

AUDIT REPORT

Global Fund Grants in Bangladesh

GF-OIG-22-015
22 September 2022
Geneva, Switzerland

 **THE GLOBAL FUND**
Office of the Inspector General

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1. Executive Summary

1.1 Opinion

Bangladesh has made significant progress in the fight against TB and malaria. The country is moving closer to eliminating malaria by 2030, with deaths having fallen significantly. For TB, there was a 50% increase in case notifications and a 50% decline in mortality between 2010 and 2020.

Despite these good results, there are still challenges around the utilization of GeneXpert machines, implementation of TB preventive treatment interventions and diagnosis of childhood TB. Many drug-resistant TB cases were missed in 2021, with low case notification in the private sector and among children. While HIV treatment coverage has increased, low coverage levels for HIV prevention services among key populations and for viral load testing are affecting HIV program outcomes. New HIV infections and HIV-related deaths have increased significantly. The adequacy, efficiency and effectiveness of grant interventions are therefore rated as **partially effective**.

While grants adapted quickly to the pandemic, better planning and coordination, as well as management of COVID-19 commodities, would have increased grant impact. Activities funded through Global Fund Grant Flexibilities and the COVID-19 Response Mechanism are therefore rated as **partially effective**.

Grant Principal Recipients have good financial management systems, with defined policies and procedures, including for monitoring sub-recipients. However, non-adherence to procurement controls and monitoring plans could cause limited value for money and financial loss. Grant oversight, and internal financial controls to support the delivery of grant activities, are therefore rated as **partially effective**.

1.2 Key Achievements and Good Practices

Significant progress made in the fight against TB and malaria

Bangladesh has made significant progress in fighting TB, with a 50% increase in TB case notifications and a 50% decline in TB mortality between 2010 and 2020.¹ Among new and previously treated patients, drug-resistant TB prevalence decreased from 1.4% and 28.5% in 2011 to 0.7% and 11.4% in 2018, respectively.¹

In 2021, 54% of TB cases were notified from community interventions, up from 49% in 2018¹. In 2021, the country achieved 85% treatment coverage for drug-sensitive TB notified cases, with a high treatment success rate of 97% for the 2020 cohort¹. The country has also successfully transitioned to all-oral treatment regimens for MDR-TB. The government has funded procurement of all antiretroviral medicines since 2012, and all first line TB medicines since 2018. Coverage for GeneXpert equipment has gradually expanded since 2018 from 191 to 471 machines with an optimization plan that includes HIV-Viral Load integration.

Bangladesh is on track in its fight against malaria. Between 2008 and 2020, cases and mortality related deaths declined by 93% and 94% respectively.² The country has eliminated malaria in 51 out of 64 districts and is in pre-elimination phase in 10 further districts.

Impressive recovery following COVID-19's impact on programs

COVID-19 significantly impacted disease programs, with TB case notifications, malaria testing and HIV testing among people living with HIV all decreasing. National disease programs, with the support of the Global Fund, developed guidelines and catch-up plans that ensured adaptation and continuity of HIV, TB and malaria services. Consequently, programmatic results improved significantly from Q3 2020. For example, TB case notifications increased by 114% from Q3 2020¹, and 1.2 million malaria nets were distributed through a mass campaign during the pandemic², in line with COVID-19 protocols.

¹ National Tuberculosis Control Program data, 2010-2021

² National Malaria Elimination Program data, 2010-2021

1.3 Key Issues and Risks

TB preventive therapy and diagnostics services need to improve

While TB case notification is increasing, 15% of drug-sensitive and 52% of drug-resistant cases were missed in 2021, many of them children.³ Bangladesh has yet to develop a national public-private mix strategy and action plan to address low TB case notification in the private sector, hindering the achievement of the national notification target. Inefficiencies in maintenance, limited use of data and challenges with sputum transportation systems have also impacted the effective utilization of GeneXpert machines.

While the country has switched to oral regimens for drug-resistant TB treatment, treatment continues to be centralized and hospital based. There have been delays in introducing and expanding drug-resistant TB treatment initiation through the WHO-recommended ambulatory care model.⁴ Improvement is also needed in the implementation of TB preventive therapy, which has been affected by stock-outs and distribution challenges.

Coverage of key populations and viral load testing needs to increase

The number of people living with HIV on treatment has been increasing steadily with improved linkage to care and retention among key population groups. Despite this, HIV incidence and HIV-related deaths increased by 26% and 45% respectively between 2016 and 2021.⁵ Challenges in enhancing coverage of HIV preventive activities among key populations and the low coverage of viral load testing are hindering grants from achieving their intended impact.

Need for better procurement processes and management of sub-recipients

Non-adherence to procurement controls is limiting competition and value for money. Although some Principal Recipients have risk-based plans to monitor sub-recipients and sub-sub recipients, these are not always adhered to, resulting in inadequately supported expenditure and non-compliance with tax regulations.

Need for enhanced planning, coordination, and implementation of COVID-19 related activities

Better planning, coordination and management of COVID-19 commodities would have increased the utilization of funds; 71% of COVID-19 Response Mechanism (C19RM) 2020 funding grant budget and 47% of Grant Flexibilities budget had been absorbed at the end of the grant (30 June 2021).⁶ In addition, implementation of important COVID-19 mitigating activities was delayed. Inventory management for COVID-19 commodities should also be improved.

³ National Tuberculosis Control Program data, 2010-2021

⁴ The World Health Organization (WHO) recommends that patients with MDR/RR-TB should be treated using mainly ambulatory care, rather than models of care based principally on hospitalization. Hospitalization should occur only if required for clinical reasons (2019 WHO consolidated guidelines on drug-resistance TB treatment page)

⁵ [National AIDS/STD Control 2021 data](#) (Accessed on 11 April 2022)

⁶ As per the last Progress Update report at the time of the audit

1.4 Objectives, Ratings and Scope

The audit seeks to provide reasonable assurance to the Global Fund Board on whether Global Fund grants to Bangladesh are achieving impact. It assessed the specific objectives below for adequacy, efficiency and effectiveness.

Objective	Rating	Scope
<ul style="list-style-type: none"> Scale up TB and drug-resistant TB case detection and TB treatment coverage. Enhance HIV testing and links to quality care to ensure sustainable achievement of grant objectives. 	Partially Effective	<p>Grants and implementers The audit covered Principal Recipients and sub-recipients of Global Fund NFM 2 and NFM 3 grants.</p> <p>Audit period The audit covered grants from January 2019 to June 2021, as well as the design of future arrangements for grants.</p> <p>Scope exclusion None</p>
<ul style="list-style-type: none"> Grants oversight and internal financial controls, including sub-recipient management to support the delivery of grant activities. 	Partially Effective	
<ul style="list-style-type: none"> Grant flexibilities and C19RM funded activities to achieve program objectives. 	Partially Effective	

The auditors visited 19 TB GeneXpert diagnostic laboratory sites, one Upuzila health complex (first referral health facility at the primary level), one TB community clinic, three GeneXpert Viral Load testing sites, three antiretroviral therapy centers, one comprehensive drop-in center (DIC); and one sub-DIC located in five divisions and 14 districts. Auditors also visited the National TB Control Program central warehouse at Shyamoli in Dhaka.

Details about the general audit rating classification can be found in [Annex A](#) of this report.

2. Background and Context

2.1 Overall Context

One of the world's most densely populated nations, Bangladesh has been among the fastest growing economies over the past two decades, supported by a demographic dividend, garment exports, remittances and stable macroeconomic conditions. Economic growth has averaged 6% since 2000, and in 2021 the UN approved a resolution to allow Bangladesh to officially graduate from least-developed-country status in 2026.⁷

Healthcare is largely decentralized in Bangladesh. Local community clinics provide primary health care services to rural and often marginalized populations. In 2019 the country had 10 physicians, nurses and midwives compared to the UN Sustainable Development Goals threshold of 44.5 per 10,000 population.^{8,9}

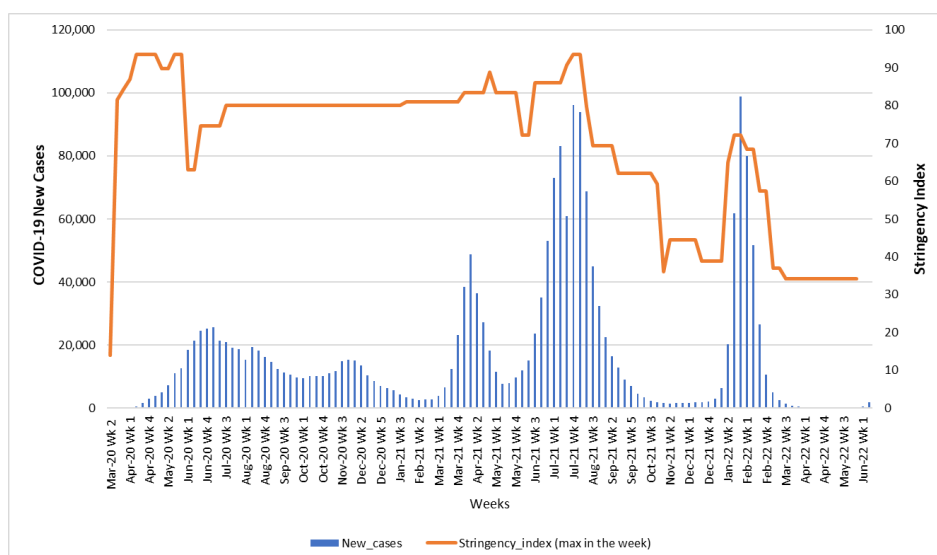


▲ Population	166 million (2021)
▲ GDP per capita	US\$ 1,962 (2020)
▲ TI Corruption Perceptions Index	146 of 180 (2020)
▲ UNDP Human Development Index	133 of 189 (2020)

2.2 COVID-19 Situation

Since March 2020, the country has taken containment measures to slow the spread of the virus, including lockdowns, dusk-to-dawn curfews and banning inter-district movement.

Figure 1: COVID-19 cases and stringency index¹⁰



COVID-19 statistics (20 June 2022)

- Cases – 1,958,074
- Active cases – 22,958
- Recovered – 1,905,983
- Deaths – 29,133111

⁷ World Bank, Bangladesh Country Profile (Accessed 8 June 2022)

⁸ WHO Dissemination Workshop on HRH evidence for decision making (Accessed 13 June 2022)

⁹ The WHO Global Strategy on Human Resources for Health: Workforce 2030 (GSHRH) stipulates the SDG index threshold of 4.45 physicians, nurses and midwives per 1,000 population (Accessed 13 June 2022)

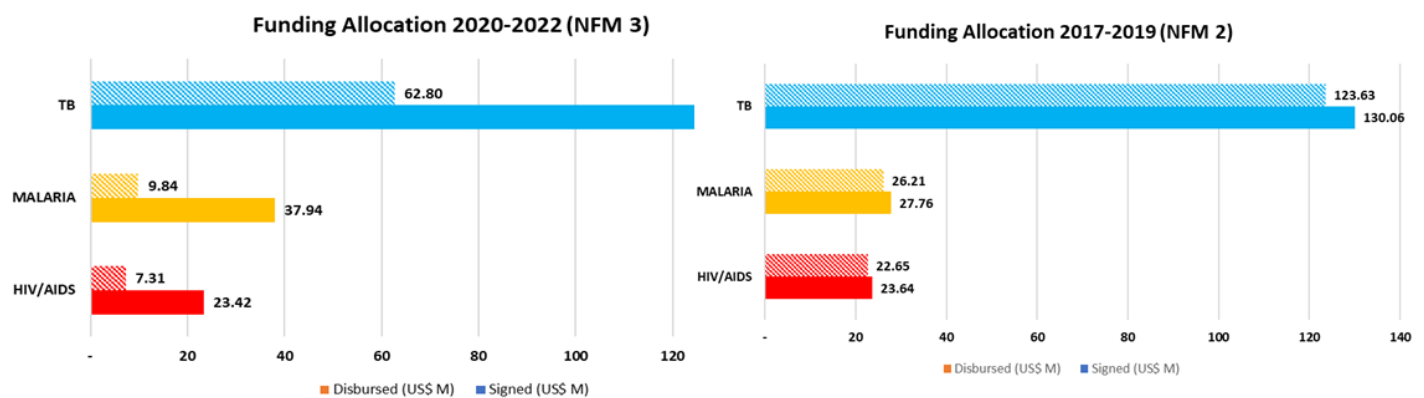
¹⁰ University of Oxford Blavatnik School of Government; COVID-19 Dynamic Dashboard for Bangladesh (Accessed on 18 June 2022)

2.3 Global Fund Grants in Bangladesh

Since 2003, the Global Fund has signed grants of over US\$835 million and disbursed over US\$700 million to Bangladesh. Total grants for the 2021-2023 implementation period represent US\$209 million. Full details on the grants can be found at the Global Fund's Data Explorer.¹¹

Principal Recipients include the Economic Relations Division within the Ministry of Finance, BRAC,¹² Save the Children and International Centre for Diarrhoeal Disease Research Bangladesh (ICDDR,B). The Ministry of Health and Family Welfare, through the national programs for the three diseases, implements grants on behalf of the Economic Relations Division. Each disease program is implemented by a government implementer and non-governmental organization. TB grants are implemented by the National Tuberculosis Control Program and BRAC; malaria grants by the National Malaria Elimination Program and BRAC; HIV grants by the National AIDS/STD Control Program, Save the Children and ICDDR,B.

Figure 2: Funding allocations - prior and current funding cycles (as of April 2022)¹¹



¹¹ [Global Fund's Data Explorer, Bangladesh profile](#) (Accessed on 11 April 2022)

¹² BRAC was previously known as the Bangladesh Rehabilitation Assistance Committee and later as the Bangladesh Rural Advancement Committee

2.4 The Three Diseases

TUBERCULOSIS



Bangladesh has the world's 7th highest TB burden, accounting for 3.6% of global cases.¹³

TB incidence of 218 cases per 100K¹³ with a 50% increase in TB case notification (2010-2020).¹⁴

High treatment success rate: DS-TB 97% (2020 cohort) and DR-TB 74% (2019 cohort).¹⁴

50% decrease in TB deaths (2010-2020).¹⁴

MALARIA



Bangladesh has eliminated malaria in 51 districts and is in pre-elimination phase in 10 districts.¹⁵

3 high-endemic districts reported 95% of total country malaria cases in 2019.¹⁵

3.7 million Global Fund supported LLINs were distributed between 2018 and June 2021.¹⁵

93% decline in malaria cases and 94% decline in malaria related deaths between 2008-2020.¹⁵

HIV/AIDS



14,000 people are living with HIV of whom 63% know their status.

Among this population, 63% were on treatment in 2021,¹⁶ and only 33% had received a viral load test out of which 93% were virally suppressed in 2021.¹⁶

HIV incidence increased by 26% between 2016 and 2021.¹⁶

AIDS-related deaths increased by 45% between 2016 and 2021.¹⁶

3. Portfolio Risk and Performance Snapshot

3.1 Portfolio Performance

Historically, Global Fund grants in Bangladesh have performed well against targets, as shown below. COVID-19 impacted grant performance, however, in 2020.

NFM 2 (1 Dec 2017 – March 2021)

GLOBAL FUND GRANTS IN BANGLADESH (NFM 2)							GRANT RATINGS						
Comp	Grant	Principal Recipient	Grant Period	Total Budget Amount (USD)	Expenditure as at Last PU/DR (USD)	Absorption as at Last PU/DR (%)	June 2018	Dec 2018	June 2019	Dec 2019	June 2020	Dec 2020	Mar 2021
BGD-T-BRAC	BRAC	BRAC	1 Jan 18 – 31 Dec 2020	90,424,788	75,575,206	83.6%	A1	A1	A1	A2	B1	B1	
BGD-T-NTP	Economics Relations Division, Min of Finance	Economics Relations Division, Min of Finance	1 Jan 18 – 31 Dec 2020	41,321,207	27,664,870	67.0%	A1	A1	A2	A2	B1	B1	
BGD-M-BRAC	BRAC	BRAC	1 Jan 18 – 31 Dec 2020	14,319,616	13,854,478	96.8%	A1	A1	A1	A1	A2	A2	
BGD-M-NMCP	Economics Relations Division, Min of Finance	Economics Relations Division, Min of Finance	1 Jan 18 – 31 Dec 2020	13,802,465	8,724,118	63.2%	A1	A1	A1	A2	A2	B1	
BGD-H-SC	Save the Children	Save the Children	1 Dec 17 – 31 Mar 2021	13,827,093	13,195,992	95.4%	A1	A2	A2	B1	B1	A2	A2*
BGD-H-ICDDR	International Centre for Diarrhoeal Disease Research (ICDDR)	International Centre for Diarrhoeal Disease Research (ICDDR)	1 Dec 17 – 31 Mar 2021	9,101,308	8,206,913	90.2%	A1	A1	A1	A1	A1	A1	A1*
BGD-H-NASP	Economics Relations Division, Min of Finance	Economics Relations Division, Min of Finance	1 Dec 17 – 31 Mar 2021	1,217,982	1,097,845	90.1%	A1	B1	B2	B1	B1	B1	B1*
				184,014,459	148,319,422	80.60%							

*Performance rating for the period 1 Dec 20 – 31 Mar 21 – period of NFM 2 grants for the respective implementers.








¹³ WHO Global TB Report, 2021

¹⁴ 2010-2021 National Tuberculosis Control Program data

¹⁵ 2008-2020 National Malaria Elimination Program data

¹⁶ National AIDS/STD Control 2021 data (accessed on 11 April 2022)

NFM 3 (Jan 2021 – Dec 2023)

Comp	Grant	Principal Recipient	Grant Period	Total Budget Amount (USD)	Budget as at June 2021 (USD)	Expenditure as at June 2021 (USD)	Absorption as at June 2021 (%)	June 2021
	BGD-T-BRAC	BRAC	1 Jan 21 – 31 Dec 2023	64,409,202	8,671,187	7,412,945	85.5%	B1
	BGD-T-NTP	Economics Relations Division, Min of Finance	1 Jan 21 – 31 Dec 2023	98,949,277	21,568,168	5,020,903	23.3%	B1
	BGD-M-BRAC	BRAC	1 Jan 21 – 31 Dec 2023	15,139,349	2,263,389	2,073,228	91.6%	A1
	BGD-M-NMCP	Economics Relations Division, Min of Finance	1 Jan 21 – 31 Dec 2023	22,805,199	2,959,748	990,710	33.5%	A1
	BGD-H-SC	Save the Children	1 Apr 21 – 31 Dec 2023	12,726,195	945,957	748,601	79.1%	A2
	BGD-H-ICDDR	International Centre for Diarrhoeal Disease Research (ICDDR)	1 Apr 21 – 31 Dec 2023	7,572,176	593,474	434,089	73.1%	A2
	BGD-H-NASP	Economics Relations Division, Min of Finance	1 Apr 21 – 31 Dec 2023	3,120,602	277,747	59,324	21.4%	B1
				224,722,000	37,279,670	16,739,800	44.9%	

3.2 Risk Appetite

The OIG compared the Secretariat's aggregated assessed risk levels of the key risk categories covered in the audit objectives for the Bangladesh portfolio with the residual risk that exists based on OIG's assessment, mapping risks to specific audit findings. The full risk appetite methodology and explanation of differences are detailed in [Annex B](#) of this report.

AUDIT AREAS	RISK CATEGORY	SECRETARIAT AGGREGATED ASSESSED RISK LEVEL (March 2022)	ASSESSED RESIDUAL RISK, BASED ON AUDIT RESULTS	RELEVANT AUDIT ISSUES
Program quality	Program quality – TB	Moderate	Moderate	Finding 4.1
	Program quality – HIV	Moderate	Moderate	Finding 4.2
Financial assurance framework /mechanism	Grant-related fraud and fiduciary risks	Moderate	Moderate	Finding 4.3
Global Fund support, including grant flexibilities and C19RM funds utilization	Procurement	Moderate	Moderate	Finding 4.4
	In-Country Supply Chain	Moderate	Moderate	

4. Findings

4.1 Significant progress made on TB case detection and links to care, but TB preventive therapy and diagnostic services needs improvement

Bangladesh has made significant progress in fighting TB over the last decade. Yet challenges in optimal utilization of GeneXpert machines, implementation of TB preventive treatment interventions and diagnosis of childhood TB could prevent grants from achieving their intended impact.

For Tuberculosis, case notification increased by 50% (from 153,903 to 230,090) and mortality decreased by 50% (from 54 to 27 per 100K population) between 2010 and 2020.¹⁷ In 2021, 54% of cases were notified from community interventions, up from 49% in 2018, and Bangladesh achieved 85% treatment coverage for drug-sensitive (DS) TB notified cases, with a high treatment success rate for DS TB (97% in 2020).¹⁷ In addition, there was a slight decline (3%) in TB incidence from 2010 to 2020.¹⁸ The country has transitioned to all-oral regimens for multidrug-resistant TB (MDR-TB) and there is a national scale-up of TB case-based electronic recording and reporting system (e-TB manager).

Despite the progress made, 15% of drug-sensitive TB and 52% of drug-resistant TB cases were missed in 2021, many of them children.¹⁷ Challenges around low utilization of GeneXpert machines, diagnosis in the private sector, insufficient coverage of TB preventive treatment, and delays in shifting to ambulatory drug-resistant TB treatment will need to be addressed to maximize the impact of investments and sustain the achievement of grant objectives.

Utilization of GeneXpert machine capacity must be enhanced and closely monitored to achieve the intended targets

Following the OIG audit in 2017, the country implemented revised algorithms for case detection, improved sputum sample transportation systems, and expanded GeneXpert equipment coverage from 192 machines in 2018 to 490 in 2021.¹⁷ This has led to increased diagnosis of drug-sensitive TB and drug-resistant TB cases. Machine utilization, however, could be further increased since national testing capacity is at 66%.^{19;20} Additionally, only 33% of new and relapse cases in 2021 were tested with GeneXpert machines.¹⁷ Low utilization is mainly due to the issues below.

Lack of regular and timely maintenance of GeneXpert machines

Regular calibration and maintenance is required to ensure diagnostic accuracy. From the 19 GeneXpert sites visited, 30% of testing modules (178 of 548) were not functioning between January and March 2022. Although a warranty extension agreement has been revised to reduce the time for replacing parts from 90 to 60 days, there is a long turnaround time for the maintenance of GeneXpert machines and their modules. From the OIG's analysis, the average module replacement lead time for 89 GeneXpert machines in Rajshahi and Rangpur Divisions was 173 days (max of 540 days). Furthermore, 89% of sites visited (17/19) did not have a maintenance log to indicate when an issue began, when it was reported/escalated and when it was resolved. This limits health facilities' ability to track and monitor issues for quick resolution.

Limited monitoring of GeneXpert utilization data

The National TB Program requires all GeneXpert sites to submit monthly reports, which include the number of tests performed and their results, as well as the functionality of modules for each machine. However, the program does not track information on the utilization of GeneXpert machines and makes limited use of data for program decisions. This has hindered timely maintenance of broken machines and reduced their operating capacity. For instance, based on OIG

¹⁷ National TB Program data, 2010-2021

¹⁸ TB incidence has reduced from 225 cases to 218 cases per 100K between 2010 and 2020. 2011 & 2021 WHO Global TB Reports

¹⁹ 66% if denominator is three testing cycles a day or at 50% if denominator is 4 testing cycles a day is used in the computation

²⁰ WHO GeneXpert MTB/RIF implementation manual, 2014: Technical and operational 'how-to': practical considerations

analysis, the National Tuberculosis Reference Laboratory reported a decrease in the functionality of available modules from 70% (45/64) in August 2021 to 58% (37/64) in March 2022. Yet there was no evidence that the National TB Program took action to remediate the issue.

To address these challenges, the country, with Global Fund support, has rolled out a comprehensive connectivity service for GeneXpert machines by installing software called Aspect. At the time of our audit, 99% (484/490) of machines had the software installed. However, some pertinent software system modules, including machine maintenance status, calibration status, warranty and stock status were not functional.

Lack of effective specimen transport mechanism for GeneXpert samples

A reliable sputum sample transport mechanism from remote diagnostic sites to GeneXpert laboratories is key to achieve accurate diagnostics. A functional system mostly exists for microscopy in the BRAC targeted communities. For drug-resistant TB treatment sites, the system is limited to culture and Line Probe Assay (LPA) which helps with rapid detection of drug resistance to first- and second-line anti-TB agents.²¹ Specimen transport and referral system for Second Line Probe Assay (SL-LPA) testing is sub-optimal. Sample/results turnaround time data are neither reported routinely nor captured in the e-TB manager system. All the GeneXpert sites visited by the OIG lacked guidelines to record sputum samples received and their results.

Need to further expand TB case detection in private facilities, particularly among children

The proportion of cases reported through private referrals decreased from 25% in 2018 to 23% in 2021, below the National Strategic Plan target of 27% for 2021.²² The lack of a national Public-Private Mix strategy contributes to low case detection in the private sector. The program also lacks a plan to improve coverage and quality of childhood TB interventions, including access to relevant diagnostic tools, integration into Maternal and Child Health programs, and engagement of clinicians/paediatricians. Tuberculosis Skin Tests, which are solely funded by the Government, have been stocked out since June 2021 due to procurement delays.

Expansion of TB Preventive Treatment activities needs to be accelerated by improving drug availability and distribution

Bangladesh planned to expand TB Preventive Therapy services from March 2021 and achieve nationwide coverage by December 2021. By June 2021, there was only 47% achievement against the Global Fund target for the number of people in contact with TB patients who began TB Preventive Therapy, due to insufficient drug stocks.²³ Disrupted global supply chains due to COVID-19 resulted in a global shortage of isoniazid-rifapentine (3HP) regimen, used for TB preventive therapy. Inefficiencies in the distribution of 3HP were also noted. For instance, the National TB Program received 3HP stock in September 2021 but had not distributed it at the time of the audit in March 2022 (>6 months).

Need to improve drug-resistant TB treatment outcomes/adherence by increasing treatment coverage and expanding ambulatory care and drug-safety monitoring

TB treatment coverage increased from 44% in 2019 to 84% in 2021.²⁴ Drug-sensitive TB treatment success has been consistently high (97%) and above global targets.²⁵ However, the 2019 cohort drug-resistant TB treatment success rate was 74%, against the National Strategic Plan target of 80%.²⁶ In 2020, 34% of drug-resistant TB cases were not tested for resistance to second-line anti-TB drugs.²⁷ In 2020, there was a 10% and 11% loss to follow up among drug-resistant TB patients on longer and shorter regimens, respectively.²⁸ Drug-resistant TB treatment continues to be centralized and hospital based, and there have been delays in the introduction and expansion of drug-resistant TB treatment through

²¹ WHO recommends the use of LPA for patients with confirmed rifampicin-resistant TB or drug-resistant TB as the initial test to detect resistance to the first and second-line TB drugs (2016 WHO: The use of molecular line probe assays for the detection of resistance to second-line anti-tuberculosis drugs: policy guidance)

²² National TB Program data, 2010-2021

²³ *ibid*

²⁴ *ibid*

²⁵ *ibid*

²⁶ *ibid*

²⁷ National TB Program data, 2010-2021

²⁸ *ibid*

the WHO-recommended ambulatory care model.²⁹ An estimated 40% of drug-resistant TB cases are being enrolled on treatment.³⁰ Data on drug-sensitive and drug-resistant TB diagnostic and treatment delays are not tracked to inform programmatic decisions. The active TB drug-safety monitoring and management (aDSM) system is underperforming, due to side effects data not being reported in the e-TB manager system.

Agreed Management Action 1
The Secretariat will work with relevant in-country stakeholders to: <ul style="list-style-type: none">I. improve sensitive susceptible (DS-TB) and Multidrug Resistant Tuberculosis (MDR-TB) case detection and linkage to care by optimizing the utilization of the GeneXpert machines.II. develop a costed laboratory strategy with supporting funds towards the implementation of priority activities.
OWNER: Head of Grant Management Division
DUE DATE: 30 June 2023

²⁹ WHO recommends that patients with MDR/RR-TB should be treated using mainly ambulatory care, rather than models of care based principally on hospitalization. Hospitalization should occur only if required for clinical reasons (2019 WHO consolidated guidelines on drug-resistance TB treatment)

³⁰ WHO Global Tuberculosis Report 2021



4.2 Improvement needed in serving key populations and optimizing national laboratory capacity, to increase viral load testing coverage

There have been steady increases in the number of people living with HIV put on treatment and in retention among key populations. But low coverage of HIV services among key populations and low levels of viral load testing are negatively affecting programs.

Coverage of prevention interventions in Bangladesh has increased over the years. Among people who inject drugs, coverage increased from 29% in 2018 to 52% in 2021,^{31,32} while there has been a steady increase in the number of people living with HIV put on treatment, with 63% (5,553/8,761) of diagnosed people living with HIV on treatment in 2021.³² Linkage to care, and retention among key population groups, has also improved. For example, treatment retention among people who inject drugs increased substantially from 16% in 2015 to 87% in 2020; among men who have sex with men and transgender populations, it increased from 48% to 86% between 2018 and 2020.³¹

Despite the progress made, HIV incidence and the number of HIV-related deaths increased by 26% and 45% respectively between 2016 and 2021.³² Challenges in enhancing coverage of HIV preventive activities among key population groups, and low coverage of viral load testing, are hindering grants from achieving their intended impact.

Need to enhance coverage and quality of HIV prevention interventions among key populations

HIV prevalence in Bangladesh is low among the general population, with an estimated 14,000 people living with HIV, and is concentrated among key populations. The national coverage of key population prevention programs however remains low (see Table 1), whereas per UNAIDS standards, optimal coverage targets should be more than 80% among key populations.³³ In addition, only 7.9%³⁴ (vs. National Strategic Plan 2021 target of 33%) of TB patients know their HIV status.³⁵

Table 1. Current KPI coverage vis-à-vis population size estimates and NSP targets³⁶

Key population	Pop'n Size Est. (PSE)	NSP Targets	Target (2021)	Results (Dec 2021)	% of PSE covered	% of NSP covered
Men who have sex with men and male sex workers	131,472	42,867	32,500	35,121	25%	76%
Transgender people	10,199	6,523	5,000	5,879	49%	77%
Female sex workers	102,260	59,270	35,473	34,458	35%	60%
People who inject drugs	33,067	23,371	17,035	14,665	52%	73%
Opioid substitution therapy	33,067	4,700	5000	3,305	15%	106%

For the current grant cycle, interventions have been scaled up to reduce coverage gaps in the 23 high prevalence districts. Despite this, there is still low coverage. This is due to:

³¹ NFM 3 HIV Grant Concept Note

³² [National AIDS/STD Control 2021 data](#) (Accessed on 11 April 2022)

³³ [UNAIDS 2025 AIDS Targets](#) (Accessed on 11 April 2022)

³⁴ NTP PU, January - June 2021

³⁵ WHO Global TB Report, 2021

³⁶ [Mapping study and size estimation of key populations in Bangladesh for HIV programs 2015-2016; 2018-2023 National Strategic Plan](#); National AIDS/STD Control data

Limited Government funding

There is an estimated funding gap of US\$167 million to support the scale-up of HIV services in the country.²⁴ Global Fund HIV investments focus on prevention activities for key populations in the 23 high prevalence districts (including Dhaka) while government-funded prevention interventions are implemented in the remaining 41 districts. The government announced financial support for key population HIV prevention in 2020, but this has yet to materialize.

Insufficient HIV Counselling and Testing (HCT) centres

In the 23 high prevalence districts, only 28 health facilities offer HCT services. Outside Dhaka, which has four HCT centres, there is an average of one HCT centre per high prevalence district, which is insufficient to cater to key populations.³⁷ HCT is not performed among TB patients in facilities within high HIV burden districts. For instance, 91% of the health facilities located in six high burden HIV districts visited by the OIG do not perform HCT to TB patients. Efforts are ongoing to expand the coverage of counselling and testing in TB DOTS centers, but a detailed plan to support this expansion is yet to be finalized.

Inadequate HIV counselling

Inadequate HIV counselling at testing centers in public health facilities is hindering access to and utilization of HCT by key populations. For example, in OIG interviews with representatives from transgender beneficiaries, concerns about inadequate space to ensure privacy, insufficient time for counselling and discrimination were raised as the main barriers to HIV testing and counselling services.

Implementation delays and challenges

The launch of HIV prevention services for female sex workers and people who inject drugs by the National AIDS/STD Control Program were delayed for about a year. This was due to delays in developing a Management Implementation Plan, a prerequisite for starting interventions. The National TB Program received Determine HIV test kits in January and July 2021, but could not use them because they lacked relevant accessories that were only received in January 2022 and distributed starting in February 2022.

Gaps in strategic information

Key population size estimates date from 2015-2016,³⁸ meaning that programmatic analysis and investments may be based on information which is not updated in a timely manner. Our audit noted differences in indicators and key population group definitions in key programmatic documents, including grant performance frameworks, the 2018-2023 National Strategic Plan and 2015 / 2020 IBBS³⁹ survey results. These differences are based on the latest versions of guidance by technical partners in different years. There were some methodological differences between the 2015 and 2020 IBBS surveys. There is a need to ensure programmatic metrics, surveys and data are aligned with the latest guidance, and that strategic data is of adequate quality to inform programmatic decisions and investments.

HIV care quality is impacted by inadequate routine monitoring of patients on antiretroviral (ARV) treatment, due to low testing capacity and stock-outs of cartridges

National ARV Therapy Guidelines require viral load tests to be undertaken six months after initiating ARV therapy, and then every 12 months thereafter. Although viral suppression is high (at 93% in 2021) for people on treatment that have been tested, viral load monitoring is very low with testing coverage at 33%.⁴⁰ This is due to the issues below.

Low viral load testing capacity

Bangladesh has only 11 viral load testing sites, located in eight high prevalence districts. There are no guidelines for viral load testing sample collection, transportation or return of results. The National AIDS/STD Control Program (NASP) has developed a plan to increase viral load testing capacity, but this is not integrated with the GeneXpert expansion plan developed by the National Tuberculosis Control Program. Furthermore, neither plan clearly defines how

³⁷ According to the 2015 geographical prioritization, 62.3% of Key Populations and 79.8% of People Living with HIV (PLHIV) live in the 23 high burden districts

³⁸ [Mapping study and size estimation of key populations in Bangladesh for HIV programs 2015-2016](#)

³⁹ IBBS is a community-based systematic survey designed to assess risk behaviours and the prevalence of HIV and other sexually transmitted diseases among the most-at-risk populations, in order to improve tracking of the HIV epidemic and program planning (source: FHI360 website - accessed on 20 May 2022).

⁴⁰ [National AIDS/STD Control 2021 data](#) (Accessed on 11 April 2022)

GeneXpert machines will be utilized for viral load testing. Neither has been adapted to the expansion of antiretroviral treatment services planned by NASP.


Stock-outs of viral load testing cartridges

None of the three sites the OIG visited performed viral load tests from June 2021 to February 2022 due to stock-outs of testing cartridges. Until the end of NFM 2, when cartridges were government-funded, the program experienced irregular and insufficient cartridge availability. In the current grant cycle (NFM 3), the Global Fund is supporting the purchasing of cartridges. But while cartridges were delivered to warehouses from November 2021, distribution to the labs and testing centres only started 86 days later.

Gaps in data availability

All three antiretroviral treatment centres the OIG visited maintained data (on people living with HIV on treatment, date of treatment initiations, viral load test results, etc.) in manual registers. No routine viral load testing data from GeneXpert testing sites is sent to the National AIDS/STD Control Program. Consequently, visibility and analysis of real time programmatic data is limited. Through the NASP NFM 3 grant, Bangladesh is currently rolling out an electronic database after an eight-month delay.

Agreed Management Action 2
The Secretariat will work with relevant in-country stakeholders to develop a comprehensive approach to improve the viral load test tracking, ordering, sample transportation and feedback systems.
OWNER: Head of Grant Management Division
DUE DATE: 30 June 2023



4.3 Need to enhance transparency and competition over procurement processes, and to improve management of sub-recipients

Grant implementers have defined policies and procedures, and accounting systems to process transactions. However, gaps in procurements and sub-recipient oversight could limit value for money and lead to financial loss.

Grant implementers have controls and processes in place to manage Global Fund grants. For procurements above Bangladeshi taka 0.5 million (US\$5.9k), national disease programs use the National e-Government Procurement (e-GP) portal system, which has robust controls. NGO Principal Recipients have developed risk-based monitoring plans to monitor sub- and sub-sub-recipients. However, gaps in domestic procurements and sub-recipient oversight could lead to limited value for money and financial loss. The OIG reviewed 12% of the total grant expenditure incurred between 2019 and 2021 and noted the issues below.

Non-competitive bidding due to gaps in procurement oversight

This audit found local procurement processes not being followed by implementers. Contracts amounting to US\$4.3 million were awarded without competitive bidding, resulting in non-compliant expenditures. For procurements below Bangladeshi taka 0.5 million (US\$5.9k), national public procurement rules require that entities request quotations from at least three vendors. The national disease programs do not have a list of pre-qualified suppliers, meaning that procurement officers unilaterally decide which suppliers to contact for each procurement. While request for quotations from suppliers is a standard procurement practice, the audit noted that quotations received were repeatedly sourced from a limited number of suppliers. While goods and services were delivered, the reduced competition could lead to limited value for money.

Gaps in sub-recipient monitoring and oversight contributed to non-compliance with Global Fund regulations

Two Principal Recipients need to improve their internal control environment and implement robust mechanisms to effectively manage and monitor their sub-recipients. While both have developed risk-based monitoring plans for sub- and sub-sub recipients, these plans are not always adhered to. For example, one Principal Recipient did not undertake 88% (21 out of 24) of 2019 planned sub-recipient monitoring visits, while the other Principal Recipient delayed 42% (5 out of 12) of 2018 sub-recipient visits by between 24 and 55 days. There was also weak follow up of recommendations from assurance providers, including the Local Fund Agent.

The audit noted no differentiation in the approach of Principal Recipients towards sub-recipient reviews and monitoring, despite variations in grant size and sub-recipient risk levels. In the 2022 sub-recipient monitoring plan, a Principal Recipient planned to undertake one monitoring visit to each of its 26 sub-recipients, despite 11 of them being rated as posing “Significant” risk. There were also instances of incorrect risk classification, with low- and high-risk sub-recipients classified in the same category.

Payment of taxes with grant funds

While Global Fund grants should be exempt from taxation (in line with article 3.5 of Global Fund Grant Regulations, 2014)⁴¹, Bangladesh has not granted tax exemption to the Global Fund grants. Consequently, US\$ 0.8M of grant funds was paid as VAT between 2019 to 2021 and remains unrecovered. Non-exemption of taxation by the country, inadequate monitoring and oversight of sub-recipients contributed to instances where taxes were not remitted and/or not computed accurately as per tax legislation. As such, implementers risk fines and penalties by the National Board of Revenue, which could result in financial loss.

⁴¹ https://www.theglobalfund.org/media/5682/core_grant_regulations_en.pdf - page 6

Agreed Management Action 3

The Secretariat will work with relevant Principal Recipients to:

- I. develop framework agreements with preferred vendors for the high value and most common products/services procured and to thus ensure value for money sourcing; and
- II. ensure sub-recipient monitoring plans are risk based with appropriate mechanisms for implementation oversight.

OWNER: Head of Grant Management Division

DUE DATE: 30 June 2023

4.4 COVID-19 funds mitigated the pandemic's impact, but better planning, coordination and implementation of COVID-19 activities is needed.

Global Fund COVID-19 funds helped Bangladesh mitigate the pandemic's impact on disease programs, however, better planning and coordination as well as management of COVID-19 commodities is required.

The Global Fund has allocated Bangladesh US\$76.5 million⁴² to respond to the pandemic. Grant Flexibilities and C19RM funds were provided in a timely manner, mitigating the pandemic's impact on disease programs. Distribution of Personal Protective Equipment and other COVID-related commodities took place largely on time, with minor delays not causing disruptions. The government of Bangladesh took responsibility for financing the procurement of Viral Transportation Medium, sample collection kits and community awareness campaigns.

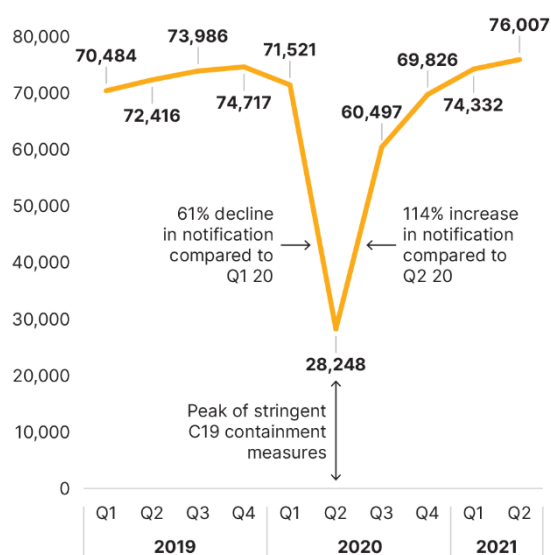
Impact of COVID-19 on disease programs

Comprehensive adaptation and catch-up plans for TB, HIV and malaria mitigated COVID's impact and contributed positively to all disease programs. TB programs, which were severely impacted at the onset of the pandemic, quickly adapted with notified cases increasing from Q3 2020 (see figure 2a). Malaria grants also performed well in 2020, recovering from initial disruptions (see Figure 2b) with 1.3 million⁴³ insecticide treated nets successfully distributed.

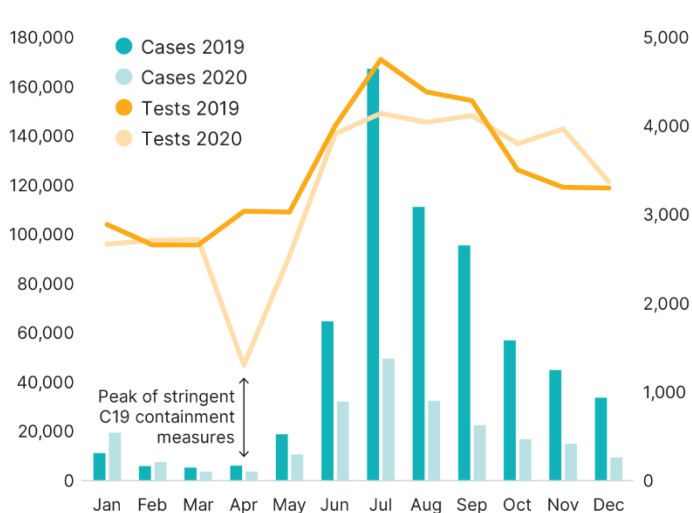
Lockdown measures slowed or halted the implementation of HIV key population program interventions. Although key population groups were unable to access Drop-in Centers, the HIV program managed to adapt, and programs began to recover from Q3 2020 onwards. The National AIDS/STD Control Program was also able to undertake an Integrated Bio-Behavioral Surveillance (IBBS) Survey in 2020, despite pandemic-related challenges.

Figures 2a and 2b: Impact of the COVID-19 pandemic on TB and malaria programs (Sources: BRAC and NTP)

COVID-19 Impact on TB Control Programme



Malaria Tests and Cases Comparison 2019 and 2020



Despite these good results, programs could have achieved even better outcomes with better planning and coordination among relevant stakeholders as well as more effective monitoring of COVID-19 commodities.

⁴² US\$8.6M in Grant flexibilities, US\$12.3M in C19RM 2020 and US\$55.6M in C19RM 2021

⁴³ 1.2M LLINs were distributed via a mass campaign and 97.5K LLINs were distributed via continuous campaign

Implementing COVID activities: better planning and coordination needed among in-country stakeholders

While acknowledging the challenges created by the pandemic, we noted gaps in planning and coordination among in-country stakeholders, and delayed implementation of key COVID-19 mitigating activities. Despite receiving HIV self-testing kits in May 2021, guided self-testing had not started as of March 2022 due to a seven-month delay in pilot site mapping. Recruiting health workers to support COVID-19 response was delayed by five months. Customs clearance of COVID-19 commodities worth US\$0.6 million was delayed by 10 months, due to late communication of tax exemption information to the Central Medical Store. As a result, as of 30 June 2021, the absorption of C19RM 2020 funds was 71% and 47% for Grant Flexibilities funds.

A four-month delay in scaling up community sample collection via booths was partly due to inefficient planning, delays in stakeholder engagements and procurement initiation, as well as delays in hotspot mapping. BRAC lacked a plan to outline procurement activities and implementation with delivery timelines. This contributed to missed opportunities to provide needed services, and to procure or reprogram savings from unutilized funds for other COVID-19 activities in a timely manner.

Gaps in COVID-19 commodities monitoring

The audit noted limited visibility of stock levels and utilization throughout the supply chain. Shyamoli Central Warehouse's electronic warehouse information management system does not capture COVID-19 commodities inventory data and only records data for TB medicines. Inventory management for laboratory supplies and GeneXpert cartridges (for TB, COVID-19 and HIV Viral Load testing) is paper based, making it prone to error and manipulation. The central warehouse lacks early warning alerts to mitigate against stock-outs and expiries, especially for COVID-19 GeneXpert cartridges which have a short shelf life. Quarterly, paper-based stock reports shared by facilities are not aggregated and analyzed, making it difficult to determine stock levels based on consumption. As of March 2022, 81% (9/11) of sites supported by one Principal Recipient had less than one month of stock for COVID-19 Rapid Antigen Test Kits, while 9% of sites were stocked out from February 2022.

Documentation gaps were noted at the Shyamoli Central Warehouse. Stock/bin cards, which aid in tracing stock movement in real time, are not maintained for COVID-19 inventories. Likewise, stock counts, which are crucial in stock monitoring and accountability, have never been undertaken for COVID-19 inventories. Gaps were also noted in Proof of Delivery (POD) documentation to account for funded COVID-19 commodities distributed from the central warehouse. For instance, 60% of sampled BRAC pickups and 11% of deliveries made through the National Malaria Elimination Program had no copies of PODs, making it difficult to monitor distribution and ensure commodities are reaching their intended beneficiaries.

Limited performance measurement of the Third-Party Logistics service provider for distribution of COVID-19 commodities was also noted. The contract awarded to the provider has no performance metrics/KPIs, making it difficult to evaluate service quality. In our sample, order deliveries had an average turnaround time of 22 days, but it is challenging to determine if this is acceptable, given no expected turnaround time is defined.

Finally, limited space is available at the central stores. Stock items are stored on the ground rather than on pallets with overcrowded and disorganized sections. Floors and walls were also damp. This compromises inventory quality and hinders inventory management, monitoring and tracking. Some of the gaps above were identified by the Secretariat through an in-country supply chain diagnostic review in 2019. It was clear that recommendations from that review are still yet to be fully implemented.

Agreed Management Action 4

The Secretariat will work with the Ministry of Health and relevant partners to respond to gaps in COVID-19 commodities monitoring.

OWNER: Head of Grant Management Division

DUE DATE: 31 March 2023

Annex A: Audit rating classification and methodology

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

The OIG audits in accordance with the Global Institute of Internal Auditors' definition of internal auditing, international standards for the professional practice of internal auditing 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 safeguard the independence of the OIG's auditors and the integrity of its work.

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 is used to provide specific assessments of these different areas. Other sources of evidence, such as the work of other auditors/assurance providers, are also used to support the conclusions.

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

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

Annex B: Risk appetite and risk ratings

In 2018, the Global Fund operationalized a Risk Appetite Framework, setting recommended risk appetite levels for eight key risks affecting Global Fund grants, formed by aggregating 20 sub-risks. Each sub-risk is rated for each grant in a country, using a standardized set of root causes and combining likelihood and severity scores to rate the risk as Very High, High, Moderate, or Low. Individual grant risk ratings are weighted by the grant signed amounts to yield an aggregate Current Risk Level for a country portfolio. A cut-off methodology on high risks is applied (the riskiest 50% of grants are selected) to arrive at a country risk rating.

OIG incorporates risk appetite considerations into its assurance model. Key audit objectives are generally calibrated at broad grant or program levels but OIG ratings also consider the extent to which individual risks are being effectively assessed and mitigated.

OIG's assessed residual risks are compared against the Secretariat's assessed risk levels at an aggregated level for those of the eight key risks which fall within the Audit's scope. In addition, a narrative explanation is provided every Time the OIG and the Secretariat's sub-risk ratings differ. For risk categories where the organization has not set formal risk appetite or levels, OIG opines on the design and effectiveness of the Secretariat's overall processes for assessing and managing those risks.

Global Fund grants in Bangladesh: comparison of OIG and Secretariat risk levels

OIG and Secretariat risk levels are aligned.