mbeya	Mbeya DC	Mbalizi District Hosp	Jun-20	-	160	160	-	160	157	160	160	-	(160)	(160)	(3)
Mbeya	Mbeya DC	Mbalizi District Hosp	Jun-22	-	163	163	-	163	163	163	163	-	(163)	(163)	-
Mbeya	Mbeya DC	Inyala HC	Jun-18	138	124	137	137	137		124	(14)	(13)	1	-	(124)
Mbeya	Mbeya DC	Inyala HC	Jun-20	128	128	128	160	128		128	-	-	-	32	(128)
Mbeya	Mbeya DC	Inyala HC	Jun-22	156	156	156	156	156		156	-	-	-	-	(156)
Mbeya	Chunya	Chalangwa HC	Jun-18	-	-	-	-	98	-	-	-	(98)	(98)	(98)	-
Mbeya	Chunya	Chalangwa HC	Jun-20	-	-	86	78	74	78	105	-	(74)	(74)	4	(27)
Mbeya	Chunya	Chalangwa HC	Jun-22	-	-	131	130	130	130	130	-	(130)	(130)	-	-
Mbeya	Chunya	Chunya DH	Jun-18	-	-	297	299	299	299	299	-	(299)	(299)	-	-
Mbeya	Chunya	Chunya DH	Jun-20	-	-	260	258	258	258	258	-	(258)	(258)	-	-
Mbeya	Chunya	Chunya DH	Jun-22	-	-	370	368	370	368	370	-	(370)	(370)	(2)	(2)
Mbeya	Chunya	Matundasi	Jun-18	131	154	154	154	154		154	23	-	(23)	-	(154)
Mbeya	Chunya	Matundasi	Jun-20	137	149	148	149	148	149	149	12	1	(11)	1	-
Mbeya	Chunya	Matundasi	Jun-22	123	133	133	133	133	133	133	10	-	(10)	-	-
Mbeya	Rungwe	Ikuti	Jun-18	78	97	97	97	97	89	97	19	-	(19)	-	(8)
Mbeya	Rungwe	Ikuti	Jun-20	68	55	57	56	55	56	55	(13)	-	13	1	1
Mbeya	Rungwe	Ikuti	Jun-22	53	59	60	59	59	59	59	6	-	(6)	-	-
Mbeya	Rungwe	Ndaga	Jun-18	60	60	60	60	60		60	-	-	-	-	(60)

Region	District	Health Facility	Month	Book 7 Child Register (Rejesta Ya Watoto) Total No. of immunisations *(a)*	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data* Total No. of immunisations *(b)*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data* Total No. of immunisations (c)	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report Total No. of immunisations (d)	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report* Total No. of immunisations (e)	VIMS report Total No. of immunisations *(g)*	DHIS2 Record Total No. of immunisations (h)	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Mbeya	Rungwe	Ndaga	Jun-20	62	62	62	60	62	62	62	-	-	-	(2)	-
Mbeya	Rungwe	Ndaga	Jun-22	68	68	68	63	68	68	68	-	-	-	(5)	-
Mbeya	Rungwe	Tukuyu	Jun-18	158	203	211	204	-		204	45	203	158	204	(204)
Mbeya	Rungwe	Tukuyu	Jun-20	197	219		209	209	209	153	22	10	(12)	-	56
Mbeya	Kyela	Tukuyu	Jun-22	124	168	168	168	168	168	168	44	-	(44)	-	-
Mbeya	Kyela	Kyela DH	Jun-18	419	530	484	494	530	610	510	111	-	(111)	(36)	100
Mbeya	Kyela	Kyela DH	Jun-20	403	464	506	505	505	505	505	61	(41)	(102)	-	-
Mbeya	Kyela	Kyela DH	Jun-22	302	358	361	380	380	388	380	56	(22)	(78)	-	8
Mbeya	Kyela	Ipinda HC	Jun-18	129	170	182	170	172	220	172	41	(2)	(43)	(2)	48
Mbeya	Kyela	Ipinda HC	Jun-20	176	184	182	173	183	183	183					
Mbeya	Kyela	Ipinda HC	Jun-22	163	215	221	215	215	215	215					
Dodoma	Dodoma City Council	Delta dispensary	Jun-22	84	109	-	109	109	109	109	25	-	(25)	-	-
Dodoma	Dodoma City Council	Delta dispensary	Dec-22	73	101	-	99	97	99	99	28	4	(24)	2	-
Dodoma	Dodoma City Council	Delta dispensary	Jun-23	70	81	-	81	81	79	79	11	-	(11)	-	-
Dodoma	Dodoma City Council	Nala dispensary	Jun-18	14	38	38	48	39	48	39	24	(1)	(25)	9	9
Dodoma	Dodoma City Council	Nala dispensary	Jun-20	19	59	59	57	59	57	65	40	-	(40)	(2)	(8)
Dodoma	Dodoma City Council	Nala dispensary	Jun-22	33	90	90	90	62	90	62	57	28	(29)	28	28
Dodoma	Chamwino District Council	Haneti Health centre	Jun-18	47	65	66	67	65	67	66	18	-	(18)	2	1
Dodoma	Chamwino District Council	Haneti Health centre	Jun-20	106	136	136	136	136	136	137	30	-	(30)	-	(1)
Dodoma	Chamwino District Council	Haneti Health centre	Jun-22	157	179	180	180	180	180	179	22	(1)	(23)	-	1

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data*	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report*	VIMS report	DHIS2 Record	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Region	District	Health Facility	Month	Total No. of immunisations *(a)*	Total No. of immunisations *(b)*	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations *(g)*	Total No. of immunisations (h)					
Dodoma	Chamwino District Council	Buigiri dispensary	Jun-18	44	44	51	44	51	47	51	-	(7)	(7)	(7)	(4)
Dodoma	Chamwino District Council	Buigiri dispensary	Jun-20	37	43	60	43	60	50	60	6	(17)	(23)	(17)	(10)
Dodoma	Chamwino District Council	Buigiri dispensary	Jun-22	43	43	45	43	47	39	47	-	(4)	(4)	(4)	(8)
Dodoma	Chamwino District Council	Msanga Dispensary	Jun-18	43	43	51	51	51	51	51	-	(8)	(8)	-	-
Dodoma	Chamwino District Council	Msanga Dispensary	Jun-20	49	51	51	64	64	64	64	2	(13)	(15)	-	-
Dodoma	Chamwino District Council	Msanga Dispensary	Jun-22	57	61	64	64	64	64	47	4	(3)	(7)	-	17
Dodoma	Kondoa Town Council	Bolisa dispensary	Jun-18	4	2	16	14	14	9	16	(2)	(12)	(10)	-	(7)
Dodoma	Kondoa Town Council	Bolisa dispensary	Jun-20	6	11	30	26	26	29	26	5	(15)	(20)	-	3
Dodoma	Kondoa Town Council	Bolisa dispensary	Jun-22	2	16	16	16	15	27	16	14	1	(13)	1	11
Dodoma	Kondoa Town Council	Kingale Dispensary	Jun-18	47	59	59	59	59	59	62	12	-	(12)	-	(3)
Dodoma	Kondoa Town Council	Kingale Dispensary	Jun-20	64	67	67	67	67	67	67	3	-	(3)	-	-
Dodoma	Kondoa Town Council	Kingale Dispensary	Jun-22	30	35	32	36	37	36	37	5	(2)	(7)	(1)	(1)
Dodoma	Bahi District Council	Ibihwa dispensary	Jun-18	43	63	63	60	63	329	75	20	-	(20)	(3)	254
Dodoma	Bahi District Council	Ibihwa dispensary	Jun-20	40	77	89	82	86	86	86	37	(9)	(46)	(4)	-

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data*	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report*	VIMS report	DHIS2 Record	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Region	District	Health Facility	Month	Total No. of immunisations *(a)*	Total No. of immunisations *(b)*	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations *(g)*	Total No. of immunisations (h)					
Dodoma	Bahi District Council	Ibihwa dispensary	Jun-22	48	76	76	85	85	85	85	28	(9)	(37)	-	-
Dodoma	Bahi District Council	Mundemu Health Centre	Jun-18	16	71	24	360	71	71	71	55	-	(55)	289	-
Dodoma	Bahi District Council	Mundemu Health Centre	Jun-20	20	35	12	77	79	79	79	15	(44)	(59)	(2)	-
Dodoma	Bahi District Council	Mundemu Health Centre	Jun-22	39	31	65	74	73	74	74	(8)	(42)	(34)	1	-
Kigoma	Kigoma MC	Bangwe Dispensary	Jun-18	53	53	53	53	53	-	53	-	-	-	-	(53)
Kigoma	Kigoma MC	Bangwe Dispensary	Jun-20	57	60	60	60	60	66	60	3	-	(3)	-	6
Kigoma	Kigoma MC	Bangwe Dispensary	Jun-22	48	50	50	50	50	149	50	2	-	(2)	-	99
Kigoma	Kigoma DC	Bitale Health Centre	Jun-18	52	61	61	59	59	-	59	9	2	(7)	-	(59)
Kigoma	Kigoma DC	Bitale Health Centre	Jun-20	61	55	96	96	55	83	96	(6)	-	6	41	(13)
Kigoma	Kigoma DC	Bitale Health Centre	Jun-22	53	54	54	53	54	53	54	1	-	(1)	(1)	(1)
Kigoma	Kasulu DC	Kalela Dispensary	Jun-18	115	115	-	115	-	-	115	-	115	115	115	(115)
Kigoma	Kasulu DC	Kalela Dispensary	Jun-20	132	-	132	132	132	132	132	(132)	(132)	-	-	-
Kigoma	Kasulu DC	Kalela Dispensary	Jun-22	93	94	-	93	93	93	93	1	1	-	-	-
Kigoma	Kasulu TC	Kasulu Town Council Hospital	Jun-18	189	-	210	215	215	-	23	(189)	(215)	(26)	-	(23)
Kigoma	Kasulu TC	Kasulu Town Council Hospital	Jun-20	148	-	163	159	163	163	13	(148)	(163)	(15)	(4)	150
Kigoma	Kasulu TC	Kasulu Town Council Hospital	Jun-22	108	-	199	192	196	192	19	(108)	(196)	(88)	(4)	173
Kigoma	Kasulu TC	Kigondo Dispensary	Jun-18	50	51	50	-	49	-	50	1	(1)	(50)	49	(50)
Kigoma	Kasulu TC	Kigondo Dispensary	Jun-20	49	49	49	49	49	49	49	-	-	-	-	-
Kigoma	Kasulu TC	Kigondo Dispensary	Jun-22	62	61	63	62	62	62	62	(1)	2	(1)	-	-

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data*	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report*	VIMS report	DHIS2 Record	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Region	District	Health Facility	Month	Total No. of immunisations *(a)*	Total No. of immunisations *(b)*	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations *(g)*	Total No. of immunisations (h)					
Kigoma	Kasulu DC	Kitanga Dispensary	Jun-18	-	143	-	143	143	-	143	143	(143)	143	-	(143)
Kigoma	Kasulu DC	Kitanga Dispensary	Jun-20	-	220	-	220	-	-	220	220	(220)	220	(220)	(220)
Kigoma	Kasulu DC	Kitanga Dispensary	Jun-22	187	422	-	381	422	381	381	235	(422)	381	41	-
Kigoma	Kigoma DC	Mwandiga Dispensary	Jun-18	-	-	-	-	-	-	-	-	-	-	-	-
Kigoma	Kigoma DC	Mwandiga Dispensary	Jun-20	81	-	91	93	93	96	93	(81)	91	2	-	3
Kigoma	Kigoma DC	Mwandiga Dispensary	Jun-22	65	-	76	75	75	73	54	(65)	76	(1)	-	19
Kigoma	Kasulu DC	Nyakitonto Health Centre	Jun-18	168	170	170	170	170	-	170	2	-	-	-	(170)
Kigoma	Kasulu DC	Nyakitonto Health Centre	Jun-20	200	200	152	200	198	200	200	-	(48)	48	(2)	-
Kigoma	Kasulu DC	Nyakitonto Health Centre	Jun-22	138	138	139	138	138	153	138	-	1	(1)	-	15
Kigoma	Kasulu TC	Kiganamo Health Centre	Jun-18	69	-	-	463	-	-	462	(69)	-	463	(463)	(462)
Kigoma	Kasulu TC	Kiganamo Health Centre	Jun-20	634	-	-	700	-	700	600	(634)	-	700	(700)	100
Kigoma	Kasulu TC	Kiganamo Health Centre	Jun-22	418	696	-	823	696	810	696	278	(696)	823	(127)	114
Kigoma	Kigoma DC	Simbo Dispensary	Jun-18	-	-	-	-	-	-	-	-	-	-	-	-
Kigoma	Kigoma DC	Simbo Dispensary	Jun-20	102	125	125	125	125	125	125	23	-	-	-	-
Kigoma	Kigoma DC	Simbo Dispensary	Jun-22	79	79	79	79	60	67	67	-	-	-	(19)	-
Kigoma	Kigoma DC	Simbo Dispensary	Jun-23	90	123	123	123	120	120	120	33	-	-	(3)	-
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-18	257	-	269	-	289	-	-	(257)	269	(269)	289	-
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-20	334	-	329	329	329	329	-	(334)	329	-	-	329
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-22	352	221	351	351	351	351	-	(131)	130	-	-	351
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-23	398	402	402	402	402	402	-	4	-	-	-	402
Dar-es-salaam	Ilala	Kinyerezi	Jun-18	252	360	360	360	360	360	360	108	-	-	-	-

Region	District	Health Facility	Month	Book 7 Child Register (Rejesta Ya Watoto) Total No. of immunisations *(a)*	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data* Total No. of immunisations *(b)*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data* Total No. of immunisations (c)	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report Total No. of immunisations (d)	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report* Total No. of immunisations (e)	VIMS report Total No. of immunisations *(g)*	DHIS2 Record Total No. of immunisations (h)	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Dar-es-salaam	Ilala	Kinyerezi	Jun-20	362	500	500		500	500	500	138	-	(500)	500	-
Dar-es-salaam	Ilala	Kinyerezi	Jun-22	400	400	400	400	400	400	400	-	-	-	-	-
Dar-es-salaam	Ilala	Mnazi Moja	Jun-18		-	366	366	375	366	366	-	366	-	9	-
Dar-es-salaam	Ilala	Mnazi Moja	Jun-20	85	393	393	393	393	393	393	308	-	-	-	-
Dar-es-salaam	Ilala	Mnazi Moja	Jun-22	730	643	440	440	440	440	440	(87)	(203)	-	-	-
Dar-es-salaam	Temeke	Buza	Jun-18	129	405	359	405	375	356	375	276	(46)	46	(30)	(19)
Dar-es-salaam	Temeke	Buza	Jun-20	140	385	388	392	392	392	392	245	3	4	-	-
Dar-es-salaam	Temeke	Buza	Jun-22	272		490	490	490	494	490	(272)	490	-	-	4
Dar-es-salaam	Temeke	Consolata Sisters	Jun-18	202	477	454		556	556	576	275	(23)	(454)	556	(20)
Dar-es-salaam	Temeke	Consolata Sisters	Jun-20	203		156		769	774	774	(203)	156	(156)	769	-
Dar-es-salaam	Temeke	Consolata Sisters	Jun-22	232	383			1,010	1,800	1,700	151	(383)	-	1,010	100
Dar-es-salaam	Temeke	Mbande	Jun-18	517	288	135		343	345	343	(229)	(153)	(135)	343	2
Dar-es-salaam	Temeke	Mbande	Jun-20	199	499	514	503	503	503	503	300	15	(11)	-	-
Dar-es-salaam	Temeke	Mbande	Jun-22	474	564	542	542	542	446	542	90	(22)	-	-	(96)
Dar-es-salaam	Ubungo	Kibwegere	Jun-18	111	124	124	124	124		124	13	-	-	-	(124)
Dar-es-salaam	Ubungo	Kibwegere	Jun-20		189	189	174	189	189	189	189	-	(15)	15	-
Dar-es-salaam	Ubungo	Kibwegere	Jun-22	196	192	190	192	192	138	192	(4)	(2)	2	-	(54)
Dar-es-salaam	Ubungo	Kimara	Jun-18		502	515	515		591	514	502	13	-	(515)	77
Dar-es-salaam	Ubungo	Kimara	Jun-20	575	597	598	598	598	591	598	22	1	-	-	(7)
Dar-es-salaam	Ubungo	Kimara	Jun-22	847	722	720	722	722	722	722	(125)	(2)	2	-	-
Dar-es-salaam	Ubungo	Kwembe	Jun-18	19		69	72	69	69	69	(19)	69	3	(3)	-

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data*	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report*	VIMS report	DHIS2 Record	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
Region	District	Health Facility	Month	Total No. of immunisations *(a)*	Total No. of immunisations *(b)*	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations *(g)*	Total No. of immunisations (h)					
Dar-es-salaam	Ubungo	Kwembe	Jun-20	26	112	116	116	116	116	116	86	4	-	-	-
Dar-es-salaam	Ubungo	Kwembe	Jun-22	26	69	62	69	69	69	69	43	(7)	7	-	-
Dar-es-salaam	Kigamboni	Buyuni	Jun-18	14	28	4	28	28	28	28	14	(24)	24	-	-
Dar-es-salaam	Kigamboni	Buyuni	Jun-20	36	36	36	36	36	36	36	-	-	-	-	-
Dar-es-salaam	Kigamboni	Buyuni	Jun-22	13	11	11	11	11	11	11	(2)	-	-	-	-
Dar-es-salaam	Kigamboni	Chekeni Mwasonga	Jun-18	63	73		73	73	73	73	10	(73)	73	-	-
Dar-es-salaam	Kigamboni	Chekeni Mwasonga	Jun-20	48	110		110	110	110	110	62	(110)	110	-	-
Dar-es-salaam	Kigamboni	Chekeni Mwasonga	Jun-22	75	116	116	116	116	116	116	41	-	-	-	-
Dar-es-salaam	Kigamboni	Kigamboni	Jun-18	131		54	Book not available			220					(220)
Dar-es-salaam	Kigamboni	Kigamboni	Jun-20	191	548	120	288	288		288					(288)
Dar-es-salaam	Kigamboni	Kigamboni	Jun-22	134	410	134	410	400		375	276	10	(266)	10	(375)

Annex 17b: Variance between data collection records - IPV

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report	VIMS report	DHIS2 Record	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Region	District	Health Facility	Month	Total No. of immunisations (a)	Total No. of immunisations (b)	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations (g)	Total No. of immunisations (h)					
Mwanza	Ilemela	Nyamwilolelwa	Jun-18			17				17	-	-	-	-	(17)
Mwanza	Ilemela	Nyamwilolelwa	Jun-20	16	16	16	16			16	-	16	16	16	(16)
Mwanza	Ilemela	Nyamwilolelwa	Jun-22	16	31		31			31	15	31	16	31	(31)
Mwanza	Ilemela	Luhanga	Jun-19	70	63	42	63	-		63	(7)	63	70	63	(63)
Mwanza	Ilemela	Luhanga	Jun-20	54	64	64	64	64		64	10	-	(10)	-	(64)
Mwanza	Ilemela	Luhanga	Jun-22	65			67	67		67	(65)	(67)	(2)	-	(67)
Mwanza	Kwimba	Hungumalwa	Jun-18		30	30	30	-	30	-	30	30	-	30	30
Mwanza	Kwimba	Hungumalwa	May-21	33	81	82	81		81	31	48	81	33	81	50
Mwanza	Kwimba	Hungumalwa	Nov-22	38	85	106	122		85	36	47	85	38	122	49
Mwanza	Kwimba	Nyanghonge	Jun-18		6	6	6	6	6	6	6	-	(6)	-	-
Mwanza	Kwimba	Nyanghonge	Jun-20	10	27	21	17	21	27		17	6	(11)	(4)	27
Mwanza	Kwimba	Nyanghonge	Jun-22		16	16		14	37	16	16	2	(14)	(14)	21
Mwanza	Kwimba	Mwankulwe	Sep-18	15	29	29	29	29	29	29	14	-	(14)	-	-
Mwanza	Kwimba	Mwankulwe	Apr-20		30		30	31	53	31	30	(1)	(31)	(1)	22
Mwanza	Kwimba	Mwankulwe	Sep-22	1		-	28	36	54	-	(1)	(36)	(35)	(8)	54
Mwanza	Ukerewe	Nakatungulu	Sep-18	59	57	50	57	-	57	-	(2)	57	59	57	57
Mwanza	Ukerewe	Nakatungulu	Jun-20	69	64	54	46	64	46	64	(5)	-	5	(18)	(18)
Mwanza	Ukerewe	Nakatungulu	Jun-22	70	62	59	62	62	62	62	(8)	-	8	-	-
Mwanza	Ukerewe	Muriti	Jul-19	35	72	45	72	72	72	72	37	-	(37)	-	-
Mwanza	Ukerewe	Muriti	Aug-20	34	59	45	59	59	85	73	25	-	(25)	-	12
Mwanza	Ukerewe	Muriti	Sep-22	19	41	41	40	40	40	40	22	1	(21)	-	-
Mwanza	Ukerewe	Kagunguli	Jun-18	50	47	55	55	55	55	55	(3)	(8)	(5)	-	-

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report	VIMS report	DHIS2 Record	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Region	District	Health Facility	Month	Total No. of immunisations (a)	Total No. of immunisations (b)	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations (g)	Total No. of immunisations (h)					
Mwanza	Ukerewe	Kagunguli	Jun-20	51	51	46	57	51	57	51	-	-	-	6	6
Mwanza	Ukerewe	Kagunguli	Jun-22	44	50	45	50	50	34	34	6	-	(6)	-	-
Mbeya	Mbeya DC	Mbalizi District Hosp	Jun-18		41	-	-	38	-	39	41	3	(38)	(38)	(39)
Mbeya	Mbeya DC	Mbalizi District Hosp	Jun-20		58	58	-	58	58	58	58	-	(58)	(58)	-
Mbeya	Mbeya DC	Mbalizi District Hosp	Jun-22		67	67	-	53	67	53	67	14	(53)	(53)	14
Mbeya	Mbeya DC	Inyala HC	Jun-18	48	39	48	48	48		39	(9)	(9)	-	-	(39)
Mbeya	Mbeya DC	Inyala HC	Jun-20	41	41	41	58	41		41	-	-	-	17	(41)
Mbeya	Mbeya DC	Inyala HC	Jun-22	51	53	53	53	53		53	2	-	(2)	-	(53)
Mbeya	Chunya	Chalangwa HC	Jun-18		-			43	-	-	-	(43)	(43)	(43)	-
Mbeya	Chunya	Chalangwa HC	Jun-20		-	33	27	27	27	27	-	(27)	(27)	-	-
Mbeya	Chunya	Chalangwa HC	Jun-22		-	45	45	45	45	45	-	(45)	(45)	-	-
Mbeya	Chunya	Chunya DH	Jun-18			-	84	-	84	-	-	-	-	84	84
Mbeya	Chunya	Chunya DH	Jun-20			80	84	84	84	-	-	(84)	(84)	-	84
Mbeya	Chunya	Chunya DH	Jun-22			122	122	122	122	-	-	(122)	(122)	-	122
Mbeya	Chunya	Matundasi	Jun-18	55	55	55	55	55		55	-	-	-	-	(55)
Mbeya	Chunya	Matundasi	Jun-20	41	-	48	48	48	48	48	(41)	(48)	(7)	-	-
Mbeya	Chunya	Matundasi	Jun-22	-	-	-	45	-	45	-	-	-	-	45	45
Mbeya	Rungwe	Ikuti	Jun-18	-	32	32	32	32	30	32	32	-	(32)	-	(2)
Mbeya	Rungwe	Ikuti	Jun-20	-	19	18	18	18	18	18	19	1	(18)	-	-
Mbeya	Rungwe	Ikuti	Jun-22	12	15	15	15	15	15	15	3	-	(3)	-	-
Mbeya	Rungwe	Ndaga	Jun-18		15	15	15	15	15	15	15	-	(15)	-	-
Mbeya	Rungwe	Ndaga	Jun-20		29	29	29	29	29	29	29	-	(29)	-	-
Mbeya	Rungwe	Ndaga	Jun-22		17	17	22	17	17	17	17	-	(17)	5	-

Region	District	Health Facility	Month	Book 7 Child Register (Rejesta Ya Watoto) Total No. of immunisations (a)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data Total No. of immunisations (b)	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data Total No. of immunisations (c)	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report Total No. of immunisations (d)	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report Total No. of immunisations (e)	VIMS report Total No. of immunisations (g)	DHIS2 Record Total No. of immunisations (h)	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Mbeya	Rungwe	Ndaga	Jun-18	-	58	58	58			58	58	58	-	58	(58)
Mbeya	Rungwe	Tukuyu	Jun-20	-	70		70	70	4	59	70	-	(70)	-	(55)
Mbeya	Rungwe	Tukuyu	Jun-22	44	55	55	55	55	55	58	11	-	(11)	-	(3)
Mbeya	Kyela	Kyela DH	Jun-18	-	157	47	157	-	187	-	157	157	-	157	187
Mbeya	Kyela	Kyela DH	Jun-20	-	139	145	145	145	151	145	139	(6)	(145)	-	6
Mbeya	Kyela	Kyela DH	Jun-22	49	124	107	117	117	117	117	75	7	(68)	-	-
Mbeya	Kyela	Ipinda HC	Jun-18	-	-	41	41	41	73	41	-	(41)	(41)	-	32
Mbeya	Kyela	Ipinda HC	Jun-20	-	48	48	48	48	48	48	48	-	(48)	-	-
Mbeya	Kyela	Ipinda HC	Jun-22	21	-	70	69	69	89	69	(21)	(69)	(48)	-	20
Dodoma	Dodoma City Council	Delta dispensary	Jun-22	23	28	-	29	29	29	29	5	(1)	(6)	-	-
Dodoma	Dodoma City Council	Delta dispensary	Dec-22	30	34	-	34	34	34	34	4	-	(4)	-	-
Dodoma	Dodoma City Council	Delta dispensary	Jun-23	22	25	-	25	25	25	25	3	-	(3)	-	-
Dodoma	Dodoma City Council	Nala dispensary	Jun-18	-	-	15	2	15	2	15	-	(15)	(15)	(13)	(13)
Dodoma	Dodoma City Council	Nala dispensary	Jun-20	8	10	10	15	10	15	10	2	-	(2)	5	5
Dodoma	Dodoma City Council	Nala dispensary	Jun-22	33	28	28	28	28	28	28	(5)	-	5	-	-
Dodoma	Chamwino District Council	Haneti Health centre	Jun-18	-	-	-	-	-	26	-	-	-	-	-	26
Dodoma	Chamwino District Council	Haneti Health centre	Jun-20	38	41	41	41	41	41	41	3	-	(3)	-	-
Dodoma	Chamwino District Council	Haneti Health centre	Jun-22	53	59	59	59	59	60	59	6	-	(6)	-	1
Dodoma	Chamwino District Council	Buigiri dispensary	Jun-18	12	12	14	12	14	12	14	-	(2)	(2)	(2)	(2)

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report	VIMS report	DHIS2 Record	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Region	District	Health Facility	Month	Total No. of immunisations (a)	Total No. of immunisations (b)	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations (g)	Total No. of immunisations (h)					
Dodoma	Chamwino District Council	Buigiri dispensary	Jun-20	17	20	20	20	20	20	20	3	-	(3)	-	-
Dodoma	Chamwino District Council	Buigiri dispensary	Jun-22	10	10	15	10	15	15	15	-	(5)	(5)	(5)	-
Dodoma	Chamwino District Council	Msanga Dispensary	Jun-18	11	16	16	18	16	18	16	5	-	(5)	2	2
Dodoma	Chamwino District Council	Msanga Dispensary	Jun-20	18	21	21	21	21	21	21	3	-	(3)	-	-
Dodoma	Chamwino District Council	Msanga Dispensary	Jun-22	17	23	23	23	23	23	23	6	-	(6)	-	-
Dodoma	Kondoa Town Council	Bolisa dispensary	Jun-18	4	4	4	4	4	4	4	-	-	-	-	-
Dodoma	Kondoa Town Council	Bolisa dispensary	Jun-20	6	11	11	11	11	11	11	5	-	(5)	-	-
Dodoma	Kondoa Town Council	Bolisa dispensary	Jun-22	2	7	7	7	7	10	7	5	-	(5)	-	3
Dodoma	Kondoa Town Council	Kingale Dispensary	Jun-18	21	23		23	23	23	23	2	-	(2)	-	-
Dodoma	Kondoa Town Council	Kingale Dispensary	Jun-20	23	25	25	25	25	25	25	2	-	(2)	-	-
Dodoma	Kondoa Town Council	Kingale Dispensary	Jun-22	10	12	12	12	12	12	12	2	-	(2)	-	-
Dodoma	Bahi District Council	Ibihwa dispensary	Jun-18	16	18		18		11	18	2	18	16	18	(7)
Dodoma	Bahi District Council	Ibihwa dispensary	Jun-20	32	39	37	33	33	32	33	7	6	(1)	-	(1)
Dodoma	Bahi District Council	Ibihwa dispensary	Jun-22	21	-	30	33	33	33	33	(21)	(33)	(12)	-	-
Dodoma	Bahi District Council	Mundemu Health Centre	Jun-18	16	15	7	15	15	15	15	(1)	-	1	-	-
Dodoma	Bahi District Council	Mundemu Health Centre	Jun-20	20	17	17	31	31	31	31	(3)	(14)	(11)	-	-

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report	VIMS report	DHIS2 Record	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Region	District	Health Facility	Month	Total No. of immunisations (a)	Total No. of immunisations (b)	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations (g)	Total No. of immunisations (h)					
Dodoma	Bahi District Council	Mundemu Health Centre	Jun-22	23	10	17	23	23	23	23	(13)	(13)	-	-	-
Kigoma	Kigoma MC	Bangwe Dispensary	Jun-18	-	-	14	14	-	-	14	-	-	-	14	(14)
Kigoma	Kigoma MC	Bangwe Dispensary	Jun-20	-	-	21	21	-	17	20	-	-	-	21	(3)
Kigoma	Kigoma MC	Bangwe Dispensary	Jun-22	15	-	17	17	-	17	17	(15)	-	15	17	-
Kigoma	Kigoma DC	Bitale Health Centre	Jun-18	20	22	33	22	-	-	20	2	22	20	22	(20)
Kigoma	Kigoma DC	Bitale Health Centre	Jun-20	26	17	37	37	37	24	37	(9)	(20)	(11)	-	(13)
Kigoma	Kigoma DC	Bitale Health Centre	Jun-22	19	22	23	21	21	21	20	3	1	(2)	-	1
Kigoma	Kasulu DC	Kalela Dispensary	Jun-18	33	32	-	33	-	-	33	(1)	32	33	33	(33)
Kigoma	Kasulu DC	Kalela Dispensary	Jun-20	41	-	30	30	30	16	30	(41)	(30)	11	-	(14)
Kigoma	Kasulu DC	Kalela Dispensary	Jun-22	30	-	-	30	30	30	30	(30)	(30)	-	-	-
Kigoma	Kasulu TC	Kasulu Town Council Hospital	Jun-18	63	-	-	72	72	-	72	(63)	(72)	(9)	-	(72)
Kigoma	Kasulu TC	Kasulu Town Council Hospital	Jun-20	35	-	57	57	57	57	94	(35)	(57)	(22)	-	(37)
Kigoma	Kasulu TC	Kasulu Town Council Hospital	Jun-22	44	-	51	51	51	51	53	(44)	51	-	-	(2)
Kigoma	Kasulu TC	Kigondo Dispensary	Jun-18	-	-	-	-	-	-	-	-	-	-	-	-
Kigoma	Kasulu TC	Kigondo Dispensary	Jun-20	11	11	11	11	11	11	11	-	-	-	-	-
Kigoma	Kasulu TC	Kigondo Dispensary	Jun-22	18	21	18	18	18	18	18	3	(3)	-	-	-
Kigoma	Kasulu DC	Kitanga Dispensary	Jun-18	-	-	-	31	102	-	-	-	-	31	71	-
Kigoma	Kasulu DC	Kitanga Dispensary	Jun-20	-	-	-	74	-	-	-	-	-	74	(74)	-
Kigoma	Kasulu DC	Kitanga Dispensary	Jun-22	54	-	-	140	132	132	140	(54)	-	140	(8)	(8)
Kigoma	Kigoma DC	Mwandiga Dispensary	Jun-18	-	-	-	-	-	-	-	-	-	-	-	-
Kigoma	Kigoma DC	Mwandiga Dispensary	Jun-20	26	-	30	30	30	40	32	(26)	30	-	-	8

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report	VIMS report	DHIS2 Record	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Region	District	Health Facility	Month	Total No. of immunisations (a)	Total No. of immunisations (b)	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations (g)	Total No. of immunisations (h)					
Kigoma	Kigoma DC	Mwandiga Dispensary	Jun-22	14	-	25	24	25	25	25	(14)	25	(1)	1	-
Kigoma	Kasulu DC	Nyakitonto Health Centre	Jun-18	-	-	40	39	40	-	40	-	40	(1)	1	(40)
Kigoma	Kasulu DC	Nyakitonto Health Centre	Jun-20	-	-	40	56	56	56	56	-	40	16	-	-
Kigoma	Kasulu DC	Nyakitonto Health Centre	Jun-22	-	60	60	60	60	60	60	60	-	-	-	-
Kigoma	Kasulu TC	Kiganamo Health Centre	Jun-18	2	-	-	143	-	-	143	(2)	-	143	(143)	(143)
Kigoma	Kasulu TC	Kiganamo Health Centre	Jun-20	185	-	-	312	-	312	310	(185)	-	312	(312)	2
Kigoma	Kasulu TC	Kiganamo Health Centre	Jun-22	189	218	-	249	218	249	218	29	(218)	249	(31)	31
Kigoma	Kigoma DC	Simbo Dispensary	Jun-18	-	-	-	-	-	-	-	-	-	-	-	-
Kigoma	Kigoma DC	Simbo Dispensary	Jun-20	-	57	57	57	57	57	57	57	-	-	-	-
Kigoma	Kigoma DC	Simbo Dispensary	Jun-22	21	23	23	23	23	27	27	2	-	-	-	-
Kigoma	Kigoma DC	Simbo Dispensary	Jun-23	35	36	36	36	36	36	36	1	-	-	-	-
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-18	-	-	-	-	-	-	-	-	-	-	-	-
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-20	-	142	112	112	-	112	-	142	(30)	-	(112)	112
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-22	-	-	116	116	116	116	-	-	116	-	-	116
Kigoma	Kigoma MC	Ujiji Health Centre	Jun-23	-	106	152	152	152	152	-	106	46	-	-	152
Dar-es-salaam	Ilala	Kinyerezi	Jun-18	***	360	106	110	104	104	104					
Dar-es-salaam	Ilala	Kinyerezi	Jun-20	130	500	130		130	130	130	370	370	-	(130)	-
Dar-es-salaam	Ilala	Kinyerezi	Jun-22	137	400	137	137	137	137	137	263	263	-	-	-
Dar-es-salaam	Ilala	Mnazi Moja	Jun-18			-	121	-	121	-	-	-	-	121	121
Dar-es-salaam	Ilala	Mnazi Moja	Jun-20		66	66	66	66	66	66	66	-	(66)	-	-
Dar-es-salaam	Ilala	Mnazi Moja	Jun-22		90	90	90	90	90	90	90	-	(90)	-	-
Dar-es-salaam	Temeke	Buza	Jun-18				124	-	105	-	-	-	-	124	105

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report	VIMS report	DHIS2 Record	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Region	District	Health Facility	Month	Total No. of immunisations (a)	Total No. of immunisations (b)	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations (g)	Total No. of immunisations (h)					
Dar-es-salaam	Temeke	Buza	Jun-20			146	100	100	100	100	-	(100)	(100)	-	-
Dar-es-salaam	Temeke	Buza	Jun-22	272	60	184	190	190	156	190	(212)	(130)	82	-	(34)
Dar-es-salaam	Temeke	Consolata Sisters	Jun-18					191	168	184	-	(191)	(191)	(191)	(16)
Dar-es-salaam	Temeke	Consolata Sisters	Jun-20					272	249	272	-	(272)	(272)	(272)	(23)
Dar-es-salaam	Temeke	Consolata Sisters	Jun-22	61				390	600	700	(61)	(390)	(329)	(390)	(100)
Dar-es-salaam	Temeke	Mbande	Jun-18			38		35	104	35	-	(35)	(35)	(35)	69
Dar-es-salaam	Temeke	Mbande	Jun-20		142	142	142	142	142	142	142	-	(142)	-	-
Dar-es-salaam	Temeke	Mbande	Jun-22	165	174	165	165	165	141	165	9	9	-	-	(24)
Dar-es-salaam	Ubungo	Kibwegere	Jun-18				38	38		38	-	(38)	(38)	-	(38)
Dar-es-salaam	Ubungo	Kibwegere	Jun-20		54	54	59	54	54	54	54	-	(54)	5	-
Dar-es-salaam	Ubungo	Kibwegere	Jun-22	62	64	64	64	64	43	64	2	-	(2)	-	(21)
Dar-es-salaam	Ubungo	Kimara	Jun-18		133	202	204		204	202	133	133	-	204	2
Dar-es-salaam	Ubungo	Kimara	Jun-20	180	201	201	201	201	201	200	21	-	(21)	-	1
Dar-es-salaam	Ubungo	Kimara	Jun-22	235	191	191	191	191	191	191	(44)	-	44	-	-
Dar-es-salaam	Ubungo	Kwembe	Jun-18			23	23	23	23	23	-	(23)	(23)	-	-
Dar-es-salaam	Ubungo	Kwembe	Jun-20			44	44	44	44	44	-	(44)	(44)	-	-
Dar-es-salaam	Ubungo	Kwembe	Jun-22	26	25	25	25	25	25	25	(1)	-	1	-	-
Dar-es-salaam	Kigamboni	Buyuni	Jun-18		-	-	-	-	4	4	-	-	-	-	-
Dar-es-salaam	Kigamboni	Buyuni	Jun-20		10		10	10	10	10	10	-	(10)	-	-
Dar-es-salaam	Kigamboni	Buyuni	Jun-22	2	3		3	3	3	3	1	-	(1)	-	-
Dar-es-salaam	Kigamboni	Chekeni Mwasonga	Jun-18				24	-	24	24	-	-	-	24	-

				Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) VIMS Data	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) HMIS Data	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) HMIS Report	VIMS report	DHIS2 Record	Var 1 (a-b)	Var 2 (b-c)	Var 3 (b-d)	Var 4 (d-e)	Var 6 (g-h)
Region	District	Health Facility	Month	Total No. of immunisations (a)	Total No. of immunisations (b)	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations (g)	Total No. of immunisations (h)					
Dar-es-salaam	Kigamboni	Chekeni Mwasonga	Jun-20		38		38	-	38	38	38	38	-	38	-
Dar-es-salaam	Kigamboni	Chekeni Mwasonga	Jun-22	12	35	35	35	35	35	35	23	-	(23)	-	-
Dar-es-salaam	Kigamboni	Kigamboni	Jun-18	21						60	(21)	-	21	-	(60)
Dar-es-salaam	Kigamboni	Kigamboni	Jun-20	-	284		58	58		58	284	226	(58)	-	(58)
Dar-es-salaam	Kigamboni	Kigamboni	Jun-22	134	180	134	180	180		100	46	-	(46)	-	(100)

Annex 17c: Variance between data collection records – Penta (Zanzibar)

			Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data*	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report*	VIMS report	DHIS2 Record	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
District	Health Facility	Month	Total No. of immunisations *(a)*	Total No. of immunisations *(b)*	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations *(g)*	Total No. of immunisations (h)					
Micheweni	Micheweni Hospital HF	Jun-18	181	-	181	-	181	-	181	(181)	(181)	-	(181)	(181)
	Micheweni Hospital HF	Jun-20	293	-	294	-	295	-	294	(293)	(295)	(2)	(295)	(294)
	Micheweni Hospital HF	Jun-22	267	-	267	-	267	-	267	(267)	(267)	-	(267)	(267)
	Tumbe Dispensary HF	Jun-18	91	-	92	-	92	-	92	(91)	(92)	(1)	(92)	(92)
	Tumbe Dispensary HF	Jun-20	109	-	109	-	136	-	109	(109)	(136)	(27)	(136)	(109)
	Tumbe Dispensary HF	Jun-22	131	-	144	-	144	-	144	(131)	(144)	(13)	(144)	(144)
	Selem HF	Jun-18	144	-	144	-	92	-	144	(144)	(92)	52	(92)	(144)
Magharib	Selem HF	Jun-20	234	-	234	-	234	-	234	(234)	(234)	-	(234)	(234)
	Selem HF	Jun-22	220	-	220	-	220	-	220	(220)	(220)	-	(220)	(220)
	Kianga HF	Jun-20	55	-	92	-	90	-	92	(55)	(90)	(35)	(90)	(92)
	Kianga HF	Jun-22	60	-	159	-	159	-	159	(60)	(159)	(99)	(159)	(159)
	Misufini HF	Jun-18	66	-	66	-	66	-	66	(66)	(66)	-	(66)	(66)
	Misufini HF	Jun-20	82	-	82	-	82	-	82	(82)	(82)	-	(82)	(82)
	Misufini HF	Jun-22	74	-	77	-	77	-	77	(74)	(77)	(3)	(77)	(77)

Annex 17d: Variance between data collection records – IPV (Zanzibar)

			Book 7 Child Register (Rejesta Ya Watoto)	Monthly Report on Immunisation Monitoring Tally Sheet (Ripoti ya mwezi ya ufuatiliaji wa huduma za chanjo) *VIMS Data*	Matching Form for Book 7 (Fomu Ya Muoanisho ya Kitabu Cha 7) *HMIS Data*	Monthly Statement of Immunisation Services (Taarifa Ya Mwezi Ya Huduma za chanjo) VIMS Report	Children's monthly monitoring report (Ripoti ya mwezi ya ufuatiliaji Watoto) *HMIS Report*	VIMS report	DHIS2 Record	Var 1 *(a-b)*	Var 2 *(b-c)*	Var 3 *(b-d)*	Var 4 *(d-e)*	Var 6 *(g-h)*
District	Health Facility	Month	Total No. of immunisations *(a)*	Total No. of immunisations *(b)*	Total No. of immunisations (c)	Total No. of immunisations (d)	Total No. of immunisations (e)	Total No. of immunisations *(g)*	Total No. of immunisations (h)					
Micheweni	Micheweni Hospital HF	Jun-20	92	-	93	-	92	-	93	(92)	(92)	-	(92)	(93)
	Micheweni Hospital HF	Jun-22	82	-	82	-	82	-	82	(82)	(82)	-	(82)	(82)
	Tumbe HF	Jun-20	29	-	29	-	56	-	29	(29)	(56)	(27)	(56)	(29)
	Tumbe HF	Jun-22	32	-	40	-	40	-	40	(32)	(40)	(8)	(40)	(40)
Magharib	Selem HF	Jun-20	35	-	41	-	0	-	41	(35)	-	35	-	(41)
	Selem HF	Jun-22	65	-	60	-	60	-	60	(65)	(60)	5	(60)	(60)
	Kianga HF	Jun-20	35	-	31	-	0	-	31	(35)	-	35	-	(31)
	Kianga HF	Jun-22	47	-	47	-	55	-	47	(47)	(55)	(8)	(55)	(47)
Kaskazini B	Misufini HF	Jun-20	15	-	15	-	15	-	15	(15)	(15)	-	(15)	(15)
	Misufini HF	Jun-22	20	-	18	-	18	-	18	(20)	(18)	2	(18)	(18)

Annex 18: Details of questioned expenditure

a) Central level - IVD

Voucher n°	Date	Grant	Transaction description	Amount	No activity reports	Inadequate	Unsupported	Ineligible	Total (TZS)	Total (USD)	Auditor's explanations/reasoning
PV - 00000221	24/02/2022	HSS	Annual internet connection fee for IVG	23,077,095				3,520,234	3,520,234	1,591	TZS 3,520,234.84 was paid in respect VAT.
PV - 00000180	02/01/22	CDS	COVID-19 Vaccination Awareness Campaign for Journalists and Health Professional Associations - Lake Zone	18,552,000				275,901	275,901	125	Out of TZS 1,808,684 which was paid to cater for conference package, TZS 275,900.95 was paid as VAT, hence the VAT amount is ineligible
TOTAL				**41,629,095**	**0**	**0**	**0**	**3,796,135**	**3,796,135**	**1,716**	

b) Questioned expenditure from NAOT reports.

Voucher	Grant	Transaction Detail	Amount	Ineligible	Total (TZS)	Total (USD)	Auditor's explanations/reasoning
2021 CDS ML - 2.5.2	CDS - Njombe Town Council	Fuel for Gavi Programme activities used to finance council's activities	5,758,988	5,758,988	5,758,988	2,602.75	To the contrary the management of Njombe Town Council used 2,432 litres of fuel amounting to TZS 5,758,988 for activities not related to vaccine programme
			5,758,988	**5,758,988**	**5,758,988**	**2,602.75**	

c) Unaccounted HSS disbursements as per PORALG SOE

Voucher No.	Grant	Transaction Detail	Amount	Questioned amount	Total USD	Auditor's explanations/reasoning
	HSS - PORALG	Unaccounted HSS disbursements as per PORALG SOE	814,319,353	63,842,858	28,854	The HSS funds were disbursed to PORALG, Councils and Districts on 24th May 2021. Letter from PORALG to MOF dated 3 June 2024 requesting for refund of TZS 63,842,858 which were not used and swept off the accounts has not yet been responded to. (The amount was swept at the end financial year 2021/2022). An SOE from PORALG dated 29th May 2024 showing the expenditure of TZS 501,781,145 for the FY ending 30 June 2023 and TZS 225,642,045 between 1 Jul 23 to May 2024. Attached is also an accountability for funds that were sent to the region amounting to TZS 23,053,305.
				63,842,858	**28,854**	

Annex 19: Detailed management responses - Mainland

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
The governance and oversight mechanisms need to be strengthened	**Recommendation 32** To strengthen governance and oversight over programme management, MoHCDGEC management with support from partners should: • adapt the ToRs for the governance and oversight bodies to the operating context and ensure that they are signed off and approved. • ensure that all members of ICC and IVD TWG are oriented on their terms of reference and mandate. • develop an IVD TWG tracking system and dashboard to track the implementation of the action points raised at their meetings, and ensure that issues are escalated to the ICC for decision making where necessary; and • develop a coordination dashboard to track the implementation and follow up of the ICC action points. This dashboard should document the owner and timeframe for each item, for the purposes of accountability at subsequent ICC meetings.	IVD will work with relevant authorities within MOHCDGEC to review the ICC TORs with the objective to adapting them to operating context and ensure that they are approved and signed. IVD has organised an orientation meeting to all ICC members on 16th September 2024. IVD will develop action point tracking dashboard/matrix to monitor the status of implementation of action points and decisions arising from TWG and ICC meetings, respectively.	IVD administrator/IVD Manager	31 December 2024
Grant Management Requirements (GMRs) and recommendations from various reviews are still outstanding	**Recommendation 2** To enhance the oversight over implementation of recommendations from various reviews, MOHCDGEC/IVD management should: • develop a tracking system at the EPI operational level and ensure all recommendations are input, given a priority ranking (high, medium, low), and that recommendations repeated in various reviews are included in tracker with one action and action owner to close off the action. For example, where recommendations are repeated in the EVM improvement plan and programme audit report, the recommendations should be aggregated and agreed action should address the issues noted in both reports. • ensure that activities from the EVM improvement plan are costed and prioritised for implementation. • develop a dashboard at the ICC oversight level taking into consideration contractual recommendations like GMRs vs assurance recommendations and allocated to an action owner with timelines for implementation.	IVD will develop a dashboard/matrix to monitor the status of implementation of recommendations from different assurance reviews including GMRs, programme audits, external audits, EPI reviews etc. IVD through the LTWG will finalise the costing of the EVMA 2021 report.	Head of Finance/IVD manager Head of Logistics/IVD manager	31 December 2024

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
	• include semi-annual status reporting on implementation at the ICC meetings; and share status updates with Gavi after endorsement from ICC.			
Coordination and monitoring of PEF Targeted Country Assistance (TCA) and other partner led programme activities needs improvement.	**Recommendation 3** To strengthen the coordination and monitoring of PEF/TCA partners, the MOHCDGEC/EPI management in coordination with all implementing partners (i.e., core and expanded) should: • use existing coordination forums such as TWGs or JA to bring together all TCA implementing partners and EPI to review performance regularly and assess progress of implementation of OneTA plan as per the approved workplan. • ensure that the TCA implementation progress and performance is reviewed by the ICC quarterly as per the Gavi PEF TCA guideline. • ensure that implementation of all Gavi-funded priorities allocated to technical partners as part of the targeted country assistance, are reviewed and validated against the status report of PEF TCA milestones.	Auditor's recommendations have been noted. All TCA activities implemented by different Immunisation partners are identified and approved by MOHCDGEC through IVD, and therefore are part of IVD activities and priorities reported in different forums and oversight meetings such as ICC, TWG and MOHCDGEC management. However, going forward IVD will include a specific agenda item requiring partners to provide progress updates on the implementation of PEF/TCA activities for consideration and approval before final submission to Gavi. The ICC will review progress of implementation of TCA activities semi-annually. To facilitate this, it would be good for Gavi to share the roles and responsibilities of the TCA implementing partners as per the signed contract.	IVD administrator/IVD manager	31 December 2025
	Recommendation 4 To ensure country ownership and consistent involvement and engagement of the EPI and MOHCDGEC throughout the TCA process, the MOHCDGEC/EPI management should undertake a proper review and validation, on each activity completed by the implementing partners, based on the annual work plan approved by the MOHCDGEC instead of only relying on the reports submitted by partners.	The Ministry agrees with the recommendation, however Gavi also has a role to play on TCA arrangements and reporting. Currently TCA partners are not formally reporting to Ministry but directly to Gavi and as such the Ministry does not have the tools to enforce the accountability. The large number of TCA contracts is managed by Gavi does not enable easy oversight and accountability by MOHCDGEC. Going forward, IVD will include a specific agenda item during the TWG meetings requiring partners to provide progress updates on the implementation of PEF/TCA activities for consideration and approval before final submission to Gavi. IVD will use these meetings to review progress and validate reports from partners against the approved annual work plans.	IVD administrator/IVD manager	31 December 2025
	Recommendation 5 To ensure accountability and transparency, CHAI should expedite the external audit of the past phase 2 project, and any remaining	As per the project plan, there were pending activities to be accomplished for the smooth running of the IVD warehouses at Mabibo. Thus, there were still ongoing discussions between Gavi, CHAI and MOHCDGEC /IVD on	IVD administrator/IVD manager	31 December 2024

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
	fund balances should be fully accounted for or paid back to the programme.	the remaining works to be conducted using the available balance. CHAI received approval from Gavi in December 2023 to utilise the balance for remaining works. The ongoing works are expected to be completed in December 2024.		
Vaccine storage and distribution operations may be hampered, due to delays in transitioning operations from MSD to IVD	Recommendation 6 To improve the oversight over the transition activities of vaccines and related supplies from MSD to IVD, the steering committee should regularly review the defined roadmap and track the remaining planned activities to ensure that these are implemented and completed.	Auditor recommendations have been noted. The transition process from MSD to IVD, for all vaccines and related supplies, has been completed and the steering committee disbanded, and the defined roadmap is no longer applicable. As for the WICR at MSD owned by MOHCDGEC -IVD, the cold rooms are designated as emergency location sites in case of evacuation. As a way of addressing the national staffing need and in accordance with the government planning and budgeting, improving the staffing need at all levels including IVD is an ongoing agenda. In this regard, the government has recruited and deployed two warehouse officers and four warehouse attendants to meet requirements according to plan. One of the factors that led to the transfer of immunisation supply chain activities from MSD to IVD was the MSD costing model which is provided by the MOU between MSD and MOHCDGEC on storage and distribution of health commodities of 2018 as amended from time to time. Through this MOU, the charging mechanism was basing on the agreed percentage of the invoice value to cover for storage and distribution from MSD to regional stores (RVS) for the case of immunisation supplies as opposed to other health commodities which has a last mile delivery arrangement. This MOU costing model (charging Mechanism) accrued a substantial amount of money given the high price of vaccines and related supplies. The current costing model which is used by IVD is a cost-effective model that captures the actual cost of distribution by considering drivers like distance, fuel, allowances, wear and tear and inventory holding costs. Further to this, a comparative analysis on the current costs against the MSD costs was	Head of Logistics/IVD Manager	31 December 2024

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		conducted which reflected a significant saving of more than 60%. All vaccines that were stored at MSD were transferred to IVD warehouse in July 2024. The current oversight arrangements at the Mabibo site include: a) Routine supervision by the office of the Chief Pharmacist of the MOHCDGEC. b)Office of the Chief Internal Auditor of the MOHCDGEC conducted quarterly. c) Support by JSI, a Gavi expanded partner, on inventory management system (VIMS), development of SOPs, CCE management and general warehouse management. d) The MOHCDGEC constituted a logistics technical working group composed of IVD, alliance partners headed by UNICEF and WHO. The working group meets quarterly. The distribution plans are regularly reviewed to reflect the realities on the field and to address changes in the programme such as campaigns and vaccine introductions. Thus, these schedules are not static but continuously changes. Further, IVD is collecting data through the operations to enable future cost modelling.		
	Recommendation 7 To ensure continuity of vaccine storage and distribution operations following the transfer of operations from MSD to IVD, IVD management should: • conclude the development of its organisational structure, secure the necessary sign off, recruit and train the necessary staff, in relevant aspects of vaccine management. • conclude the approval and dissemination of SOPs for vaccine management. • develop optimal distribution schedules and plans for the country-wide distribution of vaccines and related supplies.	Auditor recommendation has been noted, the management has done the following:- a) IVD will review the current organogram to align it to current staffing needs and operations of the IVD. b) IVD has embraced the GoT going green agenda. The ministry has developed and secured approval for 19 Effective Vaccines Management SOPs with the online dissemination of the same conducted using the AI WhatsApp Chatbot. Although, through this chatbot all the available SOPs can be accessed by all Immunisation staff at all levels, some health facilities have not yet accessed it. IVD will ensure that all facilities get access to the AI WhatsApp chatbot during supportive supervision. In addition, IVD will complete the approval and signoff of all the SOPs.	Head of Logistics/IVD Manager	31 December 2024

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		c) IVD commenced distribution of vaccines to sub-national levels on 1 July 2023 for routine vaccines and September 2021 for COVID-19 vaccines. Distribution is planned and methodical, guided by a vaccines' distribution matrix. The matrix is designed by observing the route optimisation model on minimising distribution costs, time and capacity. The matrix has been circulated to all departments for planning and pinned to the IVD warehouse. The IVD will leverage the matrix to develop an optimal distribution schedule and plan.		
Consistent low stock (below buffer) leading to vaccine stock outs9	**Recommendation 8** To ensure availability of adequate supplies of vaccines in-country, the MOHCDGEC/IVD management should: • conduct periodic reviews of its stock levels across the country, and regularly review forecasts in collaboration with UNICEF and Gavi, to refine assumptions for subsequent forecasts. • develop forecasting SOPs to inform the forecasting process at the central level.	The distribution model throughout the vaccine supply chain is the 'Pull' system. The 'Pull' system relies on VIMS embedded formulae which captures key parameters including consumption data to determine the quantities of supplies required for stock replenishment. Previously, the VIMS system had challenges. A system upgrade in underway including hosting the system in-country. Further, the logistic technical working group has approved a revised quantification tool developed by IVD logistics team that will be uploaded in VIMS for application at all levels from central to HF. IVD, through the Logistics Technical Working Group, reviews the vaccine and related supplies stock levels monthly to inform quantities to replenish or adjust depending on the consumption trend and incoming shipments. This will consequently support the review of the forecasts to refine assumptions for subsequent forecasts. IVD will work with UNICEF and other members of the LTWG to develop the vaccine and related supplies SOPs	Head of Logistics/IVD Manager	31 December 2024
Inventory management practices at national and sub national level need improvement	**Recommendation 9** To maintain all vaccine and related supplies in good condition, IVD should adhere to good storage practices.	Agree with auditor recommendations. However, in order to enhance good vaccine storage practices, IVD logistic team has done the following: a) Strict adherence to effective vaccines storage practices guidelines as provided by WHO. b) Strict adherence to SOPs developed and approved, and available in the WhatsApp chatbot by all implementers. c) To ensure stock levels are validated, the logistics team conducts quarterly supervision during delivery and as a	Head of Logistics/IVD Manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		separate activity. For sub-national levels, the logistics team conducts its supervision up to the HF level while the regional and district levels conduct regular supportive supervision. This exercise continues to be strengthened being that distribution is now being done by IVD. d) The MOHCDGEC has developed an electronic Afya supportive supervision checklist (Afya SS) which incorporates the inventory management checklist for vaccines and related supplies. This will further enhance our supportive supervision effort, including documentation of findings, implementation plan and follow up. See link https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://afyass.moh.go.tz/&ved=2ahUKEwjgw7XToZSGAxW68QIHHb9sBJEQFnoECAYQAQ&usg=AOvVaw3P2q-DX_4SXLVgEIRc7Tub		
	Recommendation 10 To improve inventory management practices at sub-national level, IVD should: • ensure vaccine handling points conduct regular physical counts, properly document stock transactions and archive their stock records and that inventory data informs decision making; • strengthen support supervision initiatives by documenting supportive supervision visits, providing feedback, and following-up on agreed action items.	In relation to outstanding matters, the following is in progress: a) During the audit period, IVD was continuing with an extensive distribution exercise of vaccines and related supplies from the central warehouse to regional stores for routine activities and to enable the scheduled MR campaign. It is during this time that, the observed syringes (annex 6) were temporarily found at the dispatch bay waiting for dispatch to regions and that the referred location does not save as a permanent dry storage area and auditors are therefore invited for review. b) The disposal process of medical substances is regulated by the TMDA guideline for disposal of medical waste and the public finance act and its regulations - 2001. In line with the guidelines, IVD has already Initiated the process for the disposal of all expired COVID-19 vaccines. It is expected that once completed the vaccines will be evacuated from the warehouse and disposed. The region ensures that council vaccine handling points conduct regular physical counts at the end of each month, properly document stock transactions and	Head of Logistics/IVD Manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		archive stock records and that inventory data informs decision making. Regions will strengthen support supervision initiatives by documenting supportive supervision visits, providing feedback, and following up on agreed action item. Regions also ensure that there is adherence to the cold chain and equipment management SOPs, through dissemination and training of relevant staff on the SOPs and regions routinely triangulate the data available, including an assessment of administrative coverage data and vaccine availability/ utilisation to check for accuracy of data reported. Such analyses should be completed at both national and sub-national levels, and any data inconsistencies noted should be validated and explained.		
Cold chain management practices need to be strengthened	Recommendation 11 To ensure adherence to the cold chain and equipment management SOPs, IVD should ensure completion, approval, dissemination and training of relevant staff on the SOPs.	In addressing a permanent agenda on ensuring vaccine quality, including temperature monitoring and documenting the VVM status throughout the supply chain, the Ministry has: a) conducted refresher training to 420 district and region immunisation managers in January 2023. b) collaborated with the East African Community's Regional Centre of Excellence for Vaccine Immunisation and Health Supply Chain Management (RCE-VIHSCM) in conducting training of immunisation supply chain management to 65 district and region immunisation managers in October 2023 and July 2024. Additional training will be conducted in Q4, 2024. c) developed and disseminated the Vaccine Monitoring SOPs, including an SOP on using the VVM. d) included immunisation supply chain issues in the Afya Supportive Supervision checklist to cover checking VVM status, temperature monitoring systems etc.	Head of Logistics/IVD Manager	31 December 2025
	Recommendation 12	Currently, a total of 3,761 CCE are installed with the RTMDs, and the MOHCDGEC under Gavi support has ordered 4,313 RTMDs to bridge the current gap. The	Head of Logistics/IVD Manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
	To ensure that the cold chain equipment functions effectively, and that the integrity of the cold chain is maintained, MOHCDGEC /IVD should: • support cold chain officers at all levels to generate and implement preventive maintenance plans. It should also design, print and disseminate equipment maintenance logs to each site, for them to document the preventive and curative activities they carry out on their CCE units. • connect the WICRs to the remote temperature monitoring system in VIMS, and train cold chain officers/storekeepers to routinely download the data and check for any temperature excursions. • ensure that WICRs are subjected to routine temperature mapping. • initiate a calibration and certification exercise of all refrigerated trucks.	ordered RTMDs are expected to arrive in the country by August 2024, ready for installation, training, and commissioning. Also, the IVD has developed a cold chain equipment maintenance and troubleshooting manual that has been approved by the TWG and included in the VIMS resource centre. The troubleshooting manual includes an equipment maintenance log template to support daily, weekly, and monthly maintenance schedules. MOHCDGEC, in collaboration with the Clinton Health Access Initiative (CHAI), will conduct an assessment of the performance and temperature mapping study of all regional WICRs. As per international purchase standards, including the Incoterms-2020 read together with our national quality standards through the Tanzania Bureau of Standards (TBS), all the refrigerated trucks were subjected to Pre-shipment Verification of Conformity (PVoC) inspection before the permit for export to Tanzania is issued. Therefore, in addition to manufacturers' certificate of calibration and conformity, which was issued during shipping, TBS issued a certificate of conformity in order to provide a green light for trucks to be shipped to Tanzania. The TBS certificate of conformity is available for auditor's review.		
	Recommendation 13 To ensure that the MOHCDGEC/IVD uses its available cold chain resources optimally, it should: • review the cold chain capacity needs at all levels and generate a CCE plan; and • improve equipment repair turn-around time, by training and deploying cold chain technicians to different regions and districts.	Auditor recommendation has been noted; the management has done the following:- a) Cold chain capacity needs assessment - IVD, in collaboration with JSI, reviewed the outdated MOHCDGEC cold chain equipment placement and expansion plan for 2018-2022 in June 2024 and developed a new cold chain equipment and expansion plan of 2024-2028. b) Redundant CCE - Currently, there are no redundant WICRs at the Central Vaccines Store after the complete transfer of all vaccines from MSD to IVD. Upon transition, the CVS has a storage deficiency that is	Head of Logistics/IVD Manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		expected to be filled by installation of 2 additional WIFRs received in May 2024. Installation is ongoing.		
Multiple data management systems are not interlinked	Recommendation 14 To ensure system integration the MOHCDGEC/IVD management, in collaboration with stakeholders, should: • develop a comprehensive integration plan to connect the Vaccine Information Management System (VIMS), the District Health Information Software 2 (DHIS2), Chanjo COVID and other HIS systems in accordance with interoperability standards (such as HL7 or FHIR) to ensure seamless data exchange between these systems. • consider upgrading the existing server infrastructure to enhance its scalability and performance. This could involve moving to cloud-based solutions which offer better scalability and reliability, while ensuring the necessary data security implications. • conduct regular IT infrastructure performance audits to ensure that systems can handle increasing data loads and user demands. • prioritise the creation of a standardised product master list as outlined in the Tanzania Digital Health Strategy for 2019-2024. In relation to this, the digital facility register should also be integrated with VIMs.	Auditor recommendation has been noted. According to the Tanzania e-policy and strategy, integration of systems can be made if and only if all the systems are hosted in country. At the time of the audit, VIMS was hosted in the cloud until May 2024. This limited integration of VIMS with other systems connected through HIM(Health Information Mediator) i.e., DHIS-2. The following steps have been taken: a) MOHCDGEC has commenced the process of integration of VIMS with DHIS2. Previously, the system was hosted by JSI (an alliance expanded partner) against the GoT E-Government Authority (eGA) requirements limiting integration. To address the challenge and allow integration, IVD is now (Since April 2024) hosting VIMS systems in country at eGA data centre and data migration is ongoing after which the system will be integrated with DHIS2. As a result, immunisation data will be sourced only through VIMS eliminating discrepancies. The integration is expected to be finalised by December 2024. Chanjo Covid on the other hand is hosted within DHIS2, although not currently integrated. The integration will be conducted simultaneously with VIMS collecting vaccines stock data while Chanjo Covid will provide immunisation data. b) 3 servers have been procured and installed at the eGA to host the VIMS and Chanjo covid which are within the confines of IVD. DHIS2 is hosted at the MOHCDGEC ICT department. c)After completion of system migration from cloud-hosting to in-country, the next step will be system assessment, IVD plans to conduct System audits and assessments for VIMS and Chanjo COVID systems, this is among the suggested areas of TCA for 2024/2025. d) The health facility data master list originates from the MOHCDGEC ICT unit.	Head of M&E / IVD manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		The master list is updated at the regional level on a real-time basis. VIMS has now been integrated with the health data master list commencing January 2024.		
The revitalisation of the Tanzania Immunisation Registry (TImR) should incorporate lessons learnt from TImR version 1	Recommendation 15 To ensure the sustainability of Gavi's system investments and that value for money is obtained, the MOHCDGEC/IVD management with support from partners should: • carry out an independent analysis for any future systems funded by Gavi (including the user licensing and system maintenance and support costs) to determine (i) the overall cost of implementing the system(s) and whether its benefits outweigh the investment costs and (ii) whether the country is able to sustain the system(s) investments and effectively after the project is fully rolled out. • prior to implementing TImR version 2, conduct a system value assessment to determine the various functional and nonfunctional requirements for the immunisation register endorsed by MOHCDGEC. This assessment should highlight the various features and gaps which the platform of choice will offer. • as part of overall sustainable capacity building initiatives, the IVD and MOHCDGEC ICT teams should take part in the development and customisation of the system, to ensure that skills transfer is planned for from the onset.	Auditors' recommendation has been noted. However, the development of TImR V2 in collaboration with PATH (Gavi expanded partner) has the following road map: a) Establishment of system requirements and specifications, b) Recruitment of a local consultant to develop the TImR V2 solution, c) Rollout through training and capacity building, and d) Refresher training. As part of the TImR System revitalisation, assessments to establish the overall costs of system development, maintenance, and enhancement were conducted as per MOHCDGEC e-strategy. PATH has recruited a local consultant who will develop TIMR 2.0, This system is planned for piloting in Jan 2025.	Head of M&E / IVD manager	31 December 2025
There were gaps in the development, upgrade, and deployment of VIMS	Recommendation 16 To ensure the optimal utilisation of VIMS, the MOHCDGEC/ IVD management in collaboration with JSI should: • create a detailed transition plan that includes the quantification of all operational costs such as server infrastructure, hardware acquisition and maintenance, software updates, bug resolution, and technical support. • conduct source code validation and formal assessment to validate the shared source code against the live / production system's code. • ensure the full transfer of control over the code ownership (including Github repositories) from JSI to the MOHCDGEC/IVD, to ensure the Ministry's autonomy and ownership of the system.	Management acknowledges auditors' observations and in addressing this the ministry has taken the following measures: - a) Development of the transition plan is underway, and the draft has already been shared with the key stakeholders for input and is expected to be finalised in Q4,2024 b) MOHCDGEC through ICT conducted a source code analysis and assessment but it was lacking in some areas like the formality, the goal, and the methodology. Furthermore, source code analysis and formal assessment are still required and it should involve important parties like the National Audit team and e-GA. c) The migration of source code, database, and VIMS application is now transferred to the government	Head of M&E / IVD manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
	• consider upgrading the technical stack to the latest versions and implement a phased upgrade of the Open LMIS components to the latest version, depending on the compatibility of any customisations made. • put in place a record comprehensive audit logs that record all user actions on the front end, in line with ISO 22600:2014 and Gavi/TGF software standards. • operationalise the training environment as stipulated in the VIMS' SOPs, to improve user competency and efficiency. • conduct a thorough review of the live system to remove all dummy records to maintain data integrity. Additionally, establish robust data validation processes to prevent such events occurring again in the future.	servers at NIDC, so the current live VIMS system is accessible through this newly hosted environment. Now the Gov has full ownership of the source code, database, and VIMS application since the server is owned and managed by the MOHCDGEC ICT department , The JSI team has yet to upgrade the system. d) Gavi financed TCA to JSI in this area, however due to lack of funds, they have not been able to improve further comprehensive audit logs that are in line with ISO 22600:2014 and Gavi/TGF software standards by improving security, transparency, accountability, and data integrity. e) Currently, MOHCDGEC has installed a single server for all VIMS-related activities. They have also insisted on having only one system on that server. If JSI is financially supported, it can be done. MOHCDGEC is planning to create a separate test/training instance for user competency and efficiency. f) MOHCDGEC in collaboration with JSI will implement an immediate cleanup of the existing dummy records and enhance our validation protocols to prevent future occurrences. This includes stricter data entry controls and regular audits to ensure that only validated, accurate data is maintained in the system.		
Weaknesses in DHIS2 and Chanjo Covid systems	Recommendation 17 To ensure optimal utilisation of the DHIS2 , the MOHCDGEC/IVD management should: • invest in building its internal capacity for system management, including training in-house technical teams to run upgrades and software-customisation related tasks. • develop and implement an ongoing training programme for technical teams, focusing on current DHIS2 features and best practices in data management. • update DHIS2 to the latest software version, to access current updated features and functions. • enhance CHANJO COVID's validation processes by integrating field validations and linking with NIDA for identity verification. Regularly update and test these features to ensure accuracy and security.	Auditor recommendation has been noted. DHIS2 is the MOHCDGEC data warehouse used to capture health related data in the country. The system is managed by MOHCDGEC and HISP-TZ a trained and contracted agency by MOHCDGEC and University of Oslo who provides technical support in managing the system. a) Country wide rollout was conducted in 2007 which involved training and capacity building to all data personnel at LGA level. DM&E department has revised HMIS forms reported in DHIS2, these forms will be rolled out countrywide in Q1, 2025, This process will include a training component to HCWs. b) DHIS2/Chanjo COVID system is in version 36. MOHCDGEC /ICT has initiated discussions with HISP-TZ to upgrade the system to version 40 same as DHIS/HMIS. This process is planned for implementation before Dec, 2024.	Head of M&E / IVD manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		c) Chanjo COVID system was never signed to be linked with CVRS/NIDA, An upgraded version of the system (Version 40) will be integrated into Health Information Mediator(HIM). d) HMIS has been integrated in pre-service curriculum.		
An outdated denominator was used to set targets leading to inaccurate reporting.	Recommendation 18 To ensure the accurate and reliable reporting of immunisation targets, the MOHCDGEC/IVD management should: • review the impact of the differences in projected number and VIMS/DHIS2 as it may be indicative of an erroneous denominator against which the immunisation targets are set. • carry out a detailed immunisation specific data quality audit and use the findings from the audit to engage with the National Bureau of Statistics to come up with a model that incorporates changes in the population when determining a denominator to use.	We acknowledge the observed gaps which were also revealed during supportive supervision visits conducted by IVD. Tanzania has been using NBS projections as targets for RMNCH monitoring including immunisation. The 2022 census results were lower than previous projections which was using 2012 census. Therefore MOHCDGEC continued to use 2012 projections while awaiting for operational targets. The ongoing VIMS enhancements will include validations that will prompt all illogical errors during data entry. NBS projected population targets use constant factor for annual births and surviving infants. The use of constant factor has affected estimates in most councils to have lower targets compared to clients attended for immunisation resulting to coverages above 100% for BCG and other antigens. In January 2024, IVD in collaboration with the MOHCDGEC M&E directorate, RCH unit, and epidemiology department conducted a joint workshop with the NBS to review population projection estimates for expected pregnancies, deliveries, live births, and pentavalent 1. The exercise provided estimates to serve as operational denominators to track coverage progress annually. These estimates are currently in use. HSS2 budget has provided resources to carry out a detailed immunisation data quality audit. The programme has already developed a concept note for	Head of M&E / IVD manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
		this activity and it will be carried out in the 2nd quarter of 2025.		
Inconsistencies in administrative immunisation coverage	Recommendation 19 To ensure that accurate, correct and reliable immunisation data is available for decision making, the MOHCDGEC/IVD management should: • routinely triangulate the data available, including an assessment of administrative coverage data and vaccine availability/ utilisation to check for accuracy of data reported. Such analyses should be completed at both national and sub-national levels, and any data inconsistencies noted should be validated and explained. • ensure that all primary data collection tools are completed correctly and that their information correlates across similar tools and sources. • make sure that data verification and validation exercises are regularly undertaken at the health facility and district level. • ensure adequate supervision at sub-national level over data collection and management components, including the follow-up of recommendations to address any data management gaps identified from the supervision visits.	We acknowledge observed disparity between vaccinated children compared to number of doses used, This is due to poor utilisation of ledger books to record daily vaccine usage which in turn will be used to fill in VIMS at the end of the month. Management has done the following: a) IVD has printed and distributed adequate vaccine ledgers and other data tools at facility level to ensure accurate data capturing at HF level. b) Data validation to ensure accurate recording in VIMS is among the areas that will be improved during VIMS enhancement. The validation will prompt the user in case of any illogical data entry. c) Supportive supervision checklist will be revised to include DQA part to asses data recording and triangulation. d) Overall, these challenges will be permanently solved after implementation of Immunisation registry(TIMR-2) IVD will utilise all available forums and training opportunities to equip HCWs with knowledge on immunisation schedule. In addition, the parameters to observe and assess adherence to immunisation schedule have been included in supportive supervision and mentorship checklist. Tanzania will implement TIMR 2.0 starting 2025. This system will have reminders and validations on vaccination schedule. Data collection tools have been revised to capture all antigens provided in routine immunisation programme.	Head of M&E / IVD manager	31 December 2025
Weaknesses in data quality assurance mechanisms	Recommendation 20 To improve the availability, quality and use of data, the MOHCDGEC/EPI management should: • carry out immunisation specific DQAs according to the WHO-endorsed methodology. This should include developing properly resourced DQIPs, after each DQA.	We agree with auditor recommendations. Management of MOHCDGEC have done the following; a) MOHCDGEC has developed a data quality improvement plan for the period 2021-2025, This plan was reviewed and updated in March 2024 to include M&E framework to monitor implementation of the plan.	Head of M&E / IVD manager	31 December 2025

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
	• ensure that the M&E TWG properly monitors all the activities identified in the DQIP and that these are implemented in a timely manner. • budget for its outstanding DQIP action items and ensure that sufficient funding is allocated to all critical areas of the plan.	b) We have prioritised key data quality improvement activities, including data triangulation to review the target population conducted in January 2024. In addition, there is ongoing data verification exercises in prioritised regions (May and June 2024), c) We acknowledge gaps in M&E TWG meetings to monitor implementation of DIP. This was due to unavailability of M&E framework and budget for the planned activities in the plan. The DIP has been updated and includes an M&E framework with planned activities and budgets from IVD and partners and is now part of M&E TWG monitored activities. d) Final data verification report will be ready by end of August 2024 following the completion of data verification exercise in June 2024. This report will include a detailed analysis, gaps and recommendations. e) Immunisation data quality audit is planned for Q2 2025 using WHO methodology and process. f) The ongoing VIMS system enhancements will include integration with DHIS-2 and VIMS will remain the only system capturing immunisation data which will be reflected in DHIS-2.		
Weaknesses in controls over expenditure supporting documents leading to questioned expenditure	Recommendation 21 To ensure that funds are properly and adequately accounted for, the MOHCDGEC/IVD management should: • ensure that all expenditures are adequately supported with relevant documents, such as: activity reports, attendance sheets, fuel/vehicle logbooks. • ensure that the supervision of financial management practices at sub-national level is conducted. • ensure that the financial management guidelines provided to Zanzibar and PORALG, clearly communicate the expected standard of accountability with regards to different cost categories. • ensure that the Gavi financial reports are reviewed by either the Technical Assistance team or any other relevant officer, prior to the reports being submitted to Gavi. •	a) The MOHCDGEC /IVD will conduct supervision visits to regions and councils on a quarterly basis. The Programme will develop a joint Monitoring and Supervision plan for the Sub-national level. b) MOHCDGEC /IVD will develop a simplified financial management guideline communicating the expected standard of accountability with regard to different cost categories for Gavi funds and share it with Zanzibar and PORALG. c) MOHCDGEC /IVD in consultation with the Gavi TA will develop a standard review checklist to guide the review of Gavi financial reports.		

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
Weaknesses in budgeting and financial management at national level	Recommendation 22 To enhance financial reporting and accountability, MOHCDGEC/IVD management should: • Document and apply lessons learned from the disbursement of CDS funds in order to fast-track HSS disbursements • Follow up on implementation of activities for funds disbursed/advanced in collaboration with PORALG to ensure timely expensing and reporting at defined timelines • IVD should ensure that financial monitoring of funds transferred to PORALG, region, councils, and Zanzibar are conducted including physical field visits review. • Coordinate with Internal Audit to conduct regular internal audit reviews including review of underlying supporting documents. • IVD should ensure that financial reports submitted to Gavi, and bank reconciliation reports are adequately reviewed and signed off by either the Technical Assistance team or any other relevant officer in order to ensure accuracy of the reports.	a) The Government has a clear structure for disbursement of funds to lower levels which was also followed to disburse CDS funds. The MOHCDGEC /IVD is leveraging lessons learned from the CDS implementation to expedite the disbursement of funds through the PORALG system by ensuring the following: (i) Timely set up of Gavi grants within the PORALG budgets at central and sub-national levels. (ii) Engagement of PORALG immunisation focal persons in planning and follow-up of implementation and financial reporting. (iii) Access of reports from the PORALG sub-national at the centre in Dodoma for reporting in IVD EPICOR. b) In accordance with the auditor's recommendations, IVD will continue to engage PORALG to ensure timely reporting of Gavi expenditures. Starting November 2023, the disbursement letters from IVD to PORALG include clear reporting timelines to be adhered to by PORALG. c) The MOHCDGEC /IVD will conducts supervision visits to regions and councils on a quarterly basis. The Programme will develop a joint Monitoring and Supervision plan to Sub-National level. d) The programme will continue coordinating with the internal audit unit to support monitoring Gavi funds at all levels. MOHCDGEC /IVD will ensure that the annual IA Plans include the review of Gavi funds both an National and Sub-National levels. e) Bank reconciliations performed by the MOHCDGEC /IVD team are currently reviewed and signed off by the Head of the Accounts unit. MOHCDGEC /IVD in consultation with the Gavi TA will develop a standard review checklist to guide the review of Gavi financial reports and bank reconciliations.		

Annex 20: Detailed management responses - Zanzibar

Issues	Audit Recommendations	Management Action	Action Owner	Timelines
The governance and programme management arrangements should be streamlined	Recommendation 23 To strengthen governance and oversight over its programme management, Zanzibar IVD, with support from the partners, should: • follow up with WHO to speed up the recruitment of a consultant to support with the development of the NIS. • institute an immunisation TWG for operational issues and reactivate the ICC and ensure that it meets as per the ToRs. • expedite the finalisation and sign off of the guidelines for integrating COVID-19 vaccination with routine immunisation. • capture COVID-19 vaccination data within DHIS2 and DVDMT for tracking and informing decision-making.	a) The Ministry of Health through IVD Zanzibar acknowledges the delay in procuring a consultant to support in the development of NIS 2021-2025. This strategy was meant to align with the MOHCDGEC Zanzibar SP 2021-2025 which is approaching to its closing period. Therefore IVD now seeks to commence the NIS development process for the period 2026-2030 to align with new MOHCDGEC SP. IVD is in talks with WHO to commence early procurement of the consultant. b) IVD will maintain a calendar for all ICC meetings in a year and follow up to ensure that these meetings happen as scheduled. In addition, on 14th March 2024 IVD conducted orientation training to all MOHCDGEC senior officers in immunisation services including the roles of ICC and Immunisation TWG as oversight bodies. With regards to TWG , IVD has developed TORs of the IVD -ZNZ immunisation TWG and has revived its operations with the first meeting held on 6th August 2024. The TWG will meet quarterly as per TORs. c) IVD in collaboration with HMIS team finalised the development of the COVID-19 data modules which is embedded in DHIS2 in May 2024. Data migration from RAHISI Chanjo Covid to DHIS2 is going on and is expected to be completed in Q1 of 2025. d) The IVD will follow up with relevant authority within the Ministry to ensure endorsement of the integrated COVID-19 vaccination with routine Immunisation Guidelines	IVD Programme Manager Zanzibar	a) 31 December 2025 (Action 1) b) 31 December 2024 c) 31 March 2025 d) 31 March 2025
	Recommendation 24	IVD Zanzibar and Mainland leverage the Mainland IVD TWG to discuss a range of common immunisation issues including workplan ,performance review, quantification,	IVD Manager Mainland /IVD Manager Zanzibar	31 December 2024

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	To strengthen collaboration, IVD mainland and IVD Zanzibar should establish regular scheduled meetings between their respective units, to serve as a platform for discussing a range of common issues including workplans, implementation progress, reporting, and technical assistance.	procurement and technical assistance. The Secretariat will improve the documentation of minutes to ensure that the attendance and participation of IVD Zanzibar is well captured.		
Improvements required in forecasting for vaccines and related supplies to ensure continuous availability of commodities	Recommendation 25 To ensure generation of an accurate forecast, the Zanzibar MOHCDGEC/IVD should: • develop, disseminate and train relevant personnel on effective forecasting of vaccines and related supplies. • engage relevant stakeholders in the forecasting process, including Pemba Island and various districts, to ensure that there is fair representation and ownership of the process, and its resultant output. • conduct periodic reviews of the forecast to check and refine, if necessary, the assumptions used in the forecasting process.	IVD, through the Logistics Technical Working Group, reviews the vaccine and related supplies stock levels monthly to inform quantities to replenish or adjust depending on the consumption trend and incoming shipments. This will consequently support the review of the forecasts to refine assumptions for subsequent forecasts. IVD will work with UNICEF and other members of the LTWG to develop the vaccine and related supplies SOPs.	IVD Manager Zanzibar	31 March 2025
Stock management at national and sub national level need improvement	Recommendation 26 To improve the LMIS system, MOHCDGEC/IVD should: • identify which of its eLMIS (SMT, DVDMT or VIMS) systems is the primary source of current data for logistics purposes. • in the event that VIMS is selected as the primary system, the Government should work with the developer to reactivate the system, conduct test runs and roll the system out to all of the vaccine handling points on the island. • run manual records alongside its eLMIS until such a time that it is demonstrated that the system is stable and reliable. • ensure data is promptly input into the primary eLMIS system.	Through the assistance of JSI, the IVD started using the VIMS platform in January 2024. The VIMS platform is now being used as stock management tool with running balances of all vaccines being presented. The system is also used as the basis of stock count and reconciliation including adjustments.	IVD Manager Zanzibar	31 December 2025
	Recommendation 27 To improve inventory management practices at sub-national level MOHCDGEC/IVD should: • ensure vaccine handling points conduct regular physical counts, properly document stock transactions and archive their stock records and that inventory data informs decision making; • strengthen support supervision initiatives by documenting supportive supervision visits, providing feedback, and following-up on agreed action items.	Variance in stock balances were expected during the audit period. This was because of the use of manual systems. To address this problem, VIMS is now fully functional at national and sub-national levels. The VIMS system requires stock reconciliation quarterly after distribution. Issues are also done digitally through VIMS. Any variances noted are investigated and adjustments made to the system. For each adjustment, VIMS requires an explanation to be made.	IVD Manager Zanzibar	31 December 2025

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		Stockouts are not common in Zanzibar. However, vaccine consumption may be higher that vaccines available at a certain period resulting to a stockout. However, at the DVS, the stock out only lasts until the subsequent distribution. For HF, horizontal distribution is done through borrowing across the HFs. Nonetheless, with the newly introduced VIMS, the reorder levels are visible from national level and potential stockouts can be addressed timely. Almost 90% of doses held in stock in December 2023 were Sinopharm vaccines donated by the Government of China outside the COVAX forecast. The number of doses was 200,000. Reasons behind the non- utilisation of this specific Vaccines was promotion of the Gavi COVAX donated vaccines that was preferred by the targeted population (JJ and Pfizer Vaccines). As at Jan 2024, 197,050 Sinopharm vaccines had expired. The vaccines have since been removed from the cold room and quarantined ready for disposal through ZFDA.		
Cold chain management practices need to be strengthened	Recommendation 28 To ensure effective cold chain equipment management, MOHCDGEC/IVD should: • develop an asset register for the CCE and periodically update it with all CCE on the island including their functionality status. • support cold chain officers at all levels to generate and implement preventive maintenance plans, design, print and disseminate equipment maintenance logs to document preventive and curative activities subjected to the respective CCE.	The IVD will review, and update assets register to ensure that all the necessary data/information relating to the assets are well captured. The IVD Zanzibar in collaboration with the mainland IVD has developed a cold chain equipment maintenance and troubleshooting manual that has been approved by the TWG and included in the VIMS resource centre. The troubleshooting manual includes an equipment maintenance log template to support daily, weekly, and monthly maintenance schedules.	Accountant IVD Zanzibar IVD Manager Zanzibar	30 September 2025
	Recommendation 29 To ensure decommissioning and disposal of obsolete CCE, MOHCDGEC/IVD Zanzibar should develop and implement a decommissioning plan.	Decommissioning and disposal of assets is guided by Procurement and Disposal Act. To commence the process, identification of the complete list of assets due for disposal is required. Gavi has provided funds through CHAI(TCA) to support decommissioning of obsolete CCE.	IVD Manager Zanzibar	31 December 2025

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Weaknesses in data management	Recommendation 30 To ensure accurate and reliable reporting of immunisation targets, MOHCDGEC/IVD management should: • review the impact of the differences in numbers as it may be indicative of an erroneous denominator against which the immunisation targets are set. • carry out immunisation specific DQAs following the WHO-endorsed methodologies. This should include developing costed DQIPs, after each DQA.	For denominator, this continues to be a challenge despite the data provided during the Census report 2022. However the IVD agreed with the recommendation for carrying out a DQA. The IVD acknowledge auditor's observation on coverage data disparity. In addressing this IVD has started quarterly data review meetings in addition to setting up data quality assessment as permanent agenda in the Immunisation TWG. With the newly improved DHIS-2 and VIMS platforms, IVD expects data quality to improve. However, more support is needed in this area from Gavi. IVD will request HMIS to include immunisation data as part of the HMIS data quality review. At IVD level, immunisation data review meetings are conducted focussing on data triangulation, quality assurance and data outliers. In addition to this , the immunisation data quality audit is planned for Q2 2025 using WHO methodology and process.	IVD Manager Zanzibar	31 December 2025
Weaknesses in budgeting and financial management	Recommendation 31 To enhance financial reporting and accountability, MOHCDGEC/IVD management should: • follow up with the service provider to expedite the installation of quick books system. • ensure that financial reports submitted to IVD mainland, and bank reconciliation reports are adequately reviewed in order to ensure accuracy of the reports. • review the system for managing fuel including, but not limited to, guidelines for managing the consumption of fuel.	a) The installation of QuickBooks was finalised in April 2024. However, its utilisation has not yet started due to ongoing discussions between the Ministry of Finance and IVD to adopt EPICOR. b) MOHCDGEC /IVD, in consultation with the Gavi TA, will develop a standard review checklist to guide the review of financial reports and bank reconciliations. c) In a bid to improve fuel management, starting from November 2023, fuel is directly managed by the districts. IVD will develop a simplified financial management guideline communicating the expected standard of accountability with regard to different cost categories including fuel management and share it with the districts.	IVD Manager Zanzibar/Accountant	31 December 2024

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		d) IVD, in consultation with TA, will modify the reporting template to include all the missing parameters like budgeted amount, budget vs actual analysis, variance explanations, and cash balances.		