

## Investigation Report

# Global Fund Grants to Côte d'Ivoire

## Programme Nationale de Lutte contre la Tuberculose

GF-OIG-16-013

15 April 2016

Geneva, Switzerland

Non-compliant Expenditures: US\$155,605

Proposed recoveries: US\$155,605

Categories: Fraud (theft) / Mismanagement



Office of the Inspector General

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# I. Background and Scope

In April 2015, the Global Fund Secretariat informed the Office of the Inspector General (OIG) that RHZE, a critical drug in the first-line treatment of tuberculosis financed wholly by the Global Fund, was available on a local market in Abidjan. The strong antibiotic drug was being sold illicitly as a so-called cure to a number of ailments. The Secretariat was concerned that the tuberculosis program's ability to save lives could be compromised if RHZE was being diverted from the legitimate supply chain. It was also concerned about the risks of increased Multi-Drug Resistant Tuberculosis (MDR-TB) if antibiotics were being taken outside of a formal medical treatment.

Given that the problem of drugs sold illicitly on markets is widespread and that their consumption entails health risks, the OIG recommended that Côte d'Ivoire become a pilot country for the roll-out of its new anti-corruption awareness campaign called 'I Speak Out Now!' The campaign could help mitigate the drug diversion and achieve better programmatic impact. The OIG and the Secretariat agreed to tailor the OIG campaign to target and curb the demand for RHZE on markets by raising awareness amongst the general population of the dangers of consuming the drug without a prescription. Reusing the slogan, 'Le médicament de la rue tue!' (Drugs bought off the street are deadly!), to build on work already started by the Fondation Chirac, the former French President's charitable foundation, the OIG launched the campaign in March 2016.

In parallel, the OIG launched a proactive assessment of the availability of RHZE in six local markets in Abidjan and markets in four other cities throughout the country. The OIG reviewed comprehensively the integrity of the country's supply chain between June and September 2015. The OIG examined major elements of the supply chain network, assessed its capabilities and the risks of leakage.

Since 2003, the Global Fund has invested US\$336 million in Côte d'Ivoire with 15 grants covering all three diseases. Tuberculosis investments total US\$28 million and pay for the treatment of over 25,000 patients per year.

The Programme National de Lutte contre la Tuberculose (PNLT), a program within the Ministry of Health, was the Principal Recipient for the country's last two tuberculosis grants. Its most recent grant, CIV-S10-G10-T, was transferred in December 2015 to a new grant to be signed in early 2016 which will focus on clinical interventions. Prior to its transfer, US\$16.4 million had been disbursed through the grant. A new tuberculosis grant will be launched in early 2016 and will be administered by the Alliance Nationale Contre le SIDA, a national Ivorian non-governmental organization focused on strengthening the national response to tuberculosis and HIV through community and prevention activities.

Due to the OIG's proactive assessment, the Côte d'Ivoire Office of the State Inspector launched its own investigation of the illicit drug sales after the OIG's initial mission in June 2015.

## II. Executive Summary

The OIG's investigation confirmed the illicit sale of RHZE in local markets throughout Côte d'Ivoire. The investigation identified three potential sources of the RHZE found in local markets:

1. A review of drug stocks and records maintained at the Nouvelle Pharmacie de la Santé Publique—responsible for receiving, warehousing and distributing program medicines nationally to hospitals and treatment centers—revealed significant weaknesses in its stock management and the use of inventory and billing systems. The OIG identified two million pills that were unaccounted for and missing from imported deliveries. Purchased with grant funds at a cost of US\$148,544 but with a street value of roughly double, the two million pills were from the program's emergency reserves representing four months' supply of tuberculosis treatments nationwide. Based on the amounts involved and other evidence, these pills are a likely source of much of the RHZE for sale in the local markets.
2. Between January 2014 and June 2015, contrary to its own distribution rules, the Nouvelle Pharmacie delivered to PNLT close to nine percent, approximately 700,000 pills, of the total amount distributed in the country. PNLT is located next to a market in central Abidjan where some of the illicit sales were occurring. The program claimed that having its own stock of pills allowed it to react more quickly to potential temporary stock-outs at treatment centers, although they were rare. Officials, however, were unable to fully account for and validate, with adequate assurance, its inflow and subsequent distribution of its drug stocks over this period due to poor record-keeping and conflicting evidence confirming the delivery of drugs to the treatment centers.
3. The investigation also identified, through market surveys, an active cross-border inflow of RHZE. Boxes of the drug delivered to other countries in West Africa were available for retail in local markets in Côte d'Ivoire. This included RHZE financed by the Global Fund and other partners for tuberculosis programs in the region.

As it did not recognize the unaccounted for and missing stocks at the Nouvelle Pharmacie, PNLT continued to procure more pills than necessary for annual patient consumption to replace missing reserve stocks. Moreover, in 2015, PNLT raised its target of reserve stocks from 2.5 million to 4.5 million RHZE pills. Given PNLT's and the Nouvelle Pharmacie's inability to adequately control and account for their stocks of RHZE, the larger volume of reserve stocks of pills were at high risk of being diverted to the markets.

Total non-compliant expenditures identified by the OIG due to unaccounted for or non-delivered RHZE were US\$155,605.

### Root Causes

The Nouvelle Pharmacie did not adequately account for and safeguard the tuberculosis program's stocks of RHZE on behalf of PNLT, its client, and cannot account for two million missing pills. PNLT did not adequately monitor and control the supply chain of tuberculosis medicines financed by the Global Fund to minimize the risk of drug diversion. This includes exercising adequate oversight of the drug's receipt, storage and safekeeping by the Nouvelle Pharmacie and its final distribution to the treatment centers. In addition, PNLT did not adequately monitor the stock movements of the tuberculosis medication it directly controlled. All these factors facilitated the illicit supply of RHZE to the local markets.

Public demand for RHZE majorly influences cross-border supply, which poses additional challenges to curb illicit sales.

## Actions Taken To-Date

As a result of this investigation, the Secretariat has strengthened the conditions precedent in the new tuberculosis grants concerning the management of the supply chain of medication, which include:

- the delivery by PNLT of an operational plan for 2016 and 2017 for the procurement of anti-tuberculosis medicines with proposed dates for the placement of orders and delivery dates, along with respective quantities;
- the creation of a multi-sectorial technical committee for stock management/control and quantification of anti-tuberculosis medicines;
- the delivery by PNLT of a cross-validation exercise between the stocks of anti-tuberculosis medicines consumed or distributed to treatment centers and the reported number of tuberculosis cases under treatment for the same period. This analysis is to be submitted semi-annually together with PNLT's progress update report to the Global Fund; and
- monthly physical counts of stocks held at the Nouvelle Pharmacie and a reconciliation with quantities received and distributed in the same period.

Additionally, the Secretariat, together with national stakeholders and partners, is working to include a stock and logistic module into the country's district health information software tool for better oversight and visibility of stocks in the country and to link patient's data with drug consumption data.

As another consequence of the investigation, in August 2015, the Ministry of Health instructed PNLT to discontinue the practice of receiving RHZE and distributing it to the treatment centers. This eliminates one possible supply source of pills in the market.

In March 2016, the OIG, in partnership with the Secretariat and the Ministry of Health, launched the "I Speak Out Now!" fraud and corruption awareness campaign in Côte d'Ivoire. Using Public Service Announcements on national radio and in the media, the campaign is designed to raise awareness about the dangers of taking non-prescribed RHZE. Through the campaign, the OIG aims to both curb the supply of RHZE on the street as well as dispel public myths about its benefits by emphasizing the public health risks of non-prescribed use.

Before this investigation, in June 2014, the Côte d'Ivoire government established the Committee for the Fight against Medicines Smuggling and Counterfeiting (COTRAMED) to combat the illicit sale of drugs in local markets, particularly in central Abidjan. Moreover, in March 2015, the National Commission for the Coordination of Drugs' Supply (CNCAM) was created to improve the coordination and monitoring of drug supplies.

## Agreed Management Actions

The Global Fund Secretariat and the OIG have agreed on specific actions to address the governance, oversight, management issues and risks identified in this report for grants implemented by PNLT. The actions are set out in detail in Section V, and include:

- improving accountability in the drug supply chain and preventing further losses of RHZE stocks by ensuring implementation of the new grant's conditions precedent; and,
- finalizing and pursuing potential monetary recoveries for the unaccounted for and non-delivered pills.

### III. Findings and Agreed Management Actions

#### 01 Drugs Are Widely Available in Local Markets

The OIG's investigation confirmed the illicit sale of RHZE in local markets throughout Côte d'Ivoire. Public perception that the drug has general health benefits drives its non-prescribed demand. Although spotted in numerous markets in several cities, the nature of local markets makes quantifying the full extent of the problem in volume and over time difficult. Confirming the source of supply was also difficult due to the reluctance of vendors to reveal their sources, although the drug vendors intimated that the source was from the government rather than treatment centers or an intermediary agent. They also claimed to be able to supply the drug in larger quantities if needed. The OIG found no other drug within the Global Fund financed tuberculosis treatment portfolio in the markets apart from RHZE.

PNLT procures tuberculosis medicines, including RHZE, for Côte d'Ivoire through the Stop TB Partnership, using the Global Fund's Global Drug Facility. The Nouvelle Pharmacie receives and stocks the RHZE in its warehouses before distributing the drugs, on behalf of PNLT, to about 90 treatment centers and hospitals throughout Côte d'Ivoire based on orders received from PNLT.<sup>1</sup>

OIG findings identify the Nouvelle Pharmacie and PNLT as the markets' most likely sources with some RHZE smuggled in from neighboring countries.

Newly diagnosed tuberculosis patients undertake a six-month treatment regimen with certain prescribed medicines. For the first two months, patients are administered RHZE, the most effective drug in the treatment portfolio, at two to five pills per day, depending on the patient's body weight. A fixed-dosage of four drugs combined into one pill, RHZE was developed and is used specifically for the first-line treatment of tuberculosis, and it has no other prescribed use and is not sold to or stocked by public pharmacies for the public.<sup>2</sup> RHZE is widely and freely available to Côte d'Ivoire's hospitals and tuberculosis treatment centers by PNLT through the Global Fund tuberculosis grant.

Prescribed and non-prescribed medicines of all types are commonly and illicitly available in local markets throughout Côte d'Ivoire. Visits between June to August 2015 by OIG representatives to six local markets in the greater Abidjan area and markets in the cities of Bouaké, Korhogo, San Pedro and Yamoussoukro, Côte d'Ivoire's larger cities where two-thirds of the total RHZE is administered, found RHZE widely and openly available (*see* Annex D for a geographical overview of the markets visited). Even in two markets in the Abidjan area where stocks of RHZE were not available for sale at the time, vendors were aware of the sale of drug in the markets and claimed to be able to supply it upon request. Lot numbers on the illicit stocks were from recent deliveries of the drug into the country by PNLT through the Global Fund grant or RHZE smuggled in from outside of Côte d'Ivoire.

Lot numbers on samples of RHZE bought in the local markets showed that some of the RHZE originated from Global Fund drugs procured for Sierra Leone, the Central African Republic and by partner institutions in Niger. Laboratory tests commissioned by the OIG proved that the drugs were genuine.

Both vendors and drug consumers informed the OIG that the public demand for RHZE is due to the belief that the inexpensive drug cures common ailments, ulcers, sexually transmitted diseases as well as purifies the body, acts as a stimulant or an aphrodisiac. This demand is majorly driving its illicit sale. RHZE pills are publicly displayed and sold in the markets in their original packaging and are

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<sup>1</sup> Smaller treatment centers occasionally receive their medicine stocks from a nearby main treatment center rather than directly from the Nouvelle Pharmacie.

<sup>2</sup> RHZE is a combination of the drugs Rifampicin, Isoniazid, Pyrazinamide and Ethambutol and was developed in 1999. Drug combinations make intensive-phase treatments possible, simplify treatment and management of drug stocks, and may prevent the emergence of drug resistance.

sold by the box (672 pills), blister pack (28 pills) or individual pill for about US\$0.15 per pill (US\$100 per box).<sup>3</sup>

The full extent of the illicit sales through local markets is difficult to quantify in volume and over time, yet the market visits and drug vendors indicate that illicit sales are not isolated, random or negligible. Analytical comparisons of RHZE consumption patterns over time in relation to the volume of pills procured and reported in inventory stocks suggest that surplus RHZE was available and leaked in 2014 and as early as 2013.

As well as wasting Global Fund investments in Côte d'Ivoire, the illicit sale of RHZE has serious health risks to buyers unknowingly affected by tuberculosis. A person with undiagnosed tuberculosis who takes RHZE for other reasons can render the drug ineffective for later tuberculosis treatment, once diagnosed. MDR-TB generally develops due to insufficient, irregular, or unsuitable treatment. MDR-TB, a worldwide health concern, is closely related to a lack of access to free or affordable healthcare services.

*Agreed Management Actions: In response to this finding, the Global Fund Secretariat agrees to ensure implementation of the risk mitigation plan which forms part of the conditions precedent in the new tuberculosis grants to improve accountability in the supply chain and to prevent further losses of RHZE to illicit markets (see Section V for details).*

## 02 Treatment Centers are Ruled Out as Likely Source of Illicit Stocks

The OIG found that the processes at individual treatment centers for documenting RHZE stocks and usage were adequate to account for the number of pills delivered to the individual treatment center. Additionally, physical pill stocks were generally well secured. Subsequently, the OIG ruled out the individual treatment centers as the likely source of the illicit stocks.

The OIG visited nine treatment centers and hospitals that, when combined, accounted for almost half of the total RHZE distributed by the Nouvelle Pharmacie between January 2014 and June 2015, representing 3.7 million pills. Four of the sites are located in Abidjan and the remaining five in Bonoua, Bouaké, Korhogo, San Pedro and Yamoussoukro. All sites visited had functional inventory systems and stored their medicines in secured areas with restricted entry. The OIG reconciled inventory records and transfers of RHZE from storage to the treatment rooms for patients. The centers' pharmacist meticulously recorded usage. Logbooks kept by the nurses in the treatment rooms record the number of pills received and administered daily to individual patients. Patient files are reconciled with patients receiving medicines. Medicine stocks were usually secured, although they are occasionally subject to break-in and theft.<sup>4</sup>

## 03 Large Stocks of RHZE Unaccounted for and Missing from the Nouvelle Pharmacie

Significant weaknesses in the management of drug stocks at the Nouvelle Pharmacie rendered the process of tracking stocks by lot number and obtaining a precise account of existing stocks inaccurate and unreliable. The Nouvelle Pharmacie failed to account for the whereabouts of almost 2 million RHZE pills, costing the tuberculosis program about US\$150,000. The local market value was roughly double. The 2 million unaccounted for pills represent four months' supply of RHZE treatments nationwide and represent a likely source of the illicit sales in the local markets, although not confirmed.

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<sup>3</sup> Original packages of RHZE bear the logos of *Stop TB Partnership* and the *Global Drug Facility*. Printed on each blister pack is the notice: 'Supplied through the Global TB Drug Facility: Not for Resale'.

<sup>4</sup> Two facilities reported thefts of RHZE in 2015 up through September totaling about 100 boxes.

The Ivorian Government created the Nouvelle Pharmacie de la Santé Publique, a non-profit organization, in October 2013 to replace the former state-controlled Public Health Pharmacy due to deficiencies and poor performance. Its mission is to serve as the national government’s supply chain of medicines to its public and para-public health facilities throughout the country including the centralized storage and distribution of medicines from its warehouses to the health facilities.

The Nouvelle Pharmacie in Abidjan receives tuberculosis medicines ordered by PNLT from the Global Fund Facility. It stores them in its warehouses until shipped to individual treatment centers and hospitals. Quantities of incoming inventory stocks are entered by lot numbers into the Nouvelle Pharmacie’s computerized inventory and billing systems which in theory track the stocks’ physical location within its warehouses and eventual distribution to treatment centers. The systems, in theory, allow the Nouvelle Pharmacie to track in real time the total number of pills in stock and with specific facilities as well as the quantities received and delivered by lot over the period.

During its multiple visits to the Nouvelle Pharmacie, the OIG found significant weaknesses in its computerized stock management processes resulting mainly from its under-utilization, non-integration of dual systems and manual overrides accompanied with supplementary spreadsheets. The facility’s staff were notably slow in responding to multiple straightforward information and document requests and were unable to provide the OIG with a full and reliable accounting of its receipt, storage and distribution of RHZE stocks from its systems during three missions over the period of June to September 2015.

The OIG also observed that the Nouvelle Pharmacie did not always distribute stocks in consideration of their expiry dates resulting in stocks of older drugs closer to expiry remaining in the warehouse. The errors and poor controls rendered the process of management of expiry of drugs and out-going shipments inaccurate and unreliable.

Unaccounted for RHZE Inventory at 30 June 2015

Most importantly, the Nouvelle Pharmacie could not substantiate the whereabouts of two million pills of RHZE received into its warehouses between January 2014 and June 2015. During the 18-month period, as shown in Table 1, the Nouvelle Pharmacie received shipments of 10.05 million RHZE pills from suppliers and distributed 6.52 million of these pills to treatment centers including PNLT. Based on its own inventory and billing systems, the Nouvelle Pharmacie would have 3.53 million pills in stock in its warehouses at the end of June 2015.<sup>5</sup> Yet the Nouvelle Pharmacie had reported to PNLT RHZE stocks of only 1.55 million pills on 30 June 2015, leaving 1.98 million pills unaccounted for (20% of the total amount received). This represents about 3,000 boxes of RHZE purchased at a cost of US\$148,544 with program funds.<sup>6</sup>

**Table 1. Unaccounted for Stocks of RHZE by Nouvelle Pharmacie for Pills Received between January 2014 and June 2015**

<b>Pills Received, January 2014 to June 2015</b>	<b>10,046,904</b>
<b>Less Pills Distributed to PNLT and Treatment Centers</b>	<b>6,518,400</b>
<b>Equals Surplus Stock that Should be On-hand at June 2015</b>	<b>3,528,504</b>
<b>Less Reported RHZE Stock On-hand at 30 June 2015</b>	<b>1,549,293</b>
<b>Equals Unaccounted for RHZE Stock</b>	<b>1,979,211</b>

Unaccounted for RHZE Inventory at 30 September 2015

Findings from the OIG’s own inspection of RHZE stocks at the Nouvelle Pharmacie in September 2015 are consistent with the lower reported levels of stocks on-hand at 30 June 2015. In September,

<sup>5</sup> RHZE received prior to 2014 was fully distributed by December 2014 and would not have been in inventory at 30 June 2015.  
<sup>6</sup> The PNLT procured the RHZE during this period at an average cost of about US\$0.075 per pill, or about US\$50 per box.

the OIG found no RHZE in stock at the facility, as all of its remaining on-hand stocks had been distributed to treatment centers and PNLT by that time.<sup>7</sup>

As shown in Table 2, the fact that there were no RHZE stocks on-hand at the Nouvelle Pharmacie in September supports the low levels of stocks it reported at 30 June 2015. Based on the country’s average consumption rate of between 420,000 pills to 435,000 pills per month, about 1.3 million RHZE pills would have been distributed from the Nouvelle Pharmacie to treatment centers between 30 June and 30 September; and, thus, would have fully depleted by September its stock of 1.5 million pills on-hand at 30 June.

**Table 2. Roll-forward of RHZE Stocks at Nouvelle Pharmacie, July to September 2015**

<b>Reported RHZE Stock On-hand at 30 June 2015</b>	1,549,293
<b>Less Estimated Distribution of RHZE to Centers, July to Sept</b>	1,301,449
<b>Equals Estimated RHZE Stock On-hand at 30 September 2015</b>	247,844
<b>Actual RHZE Stock On-hand</b>	None

The OIG concludes that the gaps between theoretical stock levels of RHZE and actual stock levels of RHZE represent pills that are physically missing from the Nouvelle Pharmacie’s inventory stocks. They also represent a highly likely source of at least some, if not most, of the illicit supplies in local markets seen in 2015.

Reserve stocks of medicines are crucial in tuberculosis programs to prevent any treatment interruption. Additional evidence, however, shows that the missing pills were from the Nouvelle Pharmacie’s reserve stocks of RHZE. The leakage, however, fortunately did not result in shortages of RHZE for the treatment centers.

An OIG analysis of RHZE procurement and consumption for Côte d’Ivoire from January 2013 to September 2015 shows that the Nouvelle Pharmacie received approximately two million pills in excess of its needs, in order to build up its buffer stock. As shown in Table 3, the Nouvelle Pharmacie received 16.6 million pills during the period whereas only about 14.4 million pills were estimated as needed for treatments, leaving a theoretical buffer stock of about 2.2 million pills at September 2015. As described above, however, there was no stock of RHZE at the Nouvelle Pharmacie in September 2015, as the pills had gone missing. See Annex B, for detailed assumptions and components of the OIG’s analysis.<sup>8</sup>

**Table 3. Summary of RHZE Supply and Demand, January 2013 to September 2015**

Pills Procured and Received during the Period	16,563,904
Less estimated consumption by Patients	14,405,987
Equals Theoretical Surplus for Reserve Stocks as September 2015	2,157,917
Less Actual On-hand Stocks at September 2015	None
<b>Equals RHZE Stocks missing</b>	<b>2,157,917</b>

*Agreed Management Actions: In response to this finding, the Global Fund Secretariat agrees to ensure implementation of the risk mitigation plan which forms part of the conditions precedent in the new tuberculosis grants to improve accountability in the supply chain and to prevent further losses of RHZE to illicit markets (see Section V for details).*

<sup>7</sup> The depleted levels did not create a stock-out as a recent shipment of RHZE was in port awaiting transfer to the Nouvelle Pharmacie.

<sup>8</sup> An imported supply of 1.5 million pills was excluded from the analysis and stock counts, as it had not yet cleared customs or been moved to the Nouvelle Pharmacie’s warehouse and entered into its intake system prior to September 2015.

## 04 Inadequate Management of Pill Stocks at PNLT

Between January 2014 and June 2015, PNLT received around nine percent of the total pills distributed nationwide, i.e., about 700,000 pills in 1040 boxes over 12 shipments costing about US\$52,500 with a street value of about US\$105,000. PNLT claimed to have distributed them directly to community treatment centers, contrary to Ivorian national law, which regulates the delivery of pharmaceuticals and health products to treatment centers and hospitals granting delivery authority exclusively to the Nouvelle Pharmacie.

PNLT claimed that the purpose of the stocks was to minimize stock-outs at the treatment centers by reducing the time lapse of ordering and receiving stocks through the Nouvelle Pharmacie.

PNLT was unable to fully account for and validate, however, with adequate assurance, its inflow and subsequent distribution of drug stocks to treatment centers. This was due to poor record keeping and conflicting evidence of drug delivery receipts from the treatment centers, making its stock of pills a potential source of some of the illicit sales in the local markets, although not confirmed. Notably, PNLT is located next to the local market in central Abidjan where some of the illicit sales were occurring.

On its visits to PNLT in June 2015, the OIG observed that PNLT maintained limited or no inventory stock records documenting the inflow and outflow of RHZE received and distributed during the period, although it attempted to re-create one later for a subsequent OIG mission. PNLT also did not systematically obtain and keep on file confirmations from the centers of the drug volumes they had received, to ensure and validate the drugs' complete and safe delivery to the centers. Additionally, neither the OIG nor the Côte d'Ivoire Office of the State Inspectorate were able to confirm or validate with reasonable assurance a number of purported deliveries by PNLT to the centers.

During its first visit to PNLT, the OIG observed that RHZE drug stocks were small in quantity, stored haphazardly in an untidy and poorly maintained room, and had not been included in the inventory. On a follow-up visit, the OIG observed two boxes of RHZE unaccounted for in an empty and unlocked office at PNLT.

Based on the preliminary findings of this investigation, the Ministry of Health in August 2015 instructed PNLT to discontinue its practice of receiving and redistributing RHZE stocks.

## 05 Un-Resolved Shortage of Pills Delivered

For an imported shipment of about 3 million RHZE pills medicines received on 17 November 2014, the Nouvelle Pharmacie noted that the delivery was short by 94,080 pills (about 3%). Contrary to PNLT's obligation to be present during deliveries at the Nouvelle Pharmacie, PNLT was not present at the time to oversee the drugs' receipt. After Nouvelle Pharmacie informed PNLT of the shortfall, the program notified the Stop TB Partnership, the drug's international supplier, of the shortage. PNLT, however, did not respond to any of the supplier's follow-up queries for information and the issue was not further pursued. PNLT did not request the shipment of additional pills, or an invoice credit, but showed indifference and left the matter unresolved. Consequently, the program paid for 94,080 pills that were not received at a cost of US\$7,061 amounting to non-compliant expenditures.

## 06 RHZE Continues to be Available in Local Markets

The OIG found that RHZE continues to be illegally available in local markets in 2016 even after the OIG shared its investigation's findings with PNLT in late 2015.

In January 2016, the OIG re-visited some of the local markets in the greater Abidjan area and confirmed that RHZE continues to be illicitly sold. Of four markets re-visited, RHZE was available at three of them. A trace of the lot numbers on a sample of boxes spotted shows that the RHZE in

two of the markets were originally shipped to Niger and financed by a partner organization, indicating that the drugs were leaked and smuggled into the country for illicit sale. The lot number of the RHZE sourced in Côte D'Ivoire showed that the drug was from a shipment delivered to the Nouvelle Pharmacie in October 2015. This indicates that the drug was still being leaked to the markets even following PNLT's heightened awareness of leaks due to the OIG investigation. The OIG notes, however, that the one market selling the RHZE financed with the Côte d'Ivoire tuberculosis grant was located next to a local hospital. The hospital is another possible source of small quantities of the drug, as well as the Nouvelle Pharmacie, as its stock management system was found by the OIG to have some gaps.

In contrast to what the OIG had observed a few months earlier, the vendors no longer openly display RHZE. Instead, they hide the drug from clear view and show it only upon request. One vendor commented on how the supply of RHZE had been recently disrupted, but still remained available.

## 07 Risk of Leaks from the Reserve Stock

In 2015, on approval by the Secretariat, PNLT procured 10 million RHZE pills. This represented 12 months' consumption, an increase in its target of reserve stocks from a six-month supply to a nine-month supply, and a replenishment of its six-month supply of reserve stocks that had unknowingly gone missing at the Nouvelle Pharmacie. For 2015, PNLT also increased its projection of average pills consumed per day from 3.5 to 4.0. The large volume of pills on-hand at one time represents a great risk of pills being leaked into the illicit supply chain given the poor stock management practices by the Nouvelle Pharmacie and the lack of PNLT oversight. It also increases the risk of the drugs expiring prior to use due to the OIG's discovery that the Nouvelle Pharmacie does not consistently apply a distribution principle that considers drug expiry dates.

In May 2015, an initial batch of 1.5 million pills, or 2,217 boxes, of the full 10 million pill order arrived into customs, but allegedly the Nouvelle Pharmacie was not alerted until some months later. During its intake procedure, the Nouvelle Pharmacie noted that 280,000 pills, or 418 boxes, corresponding to 19% of the shipment had allegedly become spoilt, having been left outdoors for roughly one week while at customs and exposed to rain. The OIG confirmed that some of the pills from the May shipment leaked into the market, based on the OIG's market surveys in January 2016, but did not confirm whether any of the spoilt pills were leaked. PNLT has requested the transportation company to reimburse them for the value of the spoilt pills.

## IV. Conclusion

The proactive review undertaken by the OIG to determine the extent of diverted RHZE drugs concluded that they were widely available. The ensuing investigation identified that the Nouvelle Pharmacie could not account for two million pills. The missing RHZE represents four months' supply of tuberculosis treatments nationwide and is a likely in-country source of most of the illicit sales in the local markets in addition to RHZE smuggled in from neighboring countries.

Major contributing factors were significant weaknesses in stock management and use of inventory and billing systems by the Nouvelle Pharmacie in accounting for and safeguarding program medicines, weak oversight by PNLT of the drug's supply chain including the Nouvelle Pharmacie's stock management practices, and poor control of stock management by PNLT.

The poor stock management led to the order and approval of more RHZE stocks than were needed for treatments and large reserve stocks that were stored or controlled inadequately by the Nouvelle Pharmacie. The Global Fund Secretariat and the OIG have agreed on specific actions to address the governance, oversight and management issues and risks identified in this report for grants implemented by PNLT including reinforcing the oversight mechanism at the Nouvelle Pharmacie and strengthening the needs assessment at PNLT.

The OIG's "I Speak Out Now!" fraud and corruption awareness campaign targets community awareness of the dangers of taking non-prescribed RHZE from public markets. It is anticipated that this campaign will also contribute to reducing the non-prescribed demand for the Global Fund-financed tuberculosis drugs in Côte d'Ivoire.

## V. Table of Agreed Management Actions

#	Category	Agreed Management Action	Target date	Owner
1	Governance, Oversight & Management Risks	<p>Based on the findings of this report, including large stocks of RHZE unaccounted for and missing from the Nouvelle Pharmacie, the Global Fund Secretariat will improve accountability in the supply chain by implementing mitigation measures to prevent further losses. These measures include:</p> <ul style="list-style-type: none"> <li>- the delivery by PNLT of an operational plan for the procurement of anti-tuberculosis medicines;</li> <li>- the creation of a multi-sectorial technical committee for stock management/control and quantification of anti-tuberculosis medicines;</li> <li>- the delivery by PNLT of a cross validation exercise between the stocks of anti-tuberculosis medicines consumed or distributed to treatment centers and the reported number of tuberculosis cases under treatment for the same period. This analysis will be submitted twice per year with the Progress Update report.</li> <li>- perform a monthly physical count of stocks held at the Nouvelle Pharmacie and reconcile to quantities received and distributed</li> </ul>	31 December 2016	Head of Grant Management Division
2	Recovery	<p>Based on the findings of this report, including stocks of RHZE unaccounted for and missing from the Nouvelle Pharmacie, the Global Fund Secretariat will finalize and pursue, from all entities responsible, an appropriate recoverable amount. This amount will be determined by the Secretariat in accordance with its evaluation of applicable legal rights and obligations and associated determination of recoverability.</p>	31 December 2016	Recoveries Committee

## Annex A: OIG Methodology

The Investigations Unit of the OIG is responsible for conducting investigations of alleged fraud, abuse, misappropriation, corruption and mismanagement (collectively, “fraud and abuse”) within Global Fund financed programs and by Principal Recipients and Sub-recipients, (collectively, “grant implementers”), Country Coordinating Mechanisms and Local Fund Agents, as well as suppliers and service providers.<sup>9</sup>

While the Global Fund does not typically have a direct relationship with the recipients’ suppliers, the scope of the OIG’s work<sup>10</sup> encompasses the activities of those suppliers with regard to the provision of goods and services. The authority required to fulfill this mandate includes access to suppliers’ documents and officials.<sup>11</sup> The OIG relies on the cooperation of these suppliers to properly discharge its mandate.<sup>12</sup>

OIG investigations aim to: (i) identify the specific nature and extent of fraud and abuse affecting Global Fund grants, (ii) identify the entities responsible for such wrongdoings, (iii) determine the amount of grant funds that may have been compromised by fraud and abuse, and (iv), place the organization in the best position to obtain recoveries through the identification of the location or the uses to which the misused funds have been put.

OIG conducts administrative, not criminal, investigations. Its findings are based on facts and related analysis, which may include drawing reasonable inferences based upon established facts. Findings are established by a preponderance of credible and substantive evidence. All available evidence is considered by the OIG, including inculpatory and exculpatory information.<sup>13</sup>

The OIG finds, assesses and reports on facts. On that basis, it makes determination on the compliance of expenditures with the grant agreements and details risk-prioritized Agreed Management Actions. Such Agreed Management Actions may notably include the identification of expenses deemed non-compliant for considerations of recovery, recommended administrative action related to grant management and recommendations for action under the Code of Conduct for Suppliers<sup>14</sup> or the Code of Conduct for Recipients of Global Fund Resources<sup>15</sup> (the “Codes”), as appropriate. The OIG does not determine how the Secretariat will address these determinations and recommendations. Nor does it make judicial decisions or issue sanctions.<sup>16</sup>

Agreed Management Actions are agreed with the Secretariat to identify, mitigate and manage risks to the Global Fund and its recipients’ activities. The OIG defers to the Secretariat and, where appropriate, the recipients, their suppliers and/or the concerned national law enforcement agencies, for action upon the findings in its reports.

The OIG is an administrative body with no law enforcement powers. It cannot issue subpoenas or initiate criminal prosecutions. As a result, its ability to obtain information is limited to the rights to it under the grant agreements agreed to with recipients by the Global Fund, including the terms of its Codes, and on the willingness of witnesses and other interested parties to voluntarily provide

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<sup>9</sup> Charter of the Office of the Inspector General (19 March 2013), available at: <http://theglobalfund.org/documents/oig/OIGOfficeOfInspectorGeneralCharteren/>, accessed 01 November 2013.

<sup>10</sup> Charter of the Office of the Inspector General (19 March 2013) § 2, 9.5 and 9.7.

<sup>11</sup> *Ibid.*, § 17.1 and 17.2

<sup>12</sup> Global Fund Code of Conduct for Suppliers (15 December 2009), § 17-18, available at: <http://theglobalfund.org/documents/corporate/CorporateCodeOfConductForSuppliersPolicyen/>, accessed 01 November 2013. Note: Every grant is subject to the Global Fund’s Standard Terms and Conditions (STC) of the Program Grant Agreement signed for that grant. The above Code of Conduct may or may not apply to the grant.

<sup>13</sup> These principles comply with the *Uniform Guidelines for Investigations*, Conference of International Investigators, June 2009; available at: <http://www.un.org/Depts/oios/pages/uniformguidelines.html>, accessed 01 November 2013.

<sup>14</sup> See fn. 16, *supra*

<sup>15</sup> Code of Conduct for Recipients of Global Fund Resources (16 July 2012) available at: <http://theglobalfund.org/documents/corporate/CorporateCodeOfConductForRecipientsPolicyen/>, accessed 01 November 2013. Note: Every grant is subject to the STC of the Program Grant Agreement signed for that grant. The above Code of Conduct may or may not apply to the grant.

<sup>16</sup> Charter of the Office of the Inspector General (19 March 2013) § 8.1

information. The OIG also provides the Global Fund Board with an analysis of lessons learned for the purpose of understanding and mitigating identified risks to the grant portfolio related to fraud and abuse.

Finally, the OIG may make referrals to national authorities for prosecution of any crimes or other violations of national laws, and supports such authorities as necessary throughout the process, as appropriate.

## 01 Applicable Concepts of Fraud and Abuse

The OIG bases its investigations on the contractual commitments undertaken by recipients and suppliers. It does so under the mandate set forth in its Charter to undertake investigations of allegations of fraud and abuse in Global Fund supported programs.

As such, it relies on the definitions of wrongdoing set out in the applicable grant agreements with the Global Fund and the contracts entered into by the recipients with other implementing entities in the course of program implementation.

Such agreements with Sub-recipients must notably include pass-through access rights and commitments to comply with the Codes. The Codes clarify the way in which recipients are expected to abide by the values of transparency, accountability and integrity which are critical to the success of funded programs. Specifically, the Code of Conduct for Recipients prohibits recipients from engaging in corruption, which includes the payment of bribes and kickbacks in relation to procurement activities.<sup>17</sup>

The Codes notably provide the following definitions of the relevant concepts of wrongdoings:<sup>18</sup>

- “Anti-competitive practice” means any agreement, decision or practice which has as its object or effect the restriction or distortion of competition in any market.
- “Collusive practice” means an arrangement between two or more persons or entities designed to achieve an improper purpose, including influencing improperly the actions of another person or entity.
- “Conflict of Interest”: A conflict of interest arises when a Recipient or Recipient Representative participates in any particular Global Fund matter that may have a direct and predictable effect on a financial or other interest held by: (a) the Recipient; (b) the Recipient Representative; or (c) any person or institution associated with the Recipient or Recipient Representative by contractual, financial, agency, employment or personal relationship. For instance, conflicts of interest may exist when a Recipient or Recipient Representative has a financial or other interest that could affect the conduct of its duties and responsibilities to manage Global Fund Resources. A conflict of interest may also exist if a Recipient or Recipient Representative’s financial or other interest compromises or undermines the trust that Global Fund Resources are managed and utilized in a manner that is transparent, fair, honest and accountable.
- “Corrupt practice” means the offering, promising, giving, receiving or soliciting, directly or indirectly, of anything of value or any other advantage to influence improperly the actions of another person or entity.
- “Fraudulent practice” means any act or omission, including a misrepresentation that knowingly or recklessly misleads, or attempts to mislead, a person or entity to obtain a financial or other benefit or to avoid an obligation.
- “Misappropriation” is the intentional misuse or misdirection of money or property for purposes that are inconsistent with the authorized and intended purpose of the money or assets, including for the benefit of the individual, entity or person they favor, either directly or indirectly.

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<sup>17</sup> Code of Conduct for Recipients of Global Fund Resources, section 3.4.

<sup>18</sup> Available at: <http://theglobalfund.org/documents/corporate/CorporateCodeOfConductForRecipientsPolicyen/> and [http://theglobalfund.org/documents/corporate/Corporate\\_CodeOfConductForSuppliers\\_Policy\\_en/](http://theglobalfund.org/documents/corporate/Corporate_CodeOfConductForSuppliers_Policy_en/)

## 02 Determination of Compliance

The OIG presents factual findings which identify compliance issues by the recipients with the terms of the Global Fund's Standard Terms and Conditions (STC) of the Program Grant Agreement. Such compliance issues may have links to the expenditure of grant funds by recipients, which then raises the issue of the eligibility of these expenses for funding by the Global Fund. Such non-compliance is based on the provisions of the STC.<sup>19</sup> The OIG does not aim to conclude on the appropriateness of seeking refunds from recipients, or other sanctions on the basis of the provisions of the Program Grant Agreement.

Various provisions of the STC provide guidance on whether a program expense is eligible for funding by the Global Fund. It is worth noting that the terms described in this section are to apply to Sub-Recipients as well as Principal Recipients.<sup>20</sup>

At a very fundamental level, it is the Principal Recipient's responsibility "to ensure that all grant funds are prudently managed and shall take all necessary action to ensure that grant funds are used solely for Program purposes and consistent with the terms of this Agreement".<sup>21</sup>

In practice, this entails abiding by the activities and budgetary ceilings proposed in the Requests for Disbursement, which in turn must correspond to the Summary Budget(s) attached to Annex A of the Program Grant Agreement. While this is one reason for expenses to be ineligible, expending grant funds in breach of other provisions of the Program Grant Agreement also results in a determination of non-compliance.

Even when the expenses are made in line with approved budgets and work plans, and properly accounted for in the program's books and records, such expenses must be the result of processes and business practices which are fair and transparent. The STC specifically require that the Principal Recipient ensures that: (i) contracts are awarded on a transparent and competitive basis, [...] and (iv) that the Principal Recipient and its representatives and agents do not engage in any corrupt practices as described in Article 21(b) of the STC in relation to such procurement.<sup>22</sup>

The STC explicitly forbid engagement in corruption or any other related or illegal acts when managing Grant Funds: "The Principal Recipient shall not, and shall ensure that no Sub-recipient or person affiliated with the Principal Recipient or any Sub-recipient [...] participate(s) in any other practice that is or could be construed as an illegal or corrupt practice in the Host Country."<sup>23</sup>

Amongst prohibited practices is the rule that the Principal Recipient shall not and shall ensure that no person affiliated with the Principal Recipient "engage(s) in a scheme or arrangement between two or more bidders, with or without the knowledge of the Principal or Sub-recipient, designed to establish bid prices at artificial, non-competitive levels."<sup>24</sup>

The Global Fund's Code of Conduct for Suppliers and Code of Conduct for Recipients further provide for additional principles by which recipients and contractors must abide, as well as remedies in case of breaches of said fundamental principles of equity, integrity and good management. The Codes also provide useful definitions of prohibited conducts.<sup>25</sup>

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<sup>19</sup> The STC are revised from time to time, but the provisions quoted below applied to all Principal Recipients at the time of the investigation.

<sup>20</sup> Standard Terms and Conditions (2012.09) at Art. 14(b):

<http://www.theglobalfund.org/documents/core/grants/CoreStandardTermsAndConditionsAgreementen>

<sup>21</sup> Id. at Art. 9(a) and Art 18(f)

<sup>22</sup> Id. at Art. 18(a)

<sup>23</sup> Id., at Art. 21 (b)

<sup>24</sup> Id. at Art. 21(b)

<sup>25</sup> Available at: <http://www.theglobalfund.org/documents/corporate/CorporateCodeOfConductForSuppliersPolicyen> ; <http://www.theglobalfund.org/documents/corporate/CorporateCodeOfConductForRecipientsPolicyen>

The Codes are integrated into the STC through Article 21(d) under which the Principal Recipient is obligated to ensure that the Global Fund's Code of Conduct for Suppliers is communicated to all bidders and suppliers.<sup>26</sup> It explicitly states that the Global Fund may refuse to fund any contract with suppliers found not to be in compliance with the Code of Conduct for Suppliers. Similarly, Article 21(e) provides for communication of the Code of Conduct for Recipients to all Sub-recipients, as well as mandatory application through the Sub-recipient agreements.<sup>27</sup>

Principal Recipients are contractually liable to the Global Fund for the use of all grant funds, including expenses made by Sub-recipients and contractors.<sup>28</sup>

The factual findings made by the OIG following its investigation and summarized through this report can be linked to the prohibited conducts or other matters incompatible with the terms of the Program Grant Agreements.

### 03 Reimbursements or Sanctions

The Secretariat of the Global Fund is subsequently tasked with determining what management actions or contractual remedies will be taken in response to those findings.

Such remedies may notably include the recovery of funds compromised by contractual breaches. Article 27 of the STC stipulates that the Global Fund may require the Principal Recipient "to immediately refund the Global Fund any disbursement of the grant funds in the currency in which it was disbursed [in cases where] there has been a breach by the Principal Recipient of any provision of this (sic) Agreement [...] or the Principal Recipient has made a material misrepresentation with respect to any matter related to this Agreement."<sup>29</sup>

According to Article 21(d), "in the event of non-compliance with the Code of Conduct, to be determined by the Global Fund in its sole discretion, the Global Fund reserves the right not to fund the contract between the Principal Recipient and the Supplier or seek the refund of the grant funds in the event the payment has already been made to the Supplier."

Furthermore, the UNIDROIT principles (2010), the principles of law governing the grant agreement, in their article 7.4.1, provide for the right of the Global Fund to seek damages from the Principal Recipient in case non-performance, in addition to any other remedies the Global Fund may be entitled to.

Additional sanctions, including with respect to Suppliers, may be determined pursuant to the Sanction Procedure of the Global Fund, for breaches to the Codes.

In determining what non-compliant expenditures are to be proposed as recoverable, the OIG advises the Secretariat that such amounts typically should be: (i) amounts, for which there is no reasonable assurance about delivery of goods or services (unsupported expenses, fraudulent expenses, or otherwise irregular expenses without assurance of delivery), (ii) amounts which constitute overpricing between the price paid and comparable market price for such goods or services, or (iii) amounts which are ineligible (non-related) to the scope of the grant and its approved work plans and budgets.

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<sup>26</sup> Standard Terms and Conditions (2012.09) at Art. 21(d)

<sup>27</sup> Id. at Art. 21(e)

<sup>28</sup> Id. at Art. 14

<sup>29</sup> Id. at Art. 27(b) and (d)

## Annex B: Macro Analysis of RHZE Supply and Consumption

The OIG performed a macro analysis of RHZE supply and consumption within Côte d'Ivoire for the period January 2013 to September 2015 to determine if orders for the drug resulted in a surplus supply that ultimately became unaccounted for by the Nouvelle Pharmacie and thus represented a likely source of supply of RHZE to the illicit markets.

As shown in Table 4, the overall number of RHZE pills delivered to the Nouvelle Pharmacie for the period January 2013 to September 2015 exceeded the estimated need for patient treatments by at least 2.16 million pills (3,211 boxes) as it included a buffer stock. In theory, the surplus number of pills should be on-hand and in stock at the NPSP or at the treatment centers awaiting distribution within the Nouvelle Pharmacie's warehouses.

**Table 4. Number of RHZE pills received by the Nouvelle Pharmacie as compared to RHZE consumption estimations, January 2013 to September 2015**

	Number of RHZE pills received by the NPSP (A)	RHZE pills consumption estimation based on the actual number of TB cases (B)	Gap (A-B)
Total from 01/01/2013 to 30/09/2015 (pills)	16,563,904	14,405,987	2,157,917
Total from 01/01/2013 to 30/09/2015 (boxes)	24,649	21,437	3,211

Sources: (A) The figures come from information provided by Stop TB Partnership. (B) The figures are estimations calculated from the actual number of TB cases reported in the CIV-S10-G10-T grant performance report.

### Assumptions Used in Macro Analysis

Receipts of RHZE Pills. As shown in Table 5, between January 2013 and September 2015, the Nouvelle Pharmacie received four shipments of RHZE pills under tuberculosis grant CIV-S10-G10-T.

**Table 5. Receipts of RHZE by the Nouvelle Pharmacie**

Date of Receipt	Quantity of RHZE Pills Received
21-Jan-13	6,517,000
24-Feb-14	3,898,272
17-Nov-14	3,027,360
9-Apr-15	3,121,272
<b>Total Received</b>	<b>16,563,904</b>

An initial shipment of 1.1 million RHZE for the grant was purchased in September 2010 and received in February 2011, but these stocks would have been fully consumed by the time of the next receipt of grant-financed drugs, in January 2013. Global Fund disbursements of grant funds to the country were frozen in early 2011 due to the country's post-electoral civil unrest. The next procurement of RHZE occurred in May 2012 and was delivered in January 2013. Due to the time gap in funding, the consumption model assumes only negligible or no stocks of RHZE on-hand as of January 2013. Any material amounts on-hand would only increase the computed gap of unaccounted for and missing stocks in 2015; therefore, the OIG's assumptions of no beginning stocks at January 2013 is conservative.

The number of pills received does not include the 10 million pills ordered for 2015 which were received by the Nouvelle Pharmacie after September 2015.

Consumption of RHZE Pills. In accordance with WHO guidelines, a newly-diagnosed patient is administered from two to five RHZE pills per day for 60 days, depending on the patient's weight. Patient receiving retreatment are administered RHZE daily for 90 days.

The number of newly-diagnosed tuberculosis patients averaged about 22,500 per year, between January 2013 and June 2015, as reported in the Grant Performance Report for grant CIV-S10-G10-T, and patients receiving retreatment averaged about 1,500 per year during the same period.

The OIG's forecast does not include consumption estimates for the month of January 2013, as the first shipment of grant-financed RHZE during the period did not arrive until late January 2013 and likely could not have been distributed to the treatment centers until February 2013, at the earliest.

The OIG's forecast assumes an average daily dose of 3.5 pills per patient for 2013 and 2014 and 4 pills per patient during 2015, as actual data is not available. These estimates mirror PNLT's estimations of daily consumption it used to project its annual needs for the same periods and is conservative (i.e., overstates need), since the needs estimate has a built-in surplus to cover leaked supplies. Therefore, tight stock monitoring is important to avoid losses to the grant.

**Table 6. Estimation of actual number of RHZE pills consumed, January 2013 to September 2015**

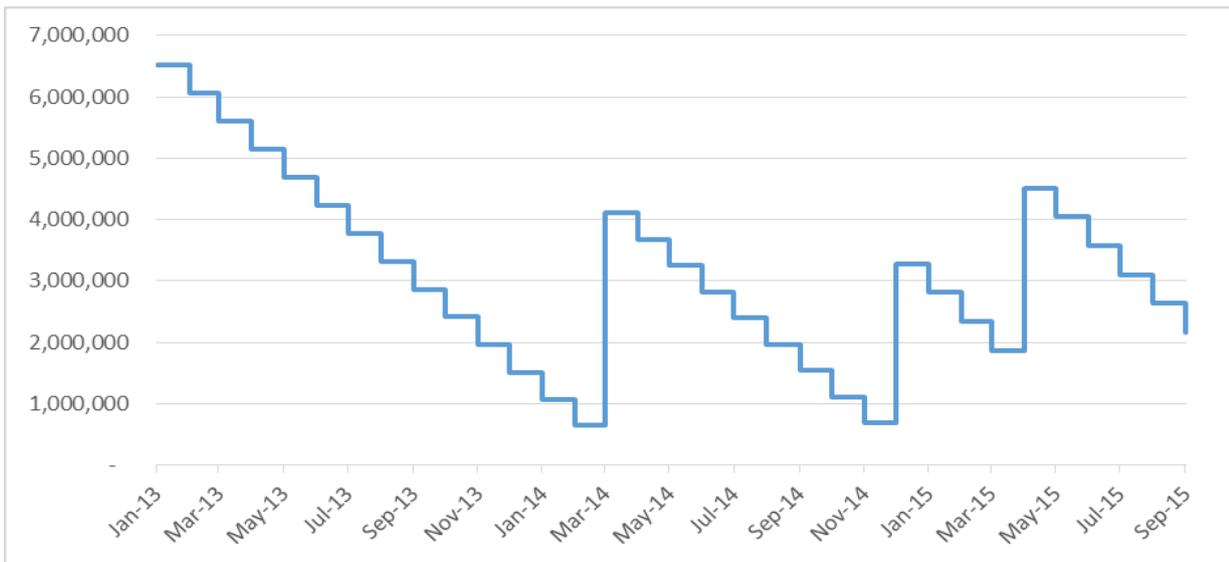
	Year 2013		Year 2014		Year 2015	
	New cases	Retreatment cases	New Cases	Retreatment Cases	New Cases	Retreatment Cases
Treatment duration (in months) (A)	2	3	2	3	2	3
Daily pills consumed (B)	3.5	3.5	3.5	3.5	4	4
Average % of cases in 2014 and 2015 (C)	94%	6.1%	94%	6.1%	94%	6.1%
Number of cases (C*D)	23,741	1,552	22,292	1,457	21,489	1,405
Yearly number of actual cases (D)	25,293		23,749		22,894	
Number of pills consumed (A*B*C*D*30)	4,985,600	488,895	4,681,256	459,051	5,157,444	505,747
Estimation of actual number of pills consumed by new cases and retreatment cases from Jan. 2013 to Sept. 2015	5,018,287		5,140,307		4,247,393	
Estimation of total number of pills consumed from Jan.2013 to Sept. 2015	14,405,987					

*Note: Based on the abovementioned assumptions, to compute the actual RHZE consumption in 2013, we have taken into account 11 months of consumption as we assumed that no pills was consumed in January 2013, while in 2015 we have taken into account 9 months of consumption from January to September 2015.*

### Monthly Status of RHZE Stocks at the Central Level

As shown in Figure 1, the timing of incoming stock receipts to the Nouvelle Pharmacie as compared to estimated monthly consumption shows that there should have been a consistent surplus of stocks at the central level throughout the entire January 2013 to September 2015 period with no shortages or stock-outs at that level at any point. In theory, any surplus of undistributed pill stocks at any one point in time should be on-hand at the Nouvelle Pharmacie in its warehouses, yet a physical inspection of the Nouvelle Pharmacie's warehouse stocks by the Nouvelle Pharmacie in June 2015 and by the OIG in September 2015 found shortages of about 2 million RHZE stocks on hand at each date as compared to the surplus computations.

**Figure 1. Monthly Estimation of RHZE Stock Levels at the Central Level, January 2013 to September 2015**



## Annex C: Summary of Subject Responses

On 11 December 2015, PNLT sent back to OIG its responses to the Letter of Findings and attached evidence regarding the OIG findings. However, following the thorough analysis of these responses and attached evidence, the OIG maintains its findings. Indeed, most of the responses and evidence provided by PNLT are not sufficient to call into question the OIG findings, for the following reasons.

### **PNLT provided one-time evidence, which cannot be generalized.**

In response to the finding regarding the lack of monitoring of the incoming delivery of tuberculosis medication, PNLT provided evidence proving that it attended the reception of 3,027,360 RHZE pills on 30 October 2014. However, this evidence does not prove PNLT systematic attendance to the RHZE reception at the Nouvelle Pharmacie.

To support its response to the finding asserting that PNLT did not monitor the inventory management of the Nouvelle Pharmacie, PNLT provided the minutes of the workshop organized at the Nouvelle Pharmacie on 29 May 2015 to reconcile stocks. Yet, PNLT response is not sufficient, as it did not provide all the quarterly minutes in 2014 and 2015, to prove that these reconciliation meetings take place regularly.

### **PNLT misunderstood some of the OIG findings.**

PNLT misinterpreted some data related to the finding claiming that PNLT did not avoid diversion at the Nouvelle Pharmacie in 2015. Indeed, PNLT asserts that the OIG made a mistake regarding the number of pills distributed between 01 January 2015 and 30 June 2015 as, according to PNLT, the OIG pretends that the Nouvelle Pharmacie distributed 2,787,504 pills during that period. However, the OIG clearly mentions in its finding that the actual amount of RHZE pills distributed by the Nouvelle Pharmacie from 01 January 2015 to 30 June 2015 was 3,448,032 pills.

PNLT also misunderstood the number of pills distributed in 2014 mentioned by the OIG. Indeed, the OIG mentions that 6,925,632 pills were received in 2014, out of which 3,070,368 were distributed in 2014. This last amount refers to the outgoing of pills received in 2014 and not to the total outgoing of pills in 2014 including those received in 2014 and before.

### **PNLT provided insufficient evidence to support its responses.**

To prove its close monitoring of the 94,080 missing pills search process, PNLT provided to the OIG the reminder letter sent to Stop TB on 01 December 2015. However, this letter was sent after PNLT receives the OIG letter of findings and PNLT did not monitor the outcome of the missing pills search process between 01 April and 02 December 2015.

The evidence provided by PNLT regarding the amount of pills distributed in 2014 are not sufficient as PNLT only provided a list of deliveries coming from SAGE V6 and did not transmitted the relevant physical delivery documents, that were requested several times by the OIG.

PNLT describes mitigation measures implemented to limit further thefts of tuberculosis medication. However, PNLT did not provide any evidence proving that it ensured optimal reliability, efficiency and security concerning the supply chain and inventory management for Grant funded tuberculosis medication.

The evidence provided by PNLT in response to the finding claiming that PNLT did not react to reports of thefts of tuberculosis medication at treatment centers are not sufficient since PNLT did not provide all the original e-mails sent to the different CATs to request further vigilance against thefts of tuberculosis medication.

Regarding the patients quantification, PNLT has corrected the OIG patients' numbers in 2014 and 2015, which did not take into account the retreatment cases. Through including these retreatment cases, the OIG observes that the number of patients for 2014 and 2015 increased by 4.5% while the amount of pills ordered for the same period increased by 60% due to the leaked pills and therefore maintains its finding.

# Annex D: Markets visited

## Overview of national market visits



**Overview of neighborhoods in Abidjan where the OIG visited markets**

