Memorandum on the Republic of Mozambique Programme Audit report

The attached Audit and Investigations report sets out the conclusions of the programme audit of Gavi's support to the Republic of Mozambique's Ministry of Health (MoH), executed by the Expanded Programme on Immunisation (EPI), along with other implementing partners. The audit team reviewed these stakeholders' management of Gavi and the COVAX Facility support to the immunisation programme, provided during the period from 1 January 2018 to 31 December 2022. The audit scope included the following grants: Health Systems Strengthening, Measles-Rubella follow-up campaign operational costs, Human Papillomavirus vaccine introduction, as well as COVID-19 Vaccine Delivery Support (CDS) and Early Operational Support (EOS) funds.

The primary objective of the audit was to assess whether: the coordination and implementation arrangements were effective, the existing grant oversight mechanisms provided continuous and reliable assurance on Gavi's investments, the financial management and procurement processes supported the timely utilisation and accountability of Gavi funds, and the vaccine supply chain management and immunisation data systems were effective.

The report's executive summary (pages 3 and 4) summarises the key conclusions, details of which are set out in the body of the report:

- 1. There is an overall audit rating of "Ineffective" which means, "Internal controls, governance and risk management practices are not adequately designed and/or are not generally effective. The nature of these issues is such that, the achievement of objectives is seriously compromised."
- 2. In total, fifteen issues were identified in the following areas: (i) governance; (ii) financial management; (iii) procurement; (iv) vaccine management; and (v) monitoring and evaluation. To address the risks associated with these issues, the audit team raised recommendations for each of them, including eleven recommendations rated as high priority.
- 3. The report's key issues included the following:
 - a. The Interagency Coordination Committee (ICC) was overall ineffective: infrequent meetings, lack of quorum, and poor follow-up on decisions.
 - b. Gavi-supported activities were excluded from MoH internal audits; external audits were delayed and audit recommendations were not adequately addressed.
 - c. Procedural frameworks were not formalised, weakening programme guidance and accountability.

- d. Financial reports lacked detail, requiring manual data entry and increasing error risk. Misreporting of grant transfers and expenditures was noted. Finally, Poor financial documentation undermined accountability and transparency.
- e. The procurement process was deficient: missing procurement files and non-compliance with procedures, lack of transparency (no publication evidence, evaluation reports, or tender documentation). Contracts did not align with procurement plans, risking poor value for money.
- f. Vaccine management processes showed multiples weaknesses, such as physical stock issues (poor temperature monitoring, expired vaccines, and unsafe storage), stock levels below minima (high risk of stock-out) and inaccurate inventory records. These issues threaten supply chain integrity and vaccine availability.
- g. No formal Monitoring & Evaluation procedures were in place; data validation and correction were informal, resulting in large discrepancies between administrative coverage and WHO/UNICEF estimates.

The issues of the programme audit were discussed with MoH and implementing partners. They accepted the audit issues, acknowledged the gaps identified, and proposed a detailed management action plan to address the audit recommendations on 31 August 2024. Due to a significant portion of documents missing, the audit could not complete the review of expenditures, which was rescheduled to a second phase in Q4 2025.

Geneva, August 2025

PROGRAMME AUDIT REPORT

Republic of Mozambique, NOVEMBER 2023



Summary

| 1. | Executive Summary | 3 |
|------|---|----|
| 1.1. | Summary of key audit issues | 3 |
| 1.2. | Overall audit opinion | 3 |
| 1.3. | Summary of issues | 4 |
| 2.1. | Audit scope | 5 |
| 2.2. | Audit objectives | 5 |
| 2.3. | Audit mission | 5 |
| 3. | Context | 5 |
| 3.1. | Introduction | 5 |
| 3.2. | Government structures involved in the implementation of Gavi grants | 6 |
| 4. | Detailed issues | 7 |
| 4.1. | Governance | 7 |
| 4.2. | Financial management | 12 |
| 4.3. | Procurement | 16 |
| 4.4. | Vaccine management | 18 |
| 4.5. | Monitoring and evaluation | 23 |
| Ann | exes | 25 |
| Anne | x 1 – Acronyms | 25 |
| Anne | x 2 – Methodology | 26 |
| Anne | x 3 – Definitions: opinion, and issue rating | 27 |
| Anne | x 4 – Classification of expenditures | 28 |
| Anne | x 5 – Field visit pictures | 29 |
| Anne | x 6 – SMT report analysis results | 32 |
| Anne | x 7 – Procurement detailed issues | 34 |
| Anne | x 8 – Corrective action plan | 36 |

1. Executive Summary

1.1. Summary of key audit issues

| Ref | Description | Rating* | Page |
|----------------------------------|--|---------|----------------------|
| 4.1 | Governance and oversight | | |
| 4.1.1 4.1.2 4.1.3 4.1.4 | Insufficient programme leadership and coordination Insufficient financial assurance mechanisms Insufficiencies in EPI human resources management Lack of formalised and detailed operating framework | | 7 9 10 11 |
| 4.2 | Financial management | | |
| 4.2.1 4.2.2 4.2.3 4.2.4 | Deficiencies in the grant financial reporting process Deficient archiving processes and loss of records VAT incurred to Gavi-funded expenditures Lack of insurance cover for vaccines and other assets | ŧ | 12 13 14 15 |
| 4.3 | Procurement | | |
| 4.3.1 | Procurement deficiencies | | 16 |
| 4.4 | Vaccine management | | |
| 4.4.1 4.4.2 4.4.3 4.4.4 | High risk of vaccine stock-outs Weaknesses in stock data management Weaknesses in physical stock management Weaknesses in cold chain equipment management practices | i | 18 19 21 22 |
| 4.5 | Monitoring and evaluation | | |
| 4.5.1 4.5.2 | Unreliable immunisation data Insufficient supportive supervision process of EPI activities | | 23 24 |

1.2. Overall audit opinion

For the period under review, the audit team assessed that the management of Gavi's support by the Ministry of Health of the **Republic of Mozambique** as "**Ineffective**" which means, "Internal controls, governance and risk management practices are not adequately designed and/or are not generally effective. The nature of these issues is such that, the achievement of objectives is seriously compromised."

As noted in Section 2.1, this opinion does not include review of cash support provided by Gavi and a subsequent review of programme expenditures is planned in 2025.

To address the risks associated with the issues, the audit team raised 15 recommendations, of which 11 (73%) were rated as high risk. The recommendations need to be addressed by implementing remedial measures according to the agreed management actions (to be added in annex 11 to this report).

^{*} The audit score assigned to each section, the level of risk assessed for each audit issue and the priority level of the recommendations are defined in annex 3 of this report.

1.3. Summary of issues

Through our audit procedures, we have identified both high and medium risk issues relating to governance, financial management, procurement processes, vaccine supply management, and monitoring and evaluation. The high-risk issues are summarised below, followed by the detailed issues in section 4 of this report.

These issues point to the need for strengthened internal controls, improved data accuracy, and adherence to established procedures to enhance the effectiveness and efficiency of the Expanded Programme on Immunisation (EPI).

Governance and oversight

There were several functional inadequacies in the inter-agency coordination committee's (ICC) workings including: infrequent meetings, occasional absence in quorum, and the committee's failure to adhere to its strategic oversight responsibilities. There was no evidence of discussions on critical issues such as low programme execution, and previous decisions and recommendations were not followed up. An update of the ICC's terms of reference was only implemented in January 2023, three years after required revisions were first identified. Additionally, Gavi-supported activities were omitted from internal audits, external audit reports were consistently delayed, and there was insufficient evidence of follow-up on audit issues and recommendations. Lastly, the internal framework was insufficiently formalised in manual of procedures in the audited entities. Addressing these issues is crucial to providing the necessary guidance and help steer the programme towards a more effective and efficient direction.

Financial management

The Ministry of Health's (MoH) financial management system failed to produce reports with the necessary level of detail, leading to manual data entry and increased risk of errors. The audit team identified inaccurate accounting of transfers between grants, including misreported income and expenditure, and financial reports lacked essential details such as fund recipient information. Inadequate accountability due to poorly maintained financial information could result in misrepresentation of the expenditures actually incurred by grants.

Procurement

Significant weaknesses in the procurement processes were identified, including: necessary procurement files missing, processes not being correctly followed, the lack of evidence of publication, the lack of evaluation reports, and the absence of offers from tender winners. Additionally, numerous chronological inconsistencies were noted in the procurement documentation, and several contracts awarded did not correspond to the Annual Procurement Plans. Poor transparency when managing procurements and contracts could result in services or supplies not achieving proper value for money outcomes as expected. Ultimately the validity of the transaction could be challenged.

Vaccine management

Deficiencies in the physical management of vaccine stock were observed. This includes: the failure to monitor temperature, equipment maintenance issues, poorly organised dry goods storage and potential fire hazard, weaknesses in stock rotation, and the presence of expired vaccines still maintained in stock. The audit also highlighted several weaknesses in the stock records data. Resolving these issues is important for ensuring effective vaccine management, including reducing stock-outs, and maintaining the integrity of the supply chain.

Monitoring and evaluation

In the absence of a comprehensive monitoring and evaluation procedure, several controls, validations, and corrections over the quality of immunisation data remained informal, if executed. This resulted in significant discrepancies between the official administrative coverage and the WHO/UNICEF estimates of national immunisation coverage, worsening the known situation of underestimated immunisation target population. Reliance on inaccurate coverage data could result in misguided interventions or the misallocation of resources, which could negatively impact the programme's effectiveness.

2. Scope and objectives of the audit

2.1. Audit scope

The Republic of Mozambique, through the Ministry of Health, has received cash-based and vaccines support from Gavi totalling USD 379.8 million since 2001. Cash support for the period 2018 – 2022 totalled USD 45.5 million for Health Systems Strengthening (HSS), vaccine campaigns and technical assistance. Mozambique also received vaccine and ancillaries support of USD 243.7 million for cold chain equipment and vaccines.

Since 2020, the COVAX Facility has been administered by the Gavi Alliance with the goal of accelerating access to COVID-19 vaccines. The goals of the COVAX facility are designed to complement and enhance Gavi's strategic goals including the vision to 'leave no-one behind with immunisation' and its mission to save lives and protect people's health by increasing equitable and sustainable use of vaccines. Mozambique received COVID-19 doses valued at USD 144.6 million, and USD 20.7 million as Covid-19 vaccine delivery support and cold chain equipment from the COVAX Facility.

The scope of the audit covered the four-and-a-half-year period from 1 July 2018 (end of previous Gavi programme audit scope) to 31 December 2022. The review of cash support provided by Gavi (see table below, amounts in USD) was not included in this report; it will be subject to a separate audit in 2025.

| Cash grant type | 2 nd half of 2018 | 2019 | 2020 | 2021 | 2022 | Total (USD) |
|--------------------|---------------------------------|------------|-----------|-----------|------------|----------------|
| HSS ¹ | 1,136,810 | 14,320,574 | 5,489,724 | 3,272,025 | 4,890,674 | 29,109,807 |
| COVAX | - | 1 | - | 1,000,482 | 2,054,722 | 3,055,204 |
| HPV | - | - | - | 688, 151 | - | 688,151 |
| MR ¹ | - | - | - | - | 2,899,104 | 2,899,104 |
| Total | 1,136,810 | 10,821,058 | 5,489,724 | 4,960,658 | 10,027,431 | 35,752,266 |

2.2. Audit objectives

The primary objective of a programme audit is to provide independent assurance to Gavi's Board on the use of Gavi support in recipient countries. In accordance with Annex 2.B of the Partnership Framework Agreement between Gavi and the MoH of the Republic of

Mozambique, signed on 6 December 2013, the MoH has the responsibility to provide records related to Gavi support. This audit focused mainly on Gavi's contributions to health systems strengthening, cash support disbursed to or managed by the MoH and the vaccine supply chain management of routine and Covid-19 vaccines.

2.3. Audit mission

The audit was conducted under the responsibility of Gavi's programme audit function, based in Geneva. The audit was undertaken in two phases:

- Scoping mission, from 14 to 18 August 2023: this phase enabled us to assess the
 control environment and risk principles, and to share the list of documents necessary
 for the audit with the subject entities involved. It also served to refine the audit scope
 and procedures with a view to carrying out the eventual audit work; and
- Audit execution, from 30 October to 9 November 2023: audit of key controls and review of transactions sample, site visits at central, intermediate, and peripheral levels.

3. Context



3.1. Introduction

General context

The Republic of Mozambique is a country located in southeastern Africa bordered by the Indian Ocean to the east, Tanzania to the north, Malawi and Zambia to the northwest, Zimbabwe to the west, and Eswatini and South Africa to the southwest. The sovereign state is separated from the Comoros, Mayotte and Madagascar by the Mozambique Channel to the east. The capital and largest city is Maputo.

The north-central provinces of Zambezia and Nampula are the most populous, with about 45% of the population. The estimated four million Makua are the dominant group in the northern part of the country; the Sena and Shona (mostly Ndau) are prominent

in the Zambezi valley; and the Tsonga and Shangaan people dominate southern Mozambique. Other groups include Makonde, Yao, Swahili, Tonga, Chopi, and Nguni (including Zulu). Bantu people comprise 97.8% of the population, with the remainder comprising people with

¹ Including cash disbursed through partners (WHO/UNICEF)
Republic of Mozambique – November 2023

Portuguese, European, and Indian ancestry. Approximately 45,000 people of Indian descent reside in Mozambique.

After thirty years of uninterrupted growth (7% on average between 2010 and 2015 followed by a slowdown from 2016), Mozambique experienced its first decline in 2020 (-1.5%) due to the pandemic and cyclonic episodes. This development was followed by a modest recovery in 2021 (+2.5%). Mozambique has a GDP/inhabitant of 444 USD and is subject to significant demographic pressures (+2.9% annual growth, 32.1 million inhabitants)².

Health context

In recent years, Mozambique's health landscape has been marked by significant challenges and gradual improvements in certain areas. The country's struggle with communicable diseases, coupled with limited healthcare infrastructure, has been a central focus.

Malaria remains a major health issue in Mozambique, with the World Health Organization's 2020 World Malaria Report highlighting over 10 million cases in the country. This high incidence rate underscores the disease's impact on public health, particularly affecting children and pregnant women.

Another critical concern is the prevalence of HIV/AIDS. Mozambique has one of the highest HIV rates globally, with UNAIDS 2020 data reporting an adult HIV prevalence of approximately 12.4%. Despite this, there have been concerted efforts to improve access to antiretroviral therapy and promote prevention measures.

Tuberculosis (TB) also poses a significant challenge, as indicated by the WHO Global Tuberculosis Report 2020, which reported an incidence rate of 551 cases per 100,000 population in Mozambique. The intersection of TB and HIV/AIDS presents additional complexities in health management.

Mozambique's health infrastructure has undergone developments in recent years, yet it continues to face significant challenges, particularly in terms of accessibility and resources. Key figures and data from reliable sources help illustrate the current state of the country's health infrastructure:

According to the World Health Organization's global health workforce statistics, Mozambique has a limited number of healthcare professionals, with a ratio of 0.3 healthcare workers per 1,000 population, significantly lower than the WHO's minimum threshold of 2.3. This shortage is more acute in rural areas, where the majority of the population resides. Also, according to USAID data more than half of Mozambicans must walk an hour or more to their nearest health facility, and medicine shortages are common.

3.2. Government structures involved in the implementation of Gavi grants

The national health system is decentralised across the 11 provinces 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 Expanded Programme on Immunisation (EPI) was launched in Mozambique 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 (CMAM).

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 DPS (Provincial Directorate of Health) and SPS (Provincial Health Services) 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 province level receives programme funds from the central-level EPI, including Gavi funds for which they have overall responsibility including: approving and incurring expenditure; maintaining accounting records; preserving supporting documents for expenditure; and financial reporting to the Central EPI. Provinces are also in charge of the vaccine supply chain management in their respective provinces.

Vaccination is carried out through fixed posts (e.g. Health Facilities) as well as using "mobile brigades". There are approximately 1,769 Health Facilities nationwide, including rural hospitals.

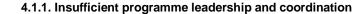
Republic of Mozambique – November 2023 Page 6 / 49

² Source: World Bank

4. Detailed issues

In accordance with the partnership framework agreement (PFA) and the transparency and accountability policy (TAP), Gavi grants must be managed within the framework of procedures that meet the requirements of national legislation and international standards in terms of transparency, accountability and fight against corruption. This section 4 describes the main weaknesses noted by the audit, their impact, and proposes corrective measures. The audit issues are grouped according to the themes described in subsections 4.1 to 4.5 below.

4.1. Governance



Context

The existence and sound functioning of the inter-agency coordinating committee (ICC) is one of the main conditions for Gavi support. According to the ICC terms of reference of 2018, "the ICC will be the main coordination forum for dialogue and decision of all matters related to the strategic direction, planning and policy on EPI. Its objectives are the following:

- Provide strategic direction, oversight and –take decisions on the Expanded Programme on Immunisation (EPI) and related health sector programmes to ensure sustainable coverage and equity of immunisation;
- Ensure a coherent view on strategy, planning, funding and performance of the EPI programme within the context of the broader health system
- Promote complementarity and harmonisation of activities and investments among stakeholders
- Promote linkages of EPI with the broader health system
- Ensure that the EPI and the coordination of the programme remains government-owned and government-led. [...]

The composition of the ICC is made up of the following required members:

From the Ministry of Health (MoH): 1. Director of DNSP – President; 2. Director of DPC; 3. Director of DAF; 4. Director of CMAM; 5. Head of PAV; 6. Head of MNCH From Partners: 1. Representative of UNICEF; 2. Representative of OMS; 3. Head of Health Section USAID; 4. Director CDC; 5. Health Lead BM; 6. Director Village Reach; 7. Director MCSP.

From Other Ministries: 1. Director from Ministério de Economia e Finanças; 2. Director from Ministério de Educação e Desenvolvimento Humano; 3. Director from Ministério do Género, Criança e Acção Social

From Civil Society: 1. Director FDC; 2. President of Rotary Club; 3. Director of Plataforma da Sociedade Civil; 4. Director of Congregação da Religiões de Moçambique
The group will have its regular meetings quarterly or special meetings whenever it deems necessary and by mutual agreement of the members. The group can also meet with other working
groups when considered necessary."

Description

The audit team noted several deficiencies in the overall programme leadership and coordination, especially through ineffective ICC processes, such as:

- 1. The ICC failed to hold regular meetings every three months as stipulated in its terms of reference (ToR 2018). No ICC meetings minutes were received for the following quarters: Q1 and Q2 of 2018; Q1, Q2 and Q4 of 2019; all quarters of 2020, 2021 (except 2 emergency meeting minutes received) and 2022.
- Not all the required ICC members were present during the meetings. No signed attendance lists were available
 for the 3 of the 5 meeting minutes received, and the attendance lists for the last 2 meetings only included 5 people
 for the July 2021 meeting and 7 people for the October 2021 meeting, instead of the 20 required members as
 stipulated in the 2018 ToR.
- 3. The review of the available ICC minutes did not demonstrate that the ICC fulfilled its role and objectives in terms of strategic direction, oversight, planning, and promotion of coordination and harmonisation of immunisation practices. No evidence of discussions about key topics was available, such as:
 - Insufficient availability of vaccines (see issue 4.4.1);
 - Critical issue on data quality preventing adequate steering of the programme (see issue 4.5.1);
 - Low programme execution (for instance, grant absorption rate for HSS 2021-22 was only 52%), while the Activity 1 of ICC ToR explicitly points to "assess the implementation of annual plans".
- 4. Lack of a documented follow-up of decisions/recommendations taken in previous ICC meetings, joint appraisals

Recommendation

Designated individual(s) should be tasked with the responsibility, to ensure that the ICC takes the following actions:

- 1. adhere to its terms of reference and hold regular meetings every three months. This will ensure that all matters related to the strategic direction, planning, and policy on EPI are discussed and decided upon in a timely manner.
- 2. enforce the requirement for all members to be present at meetings. If a member cannot attend, they should send a representative in their place. This will ensure that all stakeholders are involved in the decision-making process.
- 3. ensure that the topics covered in meetings are relevant to its role. The agenda for each meeting should be carefully planned and circulated in advance to allow members to prepare.
- 4. establish a system for tracking and following up on decisions and recommendations made in previous meetings and also by external evaluators. This could involve assigning responsibility for each action to a specific member or creating a shared action plan that is reviewed at each meeting.

and/or external evaluations, while the Activity 2 of ICC ToR refers to the review of information on the implementation of recommendations provided in evaluations, applications and annual reports of the program with the international partners. The ICC minutes available did not show any follow-up of decisions taken in previous meetings or important follow-up items such as recommendations of different studies, such as:

- Effective Vaccine Management (EVM) assessment report 2019 and EVM improvement plan, as required in GMR 17: "MISAU to nominate a responsible senior official at EPI to be responsible for the tracking of the implementation of the plan, update and reporting to Senior Management meetings and working groups";
- Programme Capacity Assessment report (December 2018).
- 5. Significant delay in implementing GMR 2 of October 2019, that included the following requirement for the ICC: "MISAU will present to Gavi a clear plan to improve the effectiveness of the oversight function of the ICC to include seeking Technical Assistance (TA) to carry out the following:
 - Revision of Terms of Reference (ToRs) for the ICC and clearly outline linkages with other key health sector coordination committees.
 - Revised ToR will make reference to Gavi's guidance for Coordination Forums and adhere to the requirements outlined within (see http://www.Gavi.org/support/coordination/)".

The ICC ToR were updated accordingly in January 2023 only, hence more than three years after the entry into force of the above-mentioned GMR.

5. When required, the ICC should review and update its terms of reference. This will ensure that the ICC's operations remain aligned with its strategic objectives.

By implementing these recommendations, the ICC can improve its effectiveness and ensure that it fulfils its role in providing strategic direction and oversight for the EPI programme.

Risks / Implications

- Inefficient use of resources
- Unaddressed critical issues
- Poor decision-making process, resulting in failure to achieve the immunisation programme objectives

Management responses/commitments



4.1.2. Insufficient financial assurance mechanisms

Context

October 2019 GMRs, updated in June 2022, set out for the following provisions in terms of audits and inspections:

- GMR 12 Internal audits: "Gavi cash supported Programmes will be included in the scope and annual operational plan of the Internal Control Department of DAF/MISAU starting in [sic]. All funding provided by Gavi will be subject to internal audit reviews at central as well as at subnational level to ensure compliance with the applicable financial regulations as well as the provisions of the PFA and GMR. HSS budget shall include the operational costs to facilitate the internal audit reviews". The Health Inspection ("IS" in its Portuguese acronym - Inspecção de Saúde) is a distinct organisational unit within the MoH, tasked with supervision, inspection, and internal audit in the Health Sector.
- GMR 13 External audits: "Annual audits of the Gavi programmes will be conducted by Mozambique's Supreme Audit Institution, the Tribunal Administrativo, in line with Gavi's Financial Management and Audit Requirements, suitably tailored to the Mozambique context to be agreed in advance with MISAU and Gavi, MISAU will submit annually to Gavi for approval the detailed TOR of the external audit based on Gavi's Guidelines on financial audits". The ToR of the Tribunal Administrativo for the external audit of funds allocated to the Health Sector by Gavi stipulates in its point 6 that "the audit report and letter of recommendation must be received by Gavi within six (6) months after the end of each financial year".
- GMR 14 Follow-up of Recommendations by Gavi grant External Auditors, Internal Auditors and Gavi Programme Auditors: "The MISAU/EPI will prepare a plan to follow up on the recommendations made by the external auditors, internal auditors and Gavi auditors for submission to Gavi and for internal dissemination internally within the MISAU. The plan will be included as Annex to all audit reports when submitted to Gavi. MISAU will be responsible for monitoring all audit recommendations and a status of the fulfilment or recommendations will be submitted to the ICC and Gavi".

Description

The audit team noted the following deficiencies regarding the supervision and independent control of implementing entities of the programme:

- 1. Gavi supported activities were not included in the scope of MISAU Internal Audit: no audits or reviews of expenditure related to Gavi supports were conducted by the Health Inspection between 2018 and 2022.
- External audit reports (annual) were not issued in a timely manner by the Tribunal Administrativo:
 - 2018 audit report issued in December 2019 (6 months delay):
 - 2019 audit report signed in July 2021 (12 months delay); and
 - 2022 audit report was not issued as of 31 December 2023 (already 6 months delay).

While the audit terms of reference and the GMR set the report issuance deadline to 6 months after year-end, the observed significant delays remain recurrent, and this weakness was already identified for the year 2017 in the Programme Capacity Assessment report of December 2018.

Weaknesses in the follow-up of audit issues and recommendations: no evidence was obtained in relation to the follow-up of audit issues and recommendations by the MoH, nor by the ICC (contrary to what is stipulated by GMR 14, see point 4 of issue 4.1.1). A document named "Plano de acção mitigação das constatações das auditorias" was recently created (November 2023), however, this document was not dated, nor signed or validated by an appropriate responsible person and had not been submitted to Gavi.

Recommendation

The MoH should implement the following actions:

- 1. With regards to the Health Inspection:
 - a) Incorporate Gavi-related expenses and vaccines into the Health Inspection audit planning, ensuring this plan receives approval from either the MoH audit committee or the highest level of MoH management: and
 - b) Forward to Gavi, upon demand, subsequent audit reports that are conducted by the IS.
- Provide required information to and follow up with the Tribunal Administrativo in order to streamline its audit processes and ensure timely issuance of audit reports. Implementing a strict timeline and regular monitoring can help in adhering to the timeframe stipulated in the audit terms of reference.
- 3. Strengthen the follow-up process on audit recommendations: MISAU should establish a robust and transparent mechanism for tracking and implementing audit recommendations. This plan should be regularly updated, validated by responsible personnel, and shared with Gavi and other stakeholders to demonstrate progress and accountability.

Risks / Implications

- Weaknesses in internal controls related to the immunisation programme may remain undetected.
- Delays in the issuance of audit reports may hinder timely identification and rectification of issues, potentially leading to prolonged inefficiencies or financial discrepancies.

Audit issues may remain unresolved and lead to a lack of accountability in managing Gavi funds and programs.

Management responses/commitments



4.1.3. Insufficiencies in EPI human resources management

According to GMR 1 (2019 version) "To enhance efficiency in the management at MISAU, Gavi recommends a review job description of key staff of EPI, and DAF at national, provincial and district levels to clarify tasks, roles and responsibilities, HSS Advisors at National and Regional level included'.

Furthermore, the Programme Capacity Assessment (PCA) report of December 2018 stated that "there is a considerable lack of clarity about roles and responsibilities within the central Expanded Programme on Immunisation (EPI) team. Planning and management skills amongst EPI staff at central level are very weak and the recent decentralisation has, to a certain extent, complicated the situation further. A new more specific organigram with individual job descriptions for each post is highly necessary."

According to GMR 5 (2019) "To strengthen the DAF (at national, provincial and district levels) and to address issues with flow of funds, the following will be done:

At provincial level, the role of the existing 3 HSS advisors will be revised/defined to include support in financial management of Provincial DAF."

Description

The audit identified several weaknesses in relation to the organisation of human resources:

- No organisational chart of the EPI was available during the audited period. Only in October 2023 was drafted a detailed EPI organisational chart;
- While GMRs (issued in 2019) required clarifications in the EPI roles and responsibilities, only in April 2022 were issued specific terms of reference defining the objectives and the functioning of the EPI Logistics Group, the Monitoring and Evaluation Group, and the Service Provision Group;
- Some of the roles planned in the GMRs to support Provincial DAF remained vacant during the period covered by the audit: central regional advisor (position fulfilled since November 2023) and northern regional advisor (recruitment pending);
- Weaknesses identified in the procurement process (under UGEA's remit, see issue 4.3.1) and in the management of physical stock (esp. during the visits to Provincial Health Directorates of Nampula and Zambezia, see issue 4.4.3) tend to point possible mismatches of human resources to the tasks. This was also pointed in the 2019 PCA report conclusions, stating that "the number of employees working at UGEA is low compared to the heavy workload and new procurement activities following the new projects. The amount of procurement tasks and steps to fulfil the entire procurement process are high, heavy and long. The capacity in terms of knowledge is weak and the training of the staff is inexistent with consequences in the quality of the work, planning, and a very low quality in reporting".

Recommendation

The MoH should implement the following actions:

- 1. MoH should prioritise finalising the detailed organisational chart and ensure that it clearly defines the roles and responsibilities of the EPI team members. This should be done immediately to avoid further confusion and inefficiency.
- 2. MoH must expedite the hiring process for the northern regional advisor to ensure all consultants are effectively supporting the provincial DAF as recommended. This step is crucial for improving financial management and oversight at the provincial level.
- 3. MoH should assess the human resource needs of provincial maintenance teams and provide additional support where necessarv.
- 4. Implement a regular monitoring and evaluation mechanism to assess the effectiveness of the organisational structure and the performance of the EPI team. This will help in identifying areas for improvement and ensuring alignment with best practices and recommendations.
- 5. Engage with provincial health directorates and UGEA to understand their specific needs and challenges. Regular communication and feedback mechanisms should be established to ensure that the support provided is aligned with the actual requirements of the provinces and UGEA.

Risks / Implications

- Unclear roles can lead to overlapping duties, unaddressed tasks, and overall poor program execution.
- Vacancies may impact financial management and operational efficiency at all levels and may lead to delayed or incorrect financial reporting and weakened financial controls.

Management responses/commitments

4.1.4. Lack of formalised and detailed operating framework

Context

- Public entities in Mozambique are subject to laws that regulate and penalise situations of fraud and corruption, namely: the Anti-Corruption Law 6/2004 "Quadro legal vigente para o combate aos crimes de corrupção e.partícipação económica ilícita" of June 17, the Criminal Code in articles 427 and 429 and the Law 15/2012 of August 14th that protects whistleblowers.
- The EPI manual has improved over the years, from its first edition in 1989 until the current one dated in 2019, with increasing level of detailed information and useful guidance. It covers EPI objectives, the vaccination calendar, epidemiologic vigilance, social mobilisation, planification, cold chain, vaccine management, etc.
- Decree No.5 from 8 March 2016 constitutes the guide for public procurement for UGEA (*Unidade Gestora de Aquisições*), the MoH procurement department. Hence, UGEA is responsible for procurement of goods, services, works, and consultancies with government funds using external funds.
- Annex 3 of Gavi's Guidelines on Financial Management and Audit Requirements, called "Guidelines on financial reporting and annual re-budgeting under Gavi cash support grants", stipulates that "Under the PFA, financial reports should be presented to Gavi in US\$. Expenditures incurred in a currency other than the US\$ should be converted into US\$ using an appropriate exchange rate. For specific technical guidance on use of exchange rates, refer to IPSAS 4 or IAS 21".

Description

The audit identified significant shortcomings in the formalisation of procedures governing the practices, such as:

- 1. The EPI manual showed noticeable weaknesses and/or absences in the following Standard Operating Procedures (SOP):
 - Logistics and vaccine management (see details in issues 4.4.2 and 4.4.3);
 - Monitoring and Evaluation (see details in issue 4.5.2).
- 2. UGEA manual was not up to date and did not include the changes set by the 2016 Decree No. 5, that refined the existing procurement methods and enhanced transparency and accountability through publication of additional information regarding procurement opportunities and results (also see issue 4.3.1).
- 3. DAF manual of procedures (*Manual de procedimentos de gestão financeira*, *version 1 June 2013*) lacked a comprehensive procedure for managing exchange rates, and a standardised approach for converting expenditure incurred in the national currency into the reporting currency (i.e. USD for Gavi reports, see also issue 4.2.1).
- 4. Lack of anti-fraud and corruption policy translating the current legal framework into concrete procedures. Essential practices forming the backbone of effective anti-fraud policies, such as a whistleblowing hotline, anti-retaliation policies, and mandatory conflict of interest declarations, were notably missing and this was illustrated by the issues related to the procurement process (see 4.3.1).

Risks / Implications

- The lack of specific procedures in the EPI manual may result in inadequate management of resources and practices, impacting negatively the results of the immunisation programme.
- UGEA's reliance on an outdated procurement manual can lead to procurement inefficiencies, potential legal issues, and a lack of transparency in handling government and external funds.
- Incompleteness of the DAF Procedures Manual may result in inconsistent and inaccurate financial reporting to Gavi.
- The absence of an anti-fraud and corruption policy significantly may hinder the ministry's ability to
 proactively prevent, detect, and address fraudulent and corrupt activities, thereby increasing the risk of
 such incidents occurring undetected, uncorrected or unreported.

Recommendation

We recommend the MoH to implement the following actions:

- Revise the EPI manual to include detailed SOPs for logistics, stock and equipment management. Establish a framework for capacity building, ensuring that all stakeholders are equipped with the necessary knowledge and skills to fulfil their roles effectively.
- Extend the monitoring and evaluation section of the EPI manual to provide specific guidelines on who should conduct supervision, the frequency, methodology, and documentation requirements. Develop an annual supervision plan for all levels and ensure that feedback and follow-up on recommendations are systematically incorporated into reports.
- Update the UGEA procurement manual to align with the current Decree No. 5 from 2016.
- Extend and develop the DAF Procedures Manual to areas related to controls over expenditure, exchange rates and fixed assets management.
- Formulate and implement a policy that incorporates existing legal frameworks, including a whistleblowing hotline, anti-retaliation policies, and conflict of interest declarations. Conduct regular training for staff to ensure awareness and adherence to this policy.

Management responses/commitments

Financial management 4.2.



4.2.1. Deficiencies in the grant financial reporting process

According to GMR 7 on financial accounting and reporting system, "all grants will be managed on e-SISTAFE to record transactions and prepare financial reports. The following will apply:

- Accounting and reporting will be in line with Gavi's Guidelines on Financial Management and Audit Requirements.
- The DAF shall submit financial reports every three months in line with the reporting requirements mentioned above. This will include ensuring proper linking of activities to budgets and source of funding at all levels of spending."

The e-SISTAFE is a financial management system used by the DAF of MoH at central and provincial levels to record expenditures, including Gavi funds. It offers a range of internal control features, including segregation of functions and related procedures.

DAF uses a Procedures Manual (Manual de procedimentos de gestão financeira, version 1 June 2013) that describes, among other subjects, the procedures for the management of external funds (incl. Gavi grants), main roles and responsibilities, the required documentation, and includes a flow chart showing programming and disbursement procedures. It also has a chapter on accountability procedures (reporting). Annex 3 of Gavi's Guidelines on Financial Management and Audit Requirements stipulates that "Gavi has provided a new template for reporting expenditures which uses the original budget as the base for reporting. [...] This tool facilitates reporting in both cost and activity dimensions and at the detailed and summary level, as laid out in the above table. [...] Gavi is aware that in many instances countries do not maintain their books of account in such a way as to fully comply with these requirements and may need support to comply with these requirements. Grant recipients are not expected to replace existing accounting and financial information systems or to create parallel systems but are required to adapt, as needed, accounting and financial information from their existing systems in order to meet Gavi's requirements."

"Gavi will therefore accept a financial report which is closely aligned to the Gavi standard requirement and this should be discussed with your Gavi Country Team contacts." The same annex stipulates in chapter 2, Financial requirements, that "Countries receiving Gavi HSIS support shall prepare periodic financial reports of actual eligible expenditure against agreed budgets for each grant".

Description

The audit identified several deficiencies in relation to the reporting of Gavi-funded expenditure:

- 1. Financial management system unable to automatically generate financial reports in the required format: reports generated by the accounting system used by the MoH did not present total expenditure allocated by cost allocation items and activity codes as required per Gavi reporting template. Therefore, the MoH must carry out a manual reclassification exercise using Excel to complete quarterly and annual reports, increasing the risk of errors.
- Incorrect reporting of transfers between grants: several cash transfers between Gavi grants were reported as actual income and expenditure in the financial reports submitted to Gavi, as illustrated by the following instance:
- The 2019 MR financial report presented a transfer of USD 3,309,342 from HSS to MR grant as an income. This report also presented a transfer of USD 3,114,453 from MR grant to HSS account as an expenditure;
- The same report disclosed two payments to UNICEF and WHO amounting to USD 1.145.545 and USD 2.163.797. respectively, also as expenditure;
- As a result, the 2019 MR financial report for 2019 disclosed a total expenditure of USD 10,866,481, while no actual expenditure was recorded for this grant and this year in the national financial management system, and the 2019 HSS financial report disclosed an expenditure of USD 400,198 to the MR grant.
- Some of the grant financial reports lacked required details, such as: missing explanation of variances between budget and actuals (e.g. in 2018 HSS report: activities 5.1.1.A.2 for USD 52,755 and 2.2.2.A.5 for USD 39,915), and missing information about fund recipients in 2019 MR and 2021 HPV reports.
- Reported cost/activity categories not matching any Gavi budget line nor cost framework: "exchange rate difference" (2020 HSS report; USD 225,736), "exchange rate losses" (several grants, totalling USD 80,935), and "to be reimbursed by UNICEF"/"to be reimbursed by GF" (2020 HSS report, totalling USD 1,831).

Risks / Implications

- Financial data errors due to manual reclassifications.
- Misrepresentation of the actual expenditure incurred to grants.
- Poor transparency and accountability due to lack of detailed financial information.
- Ineligible expenditure.

Recommendation

The MoH should implement the following actions:

- 1. Reconfigure its accounting system in order to be able to generate reports for Gavi with analysis by activity code and cost code as required by the Gavi template.
 - As a second option, as provided in the Guidelines on financial reporting mentioned above, the MoH should discuss with Gavi Country Team the possibility of using a financial report better aligned to the Gavi standard requirement.
- 2. Revise and clarify accounting procedures to ensure that transfers between grants are accurately recorded and reported. distinguishing them from genuine income and expenditure.
- 3. Provide comprehensive variance explanations and clearly identify fund recipients in financial reports to ensure full transparency and accountability in financial reporting.
- 4. Ensure all expenditure reported is within the categories defined by Gavi's cost framework and avoid reporting non-eligible expenses to maintain compliance with donor requirements.

Management responses/commitments

4.2.2. Deficient archiving processes and loss of records

Context

Article 23 of the Partnership Framework Agreement signed between Gavi and the Republic of Mozambique in December 2013 stipulates that "The Government shall maintain accurate and separate accounts and records of each of the Programmes prepared in accordance with internationally recognised standards that are sufficient to establish and verify accurately the costs and expenditures under the Programmes. The Government shall maintain such accounts and records and any other supporting documents evidencing expenses made with Gavi's funds according to the Country's fiscal requirements for a minimum of five (5) years after the completion of a Programme. In the event where Gavi provided funds are pooled with other sources of funding, accounts and records will equally be maintained for the pooled funds".

Description

The audit noted severe deficiencies in the archiving process and inadequate practices to safeguard the integrity of documents and data (of both financial and programmatic natures). These deficiencies resulted in an overall lack of traceability in information flows and transactions, and were materialised by damaged or lost documentation and data. As illustrations of this observation:

- Inability to trace back expenditure to procurement due to the absence of linkage between requests, files, contracts and invoices.
- Inability for new PAV officers to locate documents efficiently in the case of personnel turnover.
- Supporting documents were no longer available in Zambezia and Nampula provinces, as a consequence of recent cyclones (see pictures in **annex 5**)..
- Reported losses of programmatic data at district level in Ilha de Mozambique.

Recommendation

The MoH should implement the following actions:

- Implement robust data management practices, including digitalisation of documents, to enhance the security and accessibility of financial and programmatic records. Regular backups and secure storage solutions should be established to prevent data loss due to natural disasters or other unforeseen events.
- Improve the traceability of expenditure back to procurement processes and documents by linking the successive steps in the books (request, file, contract, invoice).
- Develop and enforce standardised procedures for maintaining and organizing documentation across all levels. This should include clear guidelines for filing, storing, and retrieving documents to ensure consistency and ease of access.
- Conduct regular training for staff on effective data management and documentation practices. This will ensure that all personnel are equipped to properly handle and maintain crucial records.

Risks / Implications

- Lack of traceability and organisation in record-keeping may undermine efficient financial reporting and monitoring and induce insufficient transparency and accountability.
- Damage or loss of critical financial and programmatic documentation may compromise the integrity of the programmes.

Management responses/commitments



4.2.3. VAT incurred to Gavi-funded expenditures

Context

In accordance with Article 15 of the partnership framework agreement from December 2013, "the Gavi funds provided under this Agreement shall not be used to pay any taxes, customs, duties, toll or other charges imposed on the importation of vaccines and related supplies. The Government shall use its reasonable efforts to set up appropriate mechanism to exempt from duties and taxes all purchases made locally and internationally with GAVI funds".

GMR 8 also stipulates that "on annual basis, MISAU/EPI/INS will submit requests for tax exemptions to the relevant authorities and ensure that the relevant exemptions from taxes and duties are obtained in line with the provisions of the Partnership Framework Agreement dated January 2014. Where Value Added Tax (VAT) is paid, MISAU/INS to ensure this is reimbursed to the programme in a timely manner".

Description

The audit noted that over the entire audited period (2018-2022), the Ministry of Health (MoH) incurred value-added tax (VAT) on the acquisition of goods and services using Gavi funds, contrary to the terms of the partnership framework agreement.

From the sample of transactions that was tested, the audit team identified payments totalling 12,562,934 MZN (USD 196,663) related to VAT, and therefore this amount was considered ineligible. Most of the expenditures were related to provision of services such as travel, hotel, printing and cold chain maintenance.

Risks / Implications

- Deprivation of funds allocated to the national immunisation programme;
- Non-compliance with the partnership framework agreement.

Recommendation

The MoH should:

- a) Ensure that Gavi funds are not used for the payment of VAT or any other tax charges.
- b) In cases where national regulations necessitate the initial payment of VAT followed by a subsequent reimbursement, establish a mechanism to systematically track and oversee all VAT expenses incurred in relation to Gavi funds. Additionally, ensure that these funds are reimbursed to the programme's bank account within an acceptable timeframe.

Management responses/commitments

4.2.4. Lack of insurance cover for vaccines and other assets

Context

According to GMR 19:

- "MISAU shall maintain where available at a reasonable cost, all risk property insurance on the Programme assets (including vaccines and related supplies, vehicles, cold chain equipment, etc.) and comprehensive several liability insurance with financially sound and reputable insurance companies.
- Where no insurance is available at reasonable costs, the country may include in their national budgets replacement of programme assets in case of damage or loss.
- MISAU will share details on the cost and policy for any insurance cover obtained."

Description

The audit team observed an overall lack of insurance policies to cover the loss or damage of Gavi-funded vaccines, other vaccination inputs, constructions and equipment (other than vehicles). The absence of insurance coverage is all the more a concern since several risks have materialised in the recent years. For instance, two cyclones caused various damages and losses in programmatic and financial documents, and a refrigerated truck was destroyed in a road accident.

Recommendation

The MoH must explore the possibility of insuring tangible assets, in particular vaccines stockpiles, vehicles and cold chain equipment, either by taking out an insurance policy or by guaranteeing the replacement of vaccines or assets damaged or missing at the expense of the State.

Risks / Implications

- Financial risk linked to the loss, destruction, or deterioration of assets.
- Operational risk: the absence of insurance, or sufficient budgetary resources from the State to assume this risk, may negatively impact the capacity of the EPI to continue its activities efficiently in the event of incidents or loss of assets. For example, the inability to replace cold chain equipment or a vehicle could lead to further losses of vaccine doses.

Management responses/commitments

Procurement 4.3.



4.3.1. Procurement deficiencies

Context

According to GMR 8 Procurement – supplies/services. "Procurement of supplies and services will be conducted by MISAU procurement unit Unidade Gestora Executora das Aquisições (UGEA) as follows:

- All procurement of goods and services with Gavi funds will be conducted in a competitive manner, and comply with the national Public Procurement Regulations.
- An Annual Procurement Plan (APP) will be prepared for all Gavi cash support. The APP for each Government financial year will be submitted to the ICC for review and approval, prior to the start of the relevant Government financial year and implementation.
- The APP together with a copy of the minutes meeting approving it will be communicated to Gavi prior to implementation.
- All procurement files will be made available to the Tribunal Administrativo for the annual audit of the financial statements and to Gavi for any consultant contracted by Gavi upon request."

Public Procurement in Mozambique is regulated by Decree no5 of 8 March 2016, which contains the "Regulations for contracting public works, supply of goods and provision of services to the state". We set out below the most relevant regulations in relation to our audit issues:

- Chapter 2 "Contracting Modalities "Section 1 "Public Tender", Article 51 "Deadline for Submission of Qualification Documents and Proposals", stipulates that "The Tender documents must set a deadline of no less than twenty-one (21) days for interested parties to prepare qualification documents and proposals [...] The deadline for submitting qualification documents and proposals starts from the date of publication of the Tender Notice [...] (12 days period for Limited Tender as per article 92)
- Article 60 "Evaluation Report and Jury Recommendation": "At the end of the tender evaluation phase, which includes, among other things, classification and disgualification, the Jury draws up a report in which it recommends the best tender in the Tender to the Contracting Authority for decision. In the Evaluation Report, the Jury must substantiate the evaluation, classification, disqualification and recommendation for Award, in accordance with the order of points obtained by the bidders."
- Tender Notice articles (Article 45 for open competition and Article 71 for limited competition) "When the Public Tender (same for limited tender), is held, the Contracting Authority is obliged to publish a Tender Announcement, under the terms set out in articles 32 and 33, and to communicate it to the Functional Procurement Supervision Unit'.
- Article 33 Publication of the Tender Notice: "The Competition Announcement shall be publicised by means of a public notice, portal, press, radio, newspaper or any other suitable means of communication that is easily accessible to the target public. The publication of the Tender Notice in the press must be publicised at least two (2) times by the Contracting Authority." This article also requires the publication of the final award, indicating the respective type of contracting, the value of the award and the winning firm;

It is important to note that Decree no5 of 8 March 2016 does not require, in any procurement modality, a minimum number of bids in order to proceed with the evaluation of proposals. This characteristic necessitates a heightened importance of proper publication of procurement opportunities, especially in public tender and limited tender modalities.

Description

In addition to an insufficient control framework (e.g. procurement manual not up to date, see issue 4.1.4), the audit noted several instances of inadequate practices and deficiencies in the execution of a sample of procurements, as listed below (see detailed test result in annex 7):

- 1. UGEA failed to provide the procurement files related to a series of purchase orders, for an amount totalling 71,992 USD (4,595,224 MZN) and related to the provision of cold chain maintenance services. This amount was considered as questionable expenditure.
- 2. As per the statement of funding ("Declaração de cabimento de verba"), one procurement supposed to funded by the national budget was finally incurred to Gavi funds for 19.624 USD (1.200.000 MZN). This amount was considered as questionable expenditure.
- 3. Four procurements tested were not registered in the annual procurement plans.
- 4. Incomplete procurement files: five tested procurements were missing mandatory documents (such as publication of opportunity to tender, offers received, opening of bids minutes, jury composition approval, evaluation report, publication of contract award, contract, proof of good/service delivered)
- 5. Procurement process irregularities:
 - a. Inadequate segregation of duties: for one procurement tested, one person cumulated the roles of requestor, president of the jury committee, recipient of the goods
 - b. Insufficient number of days given to bidders for preparation of proposals for nine procurements
 - c. Absence of competitor offers (single source) for four procurements

Recommendation

The MoH should implement the following actions:

- To complement the recommendation of improvement of the archiving process (see issue 4.2.2), define, document and implement a rigorous process for producing and maintaining complete procurement documentation for all the files, ensuring compliance with national regulations, Grant Management Requirements and Gavi guidelines.
- Ensure all procurement activities are appropriately reflected in the Annual Procurement Plans, aligning them with organisational strategies and funding requirements.
- Avoid conflicts of interest by defining, documenting (i.e. in the anti-fraud and anti-corruption policy and the UGEA manual of procedures, see issue 4.1.4) and implementing adequate segregation of duties in the procurement process, particularly

| | concerning individuals responsible for bid evaluation and receipt of goods. - Define, document and implement measures to ensure a fair and |
|---|--|
| | competitive bidding process, including adherence to guidelines for the number of bids and transparent evaluation criteria. |
| | - Ensure the respect of regulation in relation to adequate preparation time for bidders and encourage multiple competitive offers to enhance the quality and transparency of procurement outcomes. |
| Risks / Implications | Management responses/commitments |
| - The absence of contracts in Annual Procurement Plans points to a lack of alignment with established procurement strategies and guidelines. | See corrective action plan in annex 8 |
| Insufficient documentation, including lack of publication proof, evaluation reports, and offers from tender winners, may undermine the transparency, accountability and integrity of the procurement unit (UGEA). | |
| - Insufficient fairness and competitiveness of the tendering process may result in lower value for money. | |

4.4. Vaccine management

4.4.1. F

4.4.1. High risk of vaccine stock-outs

Context

The fundamental objective of the EPI is to guarantee comprehensive access to essential vaccines for all vulnerable populations. Achieving this goal requires a multifaceted approach, which includes accurately determining the target demographics and, consequently, the precise quantity of vaccine doses needed. It also necessitates the timely procurement and strategic distribution of these vaccines to ensure they reach the locations where they are most needed, thereby optimizing vaccine coverage and public health outcomes.

Description

- 1. The overall low availability of vaccine stockpiles constituted a major problem for the immunization programme over the audited period (2018-2022) and was a direct consequence of both leadership and coordination deficiencies (see issue 4.1.1) and poor data quality insufficiently sizing the needs at country level (see issue 4.5.1).
- The analysis of Stock Management Tool (SMT) reports from 2018 to 2022 revealed several instances of critically low vaccine stock levels and vaccine stock-outs over long periods of time at central level (CMAM), as illustrated by the following:
 - DTP-HepB-Hib (pentavalent) vaccine was out of CMAM stock for a total of 299 days between 2019 and 2022, and under the defined minimum stock for a total of 934 days. Consequently, the DTP-HepB-Hib vaccine stock was deemed adequate for the central depot only 15% of the time between 2019 and 2022;
 - Rotavirus antigen was out of CMAM stock for a total of 75 days between 2018 and 2022, and under the defined minimum stock for a total of 637 days. Consequently, the Rotavirus antigen stock was deemed adequate for the central depot only during 51% of the time between 2018 and 2022;
 - IPV (Inactivated poliovirus vaccine) antigen was out of CMAM stock for a total of 151 days between 2018 and 2022, and under the defined minimum stock for a total of 628 days. Consequently, the IPV antigen stock was deemed adequate for the central depot only during 46% of the time between 2018 and 2022;
 - MR (Measles and Rubella) vaccine was under minimum stock during 282 days between 2018 and 2022.
 Consequently, the MR vaccine stock was deemed adequate for central level only during 80% of the time between 2018 and 2022.
- 3. Vaccine quantities delivered to provinces were consistently below expressed needs. The 2022 EPI logistics report showed vaccine availability satisfaction rates (*Índice de Satisfaçao*), calculated based on quantities requested by the province and actual vaccine deliveries from central level. This indicator highlighted significant shortfalls in vaccine delivered to Maputo City, Maputo Province, Manica, and Nampula.

Risks / Implications

 Critical shortages of vaccines jeopardise programme objectives and immunity, and increase the risk of vaccinepreventable outbreaks.

Recommendation

The MoH should implement the following actions:

- Explore reasons for breaching stock levels for extended periods of time to minimise/eliminate their effects to the immunisation programme.
- Establish a more effective coordination mechanism between the central and provincial levels to ensure that vaccine requests are accurately communicated and fulfilled, and that any overstock situations are promptly addressed.

Management responses/commitments



4.4.2. Weaknesses in stock data management

Context

Vaccine and other inputs for vaccination (e.g. inject supplies) stock data is managed at the various levels through the following mechanisms:

- Stock Management Tool (SMT), developed by WHO and used by the MISAU (EPI, CMAM and provinces) for entering and monitoring stocks of vaccines and other immunisation inputs. It was used by the EPI in Mozambique since 2012 (offline version), and became online from August 2022;
- SELV ("Sistema Electrónico de Logística de Vacinas") was an online-only logistics software, designed for central and decentralised levels. Technical support was provided by VillageReach:
- SIS-MA, the National Monitoring and Evaluation System was mainly used to manage vaccination data, and also allowed to create monthly reports of final vaccine stock at Health Facility level:
- Paper documents such as:
 - Stock control sheet on paper, intended to be used as a backup at Health Unit level in cases of system failure/lack of internet, allowing for later updates;
 - Delivery notes tracing the delivery and receipt of vaccines and related material at different levels.

GMR 17 (2022 version) on vaccine stock management requires the following inventory actions:

- "• EPI to systematically review vaccine stocks at national and provincial levels on a regular basis with partners (e.g. monthly) and conduct physical assessments bi-annually and provide respective reports to Gavi Secretariat (level of stocks, reconciliation of data sources, stock out, and closed or open vial wastages).
- Physical stock verification and Quarterly stock reports national, provincial and districts to be submitted to Gavi 15 days after the six months period'.

Description

The audit team noted that the EPI manual of procedures only covered the maintenance of stock records and did not specify the systems and documents to be used in that regard (also see issue 4.1.4).

The use of multiple stock data management tools at different levels (SMT, SELV, SIS-MA, paper records) lacked harmonisation and induced overlapping information. Numerous and unaligned tools/systems created challenges and confusion, particularly at provincial and district levels, and the absence of a standard process prevented from having robust controls in place to ensure data accuracy and reliability.

At central level, the audit team observed the following errors and inconsistencies in SMT records:

- Human papillomavirus (HPV) vaccine data was missing from the SMT reports;
- Multiple mismatches in quantities between stock reported at year-end and opening of the subsequent year (see details in annex 9, table 1):
- Four different COVID-19 vaccines (C19-Sinopharm VeroCell, C19-VaxZevria ChAdOx1-S, C19-Covishield ChAdOx1-S and C19-Janssen Ad26.COV2.S) that have a positive stock opening balance in 2022 while no stock was reported in 2021;
- Arithmetical errors in the calculation of stock balance (i.e. opening balance + inputs outputs and losses) for rotavirus vaccine in 2018, with 26,000 doses overreported and oral polio vaccine (bOPV) in 2022 with 88,000 doses overreported:
- Negative stock balance for bOPV antigen in 2022 with no opening balance in 2022, arrivals = 29,701,160 issued = 31,295,220, theoretical stock balance = -1,594,060;
- Inconsistences and omissions between SMT data for 2022 and the EPI Logistics Report for the same year:
 - a) Stock Balance differences for 9 vaccines (see details in annex 9, table 2);
 - b) Significant differences between additions and issued (see details in annex 9, table 3);
 - c) SMT report shows a break / expiry of 4,192,500 BCG doses that was not mentioned in EPI logistics report.

At decentralised level, the audit team noted during the field visits in Nampula and Zambezia provinces that SELV was regularly out of service, and therefore not consistently used. Vaccine stock control was carried out mostly on paper records at district and health facility levels. At provincial level, stock sheets were maintained in Excel sheets, rather than in SMT. The following weaknesses were observed:

Numerous errors in information and calculations indicated in vaccine stock sheets of the visited health facilities;

Recommendation

The EPI should implement the following actions:

- Develop standard operating procedures for physical stock management and verification, including bi-annual assessments and quarterly reports, as outlined in GMR 19. Ensure these processes are strictly followed and reports are submitted to Gavi within specified timeframes.
- Rationalise the use of stock data management systems and avoid duplication of data processing, taking into consideration the possible limited access to networks, especially at health facility level.
- Implement a robust tracking system for vaccine deliveries to ensure that qualitative and quantitative data is accurately captured and reconciled across all levels, minimizing the risk of stock discrepancies and wastage.

- Stock records for years 2018 to 2020 missing in Lumbo (Ilha de Mozambique) and Malei e Maciaia (Zambezia);
- In Ilha de Mozambique district, the last stock sheet available for Penta dated from April 2023, and the updated measles-rubella (MR) Stock Sheet was missing:
- At province level, several stock records for different vaccines were missing;
- Delivery notes (guías de remesa) observed in Nampula and Zambezia were missing qualitative data, such as expiration date and VVM status, and included several quantitative mismatches with the central SMT record (see details in annex 9, table 4);
- In Lumbo and Ilha de Mozambique, the fridges included vaccines that belonged to a different Health Unit (Sangare) in need of cold chain equipment due to power shortage. These transfers of stock were not traceable in paper records.

Risks / Implications

- The use of multiple, uncoordinated stock data management tools leads to inconsistent and potentially unreliable national stock data reports. This lack of harmonisation complicates the stock management process, especially at the provincial and district levels, hindering the accuracy of forecasting, procurement, and demand planning;
- Inadequate guidance in the EPI manual for managing stock data across different levels contributes to a reliance on manual paper records and Excel sheets, which are prone to errors and data loss. The absence of computers and electronic devices at Health Unit levels exacerbates this issue, resulting in inaccuracies and untraceable vaccine movements:
- Significant errors and missing qualitative data in stock records, including discrepancies in delivered versus recorded vaccine quantities, can lead to poor stock management decisions, vaccine wastage, and the potential for vaccine shortages at critical times.

Management responses/commitments



4.4.3. Weaknesses in physical stock management

Context

The Effective Vaccine Management (EVM) report detailed several recommendations to improve the management of vaccines and other immunisation inputs. EVM is a tool and process that assesses each component of the immunization supply chain, such as vaccine arrival, storage or management, looking for strengths and weaknesses. This allows countries to develop plans and allocate resources to implement improvements where they are needed most.

The EVM is first and foremost a continuous quality improvement process. The ultimate objectives are for countries to have immunization supply chains that ensure the availability of the needed vaccines and supplies up to service delivery levels; with vaccines that have not lost their potency from temperature damage in the cold chain; and with increased supply chain efficiency achievable within the reach of each country specific setting. These three objectives are captured within the six rights of an effective immunization supply chain system to ensure that the right vaccines are delivered in the right quantities, in the right condition, at the right place, in the right time at the right cost.

Reaching these objectives cannot rely on conducting an EVM assessment alone. It will rest on putting in motion a comprehensive continuous quality improvement process at country level coined the 3 steps to achieving the 6 rights of an effective supply chain. The cyclical nature of the process is aimed to help countries define an achievable target for each iteration; within what is achievable in a cycle; and to benchmark that targets have been met or exceeded this during the next cycle.

Description

1. As mentioned in issue 4.1.4, the EPI manual of procedures was lacking details in the physical management of vaccines and dry goods, for example specific guidelines on physical counts (frequency of counts at the various levels, roles and responsibilities, approach and formalisation, supervision and oversight in the cases of gaps identified).

- 2. As a consequence, the following weaknesses were noted in the physical stock management:
 - The FEFO rule (First Expiry, First Out) was not always respected in deliveries from CMAM to provincial warehouses, as analysed in the SMT reports:
 - The storage of dry goods was not properly organised:
 - The CMAM central vaccine store was crowded with empty vaccine delivery boxes, cartons, syringes and other materials in the alleys around the cold rooms, increasing the risks in the event of a fire
 - A similar issue was noted in Nampula provincial warehouse, where a delayed delivery of material was stored in corridors (see pictures in annex 5);
 - Expired vaccines were found still stored in deconcentrated vaccine stockpiles:
 - The visit to Namacurra warehouse (Zambezia province) in November 2023 noted a box with BCG vaccine that expired in September 2023 inside a refrigerator;
 - Similarly, the visit to Lombo Health Unit (Nampula Province) noted a box of COVID-19 vaccines that expired one week before.

Risks / Implications

- Undefined or unclear policies and procedures may result in inadequate practices;
- Failure to follow the FEFO (first expiry, first out) rule in vaccine deliveries may lead to vaccine expiry and unnecessary waste, reducing the overall efficiency of the immunisation programme;
- Disorganised storage of dry stock may not only impede stock management, but also create fire hazards, threatening the safety of personnel and vaccine integrity.

Recommendation

The MoH should implement the following actions:

- Complete the manual of procedures and ensure its distribution. training, and monitoring of practices:
- Enforce the FEFO rule for vaccine distribution to minimise waste and ensure the oldest stock is used first. Train staff on proper stock rotation practices and conduct periodic checks to ensure compliance.
- Establish protocols for the regular inspection of vaccine expiration dates and the immediate removal of expired vaccines from active stock.
- Reorganise storage spaces to eliminate clutter and ensure all items, especially flammable materials, are stored safely and securely. Assess whether the storage capacities are appropriate for an adequate storage of dry material.

Management responses/commitments

4.4.4. Weaknesses in cold chain equipment management practices

Context

The Effective Vaccine Management (EVM) report detailed several recommendations to improve the management of vaccines and other immunisation inputs. EVM is a tool and process that assesses each component of the immunization supply chain, such as vaccine arrival, storage or management, looking for strengths and weaknesses. This allows countries to develop plans and allocate resources to implement improvements where they are needed most.

The EVM is first and foremost a continuous quality improvement process. The ultimate objectives are for countries to have immunization supply chains that ensure the availability of the needed vaccines and supplies up to service delivery levels; with vaccines that have not lost their potency from temperature damage in the cold chain; and with increased supply chain efficiency achievable within the reach of each country specific setting. These three objectives are captured within the six rights of an effective immunization supply chain system to ensure that the right vaccines are delivered in the right quantities, in the right condition, at the right place, in the right time at the right cost.

Reaching these objectives cannot rely on conducting an EVM assessment alone. It will rest on putting in motion a comprehensive continuous quality improvement process at country level coined the 3 steps to achieving the 6 rights of an effective supply chain. The cyclical nature of the process is aimed to help countries define an achievable target for each iteration; within what is achievable in a cycle; and to benchmark that targets have been met or exceeded this during the next cycle.

Description

- As mentioned in issue 4.1.4, the EPI manual of procedures was lacking explicit assignments of responsibility for the
 different roles and functions associated with vaccine logistics processes, inducing some ambiguity in the execution
 of tasks and potentially compromising the integrity of the cold chain and vaccine efficacy.
- 2. This lack of detailed procedures also materialised in the following weaknesses noted in the maintenance of EPI cold chain equipment:
 - Absence of maintenance plans and reports at central level (also noted in Nampula and in Zambezia);
 - Several deficiencies noted in the monitoring of temperatures:
 - At central level (CMAM), the October 2023 temperature monitoring sheet for one of the refrigerator rooms marked maximum temperatures above 8°C on a recurring basis (24 days in the month), while this had not been identified as a deficiency and reported for curative maintenance action;
 - In the Nampula provincial vaccine warehouse, temperature monitoring data provided through the connected system was noticeably incorrect. For instance, one of the congelation room temperature records indicated 31°C maximum and 25°C minimum, while the room was actually frozen (below zero °C)
 - Several cold chain equipment not properly registered and traced at various levels, such as an accidented refrigerated truck, funded by Gavi, left abandoned on the parking of the central vaccine depot (see pictures in annex 5). No disposal and/or write off note was provided to the audit team.

Risks / Implications

- Cold chain disruption may result in the reduction of vaccine efficacy and/or in the loss of vaccine doses.

Recommendation

The MoH should implement the following actions:

- Update the EPI manual of procedures to detail how cold chain equipment must be managed at the various levels and specify roles and responsibilities;
- Develop detailed maintenance plans and schedules, including roles and responsibilities and expected actions to prevent and to cure potential anomalies on cold chain equipment;
- Implement strict temperature control measures and regular equipment checks to ensure all storage facilities maintain vaccines within the required temperature ranges.

Management responses/commitments

4.5. Monitoring and evaluation

4.5.1. Unreliable immunisation data

Context

EPI vaccination indicators at all levels (health facilities, districts and provinces) are integrated in SISMA software (*Sistema de Informação de Saúde para Monitoria e Avaliação* – Information Health System for Monitoring and Evaluation). Data collection at health facility level is recorded on paper forms and is then introduced into the SISMA at district level.

The EPI aims to evaluate data quality and identify sources of potential unreliability through various methods, one of which is conducting surveys from the central and provincial levels down to the districts using the Data Quality Self-Assessment (DQS) tool.

Description

- As mentioned in issue 4.1.4, the EPI manual of procedures was lacking detailed Monitoring and Evaluation procedures defining the complete data input, validations, and controls to be performed at all levels of responsibilities in the health system.
- As a direct consequence, data quality controls were not materialised, and potential corrective actions were not tracked in case of inconsistent data reported. The table below illustrated the gaps observed between administrative data and WUENIC ((WHO/UNICEF Estimates of National Immunisation Coverage) survey data for year 2022:

| Vaccine | Administrative coverage | WUENIC | Gap |
|----------------------|-------------------------|--------|-----------|
| Pentavalent 1st dose | 107% | 67% | 40 points |
| Measles | 113% | 84% | 29 points |
| BCG | 134% | 79% | 55 points |

3. Immunisation targets were largely underestimated (see issue 4.4.1), based on hypothetical population growth rates, and not corrected by recent actual census data. This underestimation was illustrated by administrative coverage rates often exceeding 100% (see examples in the above table) and requiring EPI to use BCG vaccine data as operational denominator (likely also underestimated).

Risks / Implications

Inconsistent and unreliable immunisation data may impair the ability to make informed strategic decisions regarding public health planning and resource allocation.

Recommendation

The MoH should implement the following actions:

- Develop and formalise comprehensive immunisation data quality process and procedures in the EPI manual, to standardise data review and validation practices at all levels of the health system.
- Formalise controls performed to ensure accuracy, completeness, and timeliness of immunisation data inputs, by Increasing the frequency and thoroughness of data validation meetings – with clear summaries of issues and resolutions.
- Further refine the estimation of immunisation targets in provinces and municipalities, considering local dynamics and survey gaps.

Management responses/commitments

4.5.2. Insufficient supportive supervision process of EPI activities

Context

WHO defined supportive supervision as a process of helping staff to improve their own work performance continuously. It is carried out in a respectful and non-authoritarian way with a focus on using supervisory visits as an opportunity to improve knowledge and skills of health staff. Supportive supervision encourages open, two-way communication, and building team approaches that facilitate problem-solving. It focuses on monitoring performance towards goals, and using data for decision-making, and depends upon regular follow-up with staff to ensure that new tasks are being implemented correctly.

Description

- 1. As mentioned in issue 4.1.4, the EPI manual of procedures was lacking a detailed framework and procedure for supportive supervision activities to be performed at the various levels and specifying the follow-up actions to be taken after supervisions were completed. Although the manual contained a section on Monitoring and Evaluation procedures, and a brief supervision guide with questionnaires in annex, it lacked specific guidelines on:
 - Roles and responsibilities for supervising at each level, for reviewing and approving supervision reports, for compiling and analysing supervision conclusions and recommendations, and for the follow-up of corrective actions:
 - Frequency and location of supervisions at the various levels of the health system;
 - Detailed and differentiated methodology, including report templates, checklists, and follow-up practices.
- 2. The audit team noted the absence of annual supervision plans at all levels (central, provincial and district). Also, the following documentation weaknesses were identified:
 - No overall supervision reports were provided at central level;
 - Supervision reports observed at provincial and district level remained at the level of the supervised facility and were not summarised, consolidated, and reported to central level to identify trends and opportunities for improvements.

Recommendation

The MoH should implement the following actions:

- Develop and formalise a comprehensive procedure for supervision in the EPI manual, to standardise supervision practices at all levels of the health system.
- Adhere to the required frequency of supervision and systematically formalise results and follow-up actions in the supervision reports. Improve the reporting process to make sure supervision results from lower levels of the health system are aggregated and communicated for further analysis and decision.

Risks / Implications

- Defective practices may remain undetected and perpetuate in the absence of an effective supportive supervision process.
- Strategic decisions may lack important pieces of information regarding challenges met at all levels of the health system.

Management responses/commitments

Annexes

Annex 1 – Acronyms

| WILLIEY I - | - Actoriyins |
|-------------|--|
| Acronym | Definition |
| APP | Annual Procurement Plan |
| CCE | Cold Chain Equipment |
| CMAM | Central warehouse for Pharmaceuticals and Medical Supplies (Central de Medicamentos e Artigos Médicos) |
| DNSP | National directorate of public health |
| DAF | Directorate of financial and administration |
| EPI | Expanded Programme for Immunisation (PAV = Programa Alargado de Vacinação) |
| EVM | Effective Vaccine Management |
| FY | Financial Year |
| GMR | Grant Management Requirements |
| ICC | Interagency Coordination Comittee |
| M&E | Monitoring and Evaluation |
| MoH | Ministry of Health (MISAU = Ministério da Saúde) |
| MR | Measles rubella vaccine |
| MZN | Meticais |
| PCA | Programme Capacity Assessment |
| PFA | Partnership Framework Agreement |
| PHD | Provincial Health Directorates (It includes DPS = Provincial Directorate of Health and SPS = Provincial Health Services) |
| SELV | Sistema Electrónico de Logística de Vacinas |
| SMT | Stock Management Tool |
| SISMA | National Monitoring and Evaluation System |
| SOP | Standard Operating Procedures |
| TA | Technical Assistance |
| TAP | Accountability and Transparency Policy |
| ToRs | Terms of Reference |
| UGEA | Procurement Unit (Unidade Gestora de Aquisições) |
| UNICEF | United Nations Children's Fund |
| USD | United States Dollars |
| VAT | Value added tax |
| VVM | Vaccine Vial Monitor (Monitor do Frasco da Vacina) |
| WHO | World Health Organization (OMS) |
| | |

Annex 2 - Methodology

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

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

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

Annex 3 – Definitions: opinion, and issue rating

A. AUDIT RATINGS AND OVERALL OPINION

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

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

B. RISK LEVELS OF AUDIT ISSUES

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

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

Annex 4 - Classification of expenditures

Adequately supported expenditures

Expenditures validated based on convincing evidence (evidence that is sufficient, adequate, relevant and reliable) obtained by the auditors through performance of fieldwork.

Inadequately supported expenditures

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

- Purchases: These are expenditures 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: These are expenditures 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 documents to support
 liquidation of advances/floats given for meetings/trainings/workshops etc.

Inadequately supported expenditures should be classified into three non-exclusive subcategories (an item of 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 unreliable elements within the supporting documentation (e.g. missing date, signature, letterhead, etc.);
- Expenditures that are not supported by original documents; or documents 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 expenditures were provided.

Annex 5 - Field visit pictures

Picture 1 and 2 – Financial documentation in Quelimane (Zambezia)





Picture 2and 3 – Ilha de Mozambique District building after Cyclone



Picture 5 – Improvised dry stock storage in Nampula provincial warehouse



Picture 6 and 7 – Accident damaged truck at CMAM





Annex 6 - SMT report analysis results

Table 1 - Errors in Stock balances

| | 2018 | 2019 | 2019 | 2019 | 2020 | 2020 | 2020 | 2021 | 2021 | 2021 | 2022 | 2022 | 2022 |
|------------------|------------------|------------------------------|--------------------------|------------------|------------------------------|-----------------------------|------------------|------------------------------|--------------------------|------------------|------------------------------|--------------------------|------------------|
| Vaccine | Stock Balance | Stock at beginning of period | Difference | Stock Balance | Stock at beginning of period | Difference | Stock Balance | Stock at beginning of period | Difference | Stock Balance | Stock at beginning of period | Difference | Stock Balance |
| BCG | 1,042,000 | 1,042,000 | - | 987,000 | 987,000 | - | 11,644,220 | 10,811,200 | (833,020) | 6,723,520 | 6,295,100 | (428,420) | 7,576,220 |
| bOPV | 1,926,000 | 1,926,000 | - | 1,944,000 | 1,944,000 | - | - | - | - | 1,488,500 | 968,000 | (520,500) | 8,073,080 |
| DTP-HepB-Hib | 999,560 | 1,070,080 | 70,520 | 765,920 | 765,920 | - | - | - | - | - | | - | 676,160 |
| PCV-10 | 419,012 | 420,400 | 1,388 | - | - | - | - | - | - | - | | - | |
| Rota_liq | 505,250 | 504,900 | (350) | 105,000 | 105,000 | - | 65,200 | 65,200 | - | 389,750 | 234,950 | (154,800) | 77,400 |
| IPV | 775,600 | 778,530 | 2,930 | 823,800 | 834,400 | 10,600 | 400,400 | 400,400 | - | 333,200 | 834,400 | 501,200 | 1,653,950 |
| Measles | - | - | - | - | - | - | - | - | - | - | | - | |
| MR | 642,000 | 642,240 | 240 | 1,495,000 | 1,552,000 | 57,000 | 1,253,290 | 1,121,020 | (132,270) | 4,452,350 | 4,069,980 | (382,370) | 7,123,100 |
| TT | 1,621,650 | 1,621,650 | - | 3,380,170 | 3,387,240 | 7,070 | 1,146,550 | 1,162,320 | 15,770 | - | | - | |
| YF | 1,374 | - | (1,374) | - | - | - | - | - | - | - | | - | |
| PCV-13 | 994,834 | 994,800 | (34) | 583,000 | 571,000 | (12,000) | 453,800 | 453,800 | - | 345,400 | 298,000 | (47,400) | 263,200 |
| | | | mOPV2 | 802,000 | - | (802,000) | | | Td | 170,270 | 35,270 | (135,000) | 2,054,840 |
| | | | | | | | | | | HPV | 724,390 | | 693,190 |
| Total Stock | | | 76,836 | 10,885,890 | | 888,670 | 14,963,460 | | 981,060 | 13,902,990 | | 2,169,690 | |
| (and difference) | | | 0.86% | | | 8.16% | | | 6.56% | | | 15.61% | |
| | | % of erro | r in relation to balance | year stock | % of erro | r in relation to balance | year stock | % of error | in relation to y balance | rear stock | % of error | in relation to y balance | ear stock |

For the audited period, on average, each year the end-of-year stock experienced quantification errors compared to the opening of the subsequent year of 8.46%

| Total stock for the period | | 48,679,620 |
|----------------------------|------|------------|
| Total error | | 4,116,256 |
| | in % | 8.46% |

Table 2: Inconsistencies between 2022 SMT data and Logistics 2022 report - Stock Balance

| Vaccine | Stock Balance in SMT in 2022 | Amounts as per Logistics 2022 report | Difference | | |
|--------------|------------------------------------|---|-------------|--|--|
| BCG | 7,576,220 | 8,042,000 | 465,780 | | |
| bOPV | 8,073,080 | 6,883,220 | (1,189,860) | | |
| DTP-HepB-Hib | 676,160 | 669,380 | (6,780) | | |
| PCV-10 | | | - | | |
| Rota_liq | 77,400 | 78,050 | 650 | | |
| IPV | 1,653,950 | 1,367,550 | (286,400) | | |
| Measles | | | - | | |
| MR | 7,123,100 | 6,288,700 | (834,400) | | |
| TT | | | - | | |
| YF | | | - | | |
| PCV-13 | 263,200 | 188,800 | (74,400) | | |
| Td | 2,054,840 | 2,140,160 | 85,320 | | |
| HPV | 693,190 | 615,990 | (77,200) | | |

Table 3: Inconsistencies between 2022 SMT data and Logistics 2022 report - bOPV arrivals and issued figures

| bOPV | SMT | Report | Difference | Comment |
|------------------|------------|------------|------------|-----------------|
| Arrivals in 2022 | 17,732,600 | 48,063,000 | 30,330,400 | 271% difference |
| Issued in 2022 | 10,752,560 | 42,147,780 | 31,395,220 | 392% difference |

Table 4: Difference between SMT figures and delivery notes signed by the province of Nampula

| Ref. Delivery note | Vaccin | SMT figure | Quantity received as per DN | Difference (units) | % Error | Comments |
|--------------------|---------|------------|-----------------------------------|--------------------|---------|---|
| 40/PAV/-DNV/2020 | Rotarix | 105,000 | 104,500 | 500 | 0.5% | |
| 60/PAV/-DNV/2020 | Rotarix | 68,500 | 68,200 | 300 | 0.4% | Rota and IPV arrived in Phase 2 of VVM. |
| 76/PAV/-DNV/2020 | BCG | 102,000 | 114,000 | 12,000 | -11.8% | |
| | MR | 96,000 | 90,000 | 6,000 | 6.3% | |
| 2/PAV/2021 | BopV | 200,000 | 300,000 | 100,000 | -50.0% | |

Annex 7 - Procurement detailed issues

| Date | Purchase Order Code | PO Value (MZN) | Type of Service | Contract Ref# | Contract Amount | Procurement method | Audit Issues |
|------|-------------------------------------|--------------------|--|---|--------------------|--------------------|--|
| 2022 | 162, 183, 184, 210- 216, 240. | Total 1,966,070 | Cold chain maintenance services | Unknown | Unknown | Unknown | No procurement process received for year 2022 |
| 2022 | 17193 | 2,629,154 | Cold chain maintenance services | 58A001241/CL/09/OE- Manutenção de Meios de Frio/022 Incorrect procurement process received? | 1,200,000 | Limited tender | According to the document "Declaração de cabimento de verba" (Statement of funding) the contract was to be funded by national Budget and not GAVI funds. Lack of proof of publication, lack of evaluation report, and lack of offer from tender winner. |
| 2018 | 0074 | 3,234,465 | Purchase of goods: 200 refrigerant gas bottles of 13kg each. | Lack of contract. Procurement process: 20/GAVI/DA/MISAU/201 8 | Unknown | Limited tender | i.Lack of proof of distribution of gas bottles. In spite of the fact there is a delivery note signed for reception of bottles by the EPI responsible for cold chain maintenance at CMAM, the latter was not able to provide to the audit team any documentation related to the distribution of the bottles but claimed have distributed them to the provinces. During our visits to Nampula and Zambezia regional storehouses, we were not provided with any proof of receipt of the gas bottles purchased from the supplier. ii. The acquisition of refrigerant gas was not foreseen in the 2018 procurement plan provided by the UGEA. Only domestic gas totalling 300,000 MZN value was foreseen, and funded by the national budget. Nevertheless, there was a request for acquisition of refrigerant gas for CMAM by the EPI in March 2018, for a total value of 804,000 MZN (one quarter of the actual amount paid), which was approved by the Permanent Secretary of the MoH so the procurement process could start. iii. The EPI responsible for cold chain maintenance was not only the person who received the material purchased but was also the President of the Jury Committee (comprising three people) for this procurement process. He was responsible for bid opening, the evaluation of bids and the proposal of contract award. We consider that these duties in the procurement process should have been segregated from the function of receiving the goods. iv.Lack of proof of tender publication. According to the evaluation report and the minutes of bid opening, there was only one bidder, the awarded company. v.Lack of contract. vi.We noted several chronological incoherences: 1.Bid signed by the awarded company. on 2 July 2018 (signed as received by EPI maintenance head / jury president on 12 July 2018). 2.Attendance list and Opening bids session minutes on 26 June 2018. Signed by EPI maintenance head. 3.Jury composition approval Permanent Secretary on 22 August 2018. (After ju |

| | | | | | | | published on 25 November 2017. |
|------------|---------|------------|---|---|------------|-----------------|---|
| 25-05-2020 | 2163 | 1,880,342 | Equipment purchase | 000141/CP/N°58GAVI- VIG/MISAU/DA/2019 | 2,658,640 | Public Tender | Offers from bidders not on file. Just the winners bid was on file. Insufficient number of days for interested parties to prepare qualification documents and proposals (15 instead of 21). |
| 21-12-2018 | 5505 | 336,000 | | | | | - Lack of evaluation report, opening of bids minutes and jury composition |
| 28-11-2018 | 3489 | 246,199 | Travel Services | 26/65/OE/MISAU/UGEA/ 17 | 30,000,000 | Public Tender | approval. - Offers from bidders not on file. Just the winners bid was on file. |
| 17-10-2018 | 0505 | 221,925 | Services | 17 | | | - Lack of proof of publication of procurement process award decision. |
| 30-03-2020 | 1240 | 3,360,000 | Printing | 328/AD-41/GAVI- | 3,360,000 | Direct contract | - Purchase not found in Annual procurement Plans. |
| 01-04-2020 | 1316 | 3,720,987 | services | HSS/MISAU/19 | 3,720,987 | Direct contract | |
| 06-10-2020 | 4653 | 768,204 | Medical services | Not identified - Procurement process 44/GAVIHSS/MISAU/DA/ 2019 | Unknown | Public Tender | - Contract not received Purchase not found in Annual procurement Plans. |
| 14-12-2018 | 5201 | 2,122,755 | Printing | 38/31/18/GAVI/UGEA/MI | 7,000,000 | | Insufficient number of days for interested parties to prepare qualification documents |
| 14-12-2018 | 5202 | 1,516,469 | services | SAU (Difference process for | | | and proposals (19 instead of 21). |
| 19-09-2019 | 7314 | 3,361,320 | | the third transaction - CP 31/GAVI-/DA/MISAU/2018) ? | | Public Tender | |
| 06-05-2019 | 1623 | 19,999,320 | Unknown | 305/CP22/GAVI/DA/MIS AU/UGEA/2018 | 20,167,052 | Public Tender | Insufficient number of days for interested parties to prepare qualification documents and proposals (20 instead of 21). |
| 20-12-2019 | 2178 | 1,545,101 | Travel | 167/37/OE/WB/FG/MISA | 8,500,000 | D | Insufficient number of days for interested parties to prepare qualification documents |
| 12-05-2020 | 2040 | 1,043,406 | Services | U/DA/18 | | Public Tender | and proposals (20 instead of 21). |
| 18-05-2022 | 3928 | 925,748 | Unknown | 14/23/FG/DA/MISAU/18 | 3,491,230 | Public Tender | Insufficient number of days for interested parties to prepare qualification documents and proposals (9 instead of 21). |
| 17-12-2020 | 9882 | 1,699,753 | Printing services | 58A00141/CL/NR:60/ GAVI/DA/MISAU/2019 | 1,700,000 | Limited tender | Insufficient number of days for interested parties to prepare qualification documents and proposals (9 instead of 12). |
| 04-09-2020 | 3674 | 841,000 | IT Services | 29/ GAVI- | | | Offers from bidders not on file. Just the winners bid was on file. |
| 08/09/2020 | 3771 | 198,000 | | VIG/DA/MISAU/2019 | 1,215,630 | Limited tender | |
| 2022 | Several | 6,677,353 | Oil services (In Zambezia Province. | 013/RA/SPS/B S/2022 | 6,677,353 | Public Tender | Lack of proof of publication of tender opportunity |

Annex 8 - Corrective action plan

This annex was prepared by the MoH in response to the draft audit report and was shared with Gavi Secretariat on 31 August 2024. Detailed actions, timelines and responsibilities were proposed in the following action plan.

| Ref. | Recommendation | Priority | Management response / commitment | Action owner | Timeline |
|-------|--|----------|---|-----------------|-----------|
| 4.1 | Governance | | | | |
| 4.1.1 | Designated individual(s) should be tasked with the responsibility, to ensure that the ICC takes the following actions: 1. adhere to its terms of reference and hold regular meetings every three months. This will ensure that all matters related to the strategic direction, planning, and policy on EPI are discussed and decided upon in a timely manner. 2. enforce the requirement for all members to be present at meetings. If a member cannot attend, they should send a representative in their place. This will ensure that all stakeholders are involved in the decision-making process. 3. ensure that the topics covered in meetings are relevant to its role. The agenda for each meeting should be carefully planned and circulated in advance to allow members to prepare. 4. establish a system for tracking and following up on decisions and recommendations made in previous meetings and also by external evaluators. This could involve assigning responsibility for each action to a specific member or creating a shared action plan that is reviewed at each meeting. 5. When required, the ICC should review and update its terms of reference. This will ensure that the ICC's operations remain aligned with its strategic objectives. By implementing these recommendations, the ICC can improve its effectiveness and ensure that it fulfils its role in providing strategic direction and oversight for the EPI programme. | | The ICC meetings have been held regularly every three months, we only experienced some constraints at the time of COVID-19. As an example, in this year 2024, 2 meetings have already been held in February and April (see summary attached), the third will be in September and the last in December. And, if necessary, extraordinary meetings are held to discuss strategic emergency issues. Being a meeting led by the National Director of Public Health, all members and agencies have been present or at least nominated a representative, as each person's responsibility is part of the terms of reference. (See the attached attendance list) MISAU, through the ICC secretariat, takes care to select the topics for discussion, in accordance with the PAV priorities. Topics such as: Programmatic and financial performance, application of new vaccines and resources, Program recovery plan, etc. are discussed. (See the 2024 summaries attached) MISAU accepts the recommendation. Recently, MISAU, through its ICC secretariat, updated the terms of reference in line with new priorities, such as strengthening routine, introducing new vaccines, new financing windows, etc | ICC Secretariat | Quarterly |

| Ref. | Recommendation | Priority | Management response / commitment | Action owner | Timeline |
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| 4.1.2 | The MoH should implement the following actions: With regards to the Health Inspection: | High | 1.a) In planning PAV activities from 2021 onwards, in coordination with the General Health Inspection, the budget was incorporated for travel expenses for technicians from different areas of the IGS, to carry out the financial and programmatic component. And at the IGS level, a reorganization of the sector is underway, through the creation of new areas of activity, specifically those involving the programmatic part with a view to incorporating aspects relating to vaccine conservation, verification of vaccine administration techniques, checking the quality of intervention records, among others. b) MISAU accepts the recommendation. And we will comply with GAVI's request as recommended. 2. MISAU welcomes the recommendation. But it is important to highlight that the TA is an independent institution, and has sometimes lacked coordination in order to ensure compliance with the audit calendar as agreed in the terms of reference. However, MISAU has been putting pressure on them to meet the deadlines. 3. MISAU accepts the recommendation. It should be noted that aware of this need, MISAU prepared the action plan to mitigate the findings of audits carried out in the sector (relating to all funds under its management) and which has been updated annually. It will be shared with GAVI whenever necessary. | EPI Manager / HSS Project Manager / GAVI / IGS / DAF | In progress |
| 4.1.3 | The MoH should implement the following actions: MoH should prioritise finalising the detailed organisational chart and ensure that it clearly defines the roles and responsibilities of the EPI team members. This should be done immediately to avoid further confusion and inefficiency. MoH must expedite the hiring process for the northern regional advisor to ensure all consultants are effectively supporting the provincial DAF as recommended. This step is crucial for improving financial management and oversight at the provincial level. | Medium | The PAV has a detailed organizational chart that clearly defines the responsibilities of each member that makes up its technical group. Process in progress. The candidate who will occupy the position in the northern region has been identified and approved. At this moment, the process was submitted for approval by the Permanent Secretary of MISAU. MISAU-PAV has regularly carried out assessments of human resources (cold chain maintenance), and based on this, in coordination with cooperation partners, has provided technical | EPI Manager UGEA / EPI | Available In progress |

| Ref. | Recommmendation | Priority | Management response / commitment | Action owner | Timeline |
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| | 3. MoH should assess the human resource needs of provincial maintenance teams and provide additional support where necessary.4. Implement a regular monitoring and evaluation mechanism to assess the effectiveness of the | | support to the provinces according to the needs presented. 4. MISAU accepts the recommendation. 5. The PAV has carried out coordinative and collaborative actions with these two entities | EPI Technical Group | Quarterly |
| | organisational structure and the performance of the EPI team. This will help in identifying areas for improvement and ensuring alignment with best practices and recommendations. 5. Engage with provincial health directorates and UGEA to | | (UGEA and Provinces), through fortnightly meetings with the UGEA to assess the state of play of the different acquisition processes and the main challenges in the sector; and monthly with the provinces to assess the level of | EPI Technical Group | Quarterly |
| | understand their specific needs and challenges. Regular communication and feedback mechanisms should be established to ensure that the support provided is aligned with the actual requirements of the provinces and UGEA. | | implementation of programmatic activities and coverage/results in each province. In these meetings, in addition to analyzing progress, strategies are outlined to minimize the challenges encountered during the development of different activities. | EPI Manager / HSS Project Manager | In progress |
| 4.1.4 | We recommend the MoH to implement the following actions: - Revise the EPI manual to include detailed SOPs for logistics, stock and equipment management. Establish a framework for capacity building, ensuring that all stakeholders are equipped with the necessary | High | It is planned to review and update the EPI Manual, which will include detailed chapters on the logistical aspects relating to the management of stocks of vaccines and other inputs, and equipment and, above all, including chapters on the terms of reference for managers at different logistical levels, TDRs supervision etc. | EPI Technical Group | December 2025 |
| | knowledge and skills to fulfil their roles effectively. Extend the monitoring and evaluation section of the EPI manual to provide specific guidelines on who should conduct supervision, the frequency, methodology, and documentation requirements. Develop an annual supervision plan for all levels and ensure that feedback and follow-up on recommendations are systematically incorporated into reports. Update the UGEA procurement manual to align with the current Decree No. 5 from 2016. | | It has supervision plans available at each level (MISAU, PROVINCIA AND DISTRICT), and its reports are systematically incorporated into action plans for follow-up and monitoring. This year, PAV is systematizing supervision findings using electronic tools: FESP and DQS, which will facilitate feedback and follow-up actions with the provinces. | EPI Management | Contínuous |
| | Extend and develop the DAF Procedures Manual to areas related to controls over expenditure, exchange rates and fixed assets management. Formulate and implement a policy that incorporates existing legal frameworks, including a whistleblowing | | Decree No. 5/2016, of March 8, was revoked by Decree No. 79/2022, of December 30. Because of this, the Hiring Procedures Manual was revised in May 2023. (See Attachments) | | |
| | hotline, anti-retaliation policies, and conflict of interest declarations. Conduct regular training for staff to ensure awareness and adherence to this policy. | | As a result of changes in the state's financial administration regulatory framework, MISAU-DAF is updating the respective Financial Management Procedures Manual, which includes the areas of expense control, asset management and ICMS regularization mechanism and others. aspects. At | DAF | End of September 2024 |

| Ref. | Recommendation | Priority | Management response / commitment | Action owner | Timeline |
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| | | | the moment, the process is being socialized with some ministries for subsequent approval by His Excellency the Minister of Health. | | |
| | | | The DA has ongoing training programs and its technicians declare a conflict of interest whenever there is reason to do so. | | |
| 4.2 | Financial Management | | | | |
| 4.2.1 | The MoH should implement the following actions: Reconfigure its accounting system in order to be able to generate reports for Gavi with analysis by activity code and cost code as required by the Gavi template. As a second option, as provided in the Guidelines on financial reporting mentioned above, the MoH should discuss with Gavi Country Team the possibility of using a financial report better aligned to the Gavi standard requirement. Revise and clarify accounting procedures to ensure that transfers between grants are accurately recorded and reported, distinguishing them from genuine income and expenditure. Provide comprehensive variance explanations and clearly identify fund recipients in financial reports to ensure full transparency and accountability in financial reporting. Ensure all expenditure reported is within the categories defined by Gavi's cost framework and avoid reporting non-eligible expenses to maintain compliance with donor requirements. | High | - The IT package that supports the state's financial administration system (e-SISTAFE), meets all procedures provided for in public administration in Mozambique. Therefore, from hiring procedures to payment and accountability (where various reports are issued taking into account the procedures and needs arising from the public finance legislation in force in Mozambique. However, for some classifications inclusion may be requested, such as happened with the codes necessary for the decentralized management of funds at the district level from 2024 onwards. However, to report in the GAVI reporting model it will always be necessary to extract and process data in excel spreadsheets to align with budgets that vary annually and accommodate all classifications that cannot be incorporated into e-SISTAFE. It should be noted that during the implementation period covered by the audit, GAVI, specifically in 2022, changed the "templates" used for budgeting and reporting, this alone. operation is enough for the previously made settings to be changed to accommodate the new setting. | EPI Finance Team EPI Finance Team EPI Finance Team | Contínuous In quarterly reports in accordance with the GAVI procedure |
| | | | - To record and report transactions, MISAU uses a template developed and made available by GAVI. In the report fields of this template, there are no spaces available to enter transfers between grants. In the years 2018 to 2020, under guidance from GAVI, to meet HSS needs, transfers were made from: MR, VIG, PBF and PCV Swith to HSS. As there were no fields in the template for recording these operations, MISAU, in coordination with the GAVI assistance team for the country, was assisted in recording the outflows of funds in the expense tables of each | | In quarterly reports in accordance with the GAVI procedure In quarterly reports in accordance with the GAVI procedure |

| Ref. | Recommendation | Priority | Management response / commitment | Action owner | Timeline |
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| | | | subsidy and the entries in the "Other income" fields. " from HSS. This placement allowed information to be provided to GAVI with an indication of all transactions made. MISAU only respected the reporting model and guidelines from GAVI, the entity to which it is suggested that this recommendation be addressed. - For each budget line executed, MISAU provides an explanation about the level of execution and activity carried out. However, we welcome the recommendation and, from now on, the wording of the explanations will be improved. | EPI Finance Team | In quarterly reports in accordance with the GAVI procedure |
| | | | - In GAVI grants administered by MISAU, there are funds channeled via partners, specifically UNICEF and WHO. If there is a need to provide complete information about these funds, MISAU includes in its report the transfers made to these entities. Once again, within what the GAVI template allows. Not being a split expense, the entire amount channeled to these entities was recorded in the 2019 MR report as presented. - MISAU considers, in this case, that these are not ineligible expenses, but rather a way of presenting information within what the template allows. But, for each line of activity related to these funds, partners provide detailed information to GAVI. | EPI Finance Team | |
| 4.2.2 | The MoH should implement the following actions: Implement robust data management practices, including digitalisation of documents, to enhance the security and accessibility of financial and programmatic records. Regular backups and secure storage solutions should be established to prevent data loss due to natural disasters or other unforeseen events. Improve the traceability of expenditure back to procurement processes and documents by linking the successive steps in the books (request, file, contract, invoice). Develop and enforce standardised procedures for maintaining and organizing documentation across all levels. This should include clear guidelines for filing, storing, and retrieving documents to ensure consistency and ease of access. | High | In relation to this issue, the implementation of a system for digitizing and electronically archiving documents that support the payment of public expenses is underway, which begins in the Acquisitions Department until the processes are archived in the DAF. | | |

| Ref. | Recommmendation | Priority | Management response / commitment | Action owner | Timeline |
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| | Conduct regular training for staff on effective data management and documentation practices. This will ensure that all personnel are equipped to properly handle and maintain crucial records. | | | | |
| 4.2.2bis | The MoH should implement the following actions: Establish procedures for maintaining all necessary supporting documents for expenditures. This includes ensuring the safekeeping of documents, especially in regions prone to natural disasters. Enhance internal controls to prevent unsupported and inadequately supported expenditures. This should involve regular internal audits and reviews of expenditure documentation. Provide clear guidelines and regular updates to all relevant staff on what constitutes eligible expenditures under Gavi's funding and ensure strict adherence to the approved work plan and budget. | High | - MISAU welcomes the recommendation regarding document security, especially in regions prone to natural disasters, which is essentially throughout the country. - Still with regard to documents, the audit period, with regard to the substantive tests referred to in this point, although MISAU is not suggesting changes to GAVI's audit procedure, it draws attention to the fact that the period of The exam is extensive and for this there is a need for more resources (time and human) for the flow of documents to be analyzed. We have as an example the various unverified documents in Nampula. In a timely manner, MISAU communicated what could be happening at that location and having an influence on the results of the audit (See attached emails). The first survey to carry out the fieldwork may have indicated that Nampula is the largest province and with the largest portion of the budget, which implies a greater flow of documents, but what could be verified is that for that location only one auditor from the GAVI was allocated for document verification, which we found insufficient. The team leader went to the tourist island of Mozambique, a place with little budgetary impact for the program. A poor assessment of the allocation of funds was also noted, as the assigned auditor focused his activity on the SPS, an entity that only began managing GAVI funds in mid-2021 and with a smaller portion of the province's budget, consequently lower document flow. These facts resulted in a list of documents that were poorly or not verified by the auditor, a situation to which MISAU drew due attention to GAVI. It should be noted that the province of Nampula reacted to this situation as soon as it received the list of documents produced by the audit (See attached). We suggest that for the next audits, GAVI | DAF / UGEA / EPI Finance Department | Continuous |

| Ref. | Recommendation | Priority | Management response / commitment | Action owner | Timeline |
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| | | | allocates sufficient auditors according to demand, looking at the example cited above from the Province of Nampula. - MISAU accepts the recommendation; This activity can be carried out on a continuous basis, considering that DAF has a Support and Control Unit that functions as a post-expenditure review entity. This Unit complements the various profiles established to verify compliance and execute expenses in e-Sistafe. - MISAU welcomes the recommendation and will continue the ongoing process of updating personnel, whether with documentation or in joint and in-person events to share guidance. | | |
| 4.2.3 | The MoH should: a) Ensure that Gavi funds are not used for the payment of VAT or any other tax charges. b) In cases where national regulations necessitate the initial payment of VAT followed by a subsequent reimbursement, establish a mechanism to systematically track and oversee all VAT expenses incurred in relation to Gavi funds. Additionally, ensure that these funds are reimbursed to the programme's bank account within an acceptable timeframe. | High | - MISAU welcomes the recommendation and will take the necessary steps to guarantee what is stipulated in the financing agreement and the GMR. It is worth mentioning that since 2017, when the Government approved the mechanism for regularizing VAT, MISAU has been certifying its suppliers or service providers, with the General Directorate of Taxes. - MISAU welcomes the recommendation and will continue to take the necessary steps to achieve this | DAF and EPI Finance Department | |
| 4.2.4 | The MoH must explore the possibility of insuring tangible assets, in particular vaccines stockpiles, vehicles and cold chain equipment, either by taking out an insurance policy or by guaranteeing the replacement of vaccines or assets damaged or missing at the expense of the State. Procurement | Medium | - Recommendation accepted. MISAU will explore the possibility of doing so. | DAF/DNSP | |
| 4.3.1 | | High | | | |
| | The MoH should implement the following actions: To complement the recommendation of improvement of the archiving process (see issue 4.2.2), define, document and implement a rigorous process for producing and maintaining complete procurement documentation for all the files, ensuring compliance with national regulations, Grant Management Requirements and Gavi guidelines. | | -The design of terms of reference for the digitization of the archive is in progress. Parallel to this, the DA (Acquisitions Department) is implementing the contracting procedures management system at PHC. | UGEA | December 2025 |

| Ref. | Recommmendation | Priority | Management response / commitment | Action owner | Timeline |
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| | Ensure all procurement activities are appropriately reflected in the Annual Procurement Plans, aligning them with organisational strategies and funding requirements. Avoid conflicts of interest by defining, documenting (i.e. in the anti-fraud and anti-corruption policy and the UGEA manual of procedures, see issue 4.1.4) and implementing adequate segregation of duties in the procurement process, particularly concerning individuals responsible for bid evaluation and receipt of goods. Define, document and implement measures to ensure a fair and competitive bidding process, including adherence to guidelines for the number of bids and transparent evaluation criteria. Ensure the respect of regulation in relation to adequate preparation time for bidders and encourage multiple competitive offers to enhance the quality and transparency of procurement outcomes. | | The annual planning exercise for GAVI-funded activities includes contracting needs. This plan is submitted in parallel to GAVI and DA for incorporation into the annual contracting plan. At DA, Hiring Plans are updated quarterly to ensure that all processes are covered. The anti-corruption clause is already included in the contracts, so there is a declaration of conflict of interest, especially in consultancies for individuals, among others. MISAU welcomes the recommendation. Note that these definitions have a legal basis in Decree No. 79/2022, of December 30th. And procedure in the Bidding Procedures Manual revised in May 2023 | | |
| 4.4 | Vaccine Management | | | | |
| 4.4.1 | The MoH should implement the following actions: Explore reasons for breaching stock levels for extended periods of time to minimise/eliminate their effects to the immunisation programme. Establish a more effective coordination mechanism between the central and provincial levels to ensure that vaccine requests are accurately communicated and fulfilled, and that any overstock situations are promptly addressed. | High | -Stock outages arise for a variety of reasons, reduced global availability (we had the example of Rotarix), approval of doses below what is necessary, delays in the search processes and arrival of the vaccine in the country, delays in obtaining the "green light" (authorization entry by the medicines and vaccines regulatory authority -ANARME), delays in paying co-financing. For vaccines acquired by the government, delays may also occur due to the unavailability of resources for acquisition, contract award, among others. -To mitigate the situation of vaccine shortages in the country, a technical subgroup for planning, quantifying and forecasting vaccines and supplies was established. This group's main objective is to discuss the schedule of vaccine needs and shipments to the country, as well as distribution. The group systematically analyzes existing stock throughout the country's logistics chain (Central, | Logisitics Technical Group / EPI | In progress |

| Ref. | Recommmendation | Priority | Management response / commitment | Action owner | Timeline |
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| | | | State and State). There was a consensus with GAVI to review the denominator used in vaccine planning (we currently use BCG consumption as a proxy) | | |
| | | | The subgroup analyzes green light requests with a view to reducing the time it takes for vaccines to be authorized. Co-financing payment requests are sent in advance and procurement contracts are now made in a timely manner to reduce the risk of disruption. | | |
| | | | Through the Electronic Vaccine System (SELV) and SIS-MA, stocks are monitored monthly, aiming to analyze various aspects of vaccine logistics, from the request, distribution and consumption of vaccines. | | |
| | | | Using SELV, it is possible to visualize imminent stockouts, as well as low stock levels, allowing vaccine stocks to be replenished. | | |
| | | | With these measures, the country has currently been meeting its vaccine needs, in a coordinated effort with its partners (GAVI, UNICEF, etc.). | | |
| 4.4.2 | The EPI should implement the following actions: - Develop standard operating procedures for physical | High | At the moment, all guidance on vaccine management can be found in the "PAV Manual", available at all levels. | Logisitics Technical Group | Completed |
| | stock management and verification, including biannual assessments and quarterly reports, as outlined in GMR 19. Ensure these processes are strictly followed and reports are submitted to Gavi within specified timeframes. | | There is a plan to review and distribute this manual, since, with the introduction of new vaccines and the emergence of new vaccine management and cold chain technology tools, there is a need to standardize and update management procedures, as well as the | Logisitics Technical Group | |
| | Rationalise the use of stock data management systems and avoid duplication of data processing, taking into consideration the possible limited access to | | establishment of policies that must be publicized and followed by everyone. | ' | December 2025 |
| | networks, especially at health facility level. - Implement a robust tracking system for vaccine deliveries to ensure that qualitative and quantitative data is accurately captured and reconciled across all | | On the other hand, to facilitate users, Standard Operating Procedures (SOP) for managing vaccines and supplies, such as for the use of SELV and the cold chain, can be drawn up in a summarized form, based on the PAV manual. | | |
| | levels, minimizing the risk of stock discrepancies and wastage. | | The country is currently using a single electronic vaccine logistics system (SELV), from the Central, | | |

| Ref. | Recommmendation | Priority | Management response / commitment | Action owner | Timeline |
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| | | | Provincial and District levels, requiring the expansion of this system to health units where data visibility at this point is currently done through the platform DHS2 (SISMA) | Logisitics Technical Group | Completed |
| | | | The current implementation of PAV's eLIMS has capabilities that allow monitoring the movements of vaccines at various levels, however it still needs some refinement in its functionalities as well as expansion to lower levels such as the Health Unit. On the other hand, it is also essential to train users at all levels so that they have a better understanding of stock management procedures. | | |
| 4.4.3 | The MoH should implement the following actions: Complete the manual of procedures and ensure its distribution, training, and monitoring of practices; Enforce the FEFO rule for vaccine distribution to minimise waste and ensure the oldest stock is used first. Train staff on proper stock rotation practices and conduct periodic checks to ensure compliance. Establish protocols for the regular inspection of vaccine expiration dates and the immediate removal of expired vaccines from active stock. Reorganise storage spaces to eliminate clutter and ensure all items, especially flammable materials, are stored safely and securely. Assess whether the storage capacities are appropriate for an adequate storage of dry material. | High | Although the EPI manual requires an update, vaccine management procedures and vaccination materials are outlined in it. This includes the assumptions for calculating the needs for vaccines and vaccination material, procedures for requesting vaccines as well as procedures for recording the movement of vaccines and vaccination material (These procedures are included in the EPI manual Version of 2019). The data reported in SELV includes columns to record the batch number, manufacturer, expiration date, available stocks, among others. This information contributes to the correct execution of vaccine distribution procedures, always strictly respecting the FIFO principle at all levels. With the records mentioned above, before starting the distribution process, it is possible to view all the products available in the warehouse, including their expiration dates, which makes it possible to choose the products that expire first to be sent. | Logisitics Technical Group Logisitics Technical | Completed/Permanent |
| | | | Vaccine stocks are monitored regularly, using vaccine management systems that are implemented in all warehouses. This activity is complemented by periodic inventories, with information shared monthly with interested parties. It is important to highlight that in addition | Group | Completed/Permanent |

| Ref. | Recommendation | Priority | Management response / commitment | Action owner | Timeline |
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| | | | to the mechanisms highlighted above, the immediate removal of expired vaccine from warehouses and freezers is part of the logistical procedures in place in all health unit warehouses and freezers. Due to the large volume of vaccines circulating in | | |
| | | | the central warehouse, the capacity previously installed for storing dry material is well below what is necessary for this level, resulting in the occupation of space intended for packaging and shipping orders. | CMAM | December 2025 |
| | | | The request for financing is underway to expand dry storage capacity with a view to mitigating the risk. | | |
| 4.4.4 | The MoH should implement the following actions: - Update the EPI manual of procedures to detail how cold chain equipment must be managed at the various levels and specify roles and responsibilities; - Develop detailed maintenance plans and schedules, including roles and responsibilities and expected actions | Medium | At the moment, instructions on how to use vaccines for conservation can be found in the current EPI Manual, however, in the case of state assets, the description of the management of cold chain assets can be found in the procedures manual for government assets. State. | Logisitics Technical Group | December 2025 |
| | to prevent and to cure potential anomalies on cold chain equipment; | | There are rules and procedures posted on PAV glaciers in the districts that provide guidance on daily, weekly and monthly maintenance, as well as procedures to be followed in cases of breakdown. | | |
| | | | Each Province has a Maintenance Technician, who is responsible for repairing all glaciers in the Province. This insufficient number of technicians per province results in a delay in responding to district requests for repairs. To mitigate the delay, the creation of a Maintenance Center is in the process of consolidation and to align with the nucleus' strategy, the review of SOPs is underway, including the constant mobility of technicians from each province who have contributed to the management of equipment of the cold chain. | | |
| | | | The maintenance sector has managers at the central and provincial levels who develop | Logisitics Technical Group | December 2025 |

| Ref. | Recommendation | Priority | Management response / commitment | Action owner | Timeline |
|------|---|----------|---|-------------------------------|---------------------|
| | - Implement strict temperature control measures and regular equipment checks to ensure all storage facilities maintain vaccines within the required temperature ranges. | | preventive and corrective maintenance plans for cold chain equipment with two levels of action | Logisitics Technical Group | Completed/Permanent |
| | | | 1-Central level plan, which contains work that must be carried out by the contracted companies, monitors the activities carried out through the contracted companies (outsourced), from the central, provincial, intermediate and regional deposit, which consists of receiving and verifying the reports | | |
| | | | 2-Provincial level plan, this area of activity is in health units, ensuring the continuous operation of equipment to maintain the quality of vaccines. The Provincial level responds to all district requests regarding the cold chain. The maintenance plan includes instructions on daily, weekly and monthly maintenance. Likewise, the plan describes what must be done in cases of equipment failure or malfunction and contains the contingency plan. | | |
| | | | At all levels of the cold chain, there are maintenance standards and procedures that guarantee regular verification of equipment functioning, from daily temperature recording (available in all PAV coolers and cold rooms), At the moment, all coolers, freezers and refrigerated chambers contain an internal thermometer and a temperature recording sheet, twice a day (morning and afternoon), including weekends and holidays. This record is duly documented at all vaccine storage points. | | |
| | | | In addition to this manual recording available in 100% of the cold chain, the expansion of remote temperature monitoring devices that allow online temperature viewing is underway, namely beyond wireless (available in 100% of cold rooms at the central level , provincial and intermediate warehouses) and cold trace (Already installed in around 800 Health Units in the country and another 600 recently received in the country due to be installed soon). | | |
| | | | The maintenance of cold chain equipment is monitored by PAV maintenance technicians. | | |

| Ref. | Recommmendation | Priority | Management response / commitment | Action owner | Timeline |
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| | | | Every repair carried out, the maintenance technician must confirm and sign the sheet. | | |
| | | | The development of a preventive and corrective maintenance monitoring instrument is underway, carried out by contracted companies and maintenance technicians. | | |
| 4.5 | Monitoring and Evaluation | | | | |
| 4.5.1 | The MoH should implement the following actions: Develop and formalise comprehensive immunisation data quality process and procedures in the EPI manual, to standardise data review and validation practices at all levels of the health system. Formalise controls performed to ensure accuracy, completeness, and timeliness of immunisation data inputs, by Increasing the frequency and thoroughness of data validation meetings – with clear summaries of issues and resolutions. Further refine the estimation of immunisation targets in provinces and municipalities, considering local dynamics and survey gaps. | High | It is planned to review and update the PAV manual, which will include a detailed chapter on data quality assessment procedures. The preparation of the National Immunization Strategy is underway. The preparation of a pocket manual on data quality assessment was planned. The review of the feedback model for the provinces is underway. | EPI Technical Group EPI Technical Group Grupo Técnico de M&A e do PAV Unidade de M&A do PAV | December 2024 December 2024 December 2024 August 2024 |
| | | | In 2023, the Program analyzed alternative target estimates, having defined the use of BCG as a proxy to estimate births. This measure has proven to be better at correcting the challenge of goals. | EPI Technical Group | Completed |
| 4.5.2 | The MoH should implement the following actions: - Develop and formalise a comprehensive procedure for supervision in the EPI manual, to standardise supervision practices at all levels of the health system. | Medium | It is planned to review and update the PAV manual, which will include a detailed chapter on supervision procedures and a reporting model | EPI Technical Group | December 2025 |
| | Adhere to the required frequency of supervision and systematically formalise results and follow-up actions in the supervision reports. Improve the reporting process to make sure supervision results from lower levels of the health system are aggregated and communicated for further analysis and decision. | | The number of supervisions to be carried out by each management level is foreseen in the PAV activity plan. This year, PAV is systematizing supervision findings electronically, using FESP and electronic AQD. | EPI Technical Group | In progress |