



Audit Report

Global Fund Grants to the Republic of Côte d'Ivoire

GF-OIG-16-025
14 December 2016
Geneva, Switzerland

Table of Contents

Table of Contents	2
I. Background.....	3
II. Scope and Rating	6
Audit Objectives	6
Audit Scope	6
Rating	6
III. Executive Summary	7
IV. Findings and Agreed Management Actions.....	10
1. Grant implementation arrangements.....	10
1.1. Implementation of grant activities and absorption of funds under grants to the MPH .	10
1.2. Financial assurance arrangements	13
2. Supply chain controls and assurance mechanisms	15
2.1. Health product management by the central medical store	15
2.2. Health product management and monitoring by the national disease programs	17
V. Table of Agreed Actions	20
Annex A: General Audit Rating Classification.....	21
Annex B: Methodology.....	22

I. Background

The Republic of Côte d'Ivoire, situated in West Africa, has a population of 23.3 million. The country is divided into 31 regions and two autonomous districts: the largest city Abidjan, which is home to many central government institutions, and the political capital, Yamoussoukro. Côte d'Ivoire is a largely centralized country but with ongoing decentralization. The economy is lower middle income with a gross national income of US\$1,410 per capita in 2015.¹ 85% of the economy is concentrated in the south.² The country ranks 172th out of 188 countries in the United Nations Development Programme's 2015 Human Development Index³ and 107th out of 168 countries in Transparency International's 2015 Corruption Perceptions Index.⁴ It has emerged from a series of violent conflicts, the latest being a post-electoral conflict in 2010-2011. However, the country held peaceful elections in late 2015 and political stability has since returned.

The country is divided into 20 health regions and further into 82 health districts.⁵ In 2014, total health expenditure was US\$88 per capita, representing 5.7% of gross domestic product, slightly higher than the average of 5.5% for lower middle income countries in Sub-Saharan Africa.⁶

Malaria

Malaria is endemic in Côte d'Ivoire with high transmission throughout the country and peak transmission during the rainy seasons. Most cases are due to the *Plasmodium falciparum* parasite species.⁷ Malaria is the main cause of illness and mortality in the country. Pregnant women and children under five years are the most vulnerable groups.⁸ In 2014, 15% of all deaths in children under five years were caused by malaria.⁹ In 2013, as per the World Health Organization's (WHO) most recent data, the country had 8.3 million estimated malaria cases (3.8% of the world's burden) and 16,000 estimated deaths due to malaria. In 2014, there were 6.4 million suspected cases, 4.7 million presumed and confirmed cases, and 2,069 reported deaths due to malaria. Côte d'Ivoire has high insecticide resistance in malaria vectors.¹⁰

HIV/AIDS

In 2015, as per the WHO's most recent data, an estimated 460,000 people were living with HIV in Côte d'Ivoire (1.3% of the world's burden).¹¹ HIV prevalence among adults (between 15 and 49 years) is 3.7% and the highest in West Africa.¹² A total of 25,000 new infections and 25,000 deaths from AIDS are estimated per year.¹³ Only 47% of adults and 20% of children living with HIV in need of treatment (according to WHO guidelines adopted by the country), receive treatment.¹⁴ In 2016, HIV prevalence among key affected populations in Abidjan was 29.3% for men who have sex with men, and in 2015, 11.4% for female sex workers, and 5.3% for intravenous drug users. Populations living with HIV/AIDS are stigmatised. According to the Joint United Nations Programme's on HIV/AIDS (UNAIDS) estimates, in 2015, 45% of the country's population demonstrated discriminatory attitudes towards people living with HIV.¹⁵

Tuberculosis

As per the WHO's most recent data, in 2014 Côte d'Ivoire had an estimated prevalence of 48,000 tuberculosis (TB) cases, an estimated incidence of 36,000 new TB cases per year (0.4% of the world's burden) and an estimated 7,200 deaths from TB. Twenty-four percent of estimated TB cases were in

¹ World Bank data: World Development Indicators, September 2016; http://www.gouv.ci/_fiche-signalétique.php

² primaturecotedivoire.net

³ United Nations Development Programme's Human Development Report 2015

⁴ Transparency International, 2015

⁵ Plan National de Développement Sanitaire 2016 – 2020 (Draft), Ministry of Public Health and Hygiene

⁶ World Bank data: World Development Indicators, September 2016

⁷ Malaria concept note (2014); World Malaria Report 2015

⁸ WHO Country Cooperation Strategy at a Glance: Côte d'Ivoire

⁹ WHO Statistical Profile: Côte d'Ivoire (January 2015)

¹⁰ World Malaria report 2015

¹¹ UNAIDS: Aidsinfo 2015

¹² 2011-2012 Demographic and Health Survey data

¹³ UNAIDS: Aidsinfo 2015

¹⁴ National AIDS Control Program: Annual Report 2015

¹⁵ UNAIDS: Aidsinfo 2015; 2015 & 2016 Integrated Bio-Behavioral Survey data

co-infection with HIV. Also, 2.5% of new and 11% of retreated TB cases were estimated to be multi-drug-resistant TB (MDR-TB). In 2014, 23,275 TB and 471 MDR-TB cases were notified. Based on 2013 treatment enrolment data, the TB treatment success rate was 80% and mortality rate was 11%.¹⁶ In 2014, 45% of the TB burden was found in Abidjan which has about 40% of country's population and has the highest access to care in the country.¹⁷

Funding context

In 2015, the United States Government funded approximately 77% and the Global Fund 16% of HIV interventions, with the rest funded by the Government of Côte d'Ivoire and other donors. Support for HIV clinical and community health services is shared between the United States President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund by health district, with PEPFAR supporting most districts. 45% of the country's total HIV drug supply is supported by PEPFAR, 45% by the Global Fund and 10% by the Government of Côte d'Ivoire.¹⁸

In 2014, the Global Fund financed approximately 56% of malaria interventions and, in 2015, 53% of TB interventions, while the Government of Côte d'Ivoire funded 43% and 39%, respectively. The rest was funded by other donors.¹⁹

Côte d'Ivoire is also a donor to the Global Fund with a US\$1.0 million pledge for 2017-2019.

Between 2003 and 2016, the Global Fund signed 16 grants with Côte d'Ivoire totaling US\$543 million, of which US\$405 million have been disbursed as of 15 October 2016. The funding allocation for 2014-2017 totals US\$260 million, part of which has already spent under previous grants. Currently, six grants totaling EUR184 million (US\$246 million)²⁰ are active. The Global Fund has contributed to putting 170,000 people living with HIV on antiretroviral treatment, distributing 25.8 million long lasting insecticide-treated nets, and treating 83,500 TB cases.

Implementation context

The Ministry of Public Health and Hygiene (MPH) is the Principal Recipient of three grants to the public health sector (US\$104.9 million for malaria, US\$90.4 million for HIV and US\$9.3 million for TB). However, most of the Principal Recipient functions are delegated to three national disease programs,²¹ supervised by the General Directorate of Health within the MPH. The General Directorate of Health also supervises the regional directorates of health in the 20 health regions.

Two civil society organizations are the Principal Recipients of three grants to enhance the community health services: the National Alliance for Health and Development in Côte d'Ivoire (US\$22.9 million for HIV and US\$3.9 million for TB) and the Save the Children (US\$14.7 million for malaria).

In 2014-2015, the Global Fund Secretariat disbursed 54% of grant funds directly to international health product procurement agents. Remaining funds are managed by the Principal Recipients, with disbursements made to sub-recipients (including national institutions and international organizations), as well as service providers. The central medical store (*Nouvelle Pharmacie de la Santé Publique*, NPSP) receives and distributes health products to 82 health districts as well as directly to about 200 of the largest health facilities. The United Nations Children's Emergency Fund (UNICEF), a Global Fund sub-recipient, is the procurement agent of the mosquito nets and supports mass distribution campaigns. The three national disease programs are also supported by an international Fiduciary Agent, who oversees their financial and non-health procurement management.

During the audit, on 7 September 2016, a major fire broke out at night in the expedition warehouse of NPSP. It resulted in losses of health products prepared for shipments, including Global Fund financed products, as well as significant losses of NPSP's equipment. Reasons and losses are being

¹⁶ WHO Tuberculosis profile 2015; World TB Report 2015

¹⁷ National TB Control Program

¹⁸ HIV grants reprogramming request (2016)

¹⁹ Malaria concept note (2014); TB concept note (2015)

²⁰ To minimize currency fluctuation risks, grants to Côte d'Ivoire are denominated in EUR, as the national currency is pegged to EUR. EUR/US\$ exchange rates are set by the Global Fund Secretariat at grant signing.

²¹ National Malaria Control Program (PNLP), National AIDS Control Program (PNLS), and National TB Control Program (PNLT)

investigated by the local authorities. NPSP immediately rearranged its expedition services to another space, and is proceeding with an insurance claim.

Côte d'Ivoire was also a pilot country for the OIG's anti-corruption campaign called 'I Speak Out Now!' The campaign, launched in April 2016 in partnership with the MPH, was designed to raise awareness of the dangers of taking medicines bought in street markets. The campaign targeted the diversion of RHZE, a powerful and essential antibiotic used to treat tuberculosis financed by the Global Fund. RHZE was being diverted from the supply chain and sold on street markets as a cure-call to a variety of ailments. The practice not only represented a financial loss for programs funded by the Global Fund but also posed a major public health risk as it could reinforce multidrug-resistant forms of TB. Through public service announcements on national radio and in the media, the campaign built on the work of the Chirac Foundation, the charitable foundation of the former French President, by using its slogan « Le médicament de la rue tue! » (The medicine of the street kills!). In parallel to the campaign, the OIG also investigated the diversion of Global Fund financed TB drugs. The results of the investigation are available here (GF-OIG-16-013) <http://www.theglobalfund.org/en/oig/reports/>.

At the time of writing, preliminary intelligence since the investigation appears to confirm that the supply of RHZE drugs in the markets is dwindling. A recent market survey of the sites where stolen drugs were on sale a year ago found significantly smaller quantities of Global Fund financed drugs available. In terms of the ensuing agreed management actions from the investigation, the Secretariat is making progress with country partners to implement stronger controls over procurement and stock management.

II. Scope and Rating

Audit Objectives

This report features the first OIG audit of Global Fund grants to the Republic of Côte d'Ivoire. Its objectives were to assess whether:

- 1) the implementation arrangements are adequate, efficient and effective to achieve the grant objectives, ensure access to quality health services and products by the patients, support absorption of grant funds and have the effective fiduciary controls;
- 2) controls and assurance mechanisms for the supply chain are adequate to ensure timely and quality access to health products by the patients.

Audit Scope

The audit was performed in accordance with the methodology described in Annex B and focused on the period from January 2014 to July 2016 covering all six active grants:

Table 1: Active Global Fund grants to Côte d'Ivoire

Active grants	Signed grant amount, EUR	Equivalent, US\$ ²²	Principal Recipient
CIV-M-MOH	76.2 million	104.9 million	Ministry of Public Health and Hygiene (MPH), with delegation to the National Malaria Control Program (PNLP)
CIV-M-SCI	13.0 million	14.7 million	Save the Children
CIV-910-G12-H	65.6 million	90.4 million	MPH, with delegation to the National AIDS Control Program (PNLS)
CIV-910-613-H	16.7 million	22.9 million	National Alliance for Health and Development in Côte d'Ivoire
CIV-T-MOH	8.8 million	9.3 million	MPH, with delegation to the National TB Control Program (PNLT)
CIV-T-ACI	3.6 million	3.9 million	National Alliance for Health and Development in Côte d'Ivoire
Total	183.9 million	246.1 million	

Health service site visits during the OIG audit:

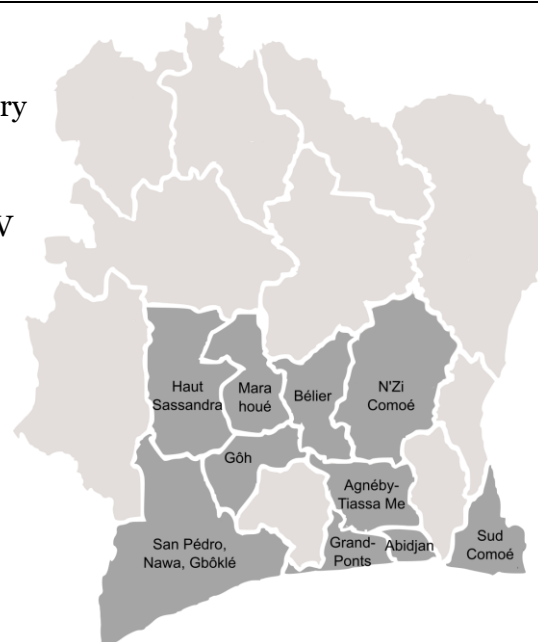
- NPSP warehouses and the National Public Health Laboratory

47 health service sites in ten health regions:

- six health district medical stores
- 33 health facilities (31 of them provided HIV testing, 29 HIV treatment, 26 malaria treatment and 13 TB treatment services)
- eight community health service sites

Ten of the 20 health regions, covered by the site visits on a sample basis, representing:²³

- 73% of patients receiving antiretroviral HIV treatment
- 55% of suspected malaria cases
- 77% of notified TB cases



Rating²⁴

Operational Risk	Rating	Reference to findings
Grant implementation arrangements	Partially effective	IV 1.1., 1.2
Supply chain controls and assurance mechanisms	Needs significant improvement	IV 2.1., 2.2

²² EUR/US\$ exchange rates are set by the Global Fund Secretariat at grant signing.

²³ The national disease programs' monitoring and evaluation data for 2015

²⁴ See Annex A for the rating definition

III. Executive Summary

Côte d'Ivoire is one of the Global Fund's high impact countries, with a US\$260 million funding allocation for 2014-2017. The Government of Côte d'Ivoire also continues to increase its domestic contributions to fight the three diseases. The country has the fifth largest malaria burden in the world representing 3.8% of worldwide cases, as estimated in 2013. According to a MPH 2011-2012 Demographic and Health Survey, at 3.7%, it had the highest HIV prevalence among adults in West Africa.

Grant implementation arrangements

Overall, existing arrangements have had successful programmatic impact due to:

- substantial health product components in grants and the wide-ranging distribution arrangements by the central medical store, directly contributing to health product and service availability to patients;
- well-coordinated interventions with other funding sources and implementing partners;
- successful coordination between the public and community health sectors; and
- increasing use of the logistics management information system (LMIS) and the health management information system (HMIS), contributing to increased data availability and quality that are critical in targeting health service interventions.

Sharing of grant ownership between the public sector and civil society Principal Recipients has been successful with good synergies in health service delivery. However, the MPH has delegated most of its Principal Recipient functions to the national disease programs (three grants totalling US\$204.6 million). Furthermore, the implementation of a number of grant activities depends on other counterparts within and beyond the MPH. The disease programs lack both the authority to efficiently coordinate the cross-cutting grant activities as well as the capacity to implement so many. The MPH's oversight, as Principal Recipient, and arbitration of coordination issues are not sufficient. The MPH is considering establishing a project management unit at a higher level internally to ensure greater coordination.

As of 30 June 2016 (excluding health product procurement related activities), implementation has not started for a significant proportion of planned grant activities for this allocation cycle: 42 out of 113 activities (37%) for the National Malaria Control Program, 30 out of 189 (16%) for the AIDS Control Program, and 13 out of 43 (30%) for TB Control Program. Absorption rates of grant budgets to date are consequently relatively low at 45%, 38% and 33%, respectively. Grant activity delays have not had a significant short-term impact on programmatic results, due to the generally stable health product deliveries. However, delays of important activities such as health product quality control and decentralization of TB services may affect health service quality in the long term.

The Global Fund Secretariat has taken various actions to address fund absorption issues, including a project called "Implementation through Partnership". The project's objective is to increase the effectiveness and efficiency of grant implementation and scale-up for impact, relying on collaboration with partners including governments, key stakeholders and bilateral and multilateral partners. These actions, while relevant and often focusing on the long-term perspective, are yet to be fully implemented and prove their operational effectiveness in solving the absorption issues in country. In June 2016, the international Fiduciary Agent also started monitoring absorption at grant activity level, but with limited results to date.

With regard to the financial and procurement controls, these are generally effective for the civil society Principal Recipients. The disease programs have partially effective controls, leading to lower competition and transparency in local procurement process, additional implementation delays and risks of financial loss. The Fiduciary Agent, overseeing these controls, has not efficiently identified these weaknesses. As part of its role, the agent has started to actively build the financial management capacity of the disease programs in 2016, although its effectiveness is yet to be proved.

Supply chain controls and assurance mechanisms

In 2014-2015, the international procurement agents procured health products at a cost of US\$41.6 million from grants to the MPH and US\$0.7 million from grants to the civil society organizations. The products were received and distributed by the central medical store. The country has a solid basis to ensure an effective health product supply chain, due to qualified staff, a good institutional and regulatory framework, a modernized central medical store with good storage conditions, an up to date stock management system, and wide-ranging and regular distribution arrangements. The increasing availability and use of the LMIS contribute to a closer stock level and consumption monitoring and more accurate product orders and deliveries.

However, due to the implementation arrangements detailed above, the **national disease programs** have a limited role in the oversight of the supply chain, as the central medical store is in charge of all distribution aspects. The programs do not review or validate product orders submitted by the districts and the largest health facilities to the central medical store. As a result, they do not monitor whether district and health facility stock levels, as well as consumption, are appropriate in relation with the programmatic data available. The disease program have difficulties reconciling the payments to procurement agents with the product quantities received. Nor do they continuously monitor product quality, stock levels and consumption at the national and district levels, to ensure these are appropriate.

The **central medical store** also has significant gaps in inventory controls and reporting. Its semi-annual stock counts do not report stock quantity variances. The disease programs are not informed about them, and any potential loss or theft of products may go unnoticed. Distribution is recorded in the stock management system using various measurements for the same products. As a result, it is not clear whether the districts and the health facilities received the right product quantities, making the distribution data unreliable. The “first-expired-first-out” method has not been applied for all distribution, resulting in a high likelihood of early product expiry in 2017. In addition, the health product quantities in the central medical store’s monthly inventory reports to the disease programs do not always include product expiry details. They also present significant deviations with the quantities in the stock management system, due to late recording of stock movements in the system and manual adjustments of reports. Thus, there is no assurance that the reported quantities are accurate.

The limited ownership of the health product management and monitoring processes by the disease programs and the inconsistencies in reports from the central medical store led to significant stock-outs in mid-2016, at the national level. Seven out of ten principal malaria drugs, malaria tests, as well as microscopy slides were not available for more than two months, and HIV tests for more than one month.

Fortunately, the consequences for patients were not too serious owing to stock reserves and flexible arrangements at the health facility level, including in drug prescription. However, the auditors noted the following:

- Three malaria treatment facilities (servicing 18,000 patients in total) out of 26 visited by the OIG had malaria drug stock-outs of between 40 and 100 days, when drugs were not available to patients.
- 13 out of 26 malaria treatment facilities had stock-outs of malaria rapid diagnostic tests between five and 100 days, and 16 of the facilities had insufficient stocks or stock-outs of microscopy slides for malaria diagnostic tests, for prolonged periods. As a result, parasitological confirmation of malaria could not be performed for all patients in need. Eleven of the facilities prescribed malaria drugs without confirmation of the disease, with the risk that patients could develop drug resistance.
- Two-thirds of the visited facilities did not have sufficient buffer stocks (between two and four months consumption) of products.

The weak stock management and quantification by the National TB Control Program also led to overstocking of eight TB drugs at the national level, which resulted in US\$71,000 worth of expiries

in 2015, US\$65,000 in 2016, and expiry risks worth US\$217,000 for 2017. In 2015, drugs for US\$53,000 were spoiled at port due to bottlenecks in product delivery from the port to the central medical store.

The Secretariat's principal risk mitigation mechanisms included the following: technical assistance to support product quantification by the disease programs and the central medical store's stock management system; a "leadership development program" piloted in several health regions and contributing to improved supply chain management; and periodical oversight missions which have highlighted some of the stock management issues. Assurance mechanisms need to be strengthened regarding the central medical store's inventory and reporting, the disease programs' role in health product management and monitoring need to be strengthened, and project management capacities developed to address fund absorption issues.

IV. Findings and Agreed Management Actions

1. Grant implementation arrangements

1.1. Implementation of grant activities and absorption of funds under grants to the MPH

The national disease programs lack the required authority and flexibility to efficiently implement a large number of cross-cutting grant activities, leading to delays and under absorption of funds.

The MPH is the Principal Recipient of grants to assist the public health sector. However, due to the broad scope of the MPH responsibilities, most of the Principal Recipient functions are delegated to the three national disease programs, supervised by the General Directorate of Health within the MPH. In grant activity implementation, the programs depend on counterparts at the national level within and beyond the MPH, and at the health region, district, facility, and community levels.

Overall, the current implementation arrangements have brought successful programmatic results, performing well on most of the key performance indicators. As of 30 June 2016, 170,000 HIV patients received antiretroviral treatment, 93% of confirmed malaria cases received antimalarial treatment, and 79% of TB cases were successfully treated, during the reported period. A 2014-2015 mosquito net distribution mass campaign covered 96% of the country's population. The achievement of impact can be attributed to the following practices:

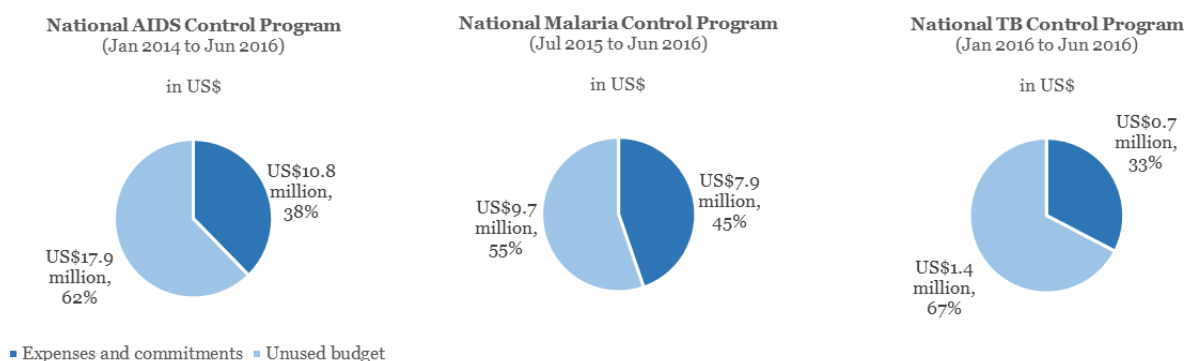
- the largest grant activities focus on procurement and the distribution of health products have been generally stable (apart from the issues raised in Section IV 2.);
- strong coordination of interventions with other donors and implementing partners (in particular PEPFAR for HIV health services and UNICEF for the net distribution mass campaigns);
- successful coordination between the public and community health sectors, including ongoing efforts to optimize community health services coverage between various donor and disease programs.

To further improve and coordinate health service delivery, in 2015-2016, the General Directorate of Health started "integrated" supervision visits, cascading to health region, district and facility levels. These visits cover various themes (health services and data, and health product management) and involve multiple MPH departments, including the three disease programs. Furthermore, to improve health data availability and quality, the new health management information system (HMIS) "DHIS2", supported by several donors and hosted by the MPH Directorate of Prospective, Planning, Evaluation and Health Information (DPPEIS), is being deployed to all health regions, districts, and the largest health facilities in 2015-2016. The system contains HIV and malaria data; TB data will be integrated in 2016. Efforts to improve reporting rates and data quality are ongoing.

However, in their current status in the central government, the disease programs lack authority to effectively coordinate and influence all of the cross-cutting grant activities with other national counterparts. Implementation of some of the activities depends entirely on other institutions, although they are budgeted through grants to the disease programs. The MPH holds periodic task force and oversight meetings with the disease programs and various key counterparts, to arbitrate coordination issues. However, MPH oversight as the delegated Principal Recipient, is not sufficient. The Ministry is considering establishing a project management unit at a higher level within the MPH to ensure greater performance and coordination. Furthermore, the number of programmed grant activities is large (between 43 and 189 activities per grant), since the Country Coordinating Mechanism programs the activities both in accordance with the national strategic plans and to absorb all the funding allocation for the country. As a result, the disease programs lack capacity to implement all of the activities approved by the Global Fund Board in the required time frame and, in some cases, have to abandon them entirely.

As of 30 June 2016, budget absorption rates (without health product procurements) for the three disease programs are low between 33% and 45%.²⁵ At the same time, the programs have not started the implementation of between 16% and 37% of their grant activities (0% absorption):

Figure 1. Budget absorption under active grants (without health product procurements), as of 30 June 2016



For example, as of 30 June 2016, the National AIDS Control Program has not used the following:

- US\$992,000 for health product quality control because the AIDS Control Program and the National Public Health Laboratory have not finalized the arrangements for this activity, causing risks of compromised product quality (see also Section IV 2.2.);
- US\$231,000 for the renovation of 19 prison pharmacies, due to delays in completing tender documentation by the relevant MPH's Directorate; pharmacy storage conditions remain inadequate.

The Malaria Control Program has not used the following:

- US\$2.0 million for further HMIS implementation by DPPEIS, another Directorate within the MPH, due to a year-long delay to reach agreement, and obtain the required details for the budget breakdown that needs to be approved by the Global Fund Secretariat. As a result, implementation of "performance based funding" activities for health systems strengthening in five pilot health districts has been delayed.
- US\$381,000 for the production of informative materials on malaria, HIV and TB, due to delayed agreement on their content by the Principal Recipients and delayed signature of the agreement with the sub-recipient. The information campaign has therefore also been delayed.

The TB Control Program has not used the following:

- US\$727,000 for health facility renovation, set-up of 62 laboratories, and related training. This is due to delayed preparations and logistical arrangements which depend on the Malaria Control Program and the availability of an expert who will be recruited jointly by several institutions. As a result, the decentralisation of TB health services is delayed.
- US\$562,000 for health system strengthening through a "leadership development program" already piloted in several health regions. Implementation of these activities depends on the General Directorate of Health, in collaboration with the "Management Sciences for Health" (MSH), who has reassessed the earlier budgetary assumptions and not yet finalized the updated activity plan.

Specifically at grant activity level, the key reasons for implementation delays and therefore low absorption of funds are:

²⁵ As of 30 June 2016, budget absorption rates taking into account health product procurements were 84% for the National Malaria Control Program, 45% for the AIDS Control Program and 24% for the TB Control Program. These figures are indicative because health product delivery schedules vary significantly from payments to procurement agents, and deliveries have been generally stable in Côte d'Ivoire.

- weak operational planning, budget monitoring and lack of project management capacity, resulting in procurement, contracting and recruitment delays;
- prolonged negotiations with other national counterparts, including difficulties in obtaining data and documents;
- difficulties in identifying the required human resources for trainings and other outreach activities;
- lack of flexible reallocation or reprogramming of grant savings, including in the cases of:
 - overestimation of budgetary unit costs or the required quantities;
 - occasional adoption of activities by other donors resulting in grant savings. For example, the National AIDS Control Program has not reallocated all or part of US\$932,000 budgeted for the maintenance of laboratory equipment and surveys among pregnant women living with HIV, although PEPFAR has taken over most components of these activities.

Despite the above, grant activity delays have not had a significant impact on programmatic results of the grants. This is primarily because the results largely depend on health product delivery, which has been generally stable. Nevertheless, delays of important activities such as health product quality control, HMIS implementation, or decentralization of TB health services lead to delays in health service quality over the longer term. Furthermore, although a part of grant savings has been reprogrammed to other activities, the budget reviews have not been systematic. Missed opportunities to improve health service quality in the long term include:

- lack of systematic HIV viral load monitoring, low coverage of HIV treatment (only 47% of adults and 20% of children in need of treatment receive it), and low coverage of HIV testing of infants born to mothers living with HIV at 40%;
- hospitals are rarely equipped with blood transfusion facilities for treating severe malaria;
- weak TB infection control management (in ten out of 13 TB treatment facilities visited, infection control measures were not satisfactory) and weak follow-up of TB patient contacts (eight out of 13 facilities did not actively test the children of TB patients, and four of them did not actively test other TB patient contacts).

Low absorption of grant funds is a long-standing issue. The Global Fund Secretariat has taken various actions to address it:

- In late 2014, the Local Fund Agent analysed non-absorption rates and their overall root causes. In late 2015, the Secretariat “Implementation Through Partnership” project supported Côte d’Ivoire as one of 20 countries with low fund absorption. The Secretariat also hosted two sub-regional conferences in 2015-2016 for grant recipients of West and Central African countries to analyse absorption issues. These actions, while relevant and often focusing on the long-term perspective, are yet to be fully implemented and prove their operational effectiveness in solving the absorption issues in country. They do not necessarily address challenges at grant activity level. As a result, most activities are delayed and budget monitoring needs improvement.
- In mid-2016, the Fiduciary Agent put in place a budget monitoring tool to analyse the progress of grant activities. However, as this tool is new, the agent has not yet analysed the root causes for the under-absorption in order to propose timely actions.

Agreed Management Action 1: The Secretariat will engage with the Government and partners to put in place a Project Management Unit reporting to the Minister’s office within the MPH, to ensure that the public sector Principal Recipients have the coordination capacity and authority to manage grant activities, particularly cross-cutting activities with other national counterparts.

Owner: Head of Grant Management

Target Date: 31 May 2017

1.2. Financial assurance arrangements

The fiduciary control and support arrangements for the national disease programs contain gaps and represent limited value for money.

The Civil Society Principal Recipients generally have effective financial and procurement controls. Moreover, any control weaknesses identified in the audit were not material. However, the national disease programs have partially effective controls and gaps in non-health procurement processes, leading to lower competition and transparency, as well as insufficient monitoring of contracts. This can cause additional implementation delays and risks of financial loss.

In late 2010, a policy called the Additional Safeguards Policy was implemented in Côte d'Ivoire. This policy aims to put in extra financial controls and oversight over a portfolio. In 2013, the Global Fund Secretariat appointed a Fiduciary Agent to support the three disease programs in overseeing their financial and non-health procurement management and to build financial management capacity. From January 2014 to June 2016, the agent cost US\$1.1 million (US\$0.4 million per annum), equalling 5% of grant funds disbursed directly to the three disease programs during the same period (US\$21.5 million). This is in addition to other financial assurance costs in the Global Fund's assurance framework, such as the Local Fund Agent (US\$0.7 million per annum) and annual external audits.

The Fiduciary Agent's performance has shown improvements in 2016 after the Secretariat's assessment in late 2015. However, the OIG auditors identified the following gaps with regard to 2014 and 2015:

- the agent had not identified weaknesses in procurement procedures;
- the agent's support to the disease programs in contract monitoring is not sufficient; as a result, the contract monitoring process by the programs is incomplete, causing financial and delivery risks;
- budget and fund absorption monitoring started only in June 2016 with limited results to date (see Section IV 1.1.);
- some of the agent's control and capacity building work is not clearly documented.

The Secretariat has encouraged the agent to build Principal Recipient capacity since 2014. For example, the Secretariat requested the agent to provide a Principal Recipient capacity assessment report and a capacity building plan by March 2015. These deliverables were submitted several months late and required improvements. In March 2016, an improved capacity building plan was provided and, in May 2016, a prospective exit plan for transfer of the agent's responsibilities to the national programs. Both plans are yet to be implemented. Performance gaps were due to procedural weaknesses of the agent. Frequent changes in the agent's team also affect the continuity of services. From 2014-2016, four agent team leaders have changed.

In May 2016, based on its risk assessment, the Secretariat revoked the Additional Safeguard Policy framework for Côte d'Ivoire. The Secretariat continues to explore options with the MPH on sustainable financial assurance arrangements. These include the establishment of an internal audit function and a project or financial management unit at an appropriate level within the MPH. Such a financial management unit already serves certain projects funded by the United States Government. MPH has commissioned an external evaluation of the prospective unit model. However, this evaluation has conveyed only preliminary results. At present, it does not provide a clear definition and separation of the roles and resources of the prospective unit, the disease programs, the General Directorate of Health, and other stakeholders. It has not evidenced the added value of the unit model in comparison to transition risks from the current model.

Agreed Management Action 2: The Secretariat will develop a plan to ensure efficient monitoring of Fiduciary Agent activities on a quarterly basis, aiming to gradually transfer oversight

responsibility for the Principal Recipient financial and fiduciary controls to the newly created Project Management Unit.

Owner: Head of Grant Management

Target Date: 31 May 2017

2. Supply chain controls and assurance mechanisms

The procurement and supply chain responsibilities in Côte d'Ivoire are shared between the national disease programs and the central medical store NPSP. The programs have the overall responsibility over the supply chain as Principal Recipients of Global Fund grants, while the central medical store receives and distributes the health products to 82 health districts as well as directly to about 200 of the largest health facilities.

2.1. Health product management by the central medical store

The central medical store's inventory, reporting and distribution systems do not ensure that all procured health products are properly accounted for and distributed.

In 2014-2015, health products with a total value of US\$42.3 million²⁶ were procured under Global Fund grants, received by NPSP, and distributed to the health districts and the largest health facilities. NPSP is a modernized medical store with good storage conditions, including a modern temperature monitoring system. Two other warehouses in Abidjan are being modernized and a satellite store in Bouaké is being constructed through donor-supported projects. NPSP operates "SAGE", a modern stock management system, to place and locate product stocks and record stock movements. It distributes the health products to 82 health districts and about 200 of the largest health facilities on a monthly or bi-weekly basis, following a scheduled calendar. Nevertheless, health product management by NPSP includes the following weaknesses:

a. A number of unsatisfactory inventory controls

Lack of accountability for stock differences: Following each semi-annual stock count, previous stock quantities are overwritten with new stock count results validated by an internal committee. The overwritten stock quantities are reported to the national disease programs – however, the variances are not justified. This presents the significant risk that mistakes, losses or theft of products may go unnoticed. SAGE has a stock count module for variance analysis but this module has not yet been customized by NPSP. The OIG's stock count during the audit found no differences for 14 out of the 15 selected products. However, it found that the stock of the long lasting insecticide-treated nets for routine distribution (85,600) exceeded system stock data (22,960) by 3.7 times. Following the audit, a joint team from NPSP and the National Malaria Control Program will further review the mosquito net stocks and records, with the Local Fund Agent as an observer.

Unreliable data recording: Distribution data has been recorded in SAGE using various unit measurements (e.g., tablets and boxes) for the same products, making the consolidated distribution data unusable. For these products, the data does not provide assurance on whether the districts and the health facilities received the correct product quantities for the patients.

Stock flow management: In at least two identified cases, NPSP did not follow the "first-expired-first-out" method in drug distribution. In several cases in 2016, a TB drug with an expiration date of February 2018 was distributed, although other lots of the same drug with an expiration date of early 2017 were still available in stock. Considering that this drug is currently overstocked, the earlier expiring quantities will result in an earlier loss of US\$67,000 if not promptly distributed.

b. Late recording of stock movements and inconsistencies with reporting affecting decision-making process

The health product quantities in NPSP's monthly inventory reports provided to the disease programs present significant deviations with inventory data in NPSP's stock management system. For a sample of reports from November 2015 to July 2016, the reported product quantities were between six times more and five times less than the quantities of these products in the system at the particular time. NPSP explained that this was often due to late recording of stock movements in the system, therefore the data was adjusted manually for each product at the time of reporting. However, considering the

²⁶ US\$41.6 million under grants to the Ministry of Public Health and Hygiene and US\$0.7 million under grants to civil society organizations

significant differences with system data, there is no assurance of whether the stock data reported to the disease programs is accurate. The inventory reports also did not regularly include quantities by each product lot with its expiry date. The inconsistent reporting has contributed to product expiries, inaccurate stock management decisions and delayed procurements by the disease programs. For example, malaria preventive drugs worth US\$66,000 expired at the end of 2015. As a result, there were stock-outs because the disease program was unaware of when products would expire and when to order a new batch in time. In mid-2016, the programs had stock-outs of malaria products and HIV tests at the national level with some consequences to patients (see Section IV 2.2.).

c. Weaknesses in distribution practices

In a number of cases, when stocks became available, NPSP delivered products that the districts and the health facilities had previously ordered (in particular, for malaria products) but without checking if the districts or the health facilities had re-ordered the same quantities in subsequent orders. This resulted in overstocks and expiry risks at the district and health facility level.

Inventory, reporting and distribution weaknesses are due to internal control, procedural and unresolved system configuration issues in NPSP. The fact that the disease programs are not involved in validation of product orders from the districts and the largest health facilities, as noted in Section IV 2.2., contributes to the distribution weaknesses mentioned above.

NPSP recognizes the issues reported in this section. It is working to improve information of the disease programs through a dedicated department and regular meetings and workshops. With assistance from the Global Fund Secretariat and the “Global Drug Facility”, NPSP also started implementing an action plan in July 2016. The plan aims to improve stock management through SAGE as well as through bar coding the product stocks, however, it is not targeted to address all of the above issues.

See Section IV 2.2. for the Agreed Management Action
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2.2. Health product management and monitoring by the national disease programs

Limited ownership of the health product management and monitoring processes by the national disease programs has led to product stock-outs and expiries, and causes risks of product loss and adverse consequences to patients.

In 2014-2015, the national disease programs were in charge of health product procurements through international agents with a total value of US\$41.6 million under Global Fund grants.

The country has sufficient capacity to ensure an effective health product supply chain, thanks to the qualified human resources at the national, regional and lower levels, and a solid institutional and regulatory basis. This is demonstrated by the dedicated National Program of Pharmaceutical Activity Development and the creation of the National Commission for Drug Supply Coordination (CNCAM) in 2015. To date, two thirds of the health districts and the largest health facilities serviced by NPSP have been trained to use the electronic logistics information management system (LMIS). This system was piloted in 2015 to order HIV and malaria health products and to provide consumption and stock level data; trainings on TB health products were imminent at the time of writing. At present, donor-funded projects also support the modernization of 28 health district medical stores and 26 hospital pharmacies.

However, due to the implementation arrangements in the country, as detailed in Section IV 1.1., the national disease programs have a limited role both over the supply chain and to ensure coordination with other national counterparts. NPSP is in charge of all distribution to the districts and the largest health facilities. Health product management and monitoring by the disease programs demonstrates the following weaknesses:

a. Lack of adequate health product monitoring leads to product stock-outs and consequences for patients

No validation of incoming health product orders: The disease programs do not review or validate product orders submitted by the districts and the largest health facilities to NPSP. NPSP reviews the consistency of the orders but it does not have to evaluate the needs of the districts and the health facilities. As a result, the programs do not monitor whether the district and health facility stock levels and consumption are appropriate.

Lack of monitoring tools and weak procurement planning: None of the programs maintain stock monitoring tools to monitor at least the national and district stock levels on a continuous basis. This has also been difficult due to the inconsistencies in NPSP reports (see Section IV 2.1.). The programs only complete stock monitoring tools required from them on a quarterly basis by the CNCAM who coordinates the national health product procurement plans. Although procurement planning has been strengthened since the creation of the CNCAM, procurements for a number of products have been delayed in 2016. This led to stock-outs at the national level, lasting for more than two months, for malaria drugs (seven out of ten principal drugs), malaria tests and microscopy slides, and for more than one month for HIV tests. These issues were due to inconsistencies in NPSP reports, the weak stock level monitoring, and underestimation of product delivery times by the programs.

Although the consequences to patients from the above issues were minimised due to stock reserves at the peripheral levels, a well-functioning transfer system between the health facilities, and the flexibilities in drug prescription, the OIG noted the following issues:

- One out of six district medical stores and three malaria treatment facilities (servicing 18,000 patients in total) out of 26 visited by the OIG had malaria drug stock-outs of between 40 and 100 days, when drugs were not available to patients and were prescribed for purchase.
- Three out of six district medical stores and 13 out of 26 malaria treatment facilities had stock-outs of malaria rapid diagnostic tests of between five and 100 days, during which parasitological confirmation of malaria could not be performed.

- 16 out of 26 malaria treatment facilities were equipped with a laboratory to perform parasitological confirmations with thick smear tests, but all of them experienced insufficient stocks or stock-outs of microscopy slides for prolonged periods.
- Due to the stock-outs of diagnostic products (either rapid diagnostic tests or microscopy slides), 11 out of 26 malaria treatment facilities prescribed malaria drugs (for purchase) without parasitological confirmation. This is contrary to the national guidelines and could lead to the risk of drug resistance developing in patients (Note: free drugs were not provided without parasitological confirmation).
- Four out of six district medical stores and 22 out of 33 health facilities did not have sufficient buffer stocks for at least one drug.²⁷ This can result in stock-outs if deliveries are not received on time or in the required quantity. Buffer stock levels are better maintained by the facilities who make electronic orders through the newly piloted LMIS.

b) Low capacity of the National TB Control Program in health product quantification

Product quantification has been strengthened since the creation of the CNCAM who coordinates this process based on inputs from the disease programs. In May 2016, the Global Drug Facility and the International Union against Tuberculosis and Lung Disease assisted the TB Control Program with its product quantification, using the Union's quantification tools.

For example, quantification errors and weak stock level monitoring in the past have led to overstocks of eight TB drugs at the national level. These resulted in US\$71,000 worth of expiries in 2015 and US\$65,000 to date in 2016. In January 2016, it was estimated that drugs worth US\$263,000 will expire in 2017. In August 2016, and as suggested by the TB Control Program, the Global Fund Secretariat authorized the donation of about 50% of the quantities expiring in 2017 to the Republic of Congo.²⁸ If the remaining expiring quantities are not promptly distributed, they will result in a loss of US\$217,000, as estimated in August 2016, and representing 21% of the average annual value of TB drugs procured in 2014-2015.

The TB Control Program did not receive full training on the use of the Union's quantification tools. This may lead to the risk of a repeat of the same quantification errors and stock-outs or overstocks in the future.

c) Long in-country delivery times to reach the central medical store

In 2014-2015, a number of deliveries from Abidjan's port or airport to NPSP took longer than necessary. For example, at least three TB drug deliveries took between three and five months, one HIV drug delivery took five months, and one malaria drug delivery two months. Such delays can lead to risks of stock-outs. In early 2015, these delays resulted in the spoilage of TB drugs with a value of US\$53,000 at port. Delays were due to various reasons, including customs procedures, transit agent delays, temporary lack of space in NPSP, and the time required to record drugs in NPSP's stock management system (often lasting up to several weeks). The situation improved in 2016 due to changes in delivery conditions (change of Incoterm) and other measures.

d) Lack of quality control

Although health products procured by the Global Fund undergo quality control by the procurement agents, the disease programs do not ensure further quality monitoring on a sample basis at various levels of the supply chain. Considering that storage conditions may vary within the supply chain, their quality at the time of consumption may be compromised. The disease programs have not used the budgeted grant funds for the quality control (see Section IV 1.1.). NPSP has undertaken quality control of HIV drugs stored in NPSP, on a sample basis.

e) No reconciliation of payments to procurement agents

²⁷ In general, district medical stores and health facilities are expected to maintain drug stocks lasting for two to four months. Required stock levels vary for individual drugs.

²⁸ About 10% of the quantities to be donated were not shipped and were lost in a fire on NPSP premises on 7 September 2016.

None of the disease programs has tools to reconcile the Global Fund payments to procurement agents (US\$41.6 million in 2014-2015) with the quantities of products received. This creates the risks of unjustified payments or loss of the health products. Nevertheless, the OIG did not find material differences between the paid and the received quantities. The disease programs find it difficult to reconcile the quantities in part because NPSP inventory reports lack details such as the supplier contract number in order to link staggered payments and deliveries. To facilitate reconciliation, the Global Fund Secretariat has been sharing the quarterly “grant account statements” for procurements of most HIV and malaria health products with the Principal Recipients since 2015. It is currently working on a mechanism to monitor the Principal Recipients’ compliance in this area.

During the OIG’s audit debrief meeting, the MPH recognized the need to increase the disease programs’ role in health product monitoring, particularly the validation of product orders from the districts and the largest health facilities, which is an outstanding issue formerly raised by the Secretariat.

Agreed Management Action 3: The Secretariat, together with NPSP, MPH and the national disease programs, will strengthen the accountability mechanism over the supply chain and the oversight capacities of the disease programs through the following actions:

- NPSP and the disease programs, in coordination, will perform regular reconciliation of NPSP inventory with the disease programs’ stock data and investigate any differences;
- the disease programs will validate product orders received by NPSP from the health districts and the largest health facilities;
- a technical assistance mission will be supported to implement recommendations tailoring the Enterprise Resource Planning system (known as SAGE) to NPSP requirements.

Owner: Head of Grant Management

Target Date: 31 July 2017

V. Table of Agreed Actions

#	Category	Agreed Management Action	Target date	Owner
1.	Governance, Oversight & Management Risks	The Secretariat will engage with the Government and partners to put in place a Project Management Unit reporting to the Minister's office within the MPH, to ensure that the public sector Principal Recipients have the coordination capacity and authority to manage grant activities, particularly cross-cutting activities with other national counterparts.	31 May 2017	Head of Grant Management
2.	Financial & Fiduciary Risks	The Secretariat will develop a plan to ensure efficient monitoring of Fiduciary Agent activities on a quarterly basis, aiming to gradually transfer oversight responsibility for the Principal Recipient financial and fiduciary controls to the newly created Project Management Unit.	31 May 2017	Head of Grant Management
3.	Health Services & Products Risks	The Secretariat, together with NPSP, MPH and the national disease programs, will strengthen the accountability mechanism over the supply chain and the oversight capacities of the disease programs through the following actions: <ul style="list-style-type: none"> • NPSP and the disease programs, in coordination, will perform regular reconciliation of NPSP inventory with the disease programs' stock data and investigate any differences; • the disease programs will validate product orders received by NPSP from the health districts and the largest health facilities; • a technical assistance mission will be supported to implement recommendations tailoring the Enterprise Resource Planning system (known as SAGE) to NPSP requirements. 	31 July 2017	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.