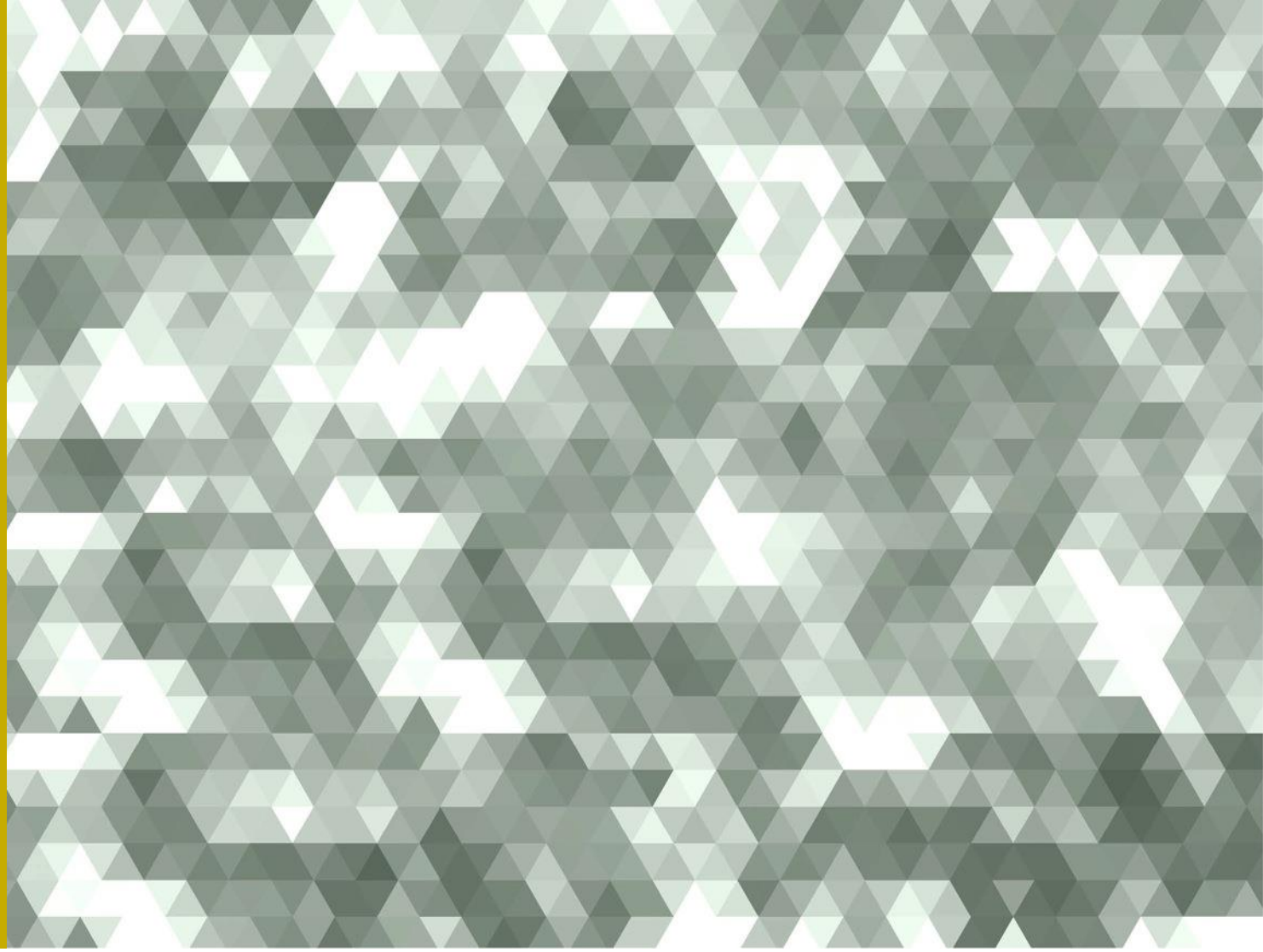

Audit Report

Global Fund Grants to the Republic of Cameroon

Procurement and Supply Chain Management

GF-OIG-16-020
26 July 2016
Geneva, Switzerland

Non-compliant expenditures – US$261,602
Proposed recoveries – US$261,602

The Global Fund
Office of the Inspector General

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I. Background

The Republic of Cameroon, situated in Central Africa, is divided into ten semi-autonomous regions with an estimated population of 22.8 million people in 2014. Cameroon is a lower middle income country with a gross national income of US$1,350 per capita in 2014.[1]

In 2013, total health expenditure was US$67 per capita, representing 5.1% of gross domestic product, which remains lower than the average of 5.6% for lower middle income countries in Sub-Saharan Africa. Cameroon has not improved on this ratio since 2009 when it produced 'Vision 2035', a high-level paper that sets out the country's development strategy for the next decades, including the objective of guaranteed access to quality health care for the majority of the population.[2] The country ranks 130th out of 167 countries in Transparency International's 2015 Corruption Perceptions Index[3] and 153th out of 188 countries in the United Nations Development Programme's 2015 Human Development Index. [4]

In recent years, Cameroon has experienced political and economic stability. However, the Extreme North and North regions present elevated security risks due to the presence of the Boko Haram terrorist group.

Malaria
Malaria is endemic and seasonal for six months of the year in the northern part of the country. In the rest of the country (covering 71% of the population), malaria is endemic and perennial with a high risk of transmission throughout the year. All cases are due to the *Plasmodium falciparum* parasite species. Pregnant women and children under five years are the most vulnerable groups.[5]

In 2013, as per the World Health Organization's (WHO) most recent data, the country had 5.2 million estimated malaria cases (2.4% of the world's burden) and 9,400 estimated deaths due to malaria. In 2014, there were 3.7 million suspected cases, 1.4 million presumed and confirmed cases, 471,000 cases received inpatient treatment, and 4,398 deaths were reported due to malaria.[6] In 2013, malaria accounted for 29% of all medical consultations, 50% of all hospital admissions, 22% of all deaths in health care facilities, and 45% of deaths in children under five years.[7]

HIV/AIDS
In 2014, as per the WHO's most recent data, an estimated 660,000 people were living with HIV in Cameroon (1.8% of the world's burden). HIV prevalence among adults (between 15 and 49 years) was 4.8%. A total of 48,000 new infections and 34,000 deaths from AIDS were estimated per year. Only 22% of people living with HIV in need of treatment (according to WHO guidelines adopted by the country), were receiving treatment. HIV prevalence among pregnant women was 5%. An estimated 66% of pregnant women in need of antiretroviral treatment for the prevention of mother-to-child transmission were receiving treatment.[8]

In 2012, per the most recent survey data, HIV prevalence was 37% among men who have sex with men and 37% among female sex workers. The country criminalizes same-sex activities and sex work, which affects access to HIV prevention and treatment services. Populations living with HIV/AIDS are stigmatised. According to a 2011-2012 survey on demography and health, 42% of the population demonstrated discriminatory attitudes towards people living with HIV.[9]

[1] World Bank data: World Development Indicators, March 2016
[2] World Bank data: World Development Indicators, March 2016
[3] Transparency International, 2015
[4] United Nations Development Program's (UNDP) Human Development Report 2015
[5] World Malaria Report, 2015; Malaria concept note (2014)
[6] World Malaria Report, 2015
[7] Malaria concept note (2014)
[8] AIDSinfo country fact sheet: Cameroon, 2016; Global update on the health sector response to HIV, WHO report, 2014
[9] AIDSinfo country fact sheet: Cameroon, 2016

Tuberculosis
Populations at risk from tuberculosis (TB) are those co-infected with HIV, people in congregate settings (such as prisons) and TB patients' close contacts, especially children under six years.[10]

As per the WHO's most recent data, in 2014 estimated TB incidence in Cameroon was 50,000 cases (0.5% of the world's burden) or 220 cases per 100,000 people (of which 88 cases were HIV positive). 87% of TB patients in Cameroon know their HIV status. In 2014, 26,038 TB cases were notified of which 126 were confirmed as multi-drug-resistant TB (MDR-TB) cases. The TB treatment success rate was 82% and mortality rate 6% based on 2013 treatment enrolment data. The MDR-TB treatment success rate was 92% based on 2012 treatment enrolment data, a rate significantly above the world average. Cameroon has been one of the pilot countries for short-treatment regimens for MDR-TB, resulting in effective and well-tolerated treatment.[11]

Funding context

Of the three diseases, the fight against HIV currently receives most of the funding in country, followed by malaria and TB:

- in 2015, the United States Government funded approximately 40%, the Government of Cameroon 33% and the Global Fund 20% of HIV interventions;
- in 2014, the Global Fund funded approximately 47% of malaria and 61% of TB interventions, and the Government of Cameroon 44% and 23%, respectively;
- other donors and principal technical partners include the Clinton Health Access Initiative, French and German development agencies, the Government of the People's Republic of China, the Joint United Nations Program on HIV/AIDS, Management Sciences for Health (MSH), UNITAID, the United Nations Children's Emergency Fund, the United Nations Population Fund, and WHO.[12]

Between 2002 and 2016, the Global Fund signed 14 grants with Cameroon totaling US$507 million, of which US$355 million has been disbursed (figures from 30 June 2016). The funding allocation for 2014-2017 totals US$288 million. Part of this allocation was spent under previous grants. Currently, four grants with a total value of EUR175 million[13] (US$197 million) are active, all signed within the framework of the Global Fund's new funding model:

Table 1: Active Global Fund grants to Cameroon

Active grants	Grant amount, EUR	Grant amount equivalent, US$	Principal Recipient
CMR-H-MOH	80.8 million	88.0 million	National AIDS Control Program (CNLS)
CMR-H-CMF	10.4 million	11.3 million	Cameroon National Association for Family Welfare (CAMNAFAW)
CMR-M-MOH	77.2 million	90.4 million	National Malaria Control Program (PNLP)
CMR-T-MOH	6.4 million	7.0 million	National TB Control Program (PNLT)

For the grants implemented by the national disease programs, the Global Fund Secretariat disburses a significant share of funds to centralized procurement agents of health and certain non-health products (in 2015, 71% of disbursed funds for the HIV grant, 78% for the malaria grant and 23% for TB grant). Remaining funds are managed by the Principal Recipients, with disbursements made to their sub-recipients and providers of health product storage and distribution services: the National Medical Procurement Center (CENAME, central medical store) and the autonomous Regional Funds for Health Promotion (regional medical stores) in ten regions.

[10] TB grant, program description
[11] World TB Report, 2015
[12] Malaria concept note (2014), HIV and TB concept note (2015)
[13] To minimize currency fluctuation risks, grants to Cameroon are denominated in EUR, as Cameroon's national currency is pegged to it.

II. Scope and Rating

01 Audit Objective

The objective of the audit of Global Fund grants to the Republic of Cameroon was to assess whether the portfolio's procurement and supply chain have effective controls and assurance mechanisms, and are coordinated with other funding sources, to ensure timely and quality access to health products by the grant beneficiaries.

02 Audit Scope

As noted above, the Global Fund's grants to Cameroon are highly focused on procurement and the supply chain. These areas, in particular supply chain management, were identified as the highest risk areas during the audit planning stage, as they are critical to ensuring that people receive the drugs and health products they need. As a result, they form the audit scope. The audit did not focus on other risk areas, such as programmatic and performance management, financial management or the quality of health services, due to existing risk mitigation and assurance mechanisms.

The audit focused on the period from January 2014 to March 2016 and the three active grants to the national disease programs during this period (94% of the value of all four currently active grants):

- CMR-011-G11-H (replaced by the grant CMR-H-MOH in February 2016), implemented by the National AIDS Control Program;
- CMR-910-G07-M (replaced by the grant CMR-M-MOH in February 2015), implemented by the National Malaria Control Program; and
- CMR-910-G09-T (replaced by the grant CMR-T-MOH in February 2016), implemented by the National TB Control Program.

Apart from interviews, document and system reviews, the audit included site visits to CENAME warehouses, laboratories of the National Laboratory for Medicines Quality Control (LANACOME), warehouses of the regional medical stores in five out of the ten regions in country, as well as stores and pharmacies in 13 hospitals and five other health facilities in these five regions.

The five regions selected for the review, on a sample basis, represent 73% of eligible patients receiving antiretroviral treatment, 48% of insecticide treated nets distributed in 2015, and 63% of TB cases notified in 2014.[14]

The previous OIG audit of Global Fund grants to Cameroon took place in 2009 (GF-OIG-09-010). Since 2009, significant improvements have been made to mitigate financial and fiduciary risks as well as put in place assurance mechanisms for programmatic activities. However, the previous outstanding recommendations regarding procurement and supply chain management are still relevant and have been addressed in the new agreed management actions.

03 Rating[15]

Operational Risk	Rating	Reference to findings
Procurement controls and assurance mechanisms	Partially effective	03
Supply chain controls and assurance mechanisms	Ineffective	01, 02, 03, 04

[14] Principal Recipients' monitoring and evaluation data
[15] See Annex A for the rating definition

III. Executive Summary

Cameroon is one of the Global Fund's core countries, currently with the 15th largest funding allocation worldwide (US$288 million from 2014-2017). It is also one of the 20 countries that are part of the Global Fund's "Implementation through Partnership" project, an initiative launched in late 2015 to assist countries which have difficulties in absorbing funds for greater impact. The Government of Cameroon has also continuously increased its contributions to fight the three diseases.

Implementation arrangements for Global Fund grants to Cameroon have changed in recent years and are highly focused on procurements of health products through the Global Fund's centralized procurement agents and product distribution through the supply chain in the country. This audit focused on the assessment of the implementing partner controls and the Secretariat's assurance mechanisms in these areas.

Procurement controls and assurance mechanisms

The Secretariat has significantly mitigated procurement risks in the Cameroon portfolio through the use of Global Fund centralized procurement agents. Health product procurement plans are coordinated with other partners. However, the Principal Recipients do not have the controls to verify that procurement agent deliveries are received in full. Delivery tracking is complex for the Principal Recipients due to the large number of products and deliveries although the OIG was able to confirm reception through CENAME records. The large number of deliveries, their complexity and significant value (US$45.2 million in 2015) carry high risks, for example, unjustified payments to procurement agents or loss of health products. In 2016, the Secretariat introduced quarterly centralized procurement reports, which should assist in simplifying tracking. However, the Secretariat does not have a mechanism to monitor whether Principal Recipients are complying with tracking deliveries.

Principal Recipients' controls and the Secretariat's assurance mechanisms over local procurements (about US$2 million in 2014-2015) are effective. However, given the material weaknesses in delivery confirmation, this area is rated overall as **partially effective.**

This audit did not reassess the Secretariat's overall controls for procurements through its centralized procurement agents, which have been reviewed in the audit of Procurement and Supply Chain Management (GF-OIG-15-008) and followed up in the audit of Internal Controls (GF-OIG-16-007).

Supply chain controls and assurance mechanisms

Storage capacity and conditions for pharmaceutical products – Storage space was found to be inadequate, and temperatures and the level of humidity too high in CENAME, as well as in four of the five regional medical stores visited by the OIG. Since health products are stored for prolonged periods, there are high risks of spoilage, which means they are less effective in treating patients. The Principal Recipients do not ensure quality control at different levels of the supply chain which is necessary considering the poor conditions products are stored in at the national and regional levels.

Procurements of these products is expected to increase (from US$14.9 million in 2015 to US$17.8 million in 2016 and US$52.9 million in 2017)[16] to accompany an anticipated planned increase in the number of patients receiving antiretroviral treatment (22% by the end of 2016 and an additional 33% by the end of 2017). This requires immediate actions by the Secretariat and the implementing partners to improve current storage and distribution arrangements. Only partial action plans have been designed so far. The plans are primarily aimed at increasing storage space, staggering procurements and decentralizing product stocks.

[16] This does not include procurements of insecticide treated nets (US$30.3 million in 2015), which are delivered by the procurement agent directly to the regional medical stores.

Inventory – Despite a number of internal reviews to improve and strengthen inventory management, the records systems and associated controls remain ineffective in CENAME and have led to the loss or theft of health products. For example, products worth US$261,602 could not be located during or after the audit. This amount constitutes non-compliant expenditure and is proposed for recovery. CENAME also has difficulties in providing timely and accurate inventory reports to the Principal Recipients, which compromises proper monitoring of health product availability. An institutional audit of CENAME is expected to take place in 2016.

Two of the Principal Recipients' (National HIV and Malaria Control Programs) inventory records and controls are also not satisfactory, compromising the accountability of procured and distributed health products and leading to loss or theft. In contrast, the records and controls of the third Principal Recipient (National TB Control Program) are satisfactory.

Monitoring of health product availability – Malaria and TB control programs have implemented tools to monitor stock availability at the national and regional levels. However, none of the three disease programs regularly monitor stock levels, which can lead to sub-optimal procurement and distribution decisions, and product stock-outs or overstocking in the supply chain. A logistics management and information system (LMIS) to assist monitoring is expected to be in use as of 2017.

Out of the five regional stores visited by the OIG, four had material stock-outs of HIV or malaria drugs lasting between a few days and two months, during which deliveries could not be made to health districts and facilities. Out of the 18 visited health facilities, five had material stock-outs of HIV drugs of between one and five months. Six health facilities had material stock-outs of malaria drugs between several weeks and six months, resulting in treatment interruptions to patients.

Monitoring of health product consumption – None of the disease programs monitor consumption patterns. Malaria product consumption data in 2015 showed discrepancies with patient numbers. A drug to treat severe malaria and a simple malaria drug were consumed at respectively 70% higher and double the rate expected for the number of patients served.

Overall supply chain monitoring and oversight – The Secretariat and various technical partners provide technical assistance to the Country Coordinating Mechanism, the Ministry of Public Health and the disease programs on various supply chain management matters, in particular on LMIS implementation and through the Global Fund's "Implementation through Partnership" project. The Secretariat also mandated a variety of supply chain reviews by the Local Fund Agent in 2014-2016, including the supply chain management capacity assessments prior to signature of the current grants. These assessments reported major issues in most of the supply chain management processes. The Ministry of Public Health's dedicated internal audit unit for Global Fund programs also undertakes limited reviews of inventory and stock availability. However, despite these reviews, action plans to address them are still being implemented by the partners. Assurance mechanisms need to be strengthened in high risk areas such as inventory management, distributions and supply chain monitoring.

Implementing partner controls over supply chain and the Secretariat's assurance mechanisms in this area are rated overall as **ineffective.**

IV. Findings and Agreed Management Actions

01 Storage capacity and conditions at national and regional levels

Inadequate storage capacity and conditions for health products at national and regional levels lead to high risks of spoilage, weak inventory controls, and loss or theft.

All medicines and pharmaceutical consumables procured under Global Fund grants are stored in CENAME warehouses in the capital Yaoundé and in N'gaoundéré (in the north of the country). Procurements of these health products totaled US$14.9 million in 2015 and are expected to increase to US$17.8 million in 2016 and US$52.9 million in 2017.[17] Based on requests from the disease programs as Principal Recipients, CENAME distributes the products to ten regional medical stores governed at a regional level, for onward distribution to health districts and facilities.

Storage capacity and conditions are not satisfactory in CENAME and most of the regional stores, which store drugs for prolonged periods:

- The OIG visited eight of the nine CENAME warehouses in Yaoundé, all of which are overfilled with products, exceeding recommended storage density levels several times, according to WHO guidance. The design of the warehouses does not facilitate air conditioning, and CENAME does not have the infrastructure to secure enough electricity to air condition all its warehouses. They are dusty with an average temperature of 27°C (with a maximum of 33°C) as per recent records. Relative humidity is measured in only two warehouses with an average 74% (with a maximum 87%), exceeding the recommended norms for drug storage. The capacity of the two cold rooms is insufficient. One of them was out of order at the date of the audit with a temperature of 30°C. It contained pharmaceutical products, although these were not funded by the Global Fund.
- Four of the five regional stores visited by the OIG were crammed with products, exceeding recommended storage density. Three of the ten regional stores in the country have satellite stores, however, they have not been considered by the disease programs as a solution to alleviate lack of storage space at a regional level. None of the regional stores visited were air conditioned and they had an average temperature of 27°C.

Such storage conditions can spoil health products, affecting their quality and consequently their effectiveness in treating patients. Warehouse overfilling compromises inventory controls and led to health products being stolen from CENAME on a number of occasions in late 2015. Furthermore, as noted in Section IV 02, pharmaceutical products worth US$261,602 could not be found during or after the audit.

The root causes of these storage conditions are primarily due to the age and design of the warehouses, CENAME's resource limitations, as well as weak supervision. Overfilling the warehouses is due to inadequate distribution planning. Conditions have also deteriorated due to increased program interventions. With the continued upscale of the HIV program, conditions are not expected to improve. The number of patients receiving antiretroviral treatment is expected to increase by 22% by the end of 2016 and by an additional 33% by the end of 2017.[18]

The above issues are in the process of being addressed, with help from the Global Fund and other technical partners. The plans are primarily aimed at increasing storage space, staggering procurements to reduce the required storage space, and decentralizing product stocks to reduce the required storage in CENAME. About 10% of CENAME's current storage capacity is used for the three disease programs, with the rest for its other core activities. MSH has estimated that 1,000 m² of additional storage space is required in CENAME, 500 m² in one regional store and 220 m² in another store for the disease programs. It recommends renovations and rearrangements in two other

[17] These do not include procurements of insecticide treated nets (US$30.3 million), which are delivered by the procurement agent directly to the regional medical stores.
[18] HIV grant performance framework data

regional stores. CENAME is preparing to open additional warehouses in Douala and has indicated that it plans to improve storage conditions through increased space, an audit of electrical grid capacity, floor renovations and other measures. The regional stores also receive technical assistance from the German development agency.

Agreed Management Action 1: The Secretariat, in co-operation with technical partners and the Ministry of Public Health, will organize and finance an assessment of the supply chain in Cameroon. Such assessment shall be directed towards long-term systematic improvement of the supply chain (e.g. cost effectiveness of the current/future model, considering options for outsourcing to the private sector, etc.). The Secretariat will support the Government and partners to develop a road map based on the findings of this assessment.

Owner: Head of Grant Management
Target Date: 30 June 2017

02 Inventory controls and operational capacity of the central medical store

Inadequate inventory controls and weak service capacity in CENAME lead to loss or theft of health products, and consequently service disruptions. Products worth US$261,602 could not be located during or after the audit.

Despite dealing with large volumes of health commodities, key internal controls related to CENAME's core services, storage and distribution of health products, are not satisfactory:

a) Inventory records and controls:

- Global Fund HIV and malaria products worth US$1.9 million, recorded in CENAME's stock cards, could not be found in the physical stock during the OIG stock counts. This was also because the stock cards had not been updated for up to several months, leading to increased risks of loss or theft of the products. Moreover, the stock count did not cover some of the warehouses where the products were stored. Following the audit, and at the Secretariat's request, the Ministry of Public Health set up a commission to undertake additional stock counts and identify records for the products that might have been distributed. The review by the commission was accompanied and verified by the Local Fund Agent. Most of the products were found or traced through distribution documents during this exercise; however, products worth US$261,602 were confirmed as having gone missing in CENAME's warehouses (see Annex C for details). This amount constitutes non-compliant expenditure and is therefore proposed for recovery.
- CENAME was not able to provide proofs of receipt for 792,612 doses of injectable Artesunate, (60 mg), an antimalarial drug distributed in 2015 to the regional medical stores (funded by the Global Fund and worth US$1.8 million). The Local Fund Agent subsequently confirmed the receipt of these drugs after visiting five of the ten regional stores and verifying reception reports from the five other regional stores.

  The OIG noted that CENAME's distribution reports for this product have not historically been accurate. Distribution quantities for each funding source (the Global Fund and UNITAID) in the reports submitted in 2015 to the National Malaria Control Program were different from those communicated to the OIG in April 2016.
- Due to the delays in updating the electronic inventory to record product receptions and distributions, up-to-date inventory registers are not available in CENAME. In April 2016, CENAME provided the OIG with a provisional inventory register as of 31 December 2015. As of April 2016, CENAME still did not have data from its satellite store in N'gaoundéré on its 2015 year-end inventory as of 31 December 2015 and for distributions during 2015. These issues compromise data completeness and accuracy for proper supply chain monitoring by the disease programs (see Section IV 04).
- Inventory controls are not satisfactory at the warehouse level. Warehouse managers participate in product deliveries but do not regularly sign off delivery reports for products received in their warehouses. Therefore the accountability for drugs is not clear.

  Single stock cards are used for different product lots with different expiry dates and for products stored in different warehouses, and no controls are in place to verify the stock cards. This compromises accountability and inventory management practices.

b) Reporting requirements: CENAME has difficulty in providing timely and regular reports in accordance with its contractual obligations:

- In 2015, only seven out of 12 monthly inventory reports were submitted to the National Malaria Control Program and eight out of 12 reports to the National AIDS Control Program. This was an improvement compared to 2014 when no regular inventory reports had been submitted. The disease programs also have difficulties in obtaining real time inventory data

from CENAME. This compromises data availability for proper supply chain monitoring (see Section IV 04).

- Quarterly technical reports on the storage conditions of products are not submitted to the disease programs; therefore, the impact of storage conditions on the quality of the products cannot be monitored or escalated effectively.

c) Distribution services:

- CENAME has difficulties in ensuring the timely distribution of products to the regional stores. It is normal that product orders from the regional stores take time to be administered through the disease programs who submit distribution requests to CENAME. However, the OIG, in its sample, calculated that the median time between an order and its receipt was 25 days with variances of between three and 57 days. These delays may lead to periodic product stock-outs at health facility level and treatment interruptions (see also Section IV 04).
- CENAME does not have any cold chain transport which is required for certain products. This may impact the quality of transported products. Budget provision for cold chain transport has been made in the new HIV grant.

The reasons for weak inventory and reporting controls are primarily due to management and organizational issues in CENAME, and the overfilling of its warehouses. CENAME's agreements with the disease programs do not give distribution timelines. This means that CENAME normally distributes products for the disease programs at the same time as larger quantities of CENAME's core business products, which causes distribution delays. The OIG also noted that, as of April 2016, only two out of the 12 invoices submitted by CENAME to the disease programs during 2015 had been paid.[19] This was due to settlement issues between the disease programs and CENAME, which may also contribute to distribution delays. CENAME and the regional stores do not receive any advance payments for their distribution services from the disease programs.

In May 2015, MSH provided a stock management training course to CENAME staff. In December 2015, a new Director General of CENAME was appointed. The Secretariat and other technical partners, including WHO and the French development agency, have consistently advocated for the Ministry of Public Health and CENAME to address its management issues. They have highlighted the need for an institutional audit of CENAME. In April 2015, Terms of Reference were produced for the audit, and funds were made available by the Ministry of Finance in April 2016. At the time of writing, the audit has not started yet.

Based on the Secretariat's requests, the Local Fund Agent undertook a number of targeted supply chain management related reviews in 2014-2016, including supply chain management capacity assessments prior to signing new grants in 2015-2016. These reviews reported major issues in health product storage, inventory and distribution. However, the issues identified in this audit remain unresolved. The Local Fund Agent's regular grant progress update reviews analyse health product inventory and stock availability based on inventory records. However, these reviews do not involve physical stock counts in CENAME or verifications of distributions. The Ministry of Public Health's dedicated internal audit unit for Global Fund programs, during its risk and sample based audits, has undertaken stock counts in CENAME and at selected regional stores and health facilities, as well as analysed stock availability. Nevertheless, CENAME's inventory controls remain ineffective.

[19] Out of the five invoices submitted to the National AIDS Control Program, one has been paid. None of the four invoices submitted to the National Malaria Control Program has been paid. Out of the three invoices submitted to the National TB Control Program, one has been paid.

Agreed Management Action 2: Taking into account the findings of the institutional audit of CENAME performed by the Ministry of Public Health and the Ministry of Finance, the Secretariat, in cooperation with in-country partners and relevant ministries, will develop an operational plan to improve in the short and medium term the storage and distribution services at CENAME level, including the responsibilities of the disease programs.

Based on the content of this operational plan, the Secretariat will review its assurance arrangements, including the use of the Local Fund Agent and the Ministry of Public Health's dedicated internal audit unit, with more emphasis on inventory and distribution reviews.

Owner: Head of Grant Management
Target Date: 31 March 2017

Agreed Management Action 3: Based on the findings of this report, the Secretariat will finalize and pursue, from all entities responsible, an appropriate recoverable amount. This amount will be determined by the Secretariat with its evaluation of applicable legal rights and obligations and associated determination of recoverability.

Owner: Recoveries Committee
Target Date: 31 December 2016

03 Inventory controls of the disease programs

Inadequate inventory controls by the disease programs lead to loss or theft of health products and service disruptions.

In terms of inventory controls, the OIG found that records and controls are satisfactory in the National TB Control Program. It maintains an inventory register, where incoming products and distribution by CENAME are recorded, and undertakes stock counts in CENAME every quarter.

However, inventory records and controls are not effective at the National HIV and Malaria Control Programs, which are responsible for the management of the health products stored and distributed by CENAME. In 2015, procurements totaled US$10.9 million for HIV and US$3.7 million for malaria health products.[20] The OIG identified the following issues:

- Program representatives are not present when products are delivered to CENAME and they do not sign off or archive the delivery reports regularly, compromising the accountability for the received products.
- CENAME's distributions are not monitored to confirm they take place according to distribution plans.
- Programs cannot reconstitute their inventory data to compare with data from CENAME to confirm that it is accurate. Quarterly stock counts are either not undertaken or documented as foreseen in the agreements between CENAME and the disease programs.

As also noted in Section IV 02, weak inventory controls lead to loss or theft of the health products, and compromise data availability for proper supply chain monitoring.

In terms of controls over health product deliveries from the centralized procurement agents, none of the disease programs have tools to reconcile Global Fund payments to the procurement agents (worth US$45.2 million in 2015)[21] with the quantities of products received. This could lead to the risks of payments that cannot be justified or loss of the health products.

The OIG found that for a sample of verified payments, the Malaria and TB Control Programs were able to produce proofs of receipt for the relevant products. However, the HIV Control Program could not produce proof for a sample of payments totaling US$7.8 million for product deliveries in 2014-2015. The OIG was, however, able to confirm the receipt of these products as they were recorded in CENAME's stock cards through an independent work process carried out by warehouse staff.[22]

The control weaknesses noted at the disease program level are primarily due to weak management, capacity and staffing issues. Difficulties also exist in obtaining regular and timely inventory data from CENAME.

Tracking of Global Fund payments to centralized procurement agents is complex for the Principal Recipients, in particular due the numerous HIV products, orders amendments, deliveries and payments. The Principal Recipients do not have accurate real time data to reconcile deliveries with payments. In 2016, the Secretariat's Sourcing Department introduced quarterly "grant account statements" for the centralized procurements of most health products. These are shared with the Country Teams and the Principal Recipients and should assist with reconciliations at the end of each quarter. However, the Secretariat does not have a mechanism to monitor the Principal Recipients' compliance in this area.

[20] Excluding procurements of insecticide treated nets (US$30.3 million), which are delivered by the procurement agent directly to the regional medical stores

[21] US$10.9 million in procurements of pharmaceutical products for HIV Control Program, US$3.7 million for Malaria Control Program, US$0.3 million for TB Control Program, as well as US$30.3 million in procurements of insecticide treated nets for Malaria Control Program

[22] The procurement agents provided the waybills confirming receipt of the related HIV product deliveries; however, most of them indicated only the volume and weight but no quantities of the received products. The OIG subsequently confirmed that the relevant product quantities had been recorded as received in CENAME's stock cards.

The findings reported in this section will be addressed through the Agreed Management Action 2 (see Section IV 02) as well as through the Agreed Management Action 1 from the audit of Internal Controls (GF-OIG-16-007).

04 Supply chain monitoring and oversight

Poor supply chain monitoring by the disease programs and weak oversight of the monitoring mechanisms may result in unavailability of health products for patients on time and in the right quantity and quality.

The Ministry of Public Health and the Country Coordinating Mechanism play a limited oversight role of the supply chain. This has led to insufficient attention being paid to supply chain issues at the disease programs:

a) **Quality control of health products:** All principal health products for Global Fund grants are procured through the Global Fund's centralized procurement agents with quality control at this level. However, the disease programs do not ensure any quality control of health products on a sample basis at various levels of the supply chain. Considering the poor storage conditions, in particular the high temperatures, in CENAME and various regional stores where the products are stored for long periods, their quality can be significantly compromised. This carries the risk that the products may be ineffective in treating patients.

b) **Monitoring of health product availability:** Although the Malaria and TB Control Programs have established tools to monitor stock availability in the supply chain at the national and the regional levels (contrary to the HIV Control Program), none of the disease programs regularly monitor stock levels. This could lead to sub-optimal procurement and distribution decisions as well as periodic stock-outs, treatment interruptions, or overstocking. For example, in September 2015, due to a sudden increase in regional demand for injectable Artesunate, the national stock decreased 45 times during this month, which almost caused a national stock-out. Although the rationale for the stock levels was related to changes in treatment regimen, the increase came unexpectedly because the regional stock levels and consumption patterns had not been monitored closely.

   A number of regional medical stores and health facilities visited by the OIG had material stock-outs. These could have been due to various factors, including weak supply chain monitoring or late distributions. Out of the five regional stores visited, the following had stock-outs lasting between a few days and two months, during which deliveries could not be made to health districts and facilities:

   - three stores (supplying 49% of HIV patients in country) did not have one or more HIV drugs;
   - four stores (supplying 58% of patients) had insufficient or no HIV test kits; and
   - four stores (supplying 36% of the country's malaria drug consumption) did not have one or more malaria drugs.

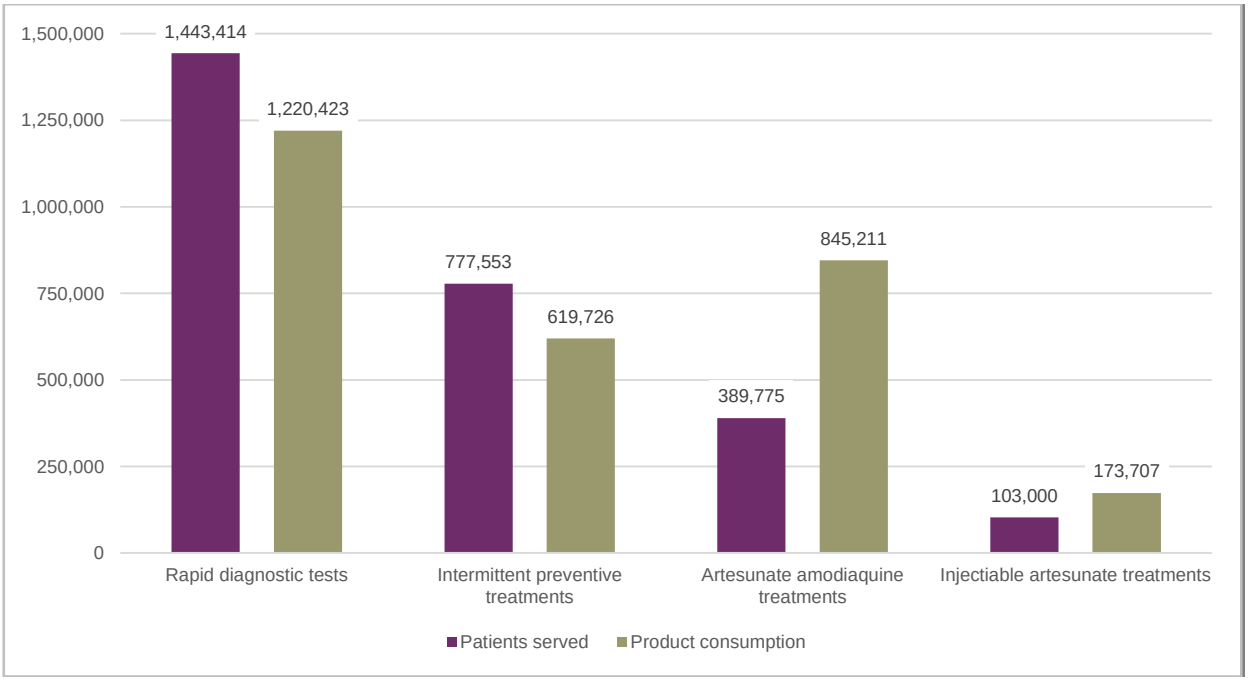
   Most of the 18 health facilities visited did not maintain buffer stocks of health products (these were ordered only for the expected consumption). Furthermore:

   - two facilities (servicing over 3,000 patients in total) did not have one or more HIV drugs for five months and three (over 5,000 patients in total) for one month;
   - three (over 2,000 patients in total) did not have HIV test kits or test tubes for several months.
   - two did not have one or more malaria drugs for six months, two for several months and two for several weeks (over 67,000 patients in total).

c) **Monitoring of health product consumption:** The disease programs do not use consumption data reported by the health facilities to monitor the consumption rationale. The Malaria Control Program's monitoring and evaluation database includes such data but it is not used. The HIV Control Program's database does not include such data. Lack of such monitoring prevents discovery of abnormalities in product consumption.

The OIG analysis of the Malaria Control Program's data from 2015 (see Figure 1) shows that injectable Artesunate and Artesunate/Amodiaquine tablets are consumed respectively at rates of about 70% higher and more than double when compared with the number of patients served. These discrepancies could be due to various reasons (incomplete data, release of products without prescriptions, or product leakages within the supply chain); however, the root causes for these differences have not been analysed by the disease programs:

Figure 1. Principal pharmaceutical product consumption for malaria grant in 2015, analysis performed by OIG (National Malaria Control Program, monitoring and evaluation database)



The Local Fund Agent's injectable Artesunate supply review in April 2016 also indicated that there might be significant leakages of the drug at various levels of the supply chain.

d) Supervision visits: None of the disease programs have comprehensive guidelines to facilitate supervision activity for health product management and reporting. Hence, health product management aspects are not consistently reviewed during program supervision visits at the regional, district and health facility level. This results in a lack of course correction for health facilities and may result in weak health product management and reporting. MSH ensures supervisions on health product management in four regions, where the HIV program is supported by PEPFAR.[23]

Furthermore, a civil society organization called "Positive Generation" undertakes regular monitoring visits to a significant number of HIV and a smaller portion of malaria and TB health facilities. The organization queries the availability of the main health products and whether the patient service costs do not exceed the established rates.[24] However, the three disease programs do not receive this organization's reports regularly and do not ensure regular feedback and follow-up on the reports. This represents a missed opportunity to combine both the efforts of the disease programs and civil society to follow up on the identified drug stock-outs and service cost abuse.

The monitoring weaknesses in the disease programs are primarily due to weak management, capacity and staffing issues. Disease programs normally employ only a few pharmacists for whom it

[23] United States President's Emergency Plan for AIDS Relief
[24] The organization advocates the rights of people living with HIV and is primarily oriented towards HIV but also malaria and TB health services. As stated by the organization, it undertakes monitoring visits to 118 HIV (out of about 166), 44 malaria (out of about 3,593) and 74 TB (out of about 238) health facilities nation-wide, and is producing weekly, quarterly and annual reports for audiences at the national, regional and local levels. This data was not entirely verified by the OIG.

may be challenging to cover all aspects of supply chain monitoring. End-to-end health product quality control was not sufficiently budgeted in the earlier grants, and quality assurance plans for the new grants are not yet operational, although the country has a national laboratory (LANACOME) which currently receives significant investments and is preparing for a WHO pre-qualification.

Furthermore, the Ministry of Public Health has limited oversight of the supply chain monitoring processes. It does not coordinate the health product quality control, pharmacovigilance, product quantification and procurement planning, or guide the disease programs on health product management supervision visits. The implementation of a nation-wide LMIS by the Ministry, with the support of the technical partners, has experienced delays. It is expected to be in use as of 2017 and should assist the disease programs in supply chain monitoring.

Finally, the Country Coordinating Mechanism has played a limited oversight role over the supply chain and other grant implementation areas. In 2015, its Strategic Oversight Committee held one session with the Principal Recipients. However, the second session was cancelled due to the Principal Recipient unavailability. This was because they were preparing the next funding requests from the Global Fund. The committee prepared only one version of the "oversight dashboards" for each active grant. These were incomplete and included very limited information. The Country Coordinating Mechanism does not undertake regular oversight visits to regions. The latest regional visits took place in early 2014 to four regions, covering only the HIV program. In July 2015, a single oversight mission took place in Yaoundé. As a result, supply chain and other grant implementation issues are not adequately explored by the mechanism, in which various partners could work together to identify solutions.

The Secretariat and various technical partners provide technical assistance to the Country Coordinating Mechanism, the Ministry and the disease programs on supply chain management matters, in particular on LMIS implementation, the establishment of quality assurance plans, and through the Global Fund's "Implementation through Partnership" project. The Local Fund Agent has also reviewed a number of targeted supply chain management issues in 2014-2016. These include malaria drug supply and quantification, as well as health product management reviews in selected health facilities during the "onsite data verifications" and the "rapid service quality assessments". However, the monitoring and oversight weaknesses reported in this section still need strengthening.

Agreed Management Action 4: The Secretariat, in co-operation with technical partners and the Ministry of Public Health, will support the establishment of a national coordination mechanism tasked to improve supply chain monitoring and oversight.

Owner: Head of Grant Management
Target Date: 31 December 2016

V. Table of Agreed Actions

#	Category	Agreed Management Action	Target date	Owner
1.	Health services & product risks	The Secretariat, in co-operation with technical partners and the Ministry of Public Health, will organize and finance an assessment of the supply chain in Cameroon. Such assessment shall be directed towards long-term systematic improvement of the supply chain (e.g. cost effectiveness of the current/future model, considering options for outsourcing to the private sector, etc.). The Secretariat will support the Government and partners to develop a road map based on the findings of this assessment.	30 June 2017	Head of Grant Management
2.	Health services & product risks	Taking into account the findings of the institutional audit of CENAME performed by the Ministry of Public Health and the Ministry of Finance, the Secretariat, in cooperation with in-country partners and relevant ministries, will develop an operational plan to improve in the short and medium term the storage and distribution services at CENAME level, including the responsibilities of the disease programs. Based on the content of this operational plan, the Secretariat will review its assurance arrangements, including the use of the Local Fund Agent and the Ministry of Public Health's dedicated internal audit unit, with more emphasis on inventory and distribution reviews.	31 March 2017	Head of Grant Management
3.	Financial and fiduciary risks	Based on the findings of this report, the Secretariat will finalize and pursue, from all entities responsible, an appropriate recoverable amount. This amount will be determined by the Secretariat with its evaluation of applicable legal rights and obligations and associated determination of recoverability.	31 December 2016	Recoveries Committee
4.	Health services & product risks	The Secretariat, in co-operation with technical partners and the Ministry of Public Health, will support the establishment of a national coordination mechanism tasked to improve supply chain monitoring and oversight.	31 December 2016	Head of Grant Management

Annex A: General Audit Rating Classification

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**.**

Annex B: Methodology

The Office of the Inspector General (OIG) performs its audits in accordance with the global Institute of Internal Auditors' (IIA) definition of internal auditing, international standards for the professional practice of internal auditing (Standards) and code of ethics. These Standards help ensure the quality and professionalism of the OIG's work.

The principles and details of the OIG's audit approach are described in its Charter, Audit Manual, Code of Conduct and specific terms of reference for each engagement. These help our auditors to provide high quality professional work, and to operate efficiently and effectively. They also help safeguard the independence of the OIG's auditors and the integrity of their work. The OIG's Audit Manual contains detailed instructions for carrying out its audits, in line with the appropriate standards and expected quality.

The scope of OIG audits may be specific or broad, depending on the context, and covers risk management, governance and internal controls. Audits test and evaluate supervisory and control systems to determine whether risk is managed appropriately. Detailed testing takes place across the Global Fund as well as of grant recipients, and is used to provide specific assessments of the different areas of the organization's' activities. Other sources of evidence, such as the work of other auditors/assurance providers, are also used to support the conclusions.

OIG audits typically involve an examination of programs, operations, management systems and procedures of bodies and institutions that manage Global Fund funds, to assess whether they are achieving economy, efficiency and effectiveness in the use of those resources. They may include a review of inputs (financial, human, material, organizational or regulatory means needed for the implementation of the program), outputs (deliverables of the program), results (immediate effects of the program on beneficiaries) and impacts (long-term changes in society that are attributable to Global Fund support).

Audits cover a wide range of topics with a particular focus on issues related to the impact of Global Fund investments, procurement and supply chain management, change management, and key financial and fiduciary controls.

Annex C: Products missing from the central medical store's warehouses during or after the audit

Stock cards (a)	Final verified stock count (b)	Distribution identified after the audit (c)	**Missing product** (d) = (a) - (b) - (c)	Unit price (e)	Unit price, including freight, insurance and procurement agent costs (f)	**Estimated loss** (g) = (d) x (f)
HIV program: Nevirapine 10mg/ml, oral suspension w/syringe, bottle, 100 ml						
38,347	29,868	5,459	**3,020**	US$ 1.30	US$ 1.49	**US$ 4,500**
HIV program: Nevirapine 200mg, tablets, 60 tabs						
153,367	134,939	-	**18,428**	US$ 2.20	US$ 2.52	**US$ 46,439**
HIV program: Lamivudine/Tenofovir Disoproxil Fumarate 300/300mg, tablets, 30 tabs						
86,173	59,219	25,921	**1,033**	US$ 4.62	US$ 5.29	**US$ 5,465**
Malaria program: Malaria Antigen P.f , HRP2, kit, 25 tests (Care Start Malaria)						
31,005	21,527	2,216	**7,262**	US$ 4.50	US$ 6.18	**US$ 44,879**
HIV program: Lamivudine/Nevirapine/Zidovudine 150/200/300mg, tablets, 60 tabs (Zidovex)						
346,396	321,676	11,218	**13,502**	US$ 8.35	US$ 9.56	**US$ 129,079**
Malaria program: Artesunate/Amodiaquine 100/270mg, tablets, blister 25 x 6 tabs						
32,416	31,309	-	**1,107**	US$ 20.25	US$ 28.22	**US$ 31,240**
					Total estimated loss	**US$ 261,602**