Memorandum on the Republic of Mozambique's Programme Audit report

The attached Gavi audit report sets out the conclusions of the programme audit of Gavi's support to the Government of Mozambique's Expanded Programme on Immunisation.

The audit was conducted in April 2019 and the period under review was from 1 January 2015 to 30 June 2018. The scope of the audit covered the Health Systems Strengthening grant, measles-rubella operational costs, two vaccine introduction grants, and select vaccine and data management processes. The final audit report was issued to the Ministry of Health on 17 June 2019.

The audit report's Executive Summary (pages 4 to 6) sets out the key conclusions, the details of which are set out in the body of the report. These included:

- There is an overall rating of unsatisfactory which means that: "Internal controls and risk management practices were either not established or not functioning well. The majority of issues identified were high risk. Hence, the overall programme's objectives are not likely to be achieved."
- Sixteen issues were identified, which related to grant oversight and governance, non-compliance with the procurement manual and inadequate controls over vaccine and supply chain management.
- Key findings identified include:
    a. Weaknesses in the grant oversight and governance by the Inter-agency Committee relating to ineffective leadership and monitoring of the MOH's Expanded Programme on Immunisation;
    b. Inadequate management of the Gavi-funded programmes by the MOH's Expanded Programme on Immunisation. Monitoring and supervision of the subnational programme activities was insufficient due to unclear policies, weak planning, and ineffective practices. Data management practices were poor, with immunisation data being spread across disparate tools and systems, exacerbated by inadequate data quality assurance processes.
    c. Weaknesses in the management of vaccines at the central level, including: non-compliance with the earliest expired first out principle; inaccurate stock records; and the mismanagement of a PCV product-switch that resulted in 60,000 doses almost being lost due to their near expiration. The stock management practices of several provincial vaccine stores were also inadequate, including weak stock records;
    d. The audit team identified questioned amounts totalling US$ 1,311,096, made up of unsupported expenditure and procurements (US$ 611,629), inadequately supported expenditures (US$268,635), inadequately supported procurements (US$ 425,249) and ineligible expenditure (US$ 5,582). There were also VAT amounts ranging between US$ 560,000 up to US$ 1.1 million from procurement activity which the MOH did not reclaim from the Ministry of Finance; and
    e. Inadequacies in the procurement management practices due to non-competitive supplier selection process, missing supporting documentation or the absence of proof of delivery.

Following a review of additional documentation undertaken by the audit team, the Gavi Secretariat accepted further information relating to procurements and inadequately supported transactions, which was subsequently made available by the MOH and provided adequate rationale for the questioned expenditures. Ultimately this led to Gavi determining that the amount to be reimbursed totalled US$ 733,795.

Further exchanges with the MOH to re-assess all of the VAT payments incurred on behalf of the programme, resulted in Gavi determining that amounts totalling US$ 788,146 were reclaimable.

The results of the programme audit have been discussed and agreed with the Ministry of Health, including their commitment to remediate the identified issues. In a letter to Gavi of 13 June 2019, the Ministry of Health accepted the audit findings, acknowledged the weaknesses identified by the programme audit, and committed to implement a detailed management action plan. On 26 November 2019, the Ministry of Health committed to:

a. Reimburse US$ 733,795 over a period starting in December 2019 with final payment in September 2021; and

b. Implement measures to transfer VAT refunds of US$ 788,146 to the Gavi-designated programme account. This transfer will be validated by Gavi.

The Gavi Secretariat continues to work with the Ministry of Health to ensure the above commitments are met.

Geneva, 9 November 2020

REPUBLIC OF MOZAMBIQUE

Programme Audit of Gavi Support to the Ministry of Health

Gavi Alliance Secretariat, Geneva, Switzerland

Final Audit Report – 17 June 2019

Table of Contents

1 Executive Summary

Overall audit opinion

The Audit Team assessed the Ministry of Health's (MOH[1]) management of Gavi's support during the audit period as **unsatisfactory**, which means, "Internal controls and risk management practices were either not established or not functioning well. The majority of issues identified were high risk. Hence, the overall Programme's objectives are not likely to be achieved."

So as to address the risks associated with the findings, the Audit Team raised 19 recommendations, of which 63% were rated as of critical, and need to be addressed by implementing remedial measures according to the action plan as defined in Annex 1.

Audit rating

Table 1: Summary of audit focus areas rated by programme audit:

Area	Audit Rating
Grant Oversight and Programme Governance	Unsatisfactory
Programme Management	Unsatisfactory
Vaccines and Supply Chain Management	Unsatisfactory
Expenditures and Internal Controls	Unsatisfactory
Procurement	Unsatisfactory
Overall rating	**Unsatisfactory**

Key issues

The audit findings covering the various aspects for how Gavi's funds and vaccine support were managed, between January 2015 and June 2018, are summarised below.

Table 2: Summary of key issues, by audit area:

Audit Area	Summary of finding
Grant Oversight and Programme Governance	The Interagency Coordinating Committee (ICC), which was expected to provide stewardship over the national immunisation programme, did not function effectively. The committee did not operate as per its terms of reference, it failed to prioritise and take leadership on several important issues that the programme was confronted by, and meetings were held sporadically or on a reactionary basis. In absence of a standing agenda, the Committee failed to provide oversight or to monitor key programme indicators on a regular basis. There was a significant delay in submission of external audit reports which compromised Gavi's ability to obtain assurance over the financial performance of its grant support, and to make informed decisions about future cash disbursements.

[1] Officially in Portuguese known as Ministério da Saúde (MISAU).

Audit Area	Summary of finding
	The immunisation programme, including Gavi's support was not included in the Ministry of Health (MOH) Internal Audit's scope as required by Gavi, effectively missing out on the opportunity to review and assess key risks associated.
Programme Management	Management of Gavi-funded programmes by the MOH's Expanded Programme on Immunisation (EPI) was inadequate. The EPI displayed poor leadership in how it coordinated and directed various initiatives, including weak synchronisation of the technical country support provided to it by various Gavi Alliance partners. Similarly, the EPI unit had not begun planning for integrating its vaccine distribution into the broader national Strategic Plan for Pharmaceutical Logistics (the PELF) which was approved in 2013. Central EPI's monitoring and supervision of the subnational programme activities, suffered from unclear policy, weak planning and ineffective practices. The process of generating and reporting immunisation data was questionable due to absence of data quality assurance processes. Based on the Audit Team's analysis, the number of children reported to have been vaccinated, exceeded the total dosage available for vaccination. Immunisation data was spread across disparate tools and systems; and the EPI lacked a strategic plan for how to integrate and streamline its various tools and systems, some of which overlapped. Due to an absence of comprehensive terms of reference, the roles and responsibilities of the various EPI Technical Working Groups (TWG) were not sufficiently defined. Further, the Audit Team could not determine how the TWGs were able to effect change, as there was no process in place for them to escalate issues to a higher authority for decision making.
Vaccines & Supply Chain Management	Vaccines at the central-level were poorly managed, including non-compliance with the Earliest Expired First Out principle, inaccurate stock records, and mismanagement of the product-switch from PCV10 to PCV13 leading to the likelihood of shelf-expiry. The forthcoming 2018 product-switch from monovalent Measles to MR is similarly a concern. At the subnational level, basic vaccine management tasks were not undertaken, including physical stock counts, monitoring of temperature, and maintenance of stock records. At some provincial vaccine stores, there were cases of product stock-outs exceeding 30 days.
Financial Management & Expenditures	The MOH lacked budget monitoring and control processes over Gavi-funded programme expenditures. The Audit Team determined that expenditures totalling MZN 29,454,708 (USD 536,055) were unsupported, inadequately supported, irregular or ineligible. The questioned expenditure was approximately 39% of the total expenditure reviewed by the Audit Team. In addition, throughout the 3.5-year period, Value Added Tax totalling MZN 30,715,673 (USD 562,002) was paid from Gavi support, to acquire goods and services across the programmes, even though this is not an eligible use of the funds provided.
Procurement	Several procurement transactions totalling MZN 42,359,022 (USD 775,064) were questioned by the Audit Team, due to a non-competitive supplier selection process, missing supporting documentation or an absence of proof of delivery.

Table 3: Summary of expenditures questioned by the Audit Team, by grant– including procurement (in USD):

Grant type	Total expenditure	Total reviewed	Total questioned	% questioned [of total reviewed]
Health Systems Strengthening (HSS)	*6,843,382*	*2,903,192*	*1,151,375*	40%
MR (Measles-Rubella) Campaign	*4,440,020*	*1,658,588*	*159,721*	10%
VIG (Vaccine Introduction Grants)	*197,574*	*21,256*	-	-
Total	***11,480,976***	***4,583,036***	***1,311,096***	**29%**

Table 4: Summary of the same expenditures questioned by the Audit Team, reflected by category (in MZN and USD):

Category	Amount MZN	Amount USD	Report Reference
Unsupported expenditures	14,467,605	*261,838*	7.2.1
Ineligible expenditures	305,100	*5,582*	7.2.3
Unsupported procurements	19,117,473	*349,791*	8
Sub-total	**33,890,178**	***617,211***	
Inadequately supported expenditures	14,682,003	*268,635*	7.2.2
Sub-total	**14,682,003**	***268,635***	
Inadequately supported procurements:			
a) New contract awarded to prior supplier without competition	18,269,892	*334,283*	8
b) Lack of proof of delivery	3,204,840	*58,639*	8
c) Non-competitive procurement without three quotations	1,766,817	*32,327*	8
Sub-total	**23,241,549**	***425,249***	
Grand total	**71,813,730**	***1,311,096***	

Table 5: Vaccines potentially expiring held at central level questioned by the Audit team as at 31 August 2018:

Category	Month	Doses	Source/ reference
PCV-13 Vaccines potential at risk of shelf expiring due to product switch	Nov 2018	16,798	SMT – August 2018
	Dec 2018	3,600	SMT – August 2018
	Jan 2019	25,782	SMT – August 2018
	Feb 2019	4,108	SMT – August 2018
HPV – pilot project vaccines	Sept 2016	9,372	These expired in 2016.
Total		**59,660**	

In addition to the questioned expenditures mentioned in Tables 3, 4 and 5 above, the Audit Team also identified Gavi funds totalling MZN 30,715,673 (USD 562,002) which were used to incur VAT expenditures. Furthermore, given that the Audit Team did not review all of the expenditures incurred by the programme during the period, based on an analysis of E-SISTAFE it was estimated that the total amount of recoverable expenditures which relate to VAT could range as high as USD 1.1 million. See section 7.3, Tables 23a and 23b for details.

2 Scope and Objectives

2.1 Audit Scope

Since 2001, Gavi has provided a total of USD 225,159,848, both in vaccine support and cash grant to the Government of Mozambique. A Partnership Framework Agreement was signed by the Ministry of Health, the Ministry of Finance and Gavi on 6 December 2013.

Between January 2015 and June 2018 (hereinafter referred to as "the audit period"), a total of USD 108,392,600 was disbursed to the country in benefit of the Mozambique's Expanded Programme on Immunisation (EPI[2]), including cash grants totalling USD 22,517,517 and vaccine support totalling USD 85,875,083. From the cash grants, USD 15,884,586 was transferred directly to the MOH and the remaining USD 6,632,931 via Gavi Alliance partners, WHO and UNICEF, as per Table 6 below.

Similarly, the funds for vaccine support were disbursed directly to Gavi's procurement agent (UNICEF Supply Division), for them to purchase on behalf of the Ministry of Health, an equivalent amount of vaccines and immunisation supplies, and to arrange transport of these to Maputo.

Table 6: Gavi support as of June 2018, in USD:

Grant type/ Disbursed year	2001 – 2014	2015 - Jun 2018	Total 2001 - 2018
Cash grant to MOH within audit scope	2,224,000	***15,884,586***	18,108,586
Cash grant via WHO	419,154	***2,581,190***	3,000,344
Cash grant via UNICEF	373,147	***4,051,741***	4,424,888
Cash amounts excluded from audit scope	792,301	***6,632,931***	7,425,232

In accordance with the "single audit principle" established by Gavi's United Nations partners, any Gavi's funds which were disbursed to the partners for direct execution (for example, to procure equipment on behalf of the Government) were excluded from the audit scope. As a consequence, the cash amounts totalling USD 6,632,931 were not reviewed as part of the audit. All other Gavi support during the audit period, was included in scope.

Table 7: Breakdown of expenditures by grant, and expenditures reviewed by the Audit Team:

Cash Grant type	Expenditure reported		Reviewed by the Audit Team		Audit coverage
	(MZN)	*(USD)*	(MZN)	*(USD)*	
Health Systems Strengthening (HSS)	374,018,208	*6,843,883*	158,659,435	*2,903,192*	42%
Measles-Rubella (MR) Campaign	242,664,847	*4,440,345*	90,641,810	*1,658,588*	37%
Vaccine Introduction Grants (VIGs)	10,798,210	*197,588*	1,161,657	*21,256*	11%
Total	**627,481,265**	***11,481,816***	**250,462,902**	***4,583,036***	**40%**

[2] Officially in Portuguese known as Programa Alargado de Vacinação (PAV).

The audit was conducted between August and September 2018, during which time, the Audit Team discussed with representatives from the MOH and Gavi Alliance partners; and reviewed the EPI expenditures and vaccine supply chain management both at the central level (Maputo) as well as at five provinces: Maputo, Cabo Delgado, Zambezia, Nampula and Manica. The Audit Team visited two districts and two Health Facilities in each of the five provinces.

Over the period covered by the audit, Gavi-funded expenditures reported by the EPI unit totalled MZN 627,481,266 (USD 11,481,816). The Audit Team reviewed MZN 250,462,902 (USD 4,583,036) expenditures, effectively covering 40% of this amount.

Additional work undertaken in April 2019

In December 2018, Gavi's Audit Team provided a draft report to the MOH which questioned approximately 39% of the total expenditures which it had reviewed. Thereafter in 2019, the Ministry provided additional supporting documents which had not been made available at the time of the audit. Following a subsequent review of the additional documentation presented, the Audit Team questioned expenditures totalling MZN 71,813,730 (USD 1,311,119) out of overall expenditures totalling MZN 250,462,902 (USD 4,582,700) reviewed.

2.2 Audit Objectives

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

The Audit Team assessed 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, including management of vaccines; the physical security of assets and resources; and compliance with national procedures and regulations.

The Audit Team also reviewed programme management arrangements and processes governing Gavi's support, so as to: assess the existence and functioning of the key processes; undertake substantive tests of a sample of programme expenditures; and review the vaccine supply chain management effectiveness and efficiency.

The findings of this audit report which is based on review of 40% of the expenditures, cannot be considered as definitive for the entire amount of expenditures incurred during the period.

2.3 Exchange rate

For the purposes of this report, all amounts denominated in the Mozambique metical (MZN) were converted using an exchange rate of USD 1 = MZN 54.65 which is an average of the latest rates used by the national treasury for different Gavi grants during the period Jan 2015 – June 2018. For HSS and MR, USD was converted into MZN in multiple tranches. However only the rate applied by CUT at the latest conversion for each grant was used. For VIG and PCV grants, the grant funds were converted into MZN in a single transaction.

Table 8: Most recent spot exchange rates applied by the National Treasury (CUT[3]) for each of Gavi grants

Grant	Applicable rate (USD-MZN)
MR Campaign	60.63
VIG – 2015	38.81
VIG – 2017	59.23
HSS	53.97
PCV Product switch	60.63
Average exchange rate	**54.65**

[3] Nacional departamento de gestão da conta única e operações do tesouro.

3 Background

Introduction

Mozambique is a low-income country with an estimated population of 29.67 million. According to the United Nations Development Program, the country ranks 180 out of 188 countries in the human development index. Average life expectancy at birth is 58.9 years. In 2015, the reported number of deaths under five years of age was 84,000.

National entities involved in the executing and managing Gavi's funds

The national health system is decentralised across the 11 provinces, 30 municipalities and 161 districts. The MOH sets the strategic direction and policy for the health sector. The Provincial Health Directorates (PHD) provide technical policy and oversight to districts and provincial hospitals, whilst districts oversee Health Facilities (HF).

In 1979, the EPI in Mozambique was launched as a priority intervention aimed at reducing mortality and morbidity from vaccine preventable diseases. At the national level, the EPI is part of the Disease Control Department within the National Directorate of Public Health and. It liaises with other units such as: Department of Epidemiology, National Institute of Health, Centre for Pharmaceuticals and Medical Supplies and Pharmaceutics Department.

The Central EPI is responsible for overall policies and core EPI activities such as: the national vaccine forecast; managing the central vaccine store; delivery of vaccines up to the provinces; budgeting allocation of programme funds to provinces and district; programme supervision and monitoring; health information management system; and donor reporting.

At the subnational level, the PHD have a mandate to implement EPI activities for their respective province. According to the MOH, every province has, at least, three positions dedicated to the EPI, namely: Head of EPI, Accountant and Logistician. The PHD receive programme funds from the central-level EPI, including Gavi monies for which they have overall responsibility including: approving and incurring expenditure; maintaining accounting records; preserving supporting documents for the expenditures; and financial reporting to the Central EPI. The PHD are also in charge of the vaccine supply chain management in their respective provinces.

Vaccination is carried out through fixed posts (for e.g. Health Facilities) as well as using "mobile brigades". The country counts approximately 1,591 Health Facilities, including rural hospitals. There are about 3,500 health workers providing services at the community level.

Since 2001, with Gavi support, the country has continued to incrementally include new vaccines in its routine immunisation schedule. As of June 2018, Gavi supported vaccines in the EPI portfolio included: inactive polio, diphtheria, pertussis, tetanus, hepatitis B, haemophilus influenza, pneumococcal pneumonia, rotavirus, and measles-rubella (campaign).

DETAILED PROGRAMME AUDIT FINDINGS

4 Grant Oversight and Programme Governance

4.1 Shortcomings in the EPI oversight mechanism

One of the conditions for Gavi support is an existence of a functioning Inter-agency Coordination Committee (ICC), or equivalent, to coordinate and hold accountable national immunisation efforts. The Audit Team determined that the existing ICC mechanism was ineffective as it lacked some essential oversight elements, namely:

- The ICC failed to hold regular meetings every three months as stipulated in its terms of reference (TOR). Additional ad-hoc meetings were also to be held for events such as grant applications, vaccine switch and the annual Joint Appraisal.
- From the Audit Team's review of the ICC minutes, it observed that the ICC did not provide a continuous and ongoing oversight of the EPI, as it did not have a standing agenda for deliberations or processes to monitor the programme indicators. The majority of ICC meetings during the past three years were convened to solely discuss specific events. For example, in 2015, only three ad-hoc meetings were held: (i) to specifically the OPV vaccine switch; (ii) for preparation of the Joint Appraisal and finally, (iii) for presentation of the results from the Joint Appraisal. The basis for meetings held in both 2016 and 2017 were of a similar nature.
- The Central EPI, which was responsible to provide secretarial support for the ICC, did not consistently maintain minutes for the ICC meetings, as required. The meeting minutes did not include name and signature of the participants. Further, there was no evidence that the minutes were circulated, or any follow-up of the decisions took place.
- There was a discordance between various members of the ICC from both the MOH and the in-country Gavi Alliance partners, as concerns were raised that the current ICC chair did not correspond to the requisite level of authority for the role. The current ICC chair was represented by the National Director of Public Health 'Diretora National da Saude 'Publica' (DNSP). According to the Gavi Alliance partners, due to the absence of a higher-level of MOH representation, the meetings' deliberations frequently remained at the operational level and lacked sufficient policy and strategy level content. Similarly, the Joint Appraisal reports of 2017 and 2018, as endorsed by the MOH, recommended for an escalation in the ICC seniority and representation. However, the status quo remained unchanged as at June 2018. In its defence, the MOH stated that the Gavi Alliance partners were often under prepared for the ICC discussions, which hampered the Committee's ability in its decision-making.
- Since 2015, there has been an increase in the volume of EPI programme activities, including four new vaccine introduction, two vaccine switches (PCV and OPV), one campaign, and more Health system strengthening and Targeted Country Assistance (TCA) resources, the latter which were delivered via Gavi Alliance partners. The Audit Team is of an opinion that during this period of intensification, the ICC 's capacity fell short of sufficiently concentrating on discussion regarding critical issues, namely:
    - Preparation regarding the 2013 Strategic Plan for Pharmaceutical Logistics (PELF). The ICC, in its capacity of an oversight and decision-making body, is expected to provide guidance

regarding the EPI's consideration in joining PELF, an initiative which is currently led by the Central de Medicamentos e Artigos Médicos (CMAM)[4];
- Reviewing the operability and financial sustainability of various initiatives brought by TCA partners, including mainstreaming the direct distribution of vaccine from provinces to Health Facilities (a project whose operational costs are currently primarily funded by the HSS grant);
- Logistical impact and considerations regarding the 2017 PCV switch;
- Defining suitable IT strategies with respect to rationalising existing immunisation and vaccine management data systems;
- Reviewing the coordination and effectiveness of TCA support; and
- Coordination arrangements with the National Immunization Technical Advisory Groups[5] (NIITAG).

ICC participation was frequently lacking, with insufficient involvement of the broader immunisation partners and insufficient inclusion of national expertise including the MOH's Direcao de Administracao e Financas, Directorate of Human Resources, Directorate of Planning and Cooperation and the Ministry of Finance and Economy for technical discussions.

Risk / Impact / Implications

There is a risk that critical issues and challenges within the EPI may not be addressed if the necessary governance arrangements are not effectively resourced or purposeful.

Recommendation 1 - Critical

The MOH, in consultation with the Gavi Alliance partners in-country, is recommended to:

- Ensure that the representative members of the ICC have the requisite capability and seniority as decision-makers, as well as the authority to represent and commit their organisations;
- Broaden the ICC's membership by including other suitable in-country partners that are concerned with immunisation and/or health programmes;
- Develop and implement annual oversight plans as stipulated in the TORs to ensure that the EPI is accountable to implement the approved annual EPI plan; and
- Develop a standing agenda for the ICC meetings which, at the minimum, should include key matters for which the ICC is expected to review or where necessary decide upon. For example: key EPI indicators (including provincial quality and completion of immunisation coverage); key vaccine stock levels; vaccine shipments in the pipeline; the status of the cold chain across all the country; any write-offs; the status of vaccines nearing their expiration, and the implementation status of the EPI annual workplan. Such types of elements should be periodically brought to the ICC by the EPI

[4] Refer to report section 5.8 for introduction to CMAM.

[5] According to WHO - National Immunization Technical Advisory Groups (NITAGs) are multidisciplinary groups of national experts responsible for providing independent, evidence-informed advice to policy makers and programme managers on policy issues related to immunization and vaccines. The Global Vaccine Action Plan calls for all country to establish or have access to such a NITAG by 2020. Source: http://www.who.int/immunization/sage/national_advisory_committees/en/, accessed 29 November 2018.

Technical Working Groups. In addition, the ICC should also monitor progress on the implementation of recommendations from various reviews concerning the EPI, such as prior Effective Vaccine Management assessments.

Management comments

The Ministry agrees with the recommendations that were already identified as a priority the revitalization and review of the ICC's functionality in JA 2017. An internal review of the ICC TORs to expand mandate and membership was undertook and discussed with the ICC members.

Management actions:

Strengthen technical assistance by UNICEF and / or WHO in order to:

Finalize and implement the new ICC ToRs / with a more comprehensive list of participants, including all entities involved in the effective implementation of the EPI.

For the implementation of the new ToRs it is necessary to take into account the need of:

Strengthen the secretariat of ICC (the secretariat should be composed of more than one entity, be dynamic and be able to draw up an agenda for the ICC to address the concerns of the Technical Group.

Develop monitoring indicators to hold ICC members accountable, in program supervision and support

The ICC in turn should identify and channel the bottlenecks of the program implementation to the level of the Minister of Health, in accordance with the coordination mechanisms of the sector and if necessary, convene a roundtable with other sectors concerned

For the next cycle of cooperation with Gavi evaluate another central control and supervision mechanism that can be adapted to the current mechanisms in place (DNSP coordination meetings, CCC, CES)

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	End of Q2

4.2 Untimely external audit reports and delays in following-up audit issues

Although in line with the Partnership Framework Agreement, the Audit Team noted that the existing external audit arrangement did not timely provide the necessary assurance on Gavi-supported activities, namely:

- Under existing arrangements, external audit reports are due to Gavi twelve months after the fiscal year. Thus, at September 2018, the most recent external audit report available was for the period ending 31 December 2016. The long lead time prior to submitting these audit reports hampered the Gavi Country Support team's ability to understand the grants' financial performance and to make decisions about future cash disbursements. In addition, the opportunity to promptly recognise and remediate internal control weaknesses as identified by the external audit, may also be missed.
- As of September 2018, the MOH had provided its formal response to the 2016 external audit reports findings, including commenting on issues in relation to the misuse of funds. However, the

actual repayment of these misused funds was not done, as the MOH had not obtained agreement from the various provinces PHD concerned, for them to reimburse the ineligible amounts identified.

Risk / Impact / Implications

If external audit findings are not promptly reported to the MOH and Gavi, this may undermine the ability to obtain assurance over the management of programmatic funds, and ultimately delay decisions on Gavi future disbursements.

Recommendation 2 - Essential

The MOH is recommended to come to an agreement with the Tribunal Administrativo[6] to minimise the time-lag until external audit reports are submitted. The scope of such future audits should also be expanded to include to review a sample of subnational expenditures.

Management comments	
The Ministry acknowledges the delay in the completion and delivery of the audit report by TA. One of the major constraints identified was the financial limitation of TA to comply with GAVI requirements. To improve, the Ministry of Health already requested in advance the audit 2018 implementation at the Administrative Court (TA), letter of request attached; The audits so far carried out include the provinces, evidence attached. **Management actions:** 1. MISAU will ensure that the TA audit budget will be included annually in the HSS budget plans. 2. MISAU agreed with the TA to hold regular pre- and post-audit meetings to better prepare audits and ensure follow-up to the recommendations.	
Responsible party	**Deadline / Timetable**
National Directorate of Public Health National Directorate of Administration and Finance	End of Q1

4.3 Gavi supported activities not included in the scope of the MOH's Internal Audit

During the audit period, the MOH's Internal Audit (IA) function carried out expenditure reviews only on statutory funds. The IA has a broad mandate ranging from finance and administration, to performance issues relating to health activities. However, the Gavi grants were not part of the IA's purview, no Gavi-

[6] Mozambique's Supreme Audit Institution which is part of the national Administrative Court responsible for all administrative, fiscal and customs matters.

related expenditures were examined, and the IA determined that the risks associated with vaccines was too low to merit reviewing.

Risk / Impact / Implications

The lack of any Internal Audit review of Gavi-supported programmes and vaccines may compromise the MOH's ability to identify any internal control weaknesses associated with the immunisation programme.

Recommendation 3 - Essential

In future, the MOH is recommenced to:

- Include Gavi expenditures and vaccines in the IA's audit planning and for this plan to be approved by the MOH audit committee or the senior most MOH management team; and
- Submit to Gavi all subsequent IA reviews which are undertaken; and
- Follow up, through Internal Audit function, on the reimbursement of misused amounts as identified in the 2016 external audit report.

Management comments

MISAU's internal audit implementation is carried out continuously through the General Inspection (Internal Audit) and DAF-Support and Control Department (DAC) together with the regional advisors. These entities have already made regular monitoring visits at the provincial level to monitor and verify Gavi's processes.

Please find attached 1, 2, 3 and 4 the DAC Reports

After an exhaustive verification of the processes for the year 2016, it was verified that there were no undue payments, and therefore no refunds were made. However, for the year 2017 and 2018 we have had returns, see (annexes 8 and 9) in which DAF is following up on them.

Management actions:

Together with DAF ensure the functionality of Support and Control Units in all provinces.

Include the Support and Control Technicians and (Internal Audit) in the supervisions of the program;

Request the General Inspectorate to make annual visits to all provinces to monitor the use of Gavi funds

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	Permanent

5 Programme Management

5.1 Suboptimal implementation and delivery of TCA activities

Targeted Country Assistance (TCA) funding is intended to benefit the country's immunisation programme, by providing essential direction, capacity building, and strengthening national systems and processes. TCA needs are identified every year as part of annual Joint Appraisal process, followed thereafter by developing an overall TCA plan in collaboration between the MOH and the partners involved.

Despite the improvements since 2017 in the coordination amongst the implementing partners, the Audit Team observed that since the commencement of TCA activities in 2016, the TCA activities executed by the various partners were effectively conducted "in silos" and in uncoordinated manner. In addition, partners' responsibilities were not always clear, for example between the roles of the HSS Regional Advisors and MB Consulting, there was ambiguity regarding the party responsible for building financial capacity at the provincial level. Other notable gaps in the execution of TCA include:

- The EPI's oversight and validation process of the TCA milestones was suboptimal. Particularly for the expanded partners, there was no evidence of an independent validation of the milestones reported as achieved.
- In addition, the TCA milestones were ambiguous and difficult to measure, as they lacked specificity, measurable indicators or timeliness.
- Some of the activities were largely output-orientated, rather than of a capacity building nature, for example, the role of MB Consulting – one of the TCA partners – which primarily focused on executing and producing financial reports for Gavi. Due to MB Consulting focusing on this type of operational "hands-on approach", its requirement to build the capacity of the MOH and the Directorate of Administration and Finance (DAF)[7] was not prioritised and its latter role was not accomplished.
- Some incompatible activities were undertaken. For example, one of the TCA partners was engaged redesigning the supply chain by channelling distribution directly from the provinces to Health Facilities, effectively removing a transit point at the district level. In parallel, another TCA partner conducted enhanced training of district health staff on the District Vaccination Data Management Tool[8] (DVDMT). Direct distribution diminishes the districts' role on vaccine distribution and data collection, and therefore to train the same districts on the use of DVDMT appeared counterproductive.
- 2016 and 2017 TCA activities were sub optimally coordinated. There were seven partner organisations providing TCA, with each of their respective activities being combined into a single TCA plan. However, the partners each implemented their respective activities without due consideration of the others' actions. This resulted in some of the TCA partners prioritising their organisational requirements without giving sufficient consideration of the overall combined needs of

[7] Locally known as Direcção de Administração e Finanças.
[8] The tool is designed and recommended by the WHO for capturing vaccination data for routine immunisation at district level.

the national immunisation programme. In addition, opportunities to redesign or reprogrammed the plan's activities were limited due to lack of coordination and periodic joint review of the status of TCA plan implementation.

- There was a mismatch between some of the partners' expertise and the activities they were selected for. For example, the HSS Regional Advisors, which were funded by Gavi HSS grant, were expected to build provincial capacity on both financial as well as programme management matters. However, the Advisors' skill sets were exclusively accountancy-based, with little if any experience for how to build capacity on programme management issues.
- The TCA partners' delivery mode for most of their TCA activities was almost via trainings. However, efforts were fragmented, as there was no opportunity to conduct integrated trainings, annual training plans for both the MOH and TCA partners were not available. Multiple trainings organised in parallel, risk creating an unhealthy culture driven by financial perdiem incentives, rather than cost-saving considerations.

The Audit Team's findings were similar to the conclusions provided in a May 2018 report on Gavi's TCA assistance in Mozambique. The review was undertaken by an independent consultant, contracted by Gavi. This report included various recommendations to improve the overall TCA planning, implementation, monitoring and governance. The report's findings were identified based on an independent consultant commissioned by Gavi who conducted a review; with the report being disseminated to the MOH and TCA Partners in September 2018. The Audit Team considers that implementing the report's recommendations would similarly be instrumental towards improving the delivery and impact of Gavi's TCA support.

Risk / Impact / Implications

In absence of effective coordination, oversight and leadership by the MOH, Gavi's TCA support may fail to have the desired improvement impact on the national immunisation programme. Disparate or conflicting efforts may result in best practices or lessons not being identified or recognised.

Recommendation 4 - Critical

The MOH, in its capacity as the ICC Chair, is recommended to carry out its leadership responsibilities by holding the TCA partners accountable for their actions by:

- Taking active participation in the design of the TCA milestones and formally approving the One-TCA plan;
- Validating the TCA milestones against what was actually delivered; and
- Implement the key and relevant recommendations from the May 2018 independent review of 'Review of Gavi targeted country assistance in Mozambique'.

Management comments

The Ministry agrees with the findings regarding the difficulties of coordinating and for them to be accountable to the Ministry. In response to this finding:

- The Head of the PAV is leading the TCA coordination process through regular meetings with partners for joint planning and monitoring of TCA.

- TCA activities respond to the needs of the program, since they were identified during the Joint Appraisal

- The needs of the program are aligned with the strategic plan of the EPI and PES - To facilitate TCA monitoring, TCA activities were included in the operational plan of the PAV 2019 - Partners with the PAV worked hard to simplify the activities of TCA 2019 - Annex OneTA2019 - The coordination of the TCA is supported by the HSS adviser since 2017 (TCA 2018 and 2019) in terms of coordination and secretariat - There were several joint supervisions by the Ministry and Partners (WHO, UNICEF). **Management actions:** The One TA plan has to be developed jointly with program staff at both central and provincial level. Streamline the participation of the provincial level in the process. ACASUS will be supporting EPI in this matter Ensure that Milestones are measurable process indicators and / or products identified Improve the Activity Tracking Matrix with the program's logical framework to facilitate the differentiation between activities and objectives Propose in the partners a report template to report the activities and performance of the quarterly milestones Ensure the implementation of the monthly technical meetings and the meetings quarterly coordination + presentation in the ICC through the strengthening of clear PCOS by the PAV Elaborate an integrated training plan and training performance monitoring plan

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	End of Q1

5.2 Weak monitoring and supervision of the EPI activities at subnational level

According to the MOH, the Central EPI is responsible for policy setting, strategic direction and building capacity of the nationwide immunisation activities. At each province, there are at least three staff dedicated to EPI activities, paid from the provincial budget. These provincial staff also receive a salary top-up paid from the Gavi HSS grant. Central EPI is responsible for monitoring the performance of these provincial EPI staff. The Audit Team assessed the Central EPI's monitoring and supervision (M&S) of the subnational EPI staff and noted the following gaps:

- There was no overall supervision and monitoring policy in place. The draft EPI manual made reference to EPI staff at all levels having monitoring and evaluation responsibilities but lacked suitable procedures for this task. Therefore, M&S roles and responsibilities between the PHD and their respective districts under their remit were unclear and were not defined;
- The existing M&S checklist did not stipulate the: frequency of visits; criteria for the selection of sites; reporting requirements for those staff who carried out monitoring visits; and the periodicity for the review by the Central EPI.

- The M&S checklist did not include areas specific to "Mobile Brigades" which is an important element of the RED/REC strategy[9];
- There was no annual supervision plan. The frequency of M&S activities to be undertaken by the Central EPI was not expressed. Moreover, as at the end of August 2018, Central EPI had not yet undertaken any M&S activity for the current year.
- Opportunities for potentially collaborating or combining supervision visits between the MOH/DAF and the Gavi Alliance Partners – who also undertook such visits – were potentially missed;
- For those M&S visits that did occur, the resultant recommendations remained at the level of the facility visited, for the local staff to implement. However, these same recommendations once identified, were not systematically documented at the Central EPI, resulting in a failure to adequately follow up on the prior issues identified during earlier visits. And as a result of this data being inconsistently recorded, the responsible EPI units were hindered in their ability to identify trends or to look back on past lessons learned; and
- There were no evident consequences for those PHD which did not put in place required procedures as per the EPI manual, or those which repeatedly failed to implement prior recommendations.

Risk / Impact / Implications

In absence of effective supervision and monitoring of vaccine management processes at the subnational level, and a lack of accountability thereon, the EPI may fail to timely identify areas for improvement or may forgo on the chance to identify and provide "hands-on" training or mentoring of subnational staff.

Recommendation 5 - Critical

The MOH, in consultation with the Gavi Alliance partners, is recommended to:

- Develop and formally adopt comprehensive operational guidelines for routine supervisory visits. These guidelines should at a minimum define the: frequency of visits; composition of team members; target coverage; checklist/tools to be used; suggestions and proposals to address any weaknesses identified; and mechanism for the follow-up- of proposed actions. The guidelines should clearly define the roles and responsibilities of the PHD regarding supervision and monitoring activities for their respective provinces.
- Officially disseminate mandatory monitoring and supervision SOP/guidelines to all PHD and require the PHD to put these in place. Provide suitable training to the PHD as necessary.
- At the Central EPI, create a database of all M&S issues and recommendations identified from visits so as to regularly follow up these with respect to any corrective measures. In addition, quarterly joint meetings should be held so that all of the EPI Technical Working Groups can discuss the issues identified from these visits and agree on a common action plan for key items or themes arising.

[9] Reaching Every District (RED) to Reach Every Child (REC) is a WHO recommended immunisation strategy which is adopted by Mozambique to accelerate improvement in immunisation coverage.

- Develop an annual monitoring and supervision plan. Thereafter this plan should be discussed with the TCA partners, so as to determine if any opportunities for integrated supervision exist and thereby jointly undertake the activity, including agreeing on any cost saving considerations.
- Supplement the Central EPI's monitoring and supervision visits with financial checks, by including suitable individuals from the DAF who are to be integrated into the teams responsible for such visits.

Management comments and actions

All supervision of the program is planned in the Economic and Social Plan (PES), an instrument for planning all MISAU program activities (Activity number 24) / 2017 and Activity number 09/2018). (Attached).

EPI prepares an annual plan with the dates of the supervisions, according to the one planned in the PES. (Attached the supervision plans). However due to concurrent issues the plan is not always followed.

During supervisions, there are books in the Districts to write down the findings of the supervision visit and the recommendations that must be followed. After the return of the supervision team, a supervision report is elaborated, which is shared with the supervised Province / District.

EPI supervision guideline is always used at all supervision visits. (Attached)

Actions:

EPI will ensure that DAF Technician will be integrated into all EPI supervision visits.

The supervision guideline will be sent to the Provinces for use during supervision of the Districts and Health Units.

Introduction of the integrated electronic monitoring tool under WHO TCA for 2019.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	End of Q1

5.3 Duplicative reporting tools/systems for immunisation and vaccine stock data

The MOH had not articulated its direction and requirements in regard to a sustainable platform for health information system. Since 2016, the MOH has been obtaining its official immunisation data from SISMA which is powered by DHIS 2 platform. However, there was a general acceptance by the MOH and Gavi Alliance partners that the data quality was highly questionable and therefore, at the time of the audit, several initiatives were underway to improve data quality.

The Audit Team noted that there were several immunisation data collection tools in use at various levels. Most of these tools were not harmonised or were duplicative in content. Maintaining these multiple tools/systems created additional burden and confusion, particularly at the PHD and districts. Due to such non-standardisation, the EPI at both the central and subnational level used different tools/systems for the same dataset; and there were no defined processes for ensuring the integrity of the data captured in these

various tools/systems. This potentially resulted in immunisation coverage and vaccine data reported across the country not being sufficiently accurate. See section 5.4 for audit observation regarding 'unreliability of immunisation data'.

Similarly, due to non-standardised use of the tools to record vaccine and syringe stocks, there was lack of visibility of the stock levels across the subnational level. This compromised the EPI's Central Vaccine Store's (CVS) ability to actively monitor vaccine stock levels across the provinces. Vaccine distribution by the CVS to the provinces was solely depended on a pre-planned schedule, leaving little room to adjust quantities based on existing levels at the provinces.

Given that some of the tools were incrementally introduced by different partners over time, it is likely that opportunities were foregone in being able to streamline or adopt integrated reporting platform solutions. From its discussion, the Audit Team identified that the following tools/systems were currently in use nationwide for the immunisation programme, as illustrated below.

Table 9: Tools/systems used at the national and subnational levels:

Level	Tools/systems
Health facilities	•Sistema de Informação de Gestão Logística das Unidades Sanitárias (SIGLUS) - Stock management, excludes vaccines •Manual Registers - immunisation data
Districts	•Sistema de Informação de Saúde de Moçambique para Monitoria e Avaliação (SIS-MA) - immunisation data •District Vaccine Data Management Tool (DVDMT) - vaccine stock & health indicators, not known how many districts were using it
Provinces	•SELV / VAN – stock records and immunisation data, bypasses districts •Stock Management Tool (SMT) – vaccine stock records
MOH Central	•Sistema de Informação de Saúde de Moçambique para Monitoria e Avaliação (SIS-MA) - official immunisation data, significantly varies from WUNEIC estimates •SELV - not used by the MOH for decision making •Stock Management Tool (SMT) – vaccine stock records •Visibility for Vaccines (ViVa) - stock management tool at central level.

Risk / Impact / Implications

The absence of streamlined data reporting processes and tools poses the following risks:

- Inefficiencies due to staff resources having to be spent on maintaining multiple tools;
- An increase in the possibility of data inconsistencies or manual errors from the multitude of data sources; and
- Lack of proper visibility of the vaccine stock levels across the country.

Recommendation 6 - Essential

The MOH is recommended to:

- Articulate its strategy for the health and logistics information system with regards to the ongoing initiatives. For example, system adopted for logistics should be aligned with the redesigned vaccine distribution system;

- Rationalise existing data collection systems in terms of the added value and necessity; and focus on concentrating resources on the development of those tools and systems which are essential;
- Aggregate, analyse and validate logistics data from provinces and use the information to make logistics decisions and manage the supply chain; and
- Revise the existing EPI manual to incorporate procedures for data input and validation so as to strengthen the quality of immunisation and stock data.

Management comments

The Ministry of Health acknowledges this finding as well as the audit recommendation.

Immunization data are reported through the SISMA (DHIS2), which is the only official MISAU system. However, to aid in data quality analysis, the program uses other tools such as DVDMT to help identify data problems. However, DVDMT and all other analysis systems collect SISMA data for any further analysis. The official instrument used in the Districts, Provinces and the central level to collect and present vaccination coverage is only the SISMA.

For vaccine management, the same instrument (SMT) is used at the central and provincial level. In the Districts and Health Units, due to local difficulties such as lack of energy and computers in the Districts and Health Units for use of the electronic instrument, the manual vaccination stock control sheets are used.

Management actions:

Continue with ongoing efforts of expansion of SELV and ensure its use for management of stocks of vaccines at all levels.

Ensure interoperability between SELV and SIGLUS platforms in order to use the same device to collect information at the health facility level.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health Central de Medicamentos e Artigos Medicos	End of Q3

5.4 Unreliable immunisation data

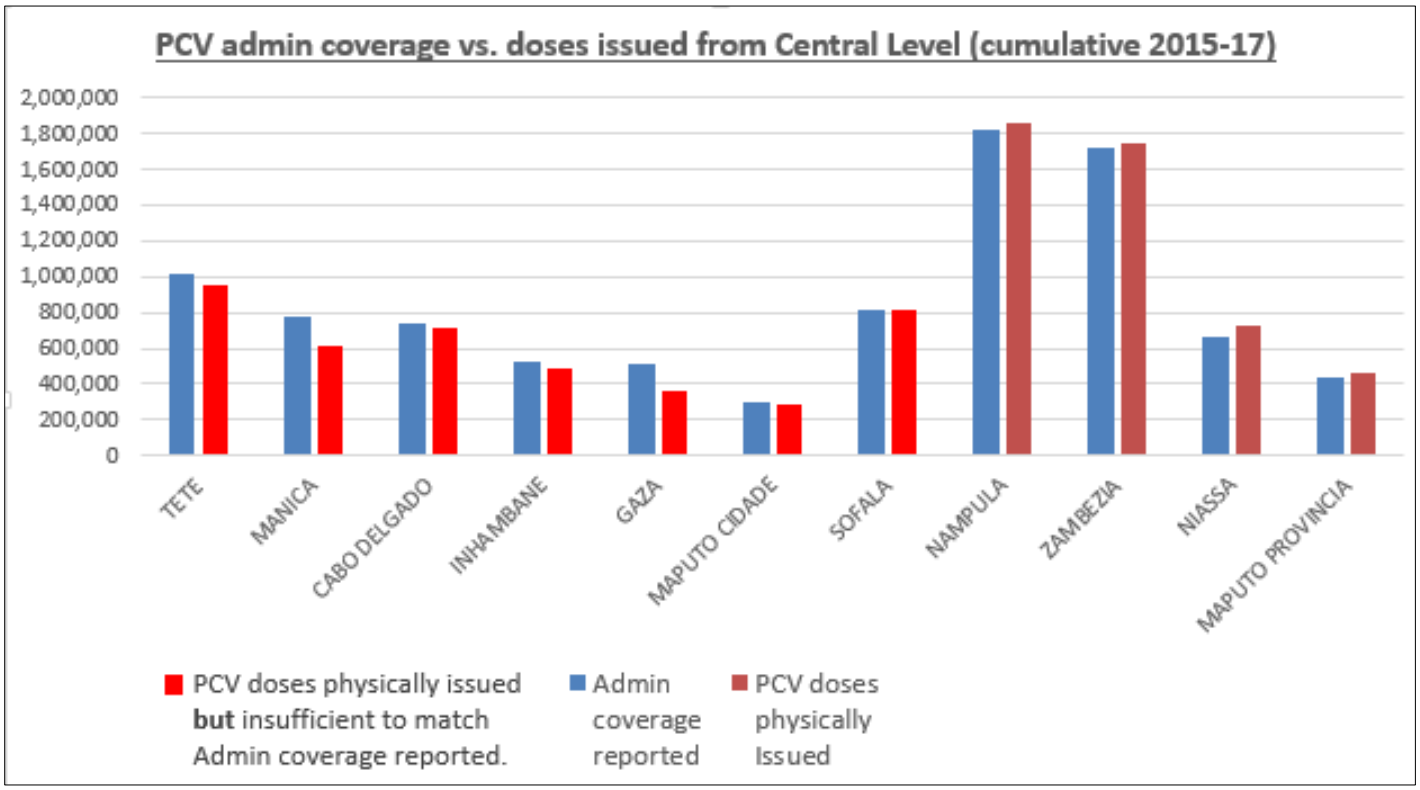
The Audit Team noted that the administrative immunisation coverage reported by the country was questionable because:

- There was no requirement for the provinces to perform a quality review of the immunisation data reported by the districts. At the point of data being uploaded by the district Data Clerk into SIS-MA,

it became live. However, there was no evidence of such data ever having been subject to any validation or quality checks prior to input.

- According to Mozambique's 2017 WUENIC DTP coverage estimates, there was a difference of 19% points between the Government's official data (99%) and WUENIC estimates (80%). Such a marked difference generally indicates poor data quality. Similarly, in 2017, the country reported a drastic increase in its immunisation coverage, which according to the WUENIC report[10], was highly unlikely given that coverage reported was already at a relatively high level. Moreover, the Audit Team noted that no national representative household survey was conducted over the past five years.
- The Audit Team performed a comparative analysis between the PCV administrative coverage and the PCV physical dosage of vaccine issued by the CVS and found that in seven out of 11 provinces, the number of children reported to be vaccinated was higher than the quantities of vaccines distributed by the CVS.

Table 10: Comparison of PCV admin coverage to doses issued, 2015 – 2017:



The above triangulation analysis was adjusted (i) to reflect the country's opening/ closing balances; or (ii) to incorporate the country's vaccine wastage assumptions. This because given the analysis covered a cumulative period of three years, both of these components had a negligible impact on the computation.

[10] WHO UNICEF Immunisation Coverage Estimates – notes for Gavi, 15 July 2018, Table 3, page 11.

In addition, the Audit Team identified the following incongruences (see Table 11) between the immunisation coverage reported, for vaccines which according to the immunisation schedule should have been paired with a matching vaccination.

Table 11: Comparison of coverage rate between two vaccines with same vaccination schedule:

Vaccine 1 scheduled at the same time as Vaccine 2		
Vaccine 1	**Vaccine 2**	**Observation**
DTP1	PCV1	DTP coverage consistently higher
DTP2	PCV2	DTP coverage consistently higher
DTP3	PCV3	DTP coverage consistently higher
DTP2	Rota 2	DTP coverage consistently higher

The Audit Team recognises that at the time of the audit in September 2018, the MOH with support from the WHO, had developed a Data Quality Improvement Plan. The plan aimed at improving: immunisation data at the Health Facilities and districts through training; development of rapid data quality assessment tools; on-the-job training for using data for decisions making; and inclusion of data validation in monitoring and evaluation activities. The plan was anticipated to be implemented during the period November 2018 – December 2020.

Risk / Impact / Implications

The unexplained inconsistencies in the administrative coverage data, which are reported as official country estimates and placed in the public domain, could have the following adverse consequences of:

- Non-compliance with the terms of the Partnership Framework Agreement regarding inaccurate reporting; and
- Undermining the level of confidence in administrative immunization data.
- Data integrity and credibility being questioned due an absence of accountability and the lack of suitable validation processes across respective tools.

Recommendation 7 - Critical

The MOH is recommended to:

- Undertake data quality assessments to determine errors points in its data collection systems;
- Follow-up on the data anomalies identified, including examining processes of administrative data collection, to ensure that these accurately capture the necessary immunisation data; and
- Based upon the result of these assessments, put in place suitable data quality processes to ensure that the immunisation data recorded in the national tools and systems is credible and suitably validated.

Management comments:

The Ministry of Health acknowledges this finding as well as the audit recommendation.

Despite several efforts in place, challenges are still faced in order to ensure reliability of administrative

data of vaccinated children. Due to work overload, health staff usually does not fill the forms and the registry books upon vaccination, which leads to consistent data collection gaps. However, the situation cannot be generalized, varying between health facilities. Registry books containing children details are available in most health facilities and those can be used to check and track the existence of these children in the community, as each child has his or her residence address written on it. **Management actions:** Accelerate implementation of Data Quality improvement Plan Conduct vaccine coverage studies in the last 5 years to have better clarity of the bottlenecks in order to address them properly Conduct a National coverage survey in order to have more accurate immunization figures.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health Department of Health Information Systems	End of Q4

5.5 EPI Technical Working Groups not optimally organised

The Audit Team noticed that the concept of Technical Working Groups (TWG) was not sufficiently operationalised within the immunisation programme. Except for the Working Group for Logistics, all other such TWGs including the Monitoring and Evaluation, Communication, Service Delivery and RED/REC were largely ineffective. By discussion it was indicated to the Audit Team that the TWG inefficiencies were due to:

- An absence of suitable TORs for the Groups and therefore their roles and responsibilities were unclear;
- TWGs meetings being held irregularly, in an ad-hoc fashion, without an explicit understanding of the need to document such meetings; nor on what frequency they should meet;
- A lack of tangible, pro-active interaction between the various TWG; or
- The absence of a defined process being in place so that the TWGs could escalate any significant issues to a higher authority (such as within the MOH or the ICC) for consideration and/or a decision.

Risk / Impact / Implications

The absence of effectively working TWGs could hamper the EPI's ability to discuss and address challenges relating to the national immunisation programme. As a consequence, this may hinder efforts to improve the programme's performance.

Recommendation 8 - Critical

It is recommended that the MOH/EPI develops comprehensive TORs for each TWGs, with clear requirements for the committee's membership, quorum, and items to include on a standing agenda during the meetings. In addition, the expectations for secretarial support and the designation of various channels

to escalate the TWGs' key proposals and recommendations, as well as the commensurate role for the ICC in holding the TWGs accountable and to task, should be defined and agreed.

Management comments The Ministry of Health agrees with this finding and its recommendation. **Management actions:** Review and update of PAV organization chart Review and update of ToRs of the EPI: - Technicians (M & A, Communication, Data managers, head of logistics, head of the cold chain, regional advisors ...) - Technical groups (M & A, Communication, Logistics ...) Creation of the communication flow chart according to the organization chart of the PAV	
Responsible party National Directorate of Public Health	**Deadline / Timetable** End of Q1

5.6 Absence of SOPs for management of vaccines

The Audit Team established that the central EPI had not finalised its vaccine management guidelines; and lacked a comprehensive set of Standard Operating Procedures (SOP) for day-to-day operation such as, the preventive maintenance for Cold Chain Equipment; supervision and monitoring; and maintaining stock records for vaccines and syringes.

The Audit Team considers that existence of suitable vaccine management guidelines and operating procedures are a prerequisite for assuring proper vaccine management and handling practices.

Risk / Impact / Implications

Absence of a comprehensive SOPs may lead to incorrect interpretation and implementation of programme activities and hinders EPI's ability to ensure that the national immunisation programme is delivered in accordance with WHO recommended guidelines.

Recommendation 9 - Essential

The MOH is recommended to:

- Develop a complete set of SOPs on the basis of the guideline for all programmatic areas such as, monitoring and supervision, outreach, cold chain maintenance, temperature monitoring, maintenance of stock records, vaccine distribution, fire safety, vaccine disposal etc. These SOPs should refer to the required forms/ tools/ checklists/ or protocols for all respective programme areas; and
- Train the EPI programme health workers from all levels, on application of the SOPs.

Management comments:

MISAU is in the final stages of updating the manual, due to the gradual introduction of new vaccines that the country has been having over the years, as well as the change of some procedures, there was a need to harmonize and align all contents related to the new vaccines in the PAV manual.

Regarding recommendation 9, paragraph 1, in point 5.6 the EPI has a manual available, with 21 Chapters where the issues raised by the audit report are included in the manual. (Document attached)

Chapter 14 - Vaccine management, which shows how to calculate the needs in vaccine; still in the same chapter in point 14.1 it is shown how to calculate the wastage rate; 14.2 on page 136 how to do requisition of vaccines; 14.3 contains a form to record the stock of vaccine and vaccination material.

Chapter 15 - Maintenance of refrigerators

Chapter 16 - ACD / RED with the respective 5 components on page 159.

In relation to the SOPs, EPI has currently SOPs for of maintenance of cold chain and Supervision.

Management actions:

EPI will develop Procedural Manuals of all areas lacking the (Mobile Brigades, Monitoring and Evaluation, Hazard and Fire Risk, as well as update the existing ones**.**

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	End of Q2

5.7 Delays in implementation of EVM Assessment recommendations

An Effective Vaccine Management (EVM) assessment was conducted in Mozambique in 2012 and again in 2015 using the standard and structured UNICEF/WHO EVM assessment methodology and tools. The EVM and its resultant Improvement Plan is expected to assist the EPI to optimise its vaccine level management, reduce wastage, accurately forecast vaccine requirements and manage its cold chain equipment resources effectively.

Broadly, the overall outcome from both of these assessments was largely the same over most of the nine EVM criteria, with little noticeable improvement occurring during the interim. This suggest that, at the time of the June 2015 EVM assessment, the majority of the 2012 recommendations were not implemented.

The Audit Team noted that the EVM Improvement Plan (EVMIP) developed in May 2017 which is based on the results of the June 2015 assessment was not well elaborated, and furthermore there was no mechanism in place to track the implementation of the recommendations. Other lapses include:

- There was a delay in budgeting for the proposed EVMIP activities. A costed comprehensive implementation plan was developed only in October 2016. However, no part(ies) were identified with the responsibility to follow through in executing the actual implementation; and

- There was no mechanism for validating the implementation of the 2017 EVMIP nor any process to monitor progress. As a result, at the time of the audit in September 2018, the progress and status for the various 2017 Improvement Plan activities was unknown.

Risk / Impact / Implications

Unsatisfactory or delayed implementation of the 2017 EVMIP may compromise the MOH's ability to maintain proper standards in its vaccine supply chain management.

Recommendation 10 - Critical

The MOH, in consultation with the Gavi Alliance partners, is recommended to:

- Hold EPI's National Logistics Working Group accountable for implementation of the EVMIP;
- Assign to one of the MOH staff, responsibility for tracking, monitoring and reporting on the EVMIP. This staff should progressively record all updates to the EVM Improvement Plan as activities are undertaken (activities status to be reflected as either "closed" or "opened"); and
- Ensure that the advancement on the EVMIP should be regularly reported to the MOH senior management and the ICC for validation, for example quarterly.

Management comments:

Ministry of Health acknowledges the delay in the finalization of EVMIP as well as the costed comprehensive plan. However, both documents were finalized and submitted in October 2016 (please find attached).

The status document is available in Excel and can be shared. At the same time this document was shared upon the CCEOP application in 2018 (please find the document attached).

A comprehensive and validated EVMCIP already exists (2016-2020).

•NLWG has been implementing and monitoring the CIP from 2016 up to now. Some of the key activities have been finalized and others in progress. And the group is engaged on implementing the planned activities and putting in place new tools for close monitor and keep stakeholders accountable for their responsibilities.

Due to human resources limitations, this task was assigned to the existing EPI logistician who is the government counterpart for the CIP implementation and monitoring, with technical assistance from the NLWG.

Management actions:

Through 2019 Gavi TCA, the NLWG capacity will be strength to manage and monitor and report implementation of EVM CIP. A comprehensive EVM Tracking tool to monitor performance will be developed by early 2019. On the other hand, the current EVM CiP implementation will be reviewed and updated.

A specific M&E Plan with KPIs for NLWG will be developed.

With the technical assistance from the NLWG, the National EPI logistician as the government counterpart for the CIP implementation and monitoring, will be reporting to the EPI national manager + ICC on EVM CIP implementation/performance in regular basis.

Responsible party	Deadline / Timetable
National Directorate of Public Health	End of Q2

5.8 Absence of a clear supply chain strategy

The Audit Team observed a lack of guidance from the MOH with respect to the EPI's integration of vaccine distribution with other health commodities. In addition, the MOH had not yet articulated or clarified whether the "direct distribution" for vaccine was the preferred and sustainable model.

In 2013, the Government of Mozambique approved its "Plano Estratégico de Logística Farmacêutica (PELF)" which directed the need to optimise and implement an integrated health commodity supply chain nationwide. As a result, the national Central Medical Store, locally known and Central de Medicamentos e Artigos Médicos (CMAM), was charged with responsibility to source, manage and distribute all health commodities down to the Health Facility Level. To date, the status and distribution of vaccines which are also health commodities, is not determined and vaccines remain under separate management by the Central EPI.

Though the MOH embraces the PELF principles of an integrated vaccines distribution within CMAM's authority, the actual terms of design, and approval or initiation of such a change management project has not yet been determined. From discussions, the MOH recognised that there remain some pressing challenges including the need to create a cadre of Health Workers with cross-cutting skills to manage all types of health commodities, including vaccines.

In 2002, Village Reach[11] began piloting an introduction of "direct distribution" model from province to Health Facilities. Since 2016, with availability of Gavi TCA support, Village Reach has intensified its efforts toward direct distribution. The Audit Team reviewed sustainability considerations with regards the current "direct distribution model". While this model reduced the need for additional financial investments in cold chain equipment at the districts, it significantly increased operational costs, so as to fund allowances to the provincial staff involved in distribution, fuel, and vehicle maintenance. Currently, such operational costs are funded from Gavi-provided HSS grant. However, in absence any credible commitment from the Government to support these costs after the end Gavi support, the model may not be sustainable. According to Village Reach as of August 2018, except for Nampula, all other provinces were distributing vaccines directly to their Health Facilities.

Lastly, from discussions with the MOH and Gavi Alliance partners, the Audit Team was informed that there was no suitable, alternative distribution strategy in place for those particular Health Facilities which were inaccessible by road. The direct distribution model involves the use of large provincial trucks which are

[11] Village Reach is one of the extended Gavi Alliance partners in Mozambique which is leading the efforts toward an effective vaccine supply chain.

not suitable to reach some of the Health Facilities where the road accessibility is poor. Further, the MOH did not maintain any geolocation data or mapping of where these facilities were located.

Risk / Impact / Implications

The EPI's failure to pro-actively pursue its commitment towards evaluating the potential integration of its vaccines distribution network, in line with the nationally approved health commodities supply chain (PELF, 2013), may result in future unanticipated interruptions.

Recommendation 11 - Essential

The MOH is recommended to:

- Set up a steering committee with responsibility for the integration of vaccines into the national health commodities supply chain; establishing suitable dialogue around the feasibility and business case; when a roadmap is agreed – track and measure progress against the relevant milestones/ indicators; and thereafter, hold CMAM and EPI accountable for managing and advancing the necessary change; and
- Develop a clear and consistent strategy for viable approaches to distribute vaccines to those Health Facilities which are road inaccessible throughout the year.

Management comments

PELF is the national guiding document for health commodities logistics, including vaccines. Specific guidelines on areas such as warehousing, cold chain, LMIS and vaccine distribution are already included in the Strategy. This strategy is being gradually implement with the oversight of CMAM.

- First Intermediary warehouse is already operational since December 2018.
- Cold Chain Integration: all intermediary warehouses will have an integrated cold chain system to store all cold chain products (medicines and vaccines) with a joint management and this will also include a distribution from IW to US (directly);
- Information Systems – SIGLUS and SELV are now being tested on site (Vilanculo Intermediary Warehouse) about 35 health facilities. Vaccine's information as well as medicines are recorded in a daily basis at last mile and visible at all levels. Managers and decision makers are now able to see and forecast needs accurately in advance to the next requisition and distribution period.
- All this was following a previous and know success cold chain rehabilitation process funded by GAVI, that was completed with all central level cold rooms refurbished and new installation at all provinces (including IW Vilanculo) with working RTMD that allows EPI managers and maintenance team to monitor cold rooms temperature performance in real time.
- Through Gavi contract (PEF 2019) VillageReach has the responsibility to deliver an iSC Integration Plan and Roadmap to integrate vaccines into other Medicines (CMAM), which is currently under way.

"The direct distribution model involves the use of large provincial trucks which are not suitable to reach some of the Health Facilities where the road accessibility is poor. Further, the MOH did not maintain any geolocation data or mapping of where these facilities were located".

- DPSs and CMAM (Intermediary warehouse) use pick-up trucks for vaccines delivery to the health facilities. MoH and CMAM do have the geolocation data and mapping for all heath facilities in the country. On the other hand, Project Last Mile has done and optimized a transport routing for all the provinces including intermediary warehouses.

"While this model reduced the need for additional financial investments in cold chain equipment at the districts, it significantly increased operational costs, so as to finance allowances to the provincial staff involved in distribution, fuel, and vehicle maintenance".

- Repeated analysis of modeling data and actual cost and expenditure data has demonstrated a significant operational cost savings for the province with the optimized supply chain design.
- Because the optimized design consolidates supply chain tasks and travel at the provincial level, the cost borne at the province increases. However, this increase is more than offset by the cost savings resulting from district and health facility staff no longer being required to travel for the vaccine collection.

Management actions:

Hold regular meetings between EPI and CMAM to monitor implementation of PELF strategy

Ensure that the recently established Integration committee reports quarterly to the ICC on the actions in place towards implementation of the PELF.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health Central de Medicamentos e Artigos Medicos	Permanent

6 Vaccines and Supply Chain Management

6.1 PCV vaccines mismanagement during the product switch

In 2016, Mozambique decided to switch from a PCV10 - two dose formulation to a PCV13 - four dose presentation during the following year. As a result, from September 2017 and subsequently in December 2017, the CVS took delivery of a total 1,426,000 doses of PCV13, with a further 813,400 doses arriving in May 2018. However, the MOH placed these orders without adequately considering its arrangements for consuming its remaining PCV10 stock balance.

The EPI's initial plan developed in 2017 following WHO consultation, was utilise the remaining PCV10 by the end of 2018, by continuing to issue this vaccine to the three southernmost provinces, with the remaining eight provinces switching to PCV13 at the outset beginning from the end of 2018.

The Audit Team observed that during the product switch from PCV10 to PCV13, the EPI made several errors in estimating its residual PCV10 balances. As a consequence, the Audit Team was estimated that approximately between 300,000 and 500,000 doses of PCV10 currently on hand in September 2018, is at risk of shelf-expiring beginning November 2018 and up to June 2019. As September 2018, the CVS still holds a total of 1,006,812 dosage of PCV10, equivalent to four months of the entire country's consumption.

By the end of September 2018, the EPI and WHO developed a new PCV10 deployment plan, in response to the excessive PCV10 build-up, by selecting two additional provinces which will now have to revert back to using PCV-10, in the hope that overall these five provinces would be able to consume most of the remaining PCV-10 before it shelf-expires.

However, the Audit Team questioned this plan because the CVS's remaining PCV10 stock as of September 2018 stock still exceeded more than approximately eight months consumption needs for these five selected provinces. This PCV10 balance is made up of 10 different batch numbers with the final batch expiring on June 2019. Considering that the CVS distributes vaccines to its provinces on a quarterly basis, the five provinces may only receive two distribution cycles by July 2019. According to the past trends, it thereafter can take approximately four to five months for vaccines to travel along the supply chain from the provinces. Under this current scenario, the Audit Team estimates that between a third and half of the PCV10 balance is at risk of expiration.

The Audit Team's root cause analysis for the excessive build-up of PCV10 stocks revealed the following:

- The EPI failed to correctly identify the PCV10 balances at the provinces which were eventually returned to the CVS when these provinces switched to PCV13. During the first half of 2018, a total of 637,678 doses of PCV10 were returned.
- EPI's differentiated approach where eight out of 11 provinces immediately switched to PCV13 and three provinces continued to use PCV10 did not work as intended. The actual overall remaining PCV10 stock was significantly higher than the absorptive capacity of the three selected provinces, when considering the near to expiry dates of the remaining PCV10 batches.
- Earliest Expired First Out (EEFO) principles were not strictly complied with as some of the CVS' PCV10 vaccine issuances were not done in proper consideration of the batches' expirations.

The Audit Team also identified additional issues which require immediate attention of the EPI and the Gavi Alliance partners in order to minimise the imminent PCV10 wastage and so as to better manage the remaining stock of PCV10 and PCV13 vaccine:

- Some of the PCV10 vaccines which were subsequently returned to the CVS have now reached stage 2 on vaccine vial monitor (VVM) indicator and need to be urgently used;
- Additional PCV13 consignments received in Q3 and Q4 of 2018 are potentially equally at risk of being consumed near expiration, given that there still remains overall backlog of PCV. On 21 September 2018, the CVS received an additional balance of 742,600 doses of PCV13. The new PCV13 has a considerably shorter shelf-life compared to PCV10 formulation, so it requires more tightly regulated management in terms of timing of orders and reception; and
- The existence of 12 different batches of both PCV10 and PCV13, mostly in a loosely stored and scattered condition, makes the planning and issuance of the vaccine a complex exercise. The vaccines need to be grouped according to their batch numbers and stored in an order of expiry dates.

PCV vaccine is relatively expensive. Approximately prices/dose are USD 3.50 for PCV10 and USD 3.13 for PCV13.

Risk / Impact / Implications

Failure to take necessary measures to accurately establish stock levels and forecast consumption may lead to vaccine surpluses and ultimately wastage.

Recommendation 12 - Critical

The MOH is recommended to:

- In consultation with Gavi Alliance partners, urgently reconsider the deployment plan to ensure that the maximum amount of near expiry PCV vaccines are used and the amount of PCV vaccine wasted is minimised;
- In future require the EPI unit to liaise with UNICEF to ensure the proper forecasting of its requirements and needs (including taking into consideration existing stock balances and past track records of consumption), so as to adequately manage the risk against any excessive stockpiling; and
- Issue vaccines in strict compliance with the EEFO principle, with exceptions only for vaccines with adverse indicators on their VVM, which means that vaccines with VVM stage 2 may be prioritised for distribution. Any such waived non-compliance should be documented and maintained alongside the stock records.

Management comments:

Switching vaccines from PCV 10 to PCV 13 has shown to be a very complex process in terms of predicting the demand and consumption of each vaccine from each level, and also because vaccine LMIS (requisition, SMT etc.) are not functioning well. This has led to accumulation of vaccine at Central warehouse. Nevertheless, rapidly he program managed to conduct an analysis on the vaccine consumption in each region and made decisions to send the remaining PCV10 to some provinces with high consumption rate to ensure that vaccine is consumed before it expires.

- The National Vaccine Store (Zimpeto) currently has a stock of 420,400 doses of PVC 10 Lot ASPNB002AA with expiration date June 2019, and the plan is to use until end of first trimester 2019 in

Zambézia, Nampula, Maputo Cidade e Province. Until now 35,000 doses were sent to Maputo Cidade and other 69,600 sent to Nampula. **Management actions:** A PCV 10 distribution Plan already updated and being implemented.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	End of Q2

6.2 Weaknesses in stock recording and management

The Audit Team identified several errors in stock records, namely:

- There were differences in dosage of vaccines between actual physical stock and the stock records. The Audit Team conducted a physical count of the vaccines at the various vaccine stores across the supply chain and found significant discrepancies between the actual vaccines and the running balance on the stock records. Except for one instance, the running balance per stock records was higher than the actual vaccine kept at three stores visited, see the Table 12 below for details:

Table 12: Difference between the physical stock count and running balance per stock records – in dosage:

Province	District	Vaccines	Stock	Stock count	Differences
Maputo	Central Vaccine Stores	Penta	1,163,280	1,234,660	- 71,380
		PCV 10	1,006,812	860,000	**146,812**
		IPV	329,500	315,000	**14,500**
		Rotavirus	416,900	330,000	**86,900**
		Measles	152,600	86,590	**66,010**
Manica	Sussundenga	Penta	1,000	900	**100**
		Rotavirus	450	250	**200**
	Manica	PCV13	1,840	1,656	**184**
		Measles	2,560	2,060	**500**
	Gondola	Measles	2,890	2,760	**130**
Cabo Delgado	Ancuabe	Penta	17,000	14,000	**3,000**
		Rotavirus	1,650	1,250	**400**

- There were discrepancies between the vaccine requisition forms and vaccine delivery notes. The Audit Team compared vaccine requests submitted by four districts to two provinces to the districts' actual receipts of vaccines as per their records. Order fulfilment differences were identified in particular for Nampula province. However, there was no justification on file explaining these discrepancies; and none of those responsible interviewed were able to adequately explain the anomalies. See Table 13 below.

Table 13: Inconsistent stock records:

Province	District	Vaccines	Requisition	Delivery note	Variance
Nampula	Nampula	IPV	66,065	29,400	- 36,665
		PCV 13	206,484	77,200	- 129,284
Manica	Manica	PCV 13	500	600	100
		IPV	500	250	- 250
	Gondola	IPV	300	200	- 100
		Rotavirus	500	600	100

- Vaccine receipts were not recorded on a real time basis. For example, at the CVS, PCV10 returns and PCV13 arrivals during 2018 were recorded in the Stock Management Tool (SMT) after a significant time lag. For example, 506,878 doses of PCV10 received in March 2018, were only entered into the stock records in August 2018;
- Due to the lack of periodic reporting between provinces and the Central EPI, the CVS had no visibility of the current stock balances at the provincial level;
- In three out of five provinces visited by the Audit Team, there was no evidence of regular physical stock counts being carried out;
- None of the vaccine stores at the provincial level, visited by the Audit Team, used an automated stock recording tool such as Stock Management Tool which is recommended by the WHO; and
- The CVS did not track and document an inventory of its ASD 0.5ml syringes in the stock records.

Risk / Impact / Implications

Absence of reliable vaccine stock records compromises the storekeepers' ability to manage, forecast and deliver suitable quantities of vaccines throughout the supply chain. Without accurate stock data vaccine stock-outs, losses, or expirations may occur.

Recommendation 13 - Essential

The MOH is recommended to:

- Ensure that its stock records for vaccines and syringes are accurately maintained at all levels of the supply chain;
- Consider implementing a web-based stock management tool, for example, putting SMT on a web platform, at central and ideally at the subnational level to accurately track a greater quantum of its stock balances across the supply chain;
- Promptly document all vaccine movements, which are backed up by accurate stock issuance vouchers, request forms and cross-referenced to signed confirmation receipts; and
- Make sure that regular physical stock counts are conducted, incorporating: independent oversight; follow-up and documentation of any stock differences identified; and validate the authorisation of any stock adjustments by suitable MOH management.

Management comments

Ministry of Health agrees with this recommendation.

The NLWG has identified SELV (an instance of OpenLMIS software) as the main immunization logistics management system for Mozambique. SELV can collect and report on the same data points as the SMT.

NWLG has also recommended that SELV be upgraded to the latest version of OpenLMIS (v3) to fully benefit from the robust new features available in version 3 of the software. OpenLMIS v3 is a web-based logistics management system that can be implemented at any level of the health system (health facility, district, province, etc) and provides stock management workflow support. This includes being able to view stock on hand for a specific item or a summary of all commodities, conduct a physical inventory workflow by saving a draft and providing a final confirmation of stock available; tracking the ins and outs of stock movement by making adjustments or recording issues and receipts, providing an audit trail for every change made in the data, providing notification of low vaccine stock, and managing lots centrally and tracking stock movements at the lot level in alignment with GS1 standards. In addition, OpenLMIS v3 also provides requisition and order support across and within health systems levels/hierarchies. Finally, OpenLMIS v3 has a sophisticated reporting and analytics platform that allows users to take the data reported into the system and turn it into actionable visualizations in a dashboard.

SELV at its particular capacity, is able to record offline and upload when network is available, all stocks on site and make it visible to the decision makers.

Integration of SELV and SIGLUS will bust supply chain integration and extend data analyses to all levels. These platforms, though tested nationwide, are now (since 15th December 2018) officially in use in Vilankulos, the first official intermediary warehouse approved by CMAM/MISAU as a model platform to be extended nationwide. The next 3 IW are planned for 2019 in Zambezia.

Management actions:

For 2019 its planned to Implement intermediate SELV data collection improvement Plan (prior to v3 upgrade) in 4 HSS priority provinces, including Vilanculos Intermediary Warehouse.

Regular and timely SELV data uploads in all target provinces; with at least 90% of sites in each province reporting data on a monthly basis.

- An antigen stock status report also includes central level stock information and shared with relevant stakeholders on a regular basis.
- Configuration and customization of OpenLMIS v3 for SELV upgrade, which will allow Improved data visibility of stock inventory at different levels of the supply chain system.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	End of Q3

6.3 Vaccine temperature not maintained at the subnational level

The Audit Team obtained, from a Gavi Alliance partner, reports of select supervisory visits to the Health Facilities in Tete and Maputo. The reports identified instances of vaccines being damaged due to heat exposure. One of the most pertinent cases was in Phalamabwe Health Facility in Tete province in December 2017 which found significant amounts of heat-expired vaccines including: Measles – 570 doses; DTP – 433 doses; Rota – 200 doses; PCV10 – 200 doses; OPV – 520 doses; IPV – 30 doses; and BCG – 530 doses.

The Audit Team also observed that the existing provincial trucks distributing vaccines were not equipped with cold storage. Given that a single distribution cycle typically takes between five and ten days, there is a risk that vaccines are heat-exposed outside of the recommended range during their transport to the Health Facilities. However, there was no documented evidence to indicate if delivery cycles were a significant contributory factor, in causing vaccine heat-exposure.

The Audit Team recognises that initiatives, supported by the TCA partners, are underway to improve temperature monitoring at the subnational levels namely, planned inclusion of temperature monitoring in SELV V3 and inclusion of temperature as one of the indicators for monitoring.

Risk / Impact / Implications

Failure to store vaccines within the recommended temperature range could damage vaccines or reduce their potency, potentially undermining their effectiveness.

Recommendation 14 - Critical

The EPI is recommended to:

- Ensure that its vehicles distributing vaccines are suitably equipped with adequate cold storage and that product temperatures are monitored. Where necessary, staff involved in vaccine distribution should be trained about the requirement and importance of continuous temperature monitoring. Vaccines which are detrimentally heat-exposed should be systematically identified, collected and delivered to a central location for safe-disposal by staff, with all such incidents being adequately accounted for and documented; and
- Any heat exposure as evidenced from the vaccines' vial monitor should be promptly recorded and notified to the provincial EPI head and, if necessary, escalated to Central EPI.

Management comments:

Vaccines are currently delivered in proper cold boxes with Ice packs, and properly equipped with temperature monitoring devices (TMD), and with trained staff and SOPs. Nevertheless, challenges in temperature monitoring at the lower level of the health system are still existent.

To respond to this issue in mid to long term, an innovative Bluetooth-enabled logger device called Trek to monitor the vaccine cold chain during transport in the Maputo Province is being piloted. This is a 9-month project. The objective is to provide visibility into existing cold chain challenges during transport and strengthen processes around distribution and packing, as well as inform decision-making at provincial and national levels for cold chain management to ensure vaccine potency.

In parallel to this, after CCE rehabilitation and installation, several devices to monitor temperature are being roll out at different levels. For instance, Central and Provincial levels are using Beyond Wireless system, and COLD TRACE at District and Health Facility levels. All these devices are active and operational, with exception to some sites/provinces where operations were interrupted (replaced by conventional instruments) due to connectivity issues.

EPI and Partners are looking into the matter and a solution has already brought to discussion.

Another innovative approach being discussed is the Long hold cold boxes. Long hold coldboxes are already in use in 3 provinces (Inhamane, Sofala and Manica). These cold boxes take LogTags in every trip made from province/district to every health facility.

Acknowledging the current limitations of ColdTrace, Fridge tags, LogTags and conventional thermometers are in place with daily (manual and electronic) records kept in file to ensure vaccines integrity. **Management actions:** SOPs will be developed and shared with the provinces specific for vaccine management during transportation, including notification card. Findings from the Pilot study in Maputo Province on innovative Bluetooth-enabled logger device (Trek) to monitor vaccine cold chain during transport will be shared.	
Responsible party National Directorate of Public Health	**Deadline / Timetable** End of Q3

6.4 Vaccine stock-outs

The EPI manual provides guidelines for establishing and maintaining adequate stocks at all times at national and subnational levels. However, from review of the manual stock records in two out of five provinces visited, the Audit Team noted instances of vaccine stock-outs, see Table 14 below. All subnational vaccine stores, visited by the Audit, did not use an automated stock recording tool and therefore ordered vaccines using a manual process. Due to poor state of the stock records, the Audit Team is unable to determine whether an actual stock out resulted or not.

Table 14: Occurrence and duration of stock-outs per manual records:

Location	Vaccine	# of days
Cabo Delgado - DPS	Penta	32 [4 Jan - 5 Feb, 2018]
	PCV13	37 [30 Dec 2017 - 5 Feb 2018]
	IPV	37 [30 Dec 2017 - 5 Feb 2018]
Nampula - DPS	PCV13	30 [May 2018]

It should be noted that the province of Cabo Delgado and Nampula have different vaccine distribution arrangements. While Nampula delivers to vaccine stores at its districts, Cabo Delgado distributes vaccines directly to the Health Facility around 21st day of every month. Therefore, it is imperative for Cabo Delgado to have an appropriate level of vaccines at all times so as to ensure uninterrupted immunisation at the Health Facilities.

Risk / Impact / Implications

Stock-out of vaccines at the provinces which are involved in the direct distribution, severely compromises availability of vaccine at the Health Facilities which are within the provinces' jurisdiction.

Recommendation 15 - Critical

The MOH is recommended to:

- Ensure that officers responsible for vaccine storage and handling at regional, district and Health Facilities are trained and mentored in the use of an automated stock recording tool to monitor stock levels and order vaccine based on the figures reflected in the stock recording tool; and
- Establish a robust forecasting system by tracking vaccine consumptions trends and using it in calculation for distribution schedule; and
- Undertake stock count at regular intervals and report to next higher level in the supply chain about over/under stock level.

Management comments:

This finding covers three suggestions: (1) appropriate stock management/logistics training for any personnel handling vaccines in the system that is selected; (2) establishing a system that tracks vaccine consumption trends and uses it for decision-making on how much to distribute to a given location; and (3) do a physical stock count at regular intervals and report to higher level about over/under stock levels. For suggestions (2) and (3), SELV (an instance of OpenLMIS) is the system that has been chosen by the NLWG as the main immunization logistics management system for Mozambique and which, if upgraded to the latest version of OpenLMIS, can do all of what is recommended in suggestion (2) and (3). OpenLMIS v3 provides requisition/order management workflow and stock management workflow that would allow users to track consumption of commodities and have the system provide alerts when vaccine stock is low. Users can create, delete or edit orders in the system, approve or reject orders, or have multiple levels of approvers, and provide emergency order management support. In addition, OpenLMIS v3 has a sophisticated reporting and analytics platform that allows users to take the data reported into the system and turn it into actionable visualizations in a dashboard, such as visualizations demonstrating inventory levels, min/max level performance, over/under stocking, etc. For suggestion #1, any deployment and implementation of SELV-OpenLMIS v3 would take into consideration the training and supportive supervision to ensure all users are fully able to use the features provided in the system.

Management actions:

As part of VillageReach 2019 Gavi TCA, VillageReach is Expanding data collection to also incorporate stock movement data from district, provincial and central warehouse to complement the health facility level stock data that already captured through SELV.

This data will be disseminated in the form of an interactive, monthly “Stock Status Report” which visualizes stock movement and stock inventory data at all levels of the health system. EPI national level expects to see the first Stock Status Report in February 2019.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health	End of Q3

7 Financial Management and Expenditures

7.1 Insufficient control over sub-national expenditures and weak sub-national capacity

Gavi funding provided to the MOH are considered 'donor budget support' which goes into the national 'general revenues' account. Based on the annual budget allocation and at the request of the MOH, Gavi funds were disbursed by the Ministry of Finance (MOF) directly to the Central EPI and/or Provincial Health Directorates.

In line with the decentralised national systems and regulation, the provinces receiving funds were fully responsible for management, oversight and reporting of the Gavi funds. As a result, the MOH did not verify or control expenditures at the provincial levels; and all documentation supporting provincial expenditures were maintained at the respective provinces. The MOH acknowledges that the lack of capacity compromises its ability to effectively manage, monitor and report on Gavi's financial support at central and subnational levels.

To improve the capacity gaps (both financial and programmatic) and coordination at the central and provincial level, the MOH contracted three Regional Advisors and MB Consulting, a local consultancy firm. The Regional Advisors were funded by Gavi-provided HSS grant and the MB Consulting (three-member team) was funded under Gavi-provided Targeted Country Assistance (TCA). The contract for MB Consulting was effective since January 2016 and Regional Advisors since January 2017.

The respective roles and responsibilities of the Regional Advisors and MB Consulting was intended to be fully complementary and coordinated. However, the Audit Team noted that both the parties failed to deliver contractual obligations; lacked coordination; and therefore, were ineffective in building financial management capacity at Central EPI and PHD.

MB Consulting's responsibilities encompassed broad elements of financial management such as: reviewing overall financial management systems and processes; developing procedures and tools; training central and subnational EPI finance staff on overall financial management; and monitoring compliance with financial management procedures through supervisory visits. Whereas, the Regional Advisors' key deliverables involved: supporting PHD in implementation of HSS grant; ensuring implementation and compliance with procedures developed by MB Consulting; ensuring proper allocation of funds to the PHD; helping PHD to prepare quarterly financial and programmatic reports; and supporting PHD during internal and external audits.

The Audit Team noted that the bulk of MB Consulting's effort was directed toward producing financial reports and development of limited financial reporting templates; and very little was accomplished in regard to capacity building activities, namely development of and training on financial management procedures was not achieved. As a consequence, the Regional Advisors, whose deliverables were conditional upon MB Consulting's output, also failed to successfully delivery most of its contractual obligations. For example, the Regional Advisors could not implement financial management tools and procedures because MB Consulting had not developed them.

The MOH did not have a process of periodically evaluating completion of the activities by both the parties and therefore, lack of deliverables was overlooked. Particularly for the Regional Advisors, there was no documentary evidence of their achievements/ activities and therefore, the Audit Team questions value added by them.

In addition, the Audit Team observed that the expected deliverables for both Regional Advisors and MB Consulting was poorly articulated in the contract. Similarly, milestones set for both the parties in TCA plan were vague and difficult to measure. The deliverables for the MB Consulting encompassed broad elements which was unreasonable for a local private firm to achieve without active participation and leadership from MOH/DAF in terms of coordinating, facilitating and validating deliverables from the Regional Advisors and MB Consulting. For both the parties, their relationship with MOH/DAF and with the PHD was not defined which compromised their ability to access relevant personnel/documents and to implement activities as per their respective contracts.

The Audit Team concluded that due to several procedural gaps in designing the contracts and setting the milestones; articulating relationship and coordination between the contracted parties and the MOH; and monitoring performance of the contracted parties, the financial management capacity at the subnational remained weak and the MOH's ability to provide assurance over Gavi's funds disbursed to the provinces, were limited.

Risk / Impact / Implications

Without adequate financial controls, checks and balances, the Gavi's funds used by the subnational level are at risk of not being used for their intended purpose.

Recommendation 16 - Critical

The MOH is recommended to:

- Make the DAF responsible for coordinating the efforts of MB Consulting and Regional Advisors in developing financial management processes manual, tools design, implementation, training and reporting;
- Develop suitable milestones and reporting lines so that the DAF is be able to measure MB Consulting and the Regional Advisors' performance at regular intervals; and

Management comments:

The transfer of funds is made directly to the provinces upon MISAU's request, so all steps are known and controlled by MISAU, attached notes;

MISAU has control of how much money has been sent, and the system allows you to see the expenses incurred. In the travels of the regional advisors, physical / documentary verifications are carried out;

The regional advisors' purpose is to support the provinces in the areas of planning and financial management and monitoring activities, and in turn, MB-Consulting was contracted to produce financial reports that were late and to train MISAU staff including the regional advisors themselves. As for MISAU, this mission was carried out with success;

The regional advisors have the tasks described in the attached TORS, which have been complied with as documented in the monthly reports produced by them in the annexed travel reports. In TORs, results were defined as: financial reports, activity reports and business plans of the provinces elaborated. And all these results have been achieved;

MB consulting has produced the reports, designed the financial reporter model, and together with the advisors prepare the general activity plans for the submission to Gavi;

MB-Consulting was hired by objective, during the period a team was created with the advisors, which allowed the production of the reports; preparation of the Annual Activity Plan and Budget; audit

responses, and the advisors were simultaneously visiting the provinces in order to support the DPS; For a better control of expenses by the provinces, the advisors developed a control model and the control map of fuel consumption was developed; The government's electronic system, e-SISTAFE, in use in the country is reliable, so there is always a guarantee of control of expenses. **Management actions:** Carry out more supervision to ensure better financial control Improve the quality of DPS and central level plans

Responsible party	**Deadline / Timetable**
National Directorate of Public Health National Directorate of Administration and Finance	Permanent

7.2 Questionable expenditures at the central and subnational levels

Section 20 of the Partnership Framework Agreement (PFA) requires the MOH to "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". The same section also stipulates that the Government shall put in place safeguards to ensure that there is no misuse or waste of, or corrupt, illegal or fraudulent activities involving the funds and vaccines and related supplies.

From the total expenditures of MZN 250,462,902 (USD 4,582,700) reviewed, the Audit Team questioned a total of MZN 71,813,730 (USD 1,311,119), i.e., approximately 29% of the total expenditure reviewed. Of these questioned amounts, non-procurement expenditures totalled MZN 29,454,708 (USD 536,055), as per Table 15 below; and procurement expenditures totalled MZN 42,359,022 (USD 775,064), see section 8 for details.

Table 15: Summary of expenditure questioned by the Audit Team (excluding procurement expenditures):

Category **7.2.1 Expenditures without supporting documents**	Amount MZN	Amount USD	Reference
Unsupported payment - absence of invoice and cash payment voucher for fuel, goods and services	3,717,203	68,013	Table 18
Unsupported allowance payments missing: payment receipts, participants list, and/or travel reports.	1,269,350	20,351	Table 19
Fuel expenditures not supported by vehicle log books and details on the recipient vehicle.	9,481,052	173,474	Table 20
Sub-total – unsupported expenditures	**14,467,605**	**261,838**	

Category 7.2.2 Expenditures without key supporting documents	Amount MZN	Amount USD	Reference
Allowance payments not supported with either one or more of key documents such as: attendance lists; travel reports; activity reports and/or route plan.	14,682,003	268,635	Table 21
Sub-total Inadequately supported expenditures	**14,682,003**	**268,635**	
7.2.3 Ineligible expenditures	**MZN**	**USD**	**Reference**
Unbudgeted expenditure related to Polio virus research, charged to Gavi grant	68,500	1,253	Table 22
Unbudgeted expenditure related to repair of a vehicle, charged to Gavi grant	236,600	4,329	
Sub-total Ineligible expenditures	**305,100**	**5,582**	
Grand Total	**29,454,708**	**536,055**	

7.2.1 Expenditures without supporting documents

From the transactions reviewed, the Audit Team identified expenditures totalling MZN 14,467,605 (USD 261,838) which were unsupported or were missing a valid invoice. For these items there was insufficient support evidencing the amount paid; or whether any goods/services were received.

- Most of the unsupported expenditures related to the payment of allowances for travel and training. These included payments: (i) without the participants' signatures confirming attendance; (ii) without the participants' signatures confirming receipt of payment or any other proof of payment; (iii) without travel reports; and (iv) without authorisation – i.e. the payments were not approved by the appropriate authority.
- Payment for goods and services, including fuel, without invoices; and
- In addition, fuel expenditures were unsupported as critical details were missing including: (i) details of (i) the recipient vehicle, (ii) the purpose for the fuel.

7.2.2 Inadequately supported expenditures

From the transactions reviewed, the Audit Team identified expenditures totalling MZN 14,682,003 (USD 268,635) which were not adequately supported with all of the necessary documentation to justify the payment. Most of these items related to programme activity allowances without the following key supporting documents: (i) attendance and/or participants list with signatures; (ii) travel report, (iii) activity report, or (iv) a travel route plan.

7.2.4 Ineligible expenditures

From the transactions reviewed, the Audit Team identified expenditures totalling MZN 305,100 (USD 5,582) were ineligible because the activities were either unbudgeted or unrelated to the Gavi-funded programmes. These amounts exclude MZN 196,602 (USD 3,597) for which MoH subsequently provided evidence of reimbursement of funds to Gavi.

Risk / Impact / Implications

If expenditures are not adequately evidenced with the necessary supporting documentation, it is not possible to determine if Gavi's funds were used in accordance with the Partnership Framework Agreement.

Recommendation 17 - Critical

The MOH is recommended to:

- Reinforce staff's compliance with the national financial management regulation at both central and provincial levels, so as to ensure that only approved expenditures are incurred, and all expenditures are evidenced with valid complete supporting documentation;
- Strengthen various fiduciary supervision components for the existing mechanisms including the: monitoring and evaluation visits; Internal Audit; TCA partners with a financial role (MB Consulting and Regional Advisors), so as to make sure that any misuse of Gavi-funds is timely identified and addressed; and
- Expand or elaborate further on standard operating procedures governing financial management processes including: the requisition of funds by provinces; expenditure/procurement requisitions; validating budget funding availability; archiving of supporting documentation; verification of expenditures; settlement of outstanding or unjustified funds advanced.

Management comments and actions:

The MISAU team in coordination with the audited provinces appreciated the attached tables, however we note that the documents considered missing by the Audit Team do exist. Given the size of the list, more time would be needed to locate and appreciate the expenses considered inadequate / ineligible, however, find attached some evidence already located;

Procurement table: it is difficult to locate the processes for confrontation purposes, since the province was not indicated (line 39 to 110), More details would be needed;

There were several duplications from the Audit Team, for instance, in the province of Zambézia, in table 20, there was a repetition of the OPs, namely, OPs 1598, 1599, 1600, 1601, 1603, 1610, 1611, 1612, 1614, 3473, 3476; 3475, 3474, 3478, 3477, 3478, 3478, 3480, 3484, 3483, 5746, 5745, 5744, 5749, 5748, 5750, 5751, 5752, 5753, 5754, 5755, 5756, 5757, 5758; 5759; 5760; 5761; 5762; 5762; 5765; 8960; 8961; 8962; 8957; 8958; 8959; 8954; 8955; 8956; 8953; 8954; 8955; 8952; 8951; 8950; 8950; 8947; 8948; 8949; 8945, 8944, 8946, 8941, 8942, 8944; 3477, 5733, 3379, 5759, 1598, 3474, 5753, 3481, 1603, 5744, 8449, 5747, 5764.

In relation to OP 1071, this is an advance of Funds made to the Chimoio City Directorate, aiming the payment of other Personnel and Fuel expenses for all Districts, within the framework of activities of mobile vaccination brigades and social mobilization. Those expenses were justified in different Accounts Processes which are held by the DPS Manica, for which we present a sample / some documents;

There are OPs that are not from GAVI and which have been rolled out, therefore, they are not included in the GAVI payments in the DPS of Nampula, namely:

Table 19 (OP's 10380, 9157, 9156, 9154, 11078, 11077, 12982, 11352, 10383, 10381, 11076, 11075)

Table 20 (OP's 8430, 13661, 7996).

Management actions:

- Conduct a specific training on national financial management regulation at both central and provincial levels
- Conduct regular supervision to the Provinces in order to asses financial management
- In collaboration with DAF, review existing SOPs for financial management processes

Responsible party	Deadline / Timetable
National Directorate of Public Health; National Directorate of Administration and Finance.	End of Q4

7.3 Gavi funds used for VAT payment

Article 15 of December 2013 Partnership Framework Agreement states that "Gavi funds provided under this agreement shall not be used to pay any taxes […]." The Audit Team determined that during the entire audit period of three and half years, the MOH continued to incur VAT on purchases of goods and services using Gavi funds, which was not as agreed.

During the discussions with the MOH, the Audit Team was informed that at least one other donor had raised the same issue in the past. It was clarified that both MOH and the Ministry of Finance agreed in principle that donor funds should not be used for VAT payments. Moreover, the MOH having accepted responsibility for past breaches had subsequently committed to reimburse all such VAT payments back into the donor's respective programme account(s). The Audit Team also observed that the MOH has recently outlined a process for how to track VAT payments for its donor-funded programmes, but that this has not yet been put in place.

From the transactions reviewed, the Audit Team identified payments totalling MZN 30,715,672 (USD 562,002) related to VAT expenditures, details are shown in the table below. Moreover, the overall ineligible VAT payments using Gavi funds during the 3.5-year audit period from January 2015 to June 2018 were estimated to total MZN 62,539,158 (USD 1,144,274), based on an analysis of the procurement expenditures incurred on the Gavi-funded programmes as recorded in E-SISTAFE. Details are as per Table 23 in Annex 3.

The Audit Team considers that as a minimum, VAT payments using Gavi funds totalling MZN 30,715,672 (USD 562,002) are ineligible, and potentially amounts totalling USD 1,144,274 is reimbursable to Gavi-funded programme accounts.[12]

Table 16: VAT payments made from Gavi grants – based on the expenditures reviewed by the Audit Team:

Programme	MZN	USD
MR	12,953,237	237,004
HSS	17,762,436	324,998
Total	**30,715,673**	**562,002**

Risk / Impact / Implications

Use of Gavi funds for VAT payments violates the Partnership Framework Agreement and reduces the funds available for the national immunisation programme.

[12] Note that the VAT payments are not included in the expenditures questioned by the Audi Team in section 7.2.

Recommendation 18 - Essential

The MOH is recommended to:

- Ensure that, in future, VAT or any other tax charges are not paid using Gavi funds; and
- Ensure that if the national regulations require VAT to be paid first and reclaimed at a later date, put in place a system to track and monitor all VAT expenditures incurred relating to Gavi funds and reimburse, within a reasonable timeframe, to the programme bank account.

Management comments:

The Ministry of Health agrees with the recommendation.

In order to ensure that Gavi funds do not pay VAT in the future, MISAU, through DAF, has submitted to the MEF and DGI / DRI the application for eligibility of all Gavi's grants (Annex 5 and 6) and application for VAT certificates (for signing on to DAF). However, through the same tax mechanism to take into account art. 4, (Annex 7) which describes the acquisition of inherent goods and services:

a) Water, gas, electricity and telephone;

(b) Food;

c) Catering services;

d) Expenses with light passenger vehicles;

e) Accommodation services.

It should be noted that the other alternative would be to enter the budget for the VAT support of the project in the coming years in agreement with DNT.

VAT Reimbursement Request Letter paid by Gavi funds (Annex 10)

Management actions:

Attach VAT certificates to all Gavi processes to be paid at DAF;

Send the VAT Reimbursement letter and attach the agreements to DNT in order to recover the Gavi funds paid in the previous years.

Responsible party	**Deadline / Timetable**
National Directorate of Public Health National Directorate of Administration and Finance	Permanent

8 Procurement

The Audit Team's review of expenditures related to procurements carried out by Unidade Gestora de Aquisições[13] (UGEA) at central and provincial levels revealed that the majority of the procurements incurred did not comply with the national Public Procurement Regulation, nor with Gavi's Partnership Framework Agreement, namely:

- There was no suitable procurement plan in place – at either the central or subnational level.
- The Audit Team found 72 instances of procurement totalling MZN 19,117,473 (USD 349,791) which were not adequately evidenced due to several key supporting documents missing, such as: purchase requisition; request for quotation/ proposal; evidence of official appointment of tenders committees involved in the shortlisting, evaluation and final approval; evaluation report and tender committee review; final contract; purchase order; delivery note for goods and equipment; relevant reports for services/ consultancies; pro-forma invoice; final invoice; evidence of final payment; or confirmation of receipt of payment.
- Supplier selection processes were often non-competitive. The Audit Team found that seven procurement contracts were awarded to suppliers selected from earlier procurement instances without any due competitive process. For all such cases, there was no evidence of the necessary waiver being obtained and placed on file, to demonstrate approval of abstaining from the due process. The overall value for such defective procurement contracts totalled MZN 18,269,892 (USD 334,283).
- Missing documentation or evidence not on file to validate the receipt of goods and services for procurement cases totalling MZN 3,204,840 (USD 58,639).
- Non-competitive procurement for small value goods purchased – 12 procurement contracts totalling MZN 1,766,817 (USD 32,327) were not supported with the necessary three quotations as required by the national procurement law, Article 113 of Decree 15/2010 of 24 May or decree 05/2016 for procurements after May 2016.

Table 17: Procurement questioned by the Audit Team - breakdown by issue and classification:

Issues	MZN	USD	Reference
Procurements without critical supporting documents	19,117,473	349,791	Table 24
New contract awarded to prior supplier without competition	18,269,892	334,283	
Lack of proof of delivery	3,204,840	58,639	
Non-competitive procurement without three quotations	1,766,817	32,327	
Total	**42,359,022**	**775,040**	

[13] Unidade Gestora de Aquisições (UGEA) is a government body responsible for day-to-day management of procurement processes at national, provincial and district level.

Risk / Impact / Implications

- Absence of an annual procurement plan compromises the MOH's ability to achieve economies of scale or to negotiate economical prices with suppliers.
- In absence of supporting documents, there is no assurance that Gavi funds were used in accordance with the terms of the Partnership Framework Agreement.
- Non-competitive procurement excludes qualified suppliers that may be willing to offer more competitive pricing and/or enhanced quality. Repeat usage of same supplier risks discouraging other eligible suppliers from bidding and does not make warrant that best value for money is obtained.

Recommendation 19 - Critical

The MOH is recommended to:

- Develop an annual procurement plan for programme activities funded by the Gavi HSS grant. This procurement plan should thereafter be promptly shared with the UGEA;
- Ensure that the programme budget owner at the central and provincial level, i.e., Central EPI and PHD, consistently put on file the necessary supporting documentation justifying all procurements and contracts awarded; and
- Ensure that all procurement of goods and services with Gavi funds is conducted in a competitive manner, and comply with the national Public Procurement Regulation.

Management comments The Ministry through the UGEA has an annual plan of procurement where they are listed the purchases to be made. However, given it is possible that by mistake some acquisitions may be omitted during the elaboration of the plan. **Management actions:** MoH will develop a more comprehensive annual procurement plan for programme activities funded by the Gavi HSS grant and ensure that the plan is shared with UGEA. MoH will ensure that all goods procured have the necessary supporting documentation Procurement of goods and services with Gavi funds will be conducted in a competitive manner, and comply with the national Public Procurement Regulation.	
Responsible party National Directorate of Public Health UGEA	**Deadline / Timetable** Permanent

Annex 1: Definitions: opinion, audit rating and prioritisation

A. DEFINITIONS OF 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:

Satisfactory – Internal controls and risk management practices were adequately established and functioning well. No high-risk areas were identified. Overall, the entity's objectives are likely to be achieved.

Partially Satisfactory – Internal controls and risk management practices were generally established and functioning, but needed improvement. One or more high- and medium-risk areas were identified that may affect the achievement of the entity's objectives.

Unsatisfactory – Internal controls and risk management practices were either not established or not functioning well. The majority of issues identified were high risk. Hence, the overall entity's objectives are not likely to be achieved.

B. RISK LEVEL FROM AUDIT FINDINGS

The audit ratings and the overall opinion, as defined in Section 'A' above, are derived from the Gavi Audit Team's judgement, as based on the number and severity of audit findings identified for each theme / section. The assessment of the level of risk corresponding to each audit report, broadly correlates to a cross-referencing for the likelihood and potential impact of each risk (whether financial, operational and / or other). The level of risk is expressed in accordance to the scale below.

The prioritisation of the recommendations included in this report includes proposed deadlines for completion as discussed with the Ministry of Health, and an indication of how soon the recommendation should implemented. The urgency and priority for addressing recommendations is rated using the following three-point scale, as follows: Critical – Essential – Desirable.

Desirable

Essential

Critical

C. PRIORITISATION OF THE RECOMMENDATIONS

Each recommendation in this report incorporates a deadline/ timetable for implementation, as agreed with the MOHS. The prioritisation of the recommendations is determined according to three levels of urgency:

- **Critical**: Immediate action is required to ensure that the programme is not exposed to material risks or significant incidents. If no action is taken, this could have major consequences that could affect the overall activities, impact or outcomes of the programme;
- **Essential**: Corrective plan of action / or remediation steps are required in accordance to best practice, starting no later than 6 months after finalising this audit report. Failure to take action could have significant consequences, affecting important aspects of the programme activities or results; and;
- **Desirable:** Corrective action should be considered within a year of finalising this audit report. Not implementing the action could delay or weaken programme activities or results.

Annex 2: Classification of expenditures

Adequately supported

Expenditures validated based on convincing evidence (evidence that is sufficient, adequate, relevant and reliable) obtained by the auditors during the carrying out of their mission on the ground.

Inadequately supported

Expenditures for which a key element or several essential aspects of the supporting documentation are missing, such as:

- *Purchases*: This is expenditure for which one or more of the essential items of documentary evidence required by the country's regulations on procurement are missing such as procurement plan, tender committee review, request for quotation, invoice, contract, purchase order, delivery note for goods and equipment, pro-forma invoice, the final invoice, etc.; and
- *Programme activity:* This is expenditure where essential documentation justifying the payment is missing. This includes but is not limited to travel without a travel authorisation, lack of a technical report or an activity report showing completion of the task, signed list by participants. Lack of the same documents to support liquidation of advances/floats given for meetings/trainings/workshops etc.

Inadequately supported expenditures should be classified into 3 non-exclusive sub-categories (an expenditure may belong to more than one of these subcategories):

a) Expenditures which do not comply with the prescribed rules and regulations (e.g. Gavi national regulations, legal agreements, policies and procedures, etc.);
b) Expenditures with incomplete and / or non-reliable elements within the supporting documentation (e.g. missing date, signature, letterhead, etc.);
c) Expenditures that do not consist of original documents or are photocopies.

Irregular expenditures

This includes any deliberate or unintentional act of commission or omission relating to:

a) The use or presentation of documents which are inaccurate, incomplete/falsified/inconsistent resulting in the undue use or payment of Gavi provided funds for activities, or the undue, withholding of monies from funds granted by Gavi; and
b) Misappropriation of funds to purposes other than those for which they were granted.

Ineligible expenditures

Expenditures that do not comply with the country's programme/grant proposal approved by Gavi or with the intended purpose and relevant approved work plans and budgets.

Unsupported expenditures

Items for which no adequate supporting documentation was available, or for which insufficient credible elements evidencing the expenditure were provided.

Annex 3: Questionable expenditures as determined by the Audit Team – Tables 18-24

Tables 18 – 24	Tables 18-24.xlsx

Table 23a: VAT payments - based on audit sample

Programme	MZN	USD
MR	12,953,237	237,004
HSS	17,762,436	324,998
Total	**30,715,673**	**562,002**

Table 23b: Indicative VAT payments during the entire audit period

Grant	Expenditure including VAT (MZN)	Expenditure excluding VAT (MZN)	VAT payment (MZN)
	(a)	(b)	(a) - (b)
IPV/ PCV	2,381,385	2,035,372	346,013
Subtotal IPV/ PCV	**2,381,385**	**2,035,372**	**346,013**
MR 2017	9,554,071	8,165,873	1,388,198
MR 2018	191,750,651	163,889,445	27,861,206
Subtotal MR	**201,304,722**	**172,055,318**	**29,249,404**
HSS 2015	24,995,748	21,363,887	3,631,861
HSS 2016	50,170,819	42,881,042	7,289,777
HSS 2017	101,550,354	86,795,174	14,755,180
HSS 2018	50,013,530	42,746,607	7,266,923
Subtotal HSS	**226,730,451**	**193,786,710**	**32,943,741**
Total MZN	**430,416,558**	**367,877,400**	**62,539,158**
Total USD	***7,875,298***	***6,731,024***	***1,144,274***

Annex 4: Action plan and comments from the MOH addressing the audit recommendations

Report Section	AUDIT RECOMMENDATION	MOH MANAGEMENT COMMENTS	MOH ACTION PLANS	MOH INDIVIDUAL RESPONSIBLE	MOH COMPLETION DATE
4.1 Shortcomings in the EPI oversight mechanism	Recommendation 1	The Ministry agrees with the recommendations that were already identified as a priority the revitalization and review of the ICC's functionality in JA 2017. An internal review of the ICC TORs to expand mandate and membership was undertook and discussed with the ICC members.	Strengthen technical assistance by UNICEF and / or WHO in order to: Finalize and implement the new ICC ToRs / with a more comprehensive list of participants, including all entities involved in the effective implementation of the EPI. For the implementation of the new ToRs it is necessary to take into account the need of: Strengthen the secretariat of ICC (the secretariat should be composed of more than one entity, be dynamic and be able to draw up an agenda for the ICC to address the concerns of the Technical Group. Develop monitoring indicators to hold ICC members accountable, in program supervision and support The ICC in turn should identify and channel the bottlenecks of the program implementation to the level of the Minister of Health, in accordance with the coordination mechanisms of the sector and if necessary, convene a roundtable with other sectors concerned For the next cycle of cooperation with Gavi evaluate another central control and supervision mechanism that can be adapted to the current mechanisms in place (DNSP coordination meetings, CCC, CES).	National Directorate of Public Health	End of Q2
4.2 Untimely external audit reports and delays in following-up	Recommendation 2	The Ministry acknowledges the delay in the completion and delivery of the audit report by TA. One of the major constraints identified was the financial limitation of TA to comply with GAVI requirements.	MISAU will ensure that the TA audit budget will be included annually in the HSS budget plans. MISAU agreed with the TA to hold regular pre- and post-audit meetings to better prepare audits and ensure follow-up to the	National Directorate of Public Health	End of Q1

audit issues		To improve, the Ministry of Health already requested in advance the audit 2018 implementation at the Administrative Court (TA), letter of request attached; The audits so far carried out include the provinces, evidence attached.	recommendations.	National Directorate of Administra-tion and Finance	
4.3 Gavi supported activities not included in the scope of the MOH's Internal Audit	Recommendation 3	MISAU's internal audit implementation is carried out continuously through the General Inspection (Internal Audit) and DAF-Support and Control Department (DAC) together with the regional advisors. These entities have already made regular monitoring visits at the provincial level to monitor and verify Gavi's processes. Please find attached 1, 2, 3 and 4 the DAC Reports After an exhaustive verification of the processes for the year 2016, it was verified that there were no undue payments, and therefore no refunds were made. However, for the year 2017 and 2018 we have had returns, see (annexes 8 and 9) in which DAF is following up on them.	Together with DAF ensure the functionality of Support and Control Units in all provinces. Include the Support and Control Technicians and (Internal Audit) in the supervisions of the program; Request the General Inspectorate to make annual visits to all provinces to monitor the use of Gavi funds	National Directorate of Public Health National Directorate of Administrati on and Finance	Permanent
5.1 Suboptimal implementation and delivery of TCA activities	Recommendation 4	The Ministry agrees with the findings regarding the difficulties of coordinating and for them to be accountable to the Ministry. In response to this finding: - The Head of the PAV is leading the TCA coordination process through regular meetings with partners for joint planning and monitoring of TCA. - TCA activities respond to the needs of the program, since they were identified during the Joint Appraisal - The needs of the program are aligned with the strategic plan of the EPI and PES - To facilitate TCA monitoring, TCA activities were included in the operational plan of the PAV 2019	The One TA plan has to be developed jointly with program staff at both central and provincial level. Streamline the participation of the provincial level in the process. ACASUS will be supporting EPI in this matter Ensure that Milestones are measurable process indicators and / or products identified Improve the Activity Tracking Matrix with the program's logical framework to facilitate the differentiation between activities and objectives Propose in the partners a report template to report the activities and performance of the quarterly milestones Ensure the implementation of the monthly technical meetings and	National Directorate of Public Health	End of Q1

		- Partners with the PAV worked hard to simplify the activities of TCA 2019 - Annex OneTA2019 - The coordination of the TCA is supported by the HSS adviser since 2017 (TCA 2018 and 2019) in terms of coordination and secretariat - There were several joint supervisions by the Ministry and Partners (WHO, UNICEF).	the meetings quarterly coordination + presentation in the ICC through the strengthening of clear PCOS by the PAV Elaborate an integrated training plan and training performance monitoring plan		
5.2 Weak monitoring and supervision of the EPI activities at subnational level	Recommendation 5	All supervision of the program is planned in the Economic and Social Plan (PES), an instrument for planning all MISAU program activities (Activity number 24) / 2017 and Activity number 09/2018). (Attached). EPI prepares an annual plan with the dates of the supervisions, according to the one planned in the PES. (Attached the supervision plans). However due to concurrent issues the plan is not always followed. During supervisions, there are books in the Districts to write down the findings of the supervision visit and the recommendations that must be followed. After the return of the supervision team, a supervision report is elaborated, which is shared with the supervised Province / District. EPI supervision guideline is always used at all supervision visits. (Attached)	EPI will ensure that DAF Technician will be integrated into all EPI supervision visits. The supervision guideline will be sent to the Provinces for use during supervision of the Districts and Health Units. Introduction of the integrated electronic monitoring tool under WHO TCA for 2019.	National Directorate of Public Health	End of Q1
5.3 Duplicative reporting tools/systems for immunisation and vaccine stock data	Recommendation 6	The Ministry of Health acknowledges this finding as well as the audit recommendation. Immunization data are reported through the SISMA (DHIS2), which is the only official MISAU system. However, to aid in data quality analysis, the program uses other tools such as DVDMT to help identify data problems. However, DVDMT and all other analysis systems collect SISMA data for any further analysis. The official instrument used in the Districts, Provinces and the central level to collect and present vaccination coverage is only the	Continue with ongoing efforts of expansion of SELV and ensure its use for management of stocks of vaccines at all levels. Ensure interoperability between SELV and SIGLUS platforms in order to use the same device to collect information at the health facility level.	National Directorate of Public Health Central de Medicamentos e Artigos Medicos	End of Q3

		SISMA. For vaccine management, the same instrument (SMT) is used at the central and provincial level. In the Districts and Health Units, due to local difficulties such as lack of energy and computers in the Districts and Health Units for use of the electronic instrument, the manual vaccination stock control sheets are used.			
5.4 Unreliable immunisation data	Recommendation 7	The Ministry of Health acknowledges this finding as well as the audit recommendation. Despite several efforts in place, challenges are still faced in order to ensure reliability of administrative data of vaccinated children. Due to work overload, health staff usually does not fill the forms and the registry books upon vaccination, which leads to consistent data collection gaps. However, the situation cannot be generalized, varying between health facilities. Registry books containing children details are available in most health facilities and those can be used to check and track the existence of these children in the community, as each child has his or her residence address written on it.	Accelerate implementation of Data Quality improvement Plan Conduct vaccine coverage studies in the last 5 years to have better clarity of the bottlenecks in order to address them properly Conduct a National coverage survey in order to have more accurate immunization figures.	National Directorate of Public Health Department of Health Information Systems	End of Q4
5.5 EPI Technical Working Groups not optimally organised	Recommendation 8	The Ministry of Health agrees with this finding and its recommendation.	Review and update of PAV organization chart Review and update of ToRs of the EPI: - Technicians (M & A, Communication, Data managers, head of logistics, head of the cold chain, regional advisors ...) - Technical groups (M & A, Communication, Logistics ...) Creation of the communication flow chart according to the organization chart of the PAV	National Directorate of Public Health	End of Q1
5.6 Absence	Recommendation 9	MISAU is in the final stages of updating the manual, due to the	EPI will develop Procedural Manuals of all areas lacking the (Mobile	National	End of Q2

of SOPs for management of vaccines		gradual introduction of new vaccines that the country has been having over the years, as well as the change of some procedures, there was a need to harmonize and align all contents related to the new vaccines in the PAV manual. Regarding recommendation 9, paragraph 1, in point 5.6 the EPI has a manual available, with 21 Chapters where the issues raised by the audit report are included in the manual. (Document attached) Chapter 14 - Vaccine management, which shows how to calculate the needs in vaccine; still in the same chapter in point 14.1 it is shown how to calculate the wastage rate; 14.2 on page 136 how to do requisition of vaccines; 14.3 contains a form to record the stock of vaccine and vaccination material. Chapter 15 - Maintenance of refrigerators Chapter 16 - ACD / RED with the respective 5 components on page 159. In relation to the SOPs, EPI has currently SOPs for of maintenance of cold chain and Supervision.	Brigades, Monitoring and Evaluation, Hazard and Fire Risk, as well as update the existing ones**.**	Directorate of Public Health	
5.7 Delays in implementation of EVM Assessment recommendations	Recommendation 10	Ministry of Health acknowledges the delay in the finalization of EVMIP as well as the costed comprehensive plan. However, both documents were finalized and submitted in October 2016 (please find attached). The status document is available in Excel and can be shared. At the same time this document was shared upon the CCEOP application in 2018 (please find the document attached). A comprehensive and validated EVMCIP already exists (2016-2020). • NLWG has been implementing and monitoring the CIP from 2016 up to now. Some of the key activities have been finalized and others in progress. And the group is engaged on implementing the planned activities and putting in place new	Through 2019 Gavi TCA, the NLWG capacity will be strength to manage and monitor and report implementation of EVM CIP. A comprehensive EVM Tracking tool to monitor performance will be developed by early 2019. On the other hand, the current EVM CiP implementation will be reviewed and updated. A specific M&E Plan with KPIs for NLWG will be developed. With the technical assistance from the NLWG, the National EPI logistician as the government counterpart for the CIP implementation and monitoring, will be reporting to the EPI national manager + ICC on EVM CIP implementation/performance in regular basis.	National Directorate of Public Health	End of Q2

		tools for close monitor and keep stakeholders accountable for their responsibilities. Due to human resources limitations, this task was assigned to the existing EPI logistician who is the government counterpart for the CIP implementation and monitoring, with technical assistance from the NLWG.			
5.8 Absence of a clear supply chain strategy	Recommendation 11	PELF is the national guiding document for health commodities logistics, including vaccines. Specific guidelines on areas such as warehousing, cold chain, LMIS and vaccine distribution are already included in the Strategy. This strategy is being gradually implement with the oversight of CMAM. • First Intermediary warehouse is already operational since December 2018. • Cold Chain Integration: all intermediary warehouses will have an integrated cold chain system to store all cold chain products (medicines and vaccines) with a joint management and this will also include a distribution from IW to US (directly); • Information Systems – SIGLUS and SELV are now being tested on site (Vilanculo Intermediary Warehouse) about 35 health facilities. Vaccine's information as well as medicines are recorded in a daily basis at last mile and visible at all levels. Managers and decision makers are now able to see and forecast needs accurately in advance to the next requisition and distribution period. • All this was following a previous and know success cold chain rehabilitation process funded by GAVI, that was completed with all central level cold rooms refurbished and new installation at all provinces (including IW Vilanculo) with working RTMD that allows EPI managers and maintenance team to monitor cold rooms temperature performance in real time. • Through Gavi contract (PEF 2019) VillageReach has the responsibility to deliver an iSC Integration Plan and Roadmap to	Hold regular meetings between EPI and CMAM to monitor implementation of PELF strategy Ensure that the recently established Integration committee reports quarterly to the ICC on the actions in place towards implementation of the PELF.	National Directorate of Public Health Central de Medicamentos e Artigos Medicos	Permanent

		integrate vaccines into other Medicines (CMAM), which is currently under way. "The direct distribution model involves the use of large provincial trucks which are not suitable to reach some of the Health Facilities where the road accessibility is poor. Further, the MOH did not maintain any geolocation data or mapping of where these facilities were located". • DPSs and CMAM (Intermediary warehouse) use pick-up trucks for vaccines delivery to the health facilities. MoH and CMAM do have the geolocation data and mapping for all heath facilities in the country. On the other hand, Project Last Mile has done and optimized a transport routing for all the provinces including intermediary warehouses. "While this model reduced the need for additional financial investments in cold chain equipment at the districts, it significantly increased operational costs, so as to finance allowances to the provincial staff involved in distribution, fuel, and vehicle maintenance". • Repeated analysis of modeling data and actual cost and expenditure data has demonstrated a significant operational cost savings for the province with the optimized supply chain design. • Because the optimized design consolidates supply chain tasks and travel at the provincial level, the cost borne at the province increases. However, this increase is more than offset by the cost savings resulting from district and health facility staff no longer being required to travel for the vaccine collection.			
6.1 PCV vaccines mismanagement during the product switch	Recommendation 12	Switching vaccines from PCV 10 to PCV 13 has shown to be a very complex process in terms of predicting the demand and consumption of each vaccine from each level, and also because vaccine LMIS (requisition, SMT etc) are not functioning well. This has led to accumulation of vaccine at Central warehouse. Nevertheless, rapidly he program managed to conduct an analysis on the vaccine consumption in each region and made decisions to	A PCV 10 distribution Plan already updated and being implemented.	National Directorate of Public Health	End of Q2

		send the remaining PCV10 to some provinces with high consumption rate to ensure that vaccine is consumed before it expires. • The National Vaccine Store (Zimpeto) currently has a stock of 420,400 doses of PVC 10 Lote ASPNB002AA with expiration date June 2019, and the plan is to use until end of first trimester 2019 in Zambézia, Nampula, Maputo Cidade e Province. Until now 35.000 doses were sent to Maputo Cidade and other 69.600 sent to Nampula.			

6.2 Weaknesses in stock recording and management	Recommendation 13	Ministry of Health agrees with this recommendation. The NLWG has identified SELV (an instance of OpenLMIS software) as the main immunization logistics management system for Mozambique. SELV can collect and report on the same data points as the SMT. NWLG has also recommended that SELV be upgraded to the latest version of OpenLMIS (v3) to fully benefit from the robust new features available in version 3 of the software. OpenLMIS v3 is a web-based logistics management system that can be implemented at any level of the health system (health facility, district, province, etc) and provides stock management workflow support. This includes being able to view stock on hand for a specific item or a summary of all commodities, conduct a physical inventory workflow by saving a draft and providing a final confirmation of stock available; tracking the ins and outs of stock movement by making adjustments or recording issues and receipts, providing an audit trail for every change made in the data, providing notification of low vaccine stock, and managing lots centrally and tracking stock movements at the lot level in alignment with GS1 standards. In addition, OpenLMIS v3 also provides requisition and order support across and within health systems levels/hierarchies. Finally, OpenLMIS v3 has a sophisticated reporting and analytics platform that allows users to take the data reported into the system and turn it into actionable	For 2019 its planned to Implement intermediate SELV data collection improvement Plan (prior to v3 upgrade) in 4 HSS priority provinces, including Vilanculos Intermediary Warehouse. Regular and timely SELV data uploads in all target provinces; with at least 90% of sites in each province reporting data on a monthly basis. - An antigen stock status report also includes central level stock information and shared with relevant stakeholders on a regular basis. - Configuration and customization of OpenLMIS v3 for SELV upgrade, which will allow Improved data visibility of stock inventory at different levels of the supply chain system.	National Directorate of Public Health	End of Q3

		visualizations in a dashboard. SELV at its particular capacity, is able to record offline and upload when network is available, all stocks on site and make it visible to the decision makers. Integration of SELV and SIGLUS will bust supply chain integration and extend data analyses to all levels. These platforms, though tested nationwide, are now (since 15th December 2018) officially in use in Vilankulos, the first official intermediary warehouse approved by CMAM/MISAU as a model platform to be extended nationwide. The next 3 IW are planned for 2019 in Zambezia.			
6.3 Vaccine temperature not maintained at the sub-national level	Recommendation 14	Vaccines are currently delivered in proper cold boxes with Ice packs, and properly equipped with temperature monitoring devices (TMD), and with trained staff and SOPs. Nevertheless, challenges in temperature monitoring at the lower level of the health system are still existent. To respond to this issue in mid to long term, an innovative Bluetooth-enabled logger device called Trek to monitor the vaccine cold chain during transport in the Maputo Province is being piloted. This is a 9-month project. The objective is to provide visibility into existing cold chain challenges during transport and strengthen processes around distribution and packing, as well as inform decision-making at provincial and national levels for cold chain management to ensure vaccine potency. In parallel to this, after CCE rehabilitation and installation, several devices to monitor temperature are being roll out at different levels. For instance, Central and Provincial levels are using Beyond Wireless system, and COLD TRACE at District and Health Facility levels. All these devices are active and operational, with exception to some sites/provinces where operations were interrupted (replaced by conventional instruments) due to connectivity issues. EPI and Partners are looking into the matter and a solution has already brought to discussion.	SOPs will be developed and shared with the provinces specific for vaccine management during transportation, including notification card. Findings from the Pilot study in Maputo Province on innovative Bluetooth-enabled logger device (Trek) to monitor vaccine cold chain during transport will be shared.	National Directorate of Public Health	

		Another innovative approach being discussed is the Long hold cold boxes. Long hold coldboxes are already in use in 3 provinces (Inhamane, Sofala and Manica). These cold boxes take LogTags in every trip made from province/district to every health facility. Acknowledging the current limitations of ColdTrace, Fridge tags, LogTags and conventional thermometers are in place with daily (manual and electronic) records kept in file to ensure vaccines integrity.			
6.4 Vaccine stock-outs	Recommendation 15	This finding covers three suggestions: (1) appropriate stock management/logistics training for any personnel handling vaccines in the system that is selected; (2) establishing a system that tracks vaccine consumption trends and uses it for decision-making on how much to distribute to a given location; and (3) do a physical stock count at regular intervals and report to higher level about over/under stock levels. For suggestions (2) and (3), SELV (an instance of OpenLMIS) is the system that has been chosen by the NLWG as the main immunization logistics management system for Mozambique and which, if upgraded to the latest version of OpenLMIS, can do all of what is recommended in suggestion (2) and (3). OpenLMIS v3 provides requisition/order management workflow and stock management workflow that would allow users to track consumption of commodities and have the system provide alerts when vaccine stock is low. Users can create, delete or edit orders in the system, approve or reject orders, or have multiple levels of approvers, and provide emergency order management support. In addition, OpenLMIS v3 has a sophisticated reporting and analytics platform that allows users to take the data reported into the system and turn it into actionable visualizations in a dashboard, such as visualizations demonstrating inventory levels, min/max level performance, over/under stocking, etc. For suggestion #1, any deployment and implementation of SELV-OpenLMIS v3 would take into consideration the training and supportive supervision to ensure all users are fully able to use the features provided in the system.	As part of VillageReach 2019 Gavi TCA, VillageReach is Expanding data collection to also incorporate stock movement data from district, provincial and central warehouse to complement the health facility level stock data that already captured through SELV. This data will be disseminated in the form of an interactive, monthly "Stock Status Report" which visualizes stock movement and stock inventory data at all levels of the health system. EPI national level expects to see the first Stock Status Report in February 2019.		

7.1 Insufficient control over sub-national expenditures and weak sub-national capacity	Recommendation 16	The transfer of funds is made directly to the provinces upon MISAU's request, so all steps are known and controlled by MISAU, attached notes; MISAU has control of how much money has been sent, and the system allows you to see the expenses incurred. In the travels of the regional advisors, physical / documentary verifications are carried out; The regional advisors were hired from January 24, 2017 and not in 2016, whose purpose is to support the provinces in the areas of planning and financial management and monitoring activities, and in turn, MB-Consulting was contracted to produce financial reports that were late and to train MISAU staff including the regional advisors themselves. As for MISAU, this mission was carried out with success; The regional advisors have the tasks described in the attached TORS, which have been complied with as documented in the monthly reports produced by them in the annexed travel reports. In TORs, results were defined as: financial reports, activity reports and business plans of the provinces elaborated. And all these results have been achieved; MB consulting has produced the reports, designed the financial reporter model, and together with the advisors prepare the general activity plans for the submission to Gavi; MB-Consulting was hired by objective, during the period a team was created with the advisors, which allowed the production of the reports; preparation of the Annual Activity Plan and Budget; audit responses, and the advisors were simultaneously visiting the provinces in order to support the DPS; For a better control of expenses by the provinces, the advisors developed a control model and the control map of fuel consumption was developed; The government's electronic system, e-SISTAFE, in use in the	Carry out more supervision to ensure better financial control Improve the quality of DPS and central level plans	National Directorate of Public Health National Directorate of Administration and Finance	Permanent

		country is reliable, so there is always a guarantee of control of expenses.			
7.2 Questionable expenditures at the central and sub-national levels	Recommendation 17	The MISAU acknowledges limitation in financial management especially at subnational levels. I In coordination with the provinces Central team has already started to conduct regular trainings and supervision in order to ensure that financial management is improved at all levels.	Conduct a specific training on national financial management regulation at both central and provincial levels Conduct regular supervision to the Provinces in order to asses financial management In collaboration with DAF, review existing SOPs for financial management processes	National Directorate of Public Health National Directorate of Administration and Finance	End of Q4
7.3 Gavi funds used for VAT payment	Recommendation 18	The Ministry of Health agrees with the recommendation. In order to ensure that Gavi funds do not pay VAT in the future, MISAU, through DAF, has submitted to the MEF and DGI / DRI the application for eligibility of all Gavi's grants (Annex 5 and 6) and application for VAT certificates (for signing on to DAF). However, through the same tax mechanism to take into account art. 4, (Annex 7) which describes the acquisition of inherent goods and services: a) Water, gas, electricity and telephone; (b) Food; c) Catering services; d) Expenses with light passenger vehicles; e) Accommodation services. It should be noted that the other alternative would be to enter the budget for the VAT support of the project in the coming years in agreement with DNT. VAT Reimbursement Request Letter paid by Gavi funds (Annex 10)	Attach VAT certificates to all Gavi processes to be paid at DAF; Send the VAT Reimbursement letter and attach the agreements to DNT in order to recover the Gavi funds paid in the previous years.	National Directorate of Public Health National Directorate of Administration and Finance	Permanent

8 Procurement	Recommendation 19	The Ministry through the UGEA has an annual plan of search where they are listed the purchases to be made. However, given it is possible that by mistake some acquisitions may be omitted during the elaboration of the plan. Attached missing documents.	MoH will develop a more comprehensive annual procurement plan for programme activities funded by the Gavi HSS grant and ensure that the plan is shared with UGEA. MoH will ensure that all goods procured have the necessary supporting documentation Procurement of goods and services with Gavi funds will be conducted in a competitive manner, and comply with the national Public Procurement Regulation.	National Directorate of Public Health UGEA	Permanent