



Audit Report

Global Fund Grants in the Republic of Ghana

GF-OIG-19-009
2 April 2019
Geneva, Switzerland

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Audit Report

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OIG advisory reports aim to further the Global Fund's mission and objectives through value-added engagements, using the professional skills of the OIG's auditors and investigators. The Global Fund Board, committees or Secretariat may request a specific OIG advisory engagement at any time. The report can be published at the discretion of the Inspector General in consultation with the stakeholder who made the request.

Investigations Report

OIG investigations examine either allegations received of actual wrongdoing or follow up on intelligence of fraud or abuse that could compromise the Global Fund's mission to end the three epidemics. The 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.

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1. Executive Summary

1.1. Opinion

Ghana, the first-ever Global Fund grant recipient, has received cumulative disbursements of US\$804 million since 2002. Although malaria remains a major cause of death in the country, significant progress has been registered, with reductions in prevalence, incidence and mortality.¹ Ghana ranks 13th in terms of global Malaria incidence, compared to 11th in 2015.² For HIV, while overall prevalence has declined,³ only 33% of the estimated 316,613 people living with HIV are currently on treatment.⁴ If the 2020 national targets are to be achieved, testing, treatment, and viral load suppression challenges urgently need to be tackled. For TB, while treatment success is high at 85%⁵, treatment coverage is only 32%⁴, with improvements required in GeneXpert utilization, use of community systems and logistics for testing samples. The systems, processes and controls on quality of services for the three diseases therefore **need significant improvement**.

A revised implementation structure by the Ministry of Health and Ghana Health Service has not yet improved oversight and accountability, with duplicative roles, ambiguous reporting lines and lack of performance targets contributing to delays, poor grant absorption and weak performance. Since the 2015 OIG audit, there have been improvements in drug storage conditions, logistics management information systems and last mile delivery; however, challenges remain around data quality and supply chain management. For data, improvements were noted in data timeliness, transition from parallel systems to the District Health Information System (DHMIS2) for HIV, and ongoing automation efforts at the facility level. However, data reporting in Logistics Management Information Systems (LMIS) is incomplete, and when data is reported, inaccuracies persist. Inventory management at health facilities is weak and logistics data are not yet effectively used for decision-making. While the government has increased its funding commitments, actual investments towards HIV drug procurement, Central Management Store (CMS) Fire Agreement⁶ and ACT sales refunds have been slow to materialize. On financial management, the audit did not identify any material financial irregularities or recoverable expenditures during limited, sample-based testing. The implementation arrangements and functions for oversight and coordination, and for supply chain, data, and financial management, therefore **need significant improvement**.

1.2. Key Achievements and Good Practices

Significant progress against malaria: Deaths from malaria declined significantly from 19% in 2010 to 4.2% in 2016.⁷ National parasite prevalence among children under 5 years old, according to national household surveys, decreased from 27% in 2014 to 20% in 2016. Approximately 21 million mosquito nets were distributed between 2016 and 2018. From 2013 to 2016, Ghana significantly increased malaria testing of suspect cases from 39% to 78% with confirmed malaria cases increasing from 143 to 166 per 1,000 population during the same period.⁷ The program closely monitored the increase in resistance to a chemical in indoor residual spray; the government subsequently changed the spraying chemicals used in affected districts.⁸

Community-level services: Ghana has expanded geographical access to health care at the community level by increasing the number of Community-based Health Planning and Services

¹ WHO Ghana Malaria profile, 2016.

² World Malaria Report, 2017; World Malaria Report, 2015.

³ 2015 National HIV Prevalence and AIDS Estimates & Projections Report.

⁴ Ghana CCM HIV Progress Update on 03 Dec 2018

⁵ WHO Ghana TB profile, 2017.

⁶ Agreement between the Government of Ghana and the Global Fund to convert US\$27M in losses from the central medical store fire into a functional supply chain.

⁷ Government of Ghana Malaria Operational Plan, 2018.

⁸ Insecticide Resistance profile (Obuasi and Wa), April 2018 registered increase from 5% resistance in 2015 to 48% in 2017. Ghana was using pirimiphos methyl, and post WHO approval of shemoside, is shifting to this new chemical.

(CHPS)⁹. There are currently over 5,400 CHPS zones and there are expected to be 6,548 by 2020.¹⁰ CHPS are not currently being fully used to provide services for the three diseases, despite representing over 60% of all health facilities in the country. Going forward, government policy envisages providing every community with a basic package of health services, in order to attain Universal Health Coverage by 2030.¹¹

Structured health financing mechanism: The National Health Insurance Scheme (NHIS) targets equitable access and financial coverage for basic health care services to Ghanaian citizens.¹² The Scheme is envisaged to provide a comprehensive benefits package, covering about 95% of health conditions affecting the population, including curative services, as well as inpatient services, emergency care, maternity care, and oral health. Currently, NHIS covers 45% of the population (approximately 13 million people)¹³ and is required to provide coverage for antiretroviral therapy,¹⁴ opportunistic infection treatment, first line TB treatment and malaria. Malaria is the fourth largest cost center of the NHIS.

1.3. Key Issues and Risks

Stronger oversight arrangements and materialization of outstanding commitments are needed: Ten months after being set up, the structures put in place at the Ministry of Health and Ghana Health Service to improve oversight and accountability are not fully functional. Further, with complex implementation structures involving the Ministry of Health (PR), Ghana Health Services (implementer) and others (e.g. teaching hospitals), the roles, accountabilities, reporting lines and performance targets are not yet clarified, with material duplications between staff job descriptions in both structures. Staff contracts have not been finalized and operating procedures have not been developed. Moreover, both the integrated operational budget for supervision, training and human resources, and the grant performance indicators dashboard remain outstanding. These challenges have contributed to oversight gaps. Despite 32% absorption and below-average program performance¹⁵ of the current grants, the Resource Mobilisation Unit (RMU/MOH) and Program Secretariat Unit (PSU/GHS) have been unable to address the underlying challenges.

While the government increased health sector commitments by 26% in 2017,¹⁶ health budget utilization has averaged under 64% in recent years,¹⁷ impacting investments in the three diseases, particularly for the CMS Fire Agreement and refunding malaria drug sales, and delaying government procurements of all but one commodities for the three diseases in 2016 and 2017.

Supply chain visibility, decision-making and inventory management: Since 2016, Ghana has been implementing a Supply Chain Improvement Plan with financial and technical support from Global Fund and USAID, and leveraging the Central Medical Store Fire Agreement¹⁷, employing external storage and distribution arrangements including last mile delivery. This has brought about improvements in warehouse conditions and LMIS reporting, however, logistics problems remain: there are inadequate inventory management practices at the facility level, and there is limited use of logistics data for decision making. This contributed to drug expiries worth US\$1 million in the 30 warehouses and facilities visited, mainly for HIV drugs at central level.¹⁸ Stock-outs lasting over 30 days of key commodities were found in over 70% of the facilities visited. Weak record keeping and

⁹ CHPS is a national strategy to deliver essential community-based health services involving planning and service delivery with the communities. Its primary focus is communities in deprived sub-districts.

¹⁰ Ghana Malaria Funding Request, 2018-2020.

¹¹ National Community-Based Health Planning and Services (CHPS) Policy, March 2016.

¹² [https://en.wikipedia.org/wiki/National_Health_Insurance_Scheme_\(Ghana\)](https://en.wikipedia.org/wiki/National_Health_Insurance_Scheme_(Ghana)).

¹³ US Government Ghana Malaria Operational Plan, 2018.

¹⁴ ART in Ghana is free to all clients with valid National Health Insurance cover (Source: ART Guidelines, 2017).

¹⁵ Average of B1 performance rating

¹⁶ 2017 Ministry of Health, Programme of Work GoG of Ghana.

¹⁷ This is an agreement between the Government and the Global Fund to convert US\$27 million of pharmaceuticals and health products destroyed in the central medical store fire into a functional supply chain in the country.

¹⁸ Of the total expiries, expired CD4 reagents account for US\$278k, mainly due to programmatic issues.

inadequate storage conditions exist at the regional and facility levels, risking treatment failures and drug resistance.

Low HIV testing, treatment and viral load suppression: Overall HIV testing coverage was 65% in June 2018.¹⁹ Stock-outs of test kits, discriminatory practices for key populations, and a weak testing strategy for the general population contributed to the low rate.²⁰ 73% of facilities visited were not following the testing algorithm consistently,²¹ risking incorrect diagnosis.

Only 37% of people living with HIV have been started on treatment²², 22% of whom are subsequently lost to treatment.²³ 80% of the facilities visited did not have a documented loss-to-follow-up tracking mechanism, and the HIV e-tracker database was unable to generate tracking reports.²⁴ Stock-outs averaged 54 days for key HIV medicines in 57% of facilities visited, leading to risks of treatment disruption. Nationally, only 33% of patients received a viral load test,²⁵ and viral load suppression is at 64%²⁶, risking high mortality and undetected drug resistance.

Significant progress is required in TB case detection: Ghana's TB case detection rate is 33%, one of the lowest globally.²⁷ Sub-optimal utilization of GeneXperts is a contributing factor. Ghana has not fully leveraged the CHPS to provide TB services, with only 17% of CHPS reporting on TB services.

Data completeness and quality issues: Timeliness of data reported for the three diseases in DHIMS2 improved from 46% in 2015 to 89% in 2017.²⁸ However, data accuracy and utilization is problematic: data quality audits performed in 2018 for HIV and malaria identified significant inaccuracies within the reported data. This affects the reliability and representativeness of data for performance measurement and decision making. Inadequate quality and efficiency in supervision and training, stock-outs of data tools, and the HIV e-tracker's limited functionalities contributed to these issues.

1.4. Rating

	<p>Objective 1. Adequacy and effectiveness of the implementation arrangements and functions: oversight and coordination arrangements; supply chain management; data management; and financial management.</p> <p>OIG rating: Needs significant improvement.</p>
	<p>Objective 2. Adequacy and effectiveness of the systems, processes and controls in place to ensure access to quality services to intended beneficiaries.</p> <p>OIG rating: Needs significant improvement.</p>

¹⁹ MOH Global Fund Progress Update Report, June 2018

²⁰ 2020 Ghana HIV Prevention Roadmap

²¹ Non-compliance to algorithms include: Reactive cases to First Response test not confirmed with OraQuick and just declared positive; Cases being declared positive without any test; Cases where First Response and OraQuick are discordant and a result is given without a PCR tie-breaker test; and cases of testing with only OraQuick without First response test.

²² Ghana HIV Technical Review - World Health Organization, Global Fund, International AIDS Society - September 2018

²³ Assessment of HIV Treatment services in Ghana, Sept 2016

²⁴ 24 out of 30 facilities visited

²⁵ NACP Service data

²⁶ NACP CCM Meeting minutes on 03 Dec 2018

²⁷ Ghana TB Prevalence Survey and World TB Report 2017.

²⁸ Ghana DHMIS2 data

1.5. Summary of Agreed Management Actions

The Secretariat will support the Ministry of Health to develop a mapping of both its and GHS' roles, accountabilities, deliverables and key performance measures for the Global Fund grants. The Secretariat will also ensure tracking of the outstanding re-investments from the government for ACT sales revenues collected, and refunds agreed, for the Global Fund drugs lost in the CMS Fire in 2015. The Secretariat will also support completing the installation of LMIS throughout the supply chain, clarifying processes and accountabilities and ensuring high-quality delivery of planned supportive supervision and trainings for supply chain and program data. The Secretariat has committed to supporting the Ministry of Health in developing and deploying an off-line HIV e-tracker in ART sites to improve HIV monitoring, and a plan for improving HIV differentiated testing. For TB, the Secretariat will support the Ministry of Health to develop a plan to improve the utilization of GeneXpert machines, and accelerate treatment enrolment of TB patients.

2. Background and Context

2.1. Overall Context

Ghana has an estimated population of 29.6 million.²⁹ Its economy grew by 8.5% in 2017, driven by the mining and oil sectors.²⁸ The fiscal deficit dropped from 9.3% of gross domestic product (GDP) in 2016 to 6% in 2017, and the trade balance registered a first-ever surplus in 2017, underpinned by fiscal consolidation efforts.²⁸ The country's GDP per capita was estimated to be US\$4,641 in 2017,³⁰ making it a lower-middle income country with one of the highest per capita incomes in the 27 West and Central African countries. The country ranks 81st out of 180 countries in Transparency International's 2017 Corruption Perceptions Index.³¹

Administratively, Ghana has ten regions and is divided into 275 districts. Districts are divided into sub-districts which are further sub-divided into Community Health Planning & Services zones. Health expenditure represented 3.6% of GDP in 2014.³² While the overall health budget has increased, its utilization rate has been less than 64% on average in recent years.³³ The percentage of health expenditure coming from domestic resources decreased from 10.8% in 2010 to 6.6% in 2016, before increasing to 7.8% in 2017.³⁴ Ghana is one of the 49 countries classified by the World Health Organization as having a critical shortage in its health workforce: it has 11 doctors, nurses and midwives per 10,000 people, against a global WHO benchmark of 23 medical staff per 10,000 people for adequate coverage of essential health services.³⁵

2.2. Differentiation Category for Country Audits

The Global Fund has classified the countries in which it finances programs into three overall portfolio categories: Focused, Core and High impact. These categories are primarily defined by size of allocation amount, disease burden and impact on the Global Fund's mission to end the three epidemics. Countries can also be classified into two crosscutting categories: Challenging Operating Environments and those under the Additional Safeguard Policy. Challenging Operating Environments are countries or regions characterized by weak governance, poor access to health services, and man-made or natural crises. The Additional Safeguard Policy is a set of extra measures that the Global Fund can put in place to strengthen fiscal controls and oversight in a particularly risky environment.

The Global Fund classifies Ghana as:

- Focused: (Smaller portfolios, lower disease burden, lower mission risk)
- Core: (Larger portfolios, higher disease burden, higher risk)
- High Impact: (Very large portfolio, mission critical disease burden)**
- Challenging Operating Environment
- Additional Safeguard Policy

²⁹ <https://www.worldbank.org/en/country/ghana/overview>

³⁰ <https://knoema.com/jesoqmb/gdp-per-capita-by-country-statistics-from-the-world-bank-1960-2017?country=Ghana>

³¹ https://www.transparency.org/news/feature/corruption_perceptions_index_2017

³² <https://www.who.int/countries/gha/en/>

³³ 2017 Ministry of Health, Programme of Work GoG of Ghana

³⁴ National Health Accounts FY2012, FY2014, 2015-2017 Ministry of Health Programme of Work GoG of Ghana

³⁵ http://www.who.int/hrh/fig_density.pdf?ua=1

2.3. Global Fund Grants in Ghana

Ghana was the first country to sign a Global Fund grant in 2002. The Global Fund continues to be a partner in Ghana, with total grants of US\$965 million signed to date, out of which US\$804 million has been disbursed. For 2017-2019, the Global Fund allocated US\$194 million for the three diseases and health systems strengthening, and additional catalytic funding of US\$5.9 million to scale up interventions in key populations and human rights barriers to services.³⁶

For the 2018-2020 implementation period, the Principal Recipients have been reduced from five to three, implementing four separate grants. Ghana Health Service, through the national programs for the three diseases, implements the grants for the Ministry of Health as a sub-Recipient. The Ministry of Health exercises oversight and control over policy formulation and grant implementation, while Ghana Health Service is the lead agency for the provision of health services, along with the three teaching hospitals in Accra, Kumasi, and Tamale.

The Ministry of Health has a resource mobilisation unit (RMU) that works on strategies to mobilize health sector resources. Under the 2018-2020 implementation period, the unit has been given the additional responsibility of providing oversight of donor-funded programs, including the Global Fund. At the implementation level, Ghana Health Service has created a program secretariat unit (PSU) to coordinate the three national disease programs and cross-cutting investments in health system strengthening.

The active grants in Ghana from 2018 to 2020 are:

NFM Grant Number	Principal Recipient	Grant Component	Grant period	Signed Amount (US\$)	Disbursed to date (US\$)
GHA-C-MOH	Ministry of Health	HIV/AIDS & TB	Jan-2018 to Dec-2020	76,502,454	10,012,181
GHA-M-MOH	Ministry of Health	Malaria	Jan-2018 to Dec-2020	94,148,208	28,962,996
GHA-M-AGAMal	AngloGold Ashanti Malaria	Malaria	Jan-2018 to Dec-2020	15,884,008	6,516,431
GHA-H-WAPCAS	West African Program to Combat AIDS and STI	HIV/AIDS	Jan-2018 to Dec-2020	7,445,969	1,358,906
Total				193,980,639	46,850,514

³⁶ Catalytic investments are for Global Fund-supported programs and activities that are not adequately covered by country allocations but that are essential to achieving strategic aims.

2.4. The Three Diseases



Malaria: Although significant progress has been made in recent years, malaria is a major cause of death in Ghana. Estimated deaths attributable to malaria are 12,880.³⁷

Ghana is one of the six countries that account for 55% of global malaria cases.³⁸

Ghana was ranked 9th and 13th in terms of global Malaria deaths and incidence respectively in 2016.³⁹

21.2 million insecticide-treated nets distributed between 2016 and 2018

Parasite prevalence reduced from 27% in 2014 to 20% in 2016.³⁹

4.5 million cases reported in 2016, against 8 million estimated cases.⁴⁰



HIV/AIDS: Ghana ranks 33rd in terms of global HIV prevalence.⁴¹ HIV is a significant cause of death in Ghana.⁴² HIV is prevalent in major cities and in 6 out of 10 regions.

Ghana has a generalized and low-concentrated HIV epidemic. Prevalence rates among key populations are higher in female sex workers (7%) and in men who have sex with men (17%).⁴³ New HIV infections have declined in children by 46% but increased among adults by 49%.⁴⁴ The country is one of 35 countries accounting for 90% of new infections globally.⁴⁵

316,613 people living with HIV in 2016.⁴⁶

100,665 (34%) people currently on antiretroviral therapy in 2016.⁴⁸

HIV prevalence among general population is 1.6%.⁴⁷

15,000 deaths in 2016.⁴⁸



Tuberculosis: Ghana is not one of the 30 high burden countries for TB and MDR-TB; it is, however, one of the 30 countries with high TB/HIV co-infections.⁴⁹ A 2015 prevalent survey revealed a 4x higher TB burden than previous estimates.

TB case notification per 100,000 population increased from 56 in 2004 to 62 in 2014,⁵⁰ and the estimated mortality rate (per 100,000 pop excl. HIV-TB) is 36.⁵¹

14,550 TB cases notified in 2017⁵²

TB treatment success rate: 85% (2016)⁵⁵

MDR-TB treatment success rate: 55% (2016)⁵⁵

TB treatment coverage: 32% (2017)⁵⁵

³⁷ WHO Ghana Malaria profile, 2016

³⁸ World Malaria Report, 2017

³⁹ USAID PMI Ghana MOP, 2018

⁴⁰ WHO Ghana Malaria profile, 2016

⁴¹ https://en.wikipedia.org/wiki/List_of_countries_by_HIV/AIDS_adult_prevalence_rate

⁴² <https://www.cdc.gov/globalhealth/countries/ghana/>

⁴³ Ghana Integrated Biological and Behavioral Surveillance survey, 2016

⁴⁴ 2020 Ghana HIV Prevention Road map

⁴⁶ Ghana CCM Meeting HIV Progress Update of 03 Dec 2018

⁴⁷ 2015 National HIV Prevalence and AIDS Estimates & Projections Report

⁴⁸ Ghana HIV Prevention 2020 Road Map, 2017

⁴⁹ Global TB Report, 2018

⁵⁰ Ghana TB Strategic Plan, 2015-2020

⁵¹ WHO TB Country Profile, 2017

⁵² WHO Ghana TB profile, 2017

3. The Audit at a Glance

3.1. Objectives

The audit assessed the adequacy and effectiveness of:

- implementation arrangements and functions to ensure the achievement of grant objectives, with a focus on:
 - oversight and coordination mechanisms
 - supply chain management
 - data management
 - financial management
- the systems, processes and controls in place to ensure access to quality services to intended beneficiaries.

3.2. Scope

The audit was performed in accordance with the methodology described in Annex B, covering the period from July 2016 to June 2018. The audit covered grants implemented by the Ministry of Health, which accounts for 86% of Global Fund investments in Ghana from 2015 to 2020. The audit did not cover the non-government malaria and HIV grants, which were deemed less risky and less material.

The OIG visited four of Ghana's ten regions, including 30 health facilities, four central and regional warehouses, and 30 storage facilities. The four regions visited represent 68%, 61% and 50% of the total HIV, TB and malaria patients in Ghana respectively. The regions represent 56% of the country's population.

3.3. Progress on Previously Identified Issues

The last OIG audit of grants in Ghana was conducted in 2015. The main weaknesses identified were around data management and supply chain management.

There have been improvements in supply chain management of the portfolio, including better storage conditions of commodities at the central level. Further measures are being put in place to improve logistics management information systems and last mile delivery. However, inventory management at the regional and facility levels remains inefficient (see section 4.2).

Improvement was noted in data management, leading to improved data timeliness and the introduction of an e-tracker to automate the recording of HIV/AIDS and TB patient information at the facility level. There has been a transition from parallel systems to DHMIS2 for HIV. Significant improvement is however needed to ensure effective roll out of the e-tracker for data collation and reporting (see section 4.5).

Previous relevant OIG work
[Audit of Global Fund grants to Ghana, 2015](#)

[Audit of Global Fund grants to Ghana, 2012](#)

4. Findings

4.1. Stronger oversight arrangements and fulfillment of government commitments for the three diseases are needed

Complex implementation structures, unclear accountabilities and delays in the fulfillment of government commitments are adversely affecting program oversight, performance and effectiveness.

Complex implementation and oversight structures and unclear accountability

The Local Fund Agent's capacity assessment prior to the current grant implementation period recommended creating a project management unit to improve oversight, visibility and coordination over the disease programs and donor funds. The Ministry of Health has since required its resource mobilization unit to provide oversight of the Global Fund supported programs. The Ghana Health Service has also established a program secretariat unit (PSU) to coordinate and oversee donor funded programs including Global Fund-supported programs.

The two units have overlapping roles, and they have as yet been unable to resolve structural complexities hampering the disease programs. For example, 70% of the roles of the heads of RMU and PSU are similar, as well as 86% of the roles of the finance specialist for the two units. Further, key performance indicators, targets and deliverables for these two units are yet to be finalized. This dilutes clear accountability for results. For example, oversight is part of the roles of both RMU and PSU. However, despite 32% absorption and below-average program performance⁵³ of the grants after six months of implementation (i.e. June 2018), neither RMU nor PSU have been able to address the underlying challenges, or assume responsibility for the results or for course correction. Further, the grant implementation structures are complex; while the Ministry of Health is currently the Principal Recipient, grant operations are largely executed through Ghana Health Services, while some other interventions involve teaching hospitals. The responsibilities and reporting lines for each of these actors involved in Global Fund grant implementation have not yet been clarified in the RMU/PSU roles, hampering smooth implementation.

Further, the units are not fully functional despite being established 10 months ago. At the time of the audit, staff contracts for the two units had not been signed, and salaries of contract staff had not been paid for the previous 10 months. Operational manuals or standard operating procedures for the units have not yet been finalized, and roles and responsibilities have not been assigned. For example, procurement and supply chain, and monitoring and evaluation staff positions in the two units remain vacant.

Furthermore, the Principal Recipient was expected to develop a costed work plan to provide an integrated and operational budget for supervision, training, travel, and human resources (including a staffing chart) across all disease programs, and the RMU/PSU, by April 2018. This costed work plan had not been finalized at the time of the audit, affecting supervision and oversight. The Principal Recipient is supposed to develop, populate and analyze a dashboard of key performance indicators and organize a quarterly review of grant implementation within 30 days of each quarter end; this has not yet happened.

Delays in the materialization of government commitments have affected key program activities

Ghana increased its health sector budget from US\$1 billion in 2017 to US\$1.3 billion in 2019.⁵⁴ The Government similarly increased its co-financing commitments for the three disease programs by US\$295 million in FY 2015-2017, compared to FY 2012-2015.⁵⁵ It is investing US\$24 million jointly with the Government of the Netherlands to procure digital X-ray machines to support TB control

⁵³ Average of B1 performance rating

⁵⁴ 2017 Ministry of Health, Programme of Work GoG of Ghana

⁵⁵ Secretariat HIV/TB Briefing Notes, 2018-2020

interventions.⁵⁶ The government has planned a phased increase in the procurement of antiretroviral medicines to cover 44% and 51% patients in 2019 and 2020, respectively. TB medicines, HIV test kits and reagents will be covered by the government from 2018 to 2020.⁵⁷

Despite this, actual health sector financing has represented an average of 64% of budgeted commitments in recent years,⁵⁸ impacting investments for the three diseases. In 2016 and 2017, the government committed US\$8.5 million for commodities for the three diseases, but only provided US\$3.5 million for malaria commodities (sulfadoxine pyrimethamine). Under the CMS Fire Agreement,⁵⁹ the Global Fund and the government agreed to deliver components of the Supply Chain Master Plan, valued at US\$27 million, for an innovative approach of in-kind repayment of debt to the Global Fund. However, while milestones valued at approximately US\$10 million have been accepted as in-kind repayment to date, progress on supply chain milestones is slow.

Regarding malaria, the Government of Ghana collects revenue from donor-funded ACTs with the aim of creating a fund to sustain drug procurement without donor support; this however generates challenges on tracking and calculating the related revenues. The Government has collected the proceeds from these sales and intends to reinvest the proceeds into a sustainable ACT management program. The ambiguity of the current approach and the effort required has resulted in delays in repayment: US\$2.9 million of the total 2015-16 ACT sales of US\$3.4 million⁶⁰ based on the Government fixed price point has so far been repaid. The ACTs provided by the Global Fund for the entire period, April 2015 to October 2018, cost US\$8 million. The Ministry of Health has committed to sharing a plan on ACT management with the Global Fund and other partners by the end of 2019. The plan will address how the ACT revenue which has already been collected will be utilized, and will include a proposal on the management of ACT revenues.

These funding shortfalls impact prevention and treatment activities, for example procurement of condoms, testing kits and medicines. Key program activities that were envisaged to be funded by the government have registered disruptions or delays due to lack of funds. For example, infection control activities at facility level and behavioral change communications to enhance awareness of the three diseases, have not been fully implemented, contributing to service quality challenges at health facility level (see findings 4.3 and 4.4). Delays in achieving the CMS Fire Agreement milestones are hindering progress on addressing supply chain and service challenges (see Finding 4.2). Delays in repayment of revenues from ACT sales have restricted their re-investment towards procuring more ACTs in future, or for other programmatic priorities. The investments against the CMS Fire Agreement and repayment of ACT revenues are reported to, and tracked by, the Recoveries Committee within the Global Fund.

To address these financial challenges, the government established a National HIV/AIDS Fund in 2016, to provide financial resources for the national HIV/AIDS response. However, the modalities and implementation of this Fund are yet to be finalised and the Secretariat for the Fund is yet to be established. The Resource Mobilisation Unit of the Ministry of Health has been tasked to work on strategies to mobilize more resources for the health sector.

⁵⁶ Joint funding approach by the Government of Ghana (US\$18 million loan) and The Government of Netherlands (US\$6 million). Ghana Global Fund 2018-2020 HIV/TB Funding Request.

⁵⁷ Ghana Global Fund 2018-2020 HIV/TB Funding Request

⁵⁸ 2017 Ministry of Health, Programme of Work GoG of Ghana

⁵⁹ This is an agreement between the Government and the Global Fund to convert US\$27 million of pharmaceuticals and health products destroyed in the central medical store fire into a functional supply chain in the country.

⁶⁰ This amount is based on calculations of the Office of the Auditor General in Ghana.

Agreed Management Action 1

The Secretariat will support the Ministry to develop for the Global Fund grants and government co-financing commitments:

- a mapping of MOH and GHS roles, and accountabilities;
- deliverables and key performance measures.

The Secretariat will support MoH to ensure completion of all outstanding commitments contained in the CMS Fire Agreement; and to submit a plan for the investment of ACT revenues collected by the GoG.

Owner: Head of Grant Management

Due date: 30 June 2020

4.2. Enhanced visibility and utilization of supply chain information for decision-making and effective inventory management practices are needed

Poor-quality stock information and inadequate inventory management practices at the sub-national level are impacting programmatic impact and service quality

With support from the Global Fund and partners including USAID, Ghana has made progress in addressing various supply chain challenges since the last OIG audit in 2015. The Global Fund, through its pooled procurement mechanism, has ensured the timely supply of medicines and commodities when requests are received from the national programs. Alternative storage and distribution arrangements, including last mile delivery, have been in use since the fire at the country's Central Medical Store. Manual logistics systems are also in the process of being automated.

However, inadequate inventory management practices and limited use of logistics data for decision making continue to negatively impact the supply chain.

Low visibility and utilization of key stock information to facilitate decision making

A key objective of an effective logistics management information system (LMIS) is to provide timely and accurate information on stock levels of commodities across the supply chain. LMIS data are not being used effectively, especially at regional levels, to inform management decisions, such as stock distributions and redistributions, and reverse logistics⁶¹. This has contributed to expiries amounting to US\$1 million¹⁷ in the warehouses and facilities visited and to stock-outs of key commodities for over 30 days in 70% of the facilities visited (reaching 200 days in some cases).⁶² This has led to treatment disruptions where all forms of malaria ACTs were stocked out. In other cases, where programs and health facilities used alternative regimens/products in case of stockouts of dedicated products, or when they sought to mitigate risks of expiries, the treatments were not in line with programmatic and supply chain best practices. In many cases, using accurate LMIS data for corrective action could have avoided the stockouts or expiries. For example, the central and regional medical stores held three and 22 months' stock of GeneXpert cartridges respectively at the time of audit, but there were stockouts of cartridges averaging 62 days (maximum of 178 days) in 25% of facilities visited. Order fulfilment is also an issue; orders for drugs and commodities for the three diseases were only 58% fulfilled in the facilities visited.

Lack of robust LMIS reporting is a contributing factor. The warehouse management system at one regional store does not track batch numbers and product expiry dates, hampering traceability. The consumption reports from service delivery points to central level, which are managed by GHS staff, registered delays (averaging 21 days for HIV & TB), hindering timely decision making.

Inadequate inventory management practices at the sub national level

The Secretariat and the Government have put mechanisms in place to safeguard grant-funded commodities at the central level, yet weak record keeping, inadequate storage conditions and ineffective accountability systems exist at regional and facility levels. Only 40%⁶³ of facilities visited had thermometers in the storage room, only half of which had a temperature data logger. Only 13% of facilities had guidelines/job aids to ensure good storage conditions. 50% of facilities had not physically removed expired drugs from store stocks, which can result in people using expired stocks. 43% of facilities visited had no evidence of undertaking periodic stock counts. During the audit, 63% of facilities had differences between stock card records and physical inventory stocks. While the

⁶¹ Reverse logistics is the process of moving goods from their typical final destination for the purpose of capturing value, or proper disposal.

⁶² Stock-out include:

- Average stock-out days of 200 days (maximum of 1011 days) for at least 1 malaria commodity in 87% facilities visited. Forced combining/ breaking formulations, not best practice as per WHO guidelines. Hampers drugs consumption and patient reconciliation. 4 facilities stocked out all formulations, leading to treatment disruption.
- Average stock-out of 54 days (maximum of 91 days) for HIV commodities in 93% facilities visited.
- Average stock-out of 33 days (maximum of 370 days) for TB drugs in 70% facilities visited, including essential drug, leading to treatment disruption.

⁶³ 12 out of 30 facilities visited

discrepancies were not financially material (US\$0.26 million), they indicate internal control gaps relating to stock management at the facility level.

Inadequate stock management and storage can affect the potency and effectiveness of drugs, leading to treatment failures and drug resistance. Inadequate quality and effectiveness of supportive supervision and training contributed to the inventory management issues. Only 13% of facilities visited received technical pharmaceutical supervision, and 13% of facilities had provided training to staff in stock record keeping. Further, where supportive supervisions were carried out by regional directorates and districts, there were no supervision reports or follow-up actions shared with the health facilities, limiting their effectiveness.

Under the CMS Fire Agreement, the Government of Ghana agreed to ensure delivery of functioning components of the Supply Chain Master Plan, valued at US\$27 million, mainly for key activities for last mile distribution, LMIS and warehousing. These initiatives were aimed at resolving the information, decision-making and inventory management challenges highlighted above. However, some critical milestones in the agreement have been delayed, including the rehabilitation of regional warehouses to comply with WHO storage standards. The development of e-LMIS has fallen behind the original timeline of September 2018; the regional and district roll-out was planned for February 2019.

In addition to these two ongoing issues, a third factor that has negatively impacted the supply chain in the past related to the delays (on average, 65 days) in clearing Global Fund funded commodities through the ports. Since the audit, this issue has been addressed and a process has been finalized between the entities involved in the procurement to manage roles and timelines.

Agreed Management Action 2

The Secretariat will support the Ministry of Health to:

- complete the installation of a Logistics Management System (LMIS) in teaching hospitals, Regional Medical Stores (RMS), regional and district hospitals and health centers at sub-district level as per Central Medical Stores (CMS) fire agreement;
- establish written processes and accountabilities for:
 - using the logistics data generated by LMIS to improve product availability at all levels
 - ensuring adherence to supportive supervision and training plans and quality of the supervisions, for supply chain as well as programmatic data (see finding 4.5).

Owner: Head of Grant Management

Due date: 30 June 2020

4.3. Improvements needed in HIV testing, treatment and viral load suppression to achieve national targets by 2020

Poor quality HIV interventions, including low testing coverage, inadequate referral and follow-up of patients, and weak monitoring of HIV patients are barriers to achieving the 2020 national targets

In 2016, Ghana adopted a universal “test and treat” policy as part of UNAIDS’ ambitious 90-90-90 targets.⁶⁴ The country’s national strategic plan (2016-2020) has set the goal of testing approximately 13 million people by 2020, and increasing antiretroviral therapy coverage from 35% to 90%, initiating 229,920 people on treatment.⁶⁵ The program needs to address the following testing and treatment gaps to improve results and enable this scale-up by 2020.

Low coverage and quality of HIV testing, particularly for the general population

Overall HIV testing coverage stood at 65% of the cumulative grant performance framework target in June 2018.⁶⁶ The low and untargeted testing coverage contributes to new infections, with new infections in adults (15+ years) increasing by 49%, from 11,400 in 2010 to 17,000 in 2016.⁶⁶ The low test yield and need for more focused testing represent a missed opportunity for early diagnosis.

Declining awareness of HIV among the general population, and a lack of behavioral interventions for the general public, contribute to the low testing coverage.⁶⁶ Stockouts of test kits at facilities are also a contributing factor: 37% and 53% of facilities visited by the auditors experienced stockouts of first line and confirmatory test kits, respectively, with an average stockout of 38 days (maximum 382 days). A weak strategy for differentiated testing contributes to low testing coverage and yield. Other contributing factors include discriminating practices, stigma, and the criminalization of key populations including sex workers and men who have sex with men.⁶⁶

The auditors noted poor-quality HIV testing. Of the facilities visited, 80% did not have a written HIV testing algorithm and 73% did not follow the testing algorithm consistently⁶⁷. There were expired first and second response test kits in 37% and 13% of the facilities visited, respectively,⁶⁸ including one instance where kits were found on the testing table, risking incorrect diagnosis. Contributing factors of the poor quality of testing include the lack of available testing guidelines. No supervision was carried out in the past 12 months for 93% of the facilities, and 88%⁶⁹ of testing providers in the facilities visited had not undergone proficiency testing over the same period.

Low linkage to treatment and inadequate follow-up of lost patients

The provision of antiretroviral therapy is at the core of the HIV response, both as a treatment and as a prevention strategy. Of patients testing HIV-positive, only 37% have so far been initiated on treatment⁷⁰, and loss to follow up after treatment initiation is 22%.⁷¹ For the facilities visited, only 60% of patients testing HIV-positive were initiated on treatment.

A weak referral system to link patients to treatment is a contributing factor. There was no documented mechanism to record and track patients lost to follow up in 80%⁷² of facilities visited,

⁶⁴ UNAIDS Fast Track (90-90-90) targets envisage that 90% of people living with HIV know their HIV status, 90% of people living with HIV who know their HIV status are placed on sustained treatment, and 90% of people living with HIV on sustained treatment achieve viral suppression.

⁶⁵ HIV/AIDS National Strategic Plan, 2016-2020; GHS Differentiated Service Delivery Manual, Dec 2017

⁶⁶ MOH Global Fund Progress Update Report, June 2018

⁶⁷ Non-compliance to algorithms include: Reactive cases to First Responses test not confirmed with OraQuick and just declared positive; Cases being declared positive without any test; Cases where First Response and OraQuick are discordant and a result is given without a PCR tie-breaker test; and cases of testing with only OraQuick without First response test.

⁶⁸ 4 out of 30 facilities providing HIV testing services had expired First response test kits, and 11 out of 30 facilities had expired Oraquick-second response test kits.

⁷⁰ Ghana HIV Technical Review - World Health Organization, Global Fund, International AIDS Society - September 2018

⁷¹ Assessment of HIV Treatment services in Ghana, Sept 2016

⁷² 24 out of 30 facilities visited.

and the HIV e-tracker database cannot generate reports to track loss to follow up. In October 2018, the HIV program started enrolling people living with HIV under the "Models of Hope" program, which should improve tracking of patients lost to follow-up. There was an average stockout of 54 days (maximum 91 days) for some HIV medicines in over 57% of facilities visited.

Weak monitoring of patients on HIV treatment

Viral load testing⁷³ is the standard way of monitoring treatment of people living with HIV and is critical to ensuring treatment success. Only 65% of patients on antiretroviral therapy had their viral load monitored in the facilities visited.⁷⁴ Nationally, only 33% of patients received a viral load test, and viral load suppression is at 51%²⁴, with high variability across regions (from 6% to 81%). Low viral load testing risks higher mortality and drug resistance, where patients are not responding to treatment.

While viral load testing machines are available in nine out of the 10 regions, clinicians have not been trained since transitioning from a targeted to a routine testing approach in 2018, and laboratory services are inadequately staffed. Inadequate sample transportation arrangements limit utilization of the existing viral load testing capacity. Currently, health facilities have to deliver samples themselves, however Ghana Health Service is working with Ghana Post Company to find solutions for sample transportation challenges.

Poor-quality or inadequate samples by health facilities are leading to sample rejections and failed tests, and contributing to weak monitoring: for example, in September 2018, 7.2% of viral load tests at Ghana's biggest teaching hospital failed. The current viral load software restricts printing individual results, causing errors in reports to patients when results are copied and pasted. Vital information is missing in viral load registers of samples, contributing to inaccurate results: for example, between April 2018 and October 2018, 11% of viral load register entries did not include the names of receiving personnel and 14% of entries lacked sample reference numbers. This affects the proper tracking of samples from health facilities.

A strategy for scaling up viral load monitoring was developed in September 2017. In October 2018, Ghana developed an acceleration plan to address the challenges in its HIV program in order to achieve the 90-90-90 targets by 2020. However, the sources of funding and an implementation mechanism have not yet been finalized.

Gaps in the supply chain for drugs are covered through AMA 2.

Agreed Management Action 3

The Secretariat will support the Ministry of Health to:

- develop and deploy an off-line HIV e-tracker in ART sites serving 85% of ART patients as a data source to track implementation of the HIV 90 90 90 acceleration plan;
- develop a plan to implement differentiated testing models to enhance awareness and change behaviors towards testing, and improve quality of testing, enabling identification of those people living with HIV who do not yet know their status.

Owner: Head of Grant Management

Due date: 30 June 2020

⁷³ A viral load test measures the number of HIV viral particles per millilitre of blood. A low viral load indicates that treatment is effective. A high viral load in a person on treatment indicates either that the medication is not being taken properly or that the virus is becoming resistant to the medication.

⁷⁴ Ghana Laboratory Viral Load Testing • Expansion Plan 2017 – 2020

4.4. Significant improvement required in TB case detection and management of MDR-TB

Under utilization of diagnostic machines, transportation difficulties and failing to leverage community health workers are hindering the detection of TB cases. Poor management of MDR-TB is also hampering an effective response to a growing disease burden.

Challenges in TB case detection

While the TB treatment success rate in Ghana is estimated at 85%, the 2015 TB prevalence survey indicated that the country's overall disease burden is in fact four times higher than previously reported. The case detection rate is 33%, instead of the earlier estimate of 80%⁷⁵, which is significantly lower than the average global case detection rate.²⁶ Of symptomatic patients seeking care who were surveyed, 75% and 85% were not offered TB screening in government and private facilities respectively. TB case notification is declining, with a 3% drop in total cases notified between 2015 and 2017.⁷⁶ The main reasons for low case detection are:

Under utilization of GeneXperts for primary diagnosis: the Government of Ghana adopted GeneXpert as its primary diagnostic tool in Q2 2017. The Global Fund supported the country in scaling up access to GeneXpert, from 15 machines in 2015 to 128 machines in 2017.⁷⁷ However, average utilization rate for the GeneXperts was 2.1 tests per machine per day in 2017 and 2018, compared to the national program's own target of four tests per machine per day. The contributing factors behind low utilization include the non-availability of new guidelines at the facility level, a lack of training on the new guidelines and lower staff willingness to use GeneXpert machines. None of the 16 health facilities visited by the OIG that have GeneXpert machines had the new national guidelines, and 40% of staff in the facilities visited had not received TB diagnosis/treatment training in the past 12 months.

Stock-outs of GeneXpert cartridges are another factor; 25% of the health facilities visited reported stock-outs of cartridges, with an average stockout of 62 days (maximum 178 days). Due to modules breaking down, 12.5% of the GeneXpert machines were malfunctioning. Power fluctuations and interruptions also led to no results, wasting of cartridges and damages to the GeneXpert machines.⁷⁸ The back-up power equipment procured is unable to support the GeneXpert machines for more than 30 minutes, and is not effective in keeping the machines functioning.

Lack of effective sputum sample transport mechanism: A reliable mechanism to transport sputum samples from remote diagnostic sites to GeneXpert laboratories is key to enhancing accessibility, utilization and accuracy of diagnostics. While public health facilities support a quarter of patients seeking medical care, only 6% of these facilities have diagnostic facilities⁷⁹, underscoring the need to link facilities with laboratories. Currently, there is no defined sputum transportation system: districts organize transportation of the sputum themselves; the Ghana Private Road Transport Union has been identified to provide this service but the contract has not yet been signed.

Sub optimal leveraging of Community-based Health and Planning Services (CHPS): Despite the country having a generalized epidemic for all three diseases, not all CHPS facilities provide services for the three diseases. For example, of the over 5,000 CHPS facilities, only 850 (17%) are expected to report on TB services in the DHMIS2; a missed opportunity since these established structures can help in expanding coverage significantly.

The country aims to improve TB case finding through an intensified TB case finding strategy in 113 prioritized districts to strengthen community-based approaches through CHPS. Ghana Health Service is putting in place measures to increase the optimization of GeneXpert machines, including

⁷⁵ Ghana HIV/AIDS and TB Funding Request, 2017

⁷⁶ Annual TB Report, 2017

⁷⁷ GeneXpert installation updated Report

⁷⁸ Ghana HIV/AIDS and TB Funding Request, 2018-2020

⁷⁹ TB Epidemiological Report in Ghana, Sep - Oct 2017

performance objectives for medical superintendents regarding case notification, defaulter rates and case fatality ratios.

Improvement needed in the management of MDR-TB

Of the notified drug resistant TB cases, 55% are being enrolled on treatment⁸⁰, with a treatment success rate of 55%. Treatment enrolment and success have been affected by delays in the roll-out of the shorter treatment regimen, which despite Ghana adopting the regimen in 2016, had only been initiated in five out of 10 regions by May 2018. Waiting for baseline test/culture results before putting patients on treatment is a factor: culture results have regularly been reported to be delayed by up to three months.⁸¹ In addition, the cost of a baseline test is a barrier for patients,⁸² an additional expense not fully funded by the Global Fund. Stockouts of MDR-TB drugs (Capreomycin Injection) were noted at the central level.⁸³

Ghana does not have a dedicated MDR-TB treatment center with proper infection control in line with WHO guidelines. The lack of effective infection control during out-patient treatment is compromising the safety of health care workers, their colleagues, patients and visitors. As GeneXpert becomes a primary diagnostic tool and with an increased number of machines, more MDR-TB cases are likely to be detected, putting further pressure on the MDR-TB program.

Agreed Management Action 4

The Secretariat will support the Ministry of Health to develop a plan to:

- improve the utilization of GeneXpert machines, including enhancing sputum transportation arrangements, and
- improve Intensified Case Finding by operationalizing the link to missing cases between regional and community levels.

Owner: Head of Grant Management

Due date: 31 March 2020

⁸⁰ MOH TB Progress Update and Disbursement Request, December 2017

⁸¹ GDF Ghana Monitoring Mission, June - July 2018

⁸² TB Epidemiological Review in Ghana, September 2017

⁸³ In July 2016, May 2017, Oct 2017 and January 2018

4.5. Progress made in data management, however improvements are needed to ensure quality data for decision making

Decision-making in Ghana is hampered by incomplete and inaccurate data, which has led to material revisions of disease burden estimates.

In Ghana, the Global Fund and other partners rely on routine health data collected and reported by the District Health Information Management System (DHIMS2)⁸⁴ for decision making. The country is deploying the Electronic Register and Tracker (e-Tracker) as a DHIMS2 module to report case-based data and records for Maternal and Child Health, Tuberculosis, HIV and Community-based Health Planning and Services (CHPS). Since the previous OIG audit in 2015, comprehensive SOPs and data validation tools have been prepared and rolled out, and staff roles and responsibilities for data have been harmonized between DHMIS2 and e-tracker. The timeliness of DHIMS2 reporting improved from 46% in 2015 to 89% in 2017.⁸⁵

However, data reported into DHIMS2 for TB and HIV is incomplete. Two of the four teaching hospitals and 12% (45 out of 375) of antiretroviral therapy centers do not report in DHIMS2, and data quality audits (DQAs) performed by the Principal Recipient in 2018 noted that data were not entered into DHIMS for one or more months. There is insufficient CHPS reporting of DHMIS2 data: while the malaria grant achieved 92% of the grant reporting target, the figure was only 32% for HIV and 53% for TB. In addition, only 9% and 32% of private facilities reported on TB and HIV respectively in DHMIS2 (78% did so for malaria). The DQAs conducted by the National Programs highlighted data accuracy issues. For example, the latest HIV DQA noted that 82% of the 99 health facilities visited in the 10 regions of Ghana had accuracy issues on data reported in DHIMS2.

These issues affect data reliability and utilization. For example, the number of people living with HIV on treatment was recently estimated to be 40,000 less than the earlier reported figure of 140,000, which affected decision-making.⁸⁶ The TB case detection rate was revised based on a survey identifying much higher TB prevalence, but routine data on testing and treatment were not used earlier to identify and address the mismatch.

Inadequate/ineffective supervision and training of data officers has contributed to data quality issues. At the facilities sampled in the audit, only 7% of staff who complete registers received training, and 23% received supportive supervision, in the previous 12 months. 47% of the facilities visited had stockouts of registers and reporting forms. For HIV, the e-tracker had limited functionalities, impacting its data quality: poor internet connectivity restricts reporting for facilities whose only option is to report using the online tool. The tool does not facilitate reporting of the number of people on antiretroviral therapy, and cannot disaggregate data for key populations. There are ongoing efforts to address these e-tracker issues.

Agreed Management Action

AMA 2 covers adherence to supervision and training plans and quality of supervision visits for program data. AMA 3 addresses e-tracker rollout. No further action needed.

⁸⁴ DHMIS2 is the official data repository/reporting platform for strategic health information in 2014, currently being accessible in all the 216 districts

⁸⁵ Ghana DHMIS2 data

⁸⁶ Ghana ART review, 2018

5. Table of Agreed Actions

Agreed Management Action	Target date	Owner
<p>The Secretariat will support the Ministry to develop for the Global Fund grants and government co-financing commitments:</p> <ul style="list-style-type: none"> • a mapping of MOH and GHS roles, and accountabilities; • deliverables and key performance measures. <p>The Secretariat will support MoH to ensure completion of all outstanding commitments contained in the CMS Fire Agreement; and to submit a plan for the investment of ACT revenues collected by the GoG.</p>	30 June 2020	Head Grant Management
<p>The Secretariat will support the Ministry of Health to:</p> <ul style="list-style-type: none"> • complete the installation of a Logistics Management System (LMIS) in teaching hospitals, Regional Medical Stores (RMS), regional and district hospitals and health centers at sub-district level as per Central Medical Stores (CMS) fire agreement; • establish written processes and accountabilities for: <ul style="list-style-type: none"> - using the logistics data generated by LMIS to improve product availability at all levels - ensuring adherence to supportive supervision and training plans and quality of the supervisions, for supply chain as well as programmatic data (see finding 4.5). 	30 June 2020	Head Grant Management
<p>The Secretariat will support the Ministry of Health to:</p> <ul style="list-style-type: none"> • develop and deploy an off-line HIV e-tracker in ART sites serving 85% of ART patients as a data source to track implementation of the HIV 90 90 90 acceleration plan; • develop a plan to implement differentiated testing models to enhance awareness and change behaviors towards testing, and improve quality of testing, enabling identification of those people living with HIV who do not yet know their status. 	30 June 2020	Head Grant Management
<p>The Secretariat will support the Ministry of Health to develop a plan to:</p> <ul style="list-style-type: none"> • improve the utilization of GeneXpert machines, including enhancing sputum transportation arrangements; • improve Intensified Case Finding by operationalizing the link to missing cases between regional and community levels. 	31 March 2020	Head Grant Management

Annex A: General Audit Rating Classification

<p>Effective</p>	<p>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.</p>
<p>Partially Effective</p>	<p>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.</p>
<p>Needs significant improvement</p>	<p>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.</p>
<p>Ineffective</p>	<p>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.</p>

Annex B: Methodology

The OIG 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 documents help our auditors to provide high quality professional work, and to operate efficiently and effectively. They 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 at the Global Fund as well as in country, 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 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.