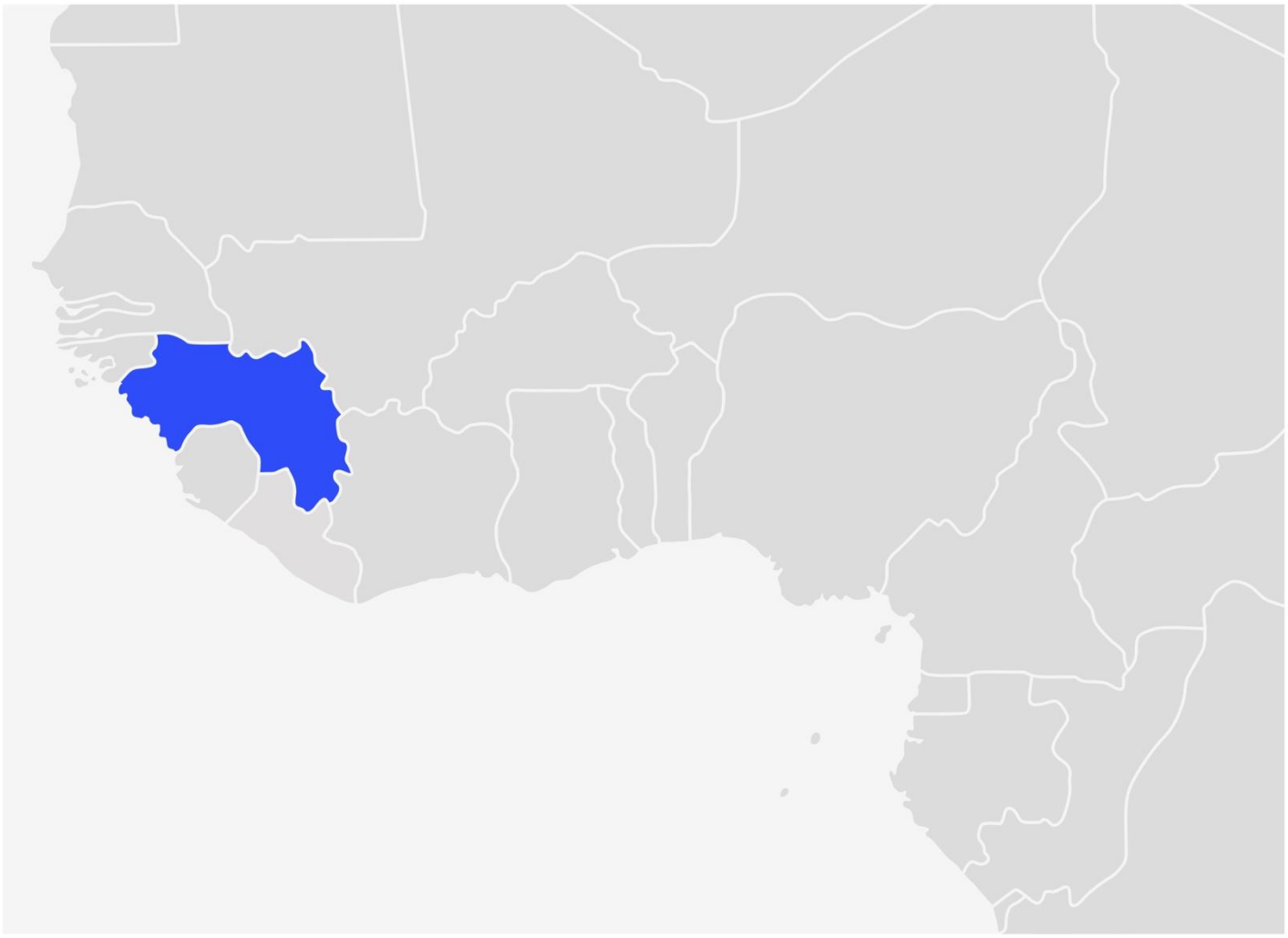

Investigation Report

Global Fund Grants in

Guinea

Fraudulent and abusive practices in LLIN mass campaign

GF-OIG-23-002
22 February 2023
Geneva, Switzerland

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1. Executive Summary

1.1 Investigation at a glance

The mass provision of long-lasting insecticidal nets (hereafter “LLINs” or “nets”) is the single most effective intervention in preventing malaria, and in reducing cases and deaths. The Global Fund provides 63% of all international financing for malaria programs. Between 2018-2020, the Global Fund invested over US$1.2 billion in LLIN mass campaigns globally and distributed 516 million LLINs.

A major finding by the OIG in this investigation was that two critical data sets from the Guinea LLIN mass distribution campaign were fraudulently manipulated. These comprise the household counting database, which records the total number of beneficiaries across Guinea and the number of LLINs needed to cover them, as well as data tracking the distribution of LLINs to beneficiaries. The OIG also found that insufficient controls and a lack of clear accountability for data accuracy contributed to fraudulent data being used in the campaign.

Such widespread data manipulation contributes to an environment in which commodity diversion becomes possible and may go undetected. In the case of Guinea, this lack of controls created the risk of fraudulently inflated population counts leading to the allocation of more LLINs to certain areas than the actual number of LLINs required. The investigation itself was initiated after 117,500 LLINs were allegedly diverted from the 2019 Guinea LLIN mass campaign to neighboring Mali, which OIG confirmed included over 10,000 nets financed by the Global Fund. Although the value of these diverted Global Fund nets is not material, the widespread data manipulation suggests a risk that the true number could be higher.

1.2 Genesis and Scope

In September 2019, approximately 117,500 diverted LLINs were found at a warehouse in Bamako, Mali. Campaign partners including the Global Fund Local Fund Agent, Against Malaria Foundation (AMF, a UK-based donor of LLINs to Guinea), and another international partner began investigative activities, including field work in Bamako. Because these investigative steps were ongoing, OIG initially opened an “oversight investigation” to monitor these inquiries, which confirmed that the vast majority of those LLINs were indeed diverted from the 2019 Guinea mass distribution campaign and included Global Fund LLINs. However, these initial inquiries determined neither the source(s) nor the root cause of the diversion, nor did they explain how the diversion of nets had gone unnoticed. The OIG took over the investigation in November 2020. While initially hampered by the COVID-19 pandemic, continued political insecurity and the 2021 military coup, a field mission was undertaken which involved the collection of documentary and electronic evidence and interviews of campaign stakeholders.

This investigation covers the 2019 LLIN mass campaign in Guinea – specifically the activities that occurred in the Catholic Relief Services (CRS) zone of operations. The investigation was conducted with the cooperation of CRS, the Guinean *Programme National de Lutte contre le Paludisme* (the National Malaria Control Programme, hereafter PNLP) and other campaign stakeholders.

1.3 Findings

The OIG found:

- Campaign LLINs were diverted to Bamako, Mali including over 10,000 nets financed by the Global Fund. The diverted LLINs were re-sold to the Malian government in a procurement that contained 'red flags' for fraud and collusion.
- Campaign data related to household counting and LLIN distribution was fraudulently manipulated. This created a risk of over-allocation of LLINs, as well as an environment in which LLIN diversions occurred and went undetected.
- The design and implementation of controls over the data reported by health centers were inadequate, creating a lack of accountability for the accuracy of campaign data.

1.4 Context

CRS is a Global Fund Principal Recipient, implementing Global Fund grants in Guinea to strengthen malaria control services. Some 27% (US$15 million) of CRS's US$56 million grant (signed amounts) for the implementation period 2018-2020 was allocated to the LLIN mass distribution campaign.

Under a sub-agreement signed between CRS and the Ministry of Public Health, the PNLP was allocated US$7.6 million from the Global Fund grant during the implementation period and led the 2019 LLIN mass distribution campaign organization. US$4 million was dedicated to campaign organization activities, including microplanning and household counting.

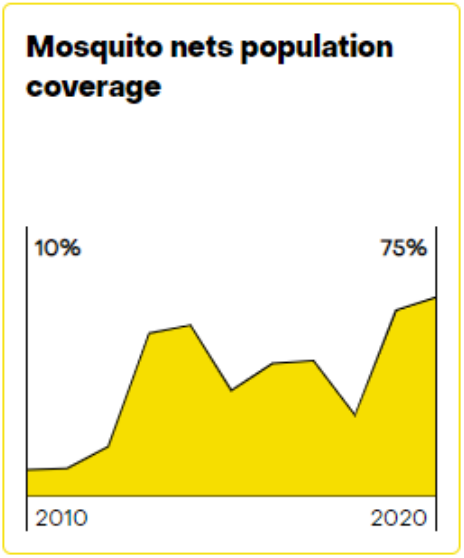
country data[1]	
Population	13.5 million (2021)
GDP per capita	$1,174 (2021)
Transparency International Corruption Perception Index	150 of 180 (2021)
UNDP Human Development Index	182 of 191 (2021-22)
Health expenditure (% of GDP)	3.98 (2019)

The Global Fund Secretariat assessed the data quality and data use risks of this grant as 'moderate', and the health sector governance of the portfolio as 'high'. In Guinea, LLIN mass campaigns occur approximately every three years, with the goal of providing free LLINs to all households in the country. Between April and August 2019, the mass campaign distributed more than 8 million LLINs, from various donors, including the Global Fund and AMF. Despite significantly reducing its number of cases since the Global Fund was founded in 2002, Guinea still has a high malaria disease burden. Incidence was 31,954 cases per 100,000 in 2020, when LLIN coverage was reported to have reached 75% of the population.[2]

[1] Sources: Population, GDP and health expenditure at https://data.worldbank.org/country/guinea; information on transparency index from Transparency International' Corruption Perceptions Index at https://www.transparency.org/en/cpi/2021/index/gin; development data from UNDP's Human Development Index at https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf, p.274; all accessed 7 November 2022

[2] Global Fund Results Report 2022, available at https://www.theglobalfund.org/en/results/ (accessed 7 November 2022)

CRS was responsible for campaign distribution activities in 20 prefectures (the sub-regional administrative districts in Guinea), and managed three regional warehouses (N'zerekore, Mamou and Kankan). Another international donor managed campaign activities in the rest of Guinea. Guinean health authorities, including the PNLP, had a coordination function, while prefectural and sub-prefectural health authorities led field operations and data management.



Prior to distribution, key activities, including microplanning (an estimation of the local populations and campaign needs) and household counting (a full physical survey of every household), were used to determine the exact number of beneficiaries and LLINs required. After each distribution wave, remaining LLINs were returned from distribution points to regional warehouses, a process called 'reverse logistics,' to be used in subsequent distribution waves.

1.5 Impact of the investigation

This investigation has highlighted how accurate data is essential not only to ensure the identification of all eligible beneficiaries, but also to ensure an efficient campaign and accountability for the significant investments made in LLIN mass campaigns. This case showed that theft and waste may go undetected if the underlying data is unreliable. Fraudulent or inaccurate data also risks impacting future campaigns, because the counted population from a previous campaign often forms the basis of projections in the following campaign.

The challenges of mass campaign data collection and the impact of inaccurate or manipulated data are not isolated to Guinea. The OIG therefore recommends the Global Fund consider the potential repercussions of manipulated data on mass campaigns more broadly and examine similar risks across portfolios.

LLIN mass campaigns are complex activities that are vulnerable to commodity diversion. While individual diversion schemes that come to the Global Fund's attention may seem to have a limited or localized impact – given the sheer scale of mass campaigns across the Global Fund – small schemes have the potential to add up to a significant amount of misuse or waste. Improving traceability of LLINs is an important step in deterring and detecting such thefts, and an agreed management action will leverage advances in traceability to improve the Global Fund Secretariat's ability to mitigate this type of wrongdoing.

As a result of this case, OIG recommends the recovery of US$54,824 in grant funds not used for the purposes for which they were intended.

2. Findings

2.1 Campaign LLINs were diverted to Bamako, Mali including nets financed by the Global Fund

In September 2019, approximately 117,500 falsely labelled LLINs were found in a warehouse in Bamako, Mali. The diverted LLINs had been repackaged from bales of 50 into falsified individual packs that obscured the true source of the nets.

Field investigations by campaign partners in September and October 2019 identified that most of the diverted LLINs came from Guinea's 2019 mass distribution campaign, including 10,506 CRS-labelled LLINs, financed by the Global Fund, and more than 45,000 LLINs funded by AMF.

The OIG found that the majority of the diverted Global Fund and AMF LLINs originated from CRS campaign zones, specifically in the Kankan region. The OIG also found additional LLINs were likely diverted from Conakry, which was in the zone of operations of another donor partner.[3]

These LLINs were likely diverted from multiple locations at the health facility and distribution point level. Records – including those from Kankan's CRS-managed regional warehouse – showed dispatches to health facilities matched the LLIN allocations, and that no material stock deficit at regional warehouses was identified. These factors strongly suggest that diversion occurred after dispatch of the LLINs from the warehouse.

The OIG found that in Kankan's Siguiri prefecture, 98% of the over 610,000 allocated LLINs were distributed, but only 92% of coupons or households were served, a difference of more than 36,000 LLINs. Three health centers in the prefecture (each covering multiple distribution sites) distributed almost all their LLINs, despite having collected no more than 93% of coupons. This indicates distribution of unaccounted LLINs, because beneficiaries needed to exchange a coupon received during the household counting phase in return for their allocated LLINs. This coupon exchange requirement means the proportion of LLINs distributed and of coupons collected should be strongly aligned.

LLINs were delivered from manufacturers in 'lots', or batches, of 500,000 units or more. Some of these lot numbers were recovered on bale packaging in the Bamako warehouse. While the lot numbers were recorded up to their delivery to regional warehouses, campaign logistics failed to record batch numbers in the subsequent dispatch to health facilities and distribution points. This affected traceability, making it more difficult to monitor the LLINs further down the supply chain (i.e. those delivered to the health facilities and then to distribution points), or to positively identify the specific health facilities to which the diverted LLINs were likely delivered.

Nonetheless, available supply chain records did show that many of the lot numbers found on packaging in Bamako were from bales delivered in whole or in part to Kankan. Also corroborating the diversion of LLINs from Kankan region, OIG found:

- The delivery of diverted LLINs in Mali, from 22 July to 3 September 2019, coincided with key distribution waves in Kankan region, particularly Kankan and Siguiri prefectures.
- 13 (20%) of health facilities in the region had indications of potential distribution of LLINs without receiving (or recording) the vouchers.

[3] OIG did not fully investigate the operations of the donor partner as it is not within OIGs mandate. However, OIG has shared relevant information with the partner, and have offered assistance in their work.

- Reverse logistics in Kankan and Siguiri prefectures did not occur until after the discovery of the diversion scheme in Bamako, more than two months after distribution, when over 43,000 LLINs were returned to a CRS warehouse without a delivery note.

This investigation followed a similar incident reported to OIG from Guinea's 2016 mass campaign, when Global Fund-purchased LLINs were also found for sale in Bamako, Mali, and LLINs were lost from the custody of the national medical store, *Pharmacie centrale de Guinée* (PCG).[4]

Diverted LLINs resold in Malian government procurement with 'red flags'

The LLINs diverted from Guinea were resold to the Malian government by Elite Global Services SARL (EGS), a Malian-registered firm, under a local procurement run by the Malian National Malaria Control Program (NMCP).

The OIG found evidence suggesting that EGS may have engaged in a premeditated and coordinated scheme to exploit the Guinea mass campaign to fulfil its contract with the Malian government.

For example, EGS was paid as much as 77% more (US$3.62 per LLIN) than comparable products that had been procured by the Global Fund on the open market and delivered to Principal Recipients in Mali in 2018 and 2019. The fulfilment of the order to Mali took nine months and arrived at the same time as the Guinea campaign was taking place.

The OIG acknowledges the Principal Recipient's response to these findings that the diversion occurred after the LLINs left the CRS warehouses. However, the grant agreement signed and entered into between the Global Fund and CRS requires that all grant funds are prudently managed and used solely for program activities. It also stipulates that it is CRS's responsibility to ensure that CRS, along with each of its sub-recipients and suppliers, meets such requirements.

As a result of this case, the OIG recommends recovery of US$54,824[5] in grant funds not used for the purposes for which they were intended, representing the value of diverted Global Fund LLINs and associated logistics.

[4] The 2016 matter was not investigated by the OIG as PCG agreed at that time to reimburse the value of the missing LLINs and the matter was reported to the national police.

5 Comprising US$22,798 (the value of the 10,506 Global Fund financed LLINs diverted) and US$32,026 in estimated logistics expenses wasted as a direct result of the diversion and data manipulation.

2.2 Two separate campaign data sets were manipulated, creating an environment in which LLIN diversions went undetected

The OIG found two key data sets from the campaign were manipulated: **household counting data** and **LLIN distribution records**. Both data sets, captured in spreadsheets based on handwritten field records, had frequent 'round numbers', as well as unusual ratios of data. Because the data sets related to inherently variable data – for example, the number of people physically counted in a village, or the number of LLINs distributed to beneficiaries on any given day – such 'even' data is implausible.

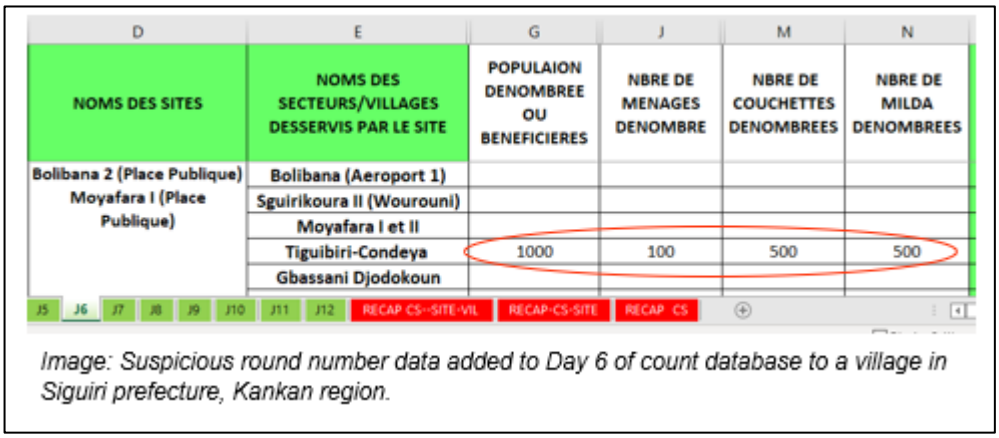
The OIG found the data was fraudulent: it was neither an accurate reflection of the physical population count, nor of the specific distribution it purported to represent. This was despite more than US$4 million in Global Fund resources having been allocated to the campaign management activities, including data collection and analysis, as well as the reliance placed on such data to allocate and account for LLINs. The Global Fund considers fraudulent practices to include acts or omissions undertaken, either knowingly or recklessly, to obtain a benefit *or* to avoid an obligation.[6] Regardless of the individual motivations, any data manipulation – whether to complete a complex task more quickly, or to deliberately increase the number of LLINs allocated in a specific area – is considered a fraudulent practice.

Despite the LLIN diversion detailed above, the Global Fund received no reporting that beneficiaries did *not* receive LLINs during the campaign. This diversion was not detected or prevented by campaign data monitoring, as will be further detailed in finding three.

Fraudulent data in household counting undermined its accuracy

A materially accurate household count is vital to supporting a needs-based quantification for distribution. Importantly, during the process, each household receives a coupon that must subsequently be exchanged for the stated number of LLINs at the specified distribution point. The data from the count also forms the basis for the accountability of campaign commodities. An overview of the household counting process is in Annex A.

The OIG found numerous indicators of data manipulation and fraudulent entries in the six prefectures sampled. It identified numerous **round number entries** of population (multiples of 100), households (multiples of 10) or LLIN allocation (multiples of 50 – a bale) in individual villages, for both the final count and for data entered on individual days.



D	E	G	J	M	N
NOMS DES SITES	NOMS DES SECTEURS/VILLAGES DESSERVIS PAR LE SITE	POPULAION DENOMBREE OU BENEFICIERES	NBRE DE MENAGES DENOMBRE	NBRE DE COUCHETTES DENOMBREES	NBRE DE MILDA DENOMBREES
Bolibana 2 (Place Publique) Moyafara I (Place Publique)	Bolibana (Aeroport 1)				
	Sguirikoura II (Wourouni)				
	Moyafara I et II				
	Tiguibiri-Condeya	1000	100	500	500
	Gbassani Djodokoun				

J5 J6 J7 J8 J9 J10 J11 J12 RECAP CS--SITE-VIL RECAP-CS-SITE RECAP_CS

Image: Suspicious round number data added to Day 6 of count database to a village in Siguiri prefecture, Kankan region.

The OIG also analyzed the average number of **persons per household** and **persons per LLIN,** two key ratios in the data. As both metrics should be calculated after the count, it would be expected they are seldom integers ('whole numbers') or other precise ratios, particularly as the number of

[6] The Global Fund Policy to Combat Fraud and Corruption, 15 November 2017, available at https://www.theglobalfund.org/media/6960/core_combatfraudcorruption_policy_en.pdf (Accessed 7 November 2022)

LLINs should vary on each individual coupon (it is not possible to allocate 'half' an LLIN to households with an odd number of residents).

The OIG identified numerous examples of round number ratios, which would likely indicate that one or more data points (e.g., the population, number of LLINs or number of houses physically counted) were manipulated or extrapolated to arrive at an apparently desired outcome. In some cases, the data matched exactly with key campaign base assumptions. For instance, the average number of persons calculated per household as seven, or the calculated number of persons per LLIN of 1.8 (*below*) – both indicating an estimation or extrapolation of certain data rather than an actual count.

In other examples, a low ratio of less than 1.4 persons per LLIN indicted potential over-allocation of 13,461 LLINs across 47 villages.

E	F	G	J	M	N	R
NOMS DES SECTEURS/VILLAGES DESSERVIS PAR LE SITE	POPULATION DU MICROPLAN	POPULAION DENOMBREE OU BENEFICIERES	NBRE DE MENAGES DENOMBRE	NBRE DE COUCHETTES DENOMBREES	NBRE DE MILDA DENOMBREES	NOMBRE DE PERSONNES PAR MILDA
Bate centre 3	2050	360	71	181	200	1.8000

Image: Suspicious ratio of exactly 1.8 persons per LLIN (matching the campaign baseline) in data added to Day 4 of count database to a village in Kankan prefecture.

Annex B contains further examples of red flags for data fraud identified in this investigation.

Distribution data contained irregularities and indicates potential over-allocation and diversion risk

During distribution, each site recorded the number of LLINs distributed and coupons served per day. This process is important for ensuring accountability for LLINs in the field and allows the calculation of undistributed LLINs for the reverse logistics process, described in Section 1.4 Context.

The OIG sampled four prefectural distribution databases from the CRS zones and observed suspiciously frequent 'round number' entries in daily distribution data, including even bales of LLINs (multiples of 50) being distributed in a day, and numerous instances of multiples of 100 coupons being served in a day. Similarly, the OIG found questionable ratios of the average number of LLINs distributed per coupon received (LLIN/coupon), including whole (e.g., 4.00) or half numbers (e.g., 3.50) of LLINs per coupon in a day.

Round number entries are suspicious because the distribution would be expected to follow an unpredictable pattern. Each individual coupon should have different numbers of beneficiaries and therefore varying numbers of allocated LLINs. Similarly, the number of beneficiaries exchanging their coupons each day should also fluctuate. Round numbers could indicate either manipulated count data (if "fake" coupons were genuinely received at the site) or manipulated distribution data, including a risk of either petty diversion (i.e., rounding up the leftovers of open bales) or material theft of whole bales. It is worth noting that the LLINs diverted to Bamako were still packaged in bales.

The OIG also identified a disparity between the number of LLINs distributed and the number of coupons served during the campaign on some sites or days. As recipients were required to exchange their coupon at the distribution point to receive their LLINs, a reasonable correlation between the percentage of households served and the proportion of LLINs distributed should be expected. Therefore, a site that distributed nearly 100% of LLINs, but recorded only 90% of coupons served, indicates LLINs were distributed without (or without recording) the corresponding coupon. Distribution without coupons is a major red flag for diversion. It could also support the premise that the household counting in some areas was not properly completed, resulting in a lack of coupons

being issued to beneficiaries. Incomplete household counting could for instance be based on data extrapolations instead of on the required field visits.

While any one of these above-mentioned red flags may be of concern or warrant further review, OIG found certain sites contained multiple red flags, which taken together indicate the data does not accurately reflect a transparent distribution. Annex C has a case study of these red flags.

2.3 Lack of accountability in campaign data analysis and inadequate design of controls impacted operations

A lack of accountability for data accuracy in the campaign resulted in inadequate data entry controls and analysis of base (village) data. As detailed in Finding 2, fraudulent data was identified in two crucial data sets and in village-level data across different health centers and prefectures. This indicates widespread irregularities, as well as a lack of coordinated, centralized accountability mechanisms to ensure accuracy for this key activity.

The data manipulation detailed above exposes a significant risk of diversion of LLINs and potentially recklessness[7] towards data accuracy during the campaign. Fraudulent data went unnoticed or unchallenged due to a lack of data controls. In turn, this meant the manipulated data was not 'fit for purpose' from an accountability perspective to help detect or prevent this diversion (which was only noticed when the LLINs were found in Mali). This presents a risk that other diversions may have similarly gone undetected.

The OIG acknowledges LLIN mass campaigns are complex and data-heavy undertakings. Over 17,000 counting agents and 1,491 staff from different levels of the health system were trained for the labor-intensive process of conducting a physical household count identifying all potential beneficiaries across Guinea. However, this complexity necessitates effective oversight, or the identification of simplified processes. This would reduce the incentive for avoiding cumbersome processes, as well as increase the value for money spent obtaining and analyzing data.

Lack of review of field data and effect of data consolidation

The Principal Recipient and PNLP invested significant effort in analyzing consolidated data, on the assumption that the field data they were given was materially accurate. However, there was no apparent meaningful process to verify the accuracy of the village and daily data. These inadequate controls of data entry and data review contributed to the failure to identify and interrogate potentially erroneous or manipulated field data. Individually suspicious data entries were often obscured once the village count was consolidated, and completely hidden when the village data itself was synthesized into the health center and prefectural level data, which was subsequently analyzed by the central levels of the campaign.

According to the Principal Recipient, writing in response to these findings, the campaign was designed so that the field levels of the campaign were responsible for preparing accurate data, which was supposed to have been subject to several checks before being sent to the central level, namely the PNLP and the Principal Recipient. As such, the central level was not intended to modify data approved by the prefecture.

The OIG found this design created a lack of segregation of duties, because the level preparing the data is also solely responsible for validating its accuracy. For example, an appropriate verification process would be expected to have triggered additional and independent review of material variances in key data points, such as the red flags identified in this case. Furthermore, the OIG identified that health facilities are the only level in the campaign chain that both work on the

[7] A Fraudulent Practice includes a misrepresentation that knowingly or recklessly misleads, including misrepresentation or manipulation of any information arising from or relating to Global Fund Activities, such as plans and data. The Global Fund Policy to Combat Fraud and Corruption, 15 November 2017, available at https://www.theglobalfund.org/media/6960/core_combatfraudcorruption_policy_en.pdf (Accessed 7 November 2022)

aggregation of data and have a role in the physical logistics of the LLINs, creating a further risk for fraud or diversion of surplus LLINs in the field.

Lack of authoritative denominator data and risk of over-estimated population leading to inefficient use of resources

Data challenges in LLIN mass campaigns are not unique to Guinea. Reliable population reference data may be missing across many portfolios, making it very challenging to test data accuracy by comparing the household counting to an established denominator. In this case, the OIG found the 2019 campaign counted population of 16.2 million was 2.5 million higher (18%) than the available UN OCHA population data of 13.7 million. Based on the campaign assumption of 1.8 persons per LLIN, more than 1.3 million nets are required to cover the population variance for this campaign. The respective populations in (CRS-managed) regions of Kankan and N'zerekore were 33% and 42% higher than the OCHA data.[8] While fluctuations and differences should be expected, these differences indicate a systemic underlying cause pointing to a risk that the population was over-estimated.

PREFECTURES	Population Micro plan	Campaign Population	Population UN OCHA	Variance from denominator (OCHA)
REGION BOKE	1,672,705	1,561,490	1,384,576	12.78%
REGION KINDIA	2,759,507	2,541,650	2,144,238	18.53%
REGION FARANAH	1,526,965	1,515,083	1,177,747	28.64%
KANKAN	833,834	869,703	601,556	44.58%
KEROUANE	367,310	365,696	256,524	42.56%
KOUROUSSA	339,660	391,906	361,234	8.49%
MANDIANA	555,614	669,942	438,207	52.88%
SIGUIRI	1,008,511	1,212,799	982,707	23.41%
REGION KANKAN	3,104,929	3,510,046	2,640,228	32.94%
REGION MAMOU	1,145,948	981,246	918,776	6.80%
REGION N'ZEREKORE	2,774,319	2,788,378	1,958,995	42.34%
REGION DE LABE	1,333,476	1,166,943	1,317,705	-11.44%
VILLE DE CONAKRY	2,541,287	2,094,403	2,148,799	-2.53%
GUINEA	**16,859,137**	**16,159,239**	**13,691,064**	**18.03%**

Chart: Comparison of campaign data to UN-population data, highlighting variance in both planning and final count data, particularly in Kankan region (sub-prefectures visible).

Despite the LLIN diversion detailed above, the Global Fund did not receive reporting that beneficiaries had *not* received LLINs during the campaign. The number of LLINs recorded as dispatched from regional warehouses to health facilities matched the allocation derived from the household counting. This confirms the suspicion that any scheme to manipulate household counting could result in surplus nets being sent to the field unchecked. Even after the diversion came to light, the OIG could not identify in the data alone a clear gap of the diverted LLINs, such as a disparity in warehouse records. The data inadequacies led to the appearance that there was nothing untoward – despite a significant number of nets having been diverted.

There is a risk that unless the Global Fund takes a holistic response to the data challenges identified in this case, similar risks could materialize in other portfolios. Identifying best practices to detect and re-analyze potentially erroneous data, as well as new methods to ensure central accountability for data accuracy or to predict and verify critical data such as estimated populations, could help mitigate data risk in other LLIN mass campaigns.

[8] Denominator data refers to an alternative or independent reference population data estimate. OIG compared with data from the UN Office for Coordination of Humanitarian Affairs (OCHA), available at https://data.humdata.org/dataset/guinea-population-statistics. (Accessed 19 April 2021) See also the World Bank estimate of 13.5 million cited in the country profile of this report. OIG notes the difficulty with data collection in Guinea, and acknowledges all data sources may have a significant margin of error.

3. Global Fund Response

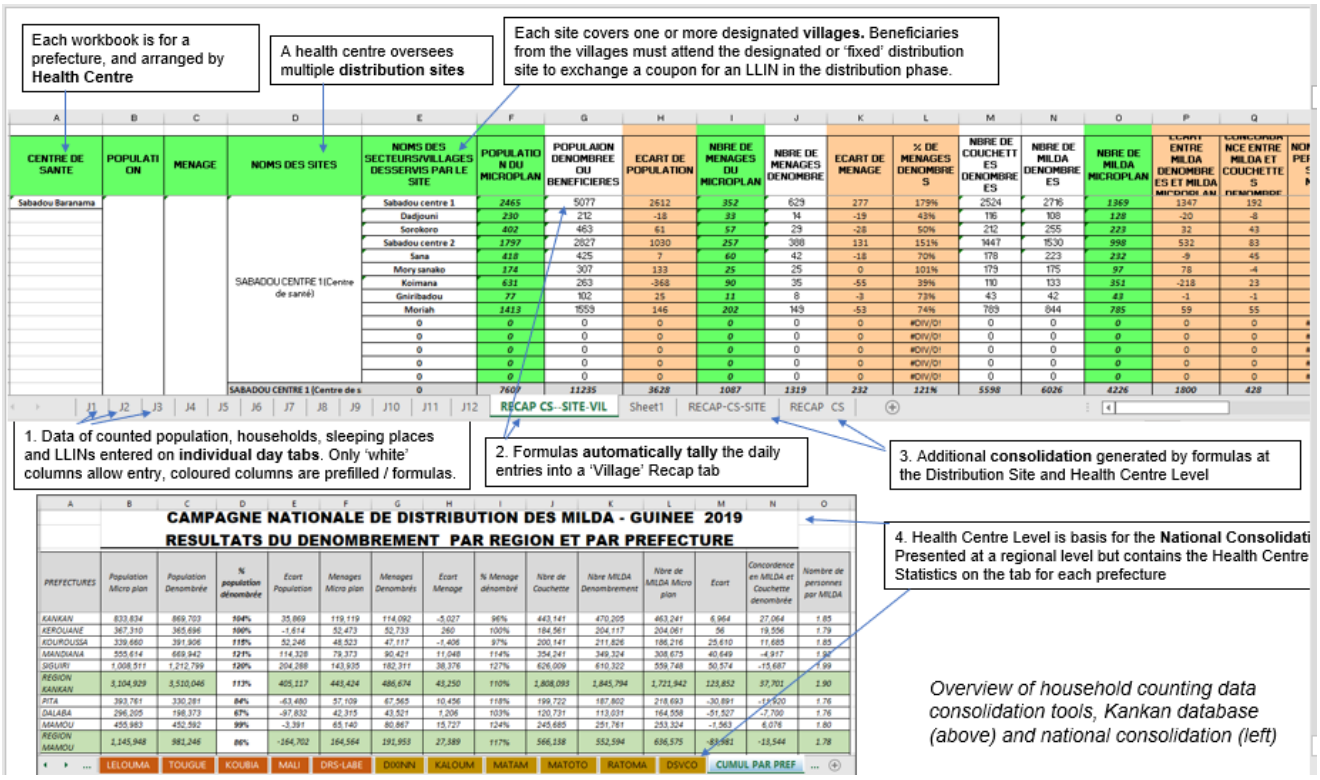
Action to be taken	Due date	Owner
1. The Global Fund Secretariat will finalize and pursue, from all entities responsible, an appropriate recoverable amount. This amount will be determined by the Secretariat, in accordance with its evaluation of applicable legal rights and obligations and associated determination of recoverability.	30 September 2023	Chair, Recoveries Committee
2. The Global Fund will leverage current advances in traceability offered through GS1 standards by encouraging portfolios to procure LLINs from manufacturers implementing GS1 principles. The Global Fund will explore the development of a traceability strategy to capture the unique identifiers from commodities implementing GS1 principles, and of standards to be adhered to by implementers, to be rolled out incrementally.	31 December 2023	Head, Supply Operations
3. The Global Fund, in collaboration with technical partners, will review the guidance on population size estimates to inform LLIN campaigns. This will 1) Strengthen the tools on pre-campaign household enumeration and the quality of the exercise through supervision, monitoring, data analytics, and 2) Clarify expectations on roles, responsibilities and accountabilities, to collect and verify data across various levels of health care delivery systems. This work will complement the holistic campaign guidance produced and continually updated by the Alliance for Malaria Prevention. This will also ensure LFA assurance over campaign operations includes guidance concerning verification of data during census and distribution as appropriate.	31 December 2023	Head, Strategic Investment & Impact Division

Annex A: Summary of household counting process

To identify all potential beneficiaries, each household across the country should be physically visited by workers in the field to count the number of residents and beds. Field workers record the data from each household on a coupon and provide a copy to the household that must be exchanged for the stated number of LLINs at the specified distribution point. This process supports a needs-based quantification for LLIN distribution.

The data from coupons was tallied in paper-based summary sheets at, or below, the health center level. These summaries were subsequently digitalized into Excel-based campaign tools (see below) at a prefectural level. The coupons remained with health centers, and all subsequent data collation and analysis occurred without the raw, or primary, records.

The bulk of suspicious data identified by this investigation was at the village level. This is because Excel tools (see example below) were designed so that individual datapoints had to be entered per village on separate daily tabs. Formulas calculated the total population, number of households and LLINs per village, and then automatically consolidated data per health center, prefecture and ultimately per region. The OIG found that the consolidation process largely obscured the suspicious data from individual villages.



Overview of household counting data consolidation tools, Kankan database (above) and national consolidation (left)

Annex B: Examples of suspicious ‘round numbers’ in household counting

Round entries of population and LLINs on individual days

In the Siguiri prefecture village of Faranin (see image) exactly 2,000 people (A), from 300 households (B), requiring 1,000 LLINs, exactly 20 bales (C), were recorded on day two of the count. The image also shows that Bolibana (Lelen) recorded 1,308 population from 80 households visited, an average household population of 16.3, which is over double the baseline average of seven, casting doubt on the accuracy of both the population and households counted in the village.

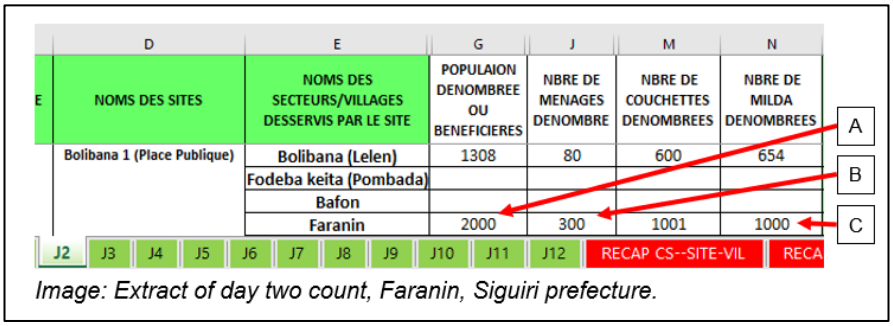
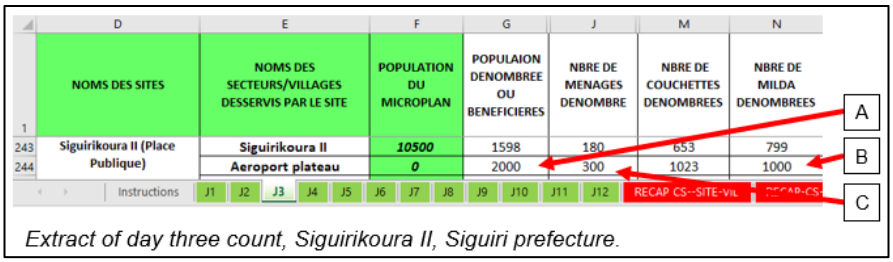


Image: Extract of day two count, Faranin, Siguiri prefecture.

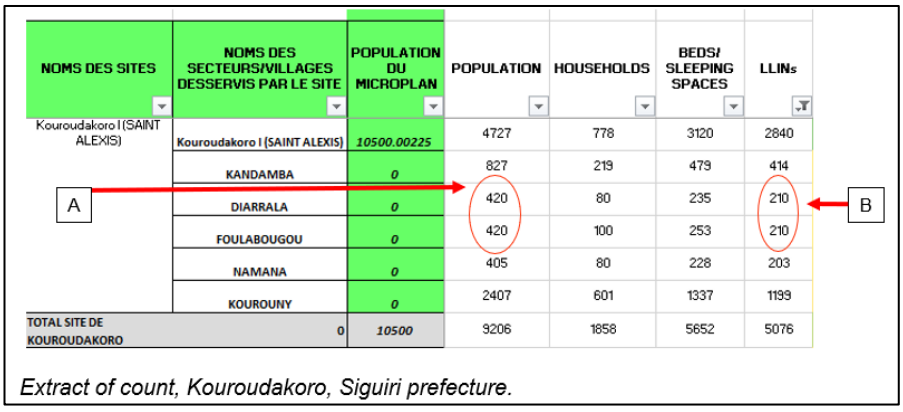
Duplicated data

Another village in Siguiri prefecture, Aeroport plateau, recorded the same data as Faranin (see above) on day three: exactly 2,000 people (A), 1,000 LLINs (B), and 300 households (C). Not only are round numbers themselves very unlikely, but the same count in different areas is also implausible, indicating fraudulent data was duplicated at different sites.



Extract of day three count, Siguirikoura II, Siguiri prefecture.

Data was also duplicated at a site in Siguirikoro health center, below, where two villages recorded the exact same counted population (A) and LLINs (B), as well as a round number of households.



Extract of count, Kouroudakoro, Siguiri prefecture.

Round number of households counted

To identify 'round numbers' (multiples of 10) in data sets, the OIG reviewed the last digit of numbers (e.g., 8**0** households in a village – where 0 is the 'last digit' of the number). The frequent appearance of 'round numbers' in a variable dataset, such as the number of houses or individuals in any given village, is implausible. This suggests that the number of households recorded was inaccurate, incomplete or an estimation.

In Mamou, 54% (329) of villages counted in the campaign were purported to contain a round number of households.

Population last digit	Number of Villages	%
0	88	14.57%
1	47	7.78%
2	60	9.93%
3	52	8.61%
4	65	10.76%
5	59	9.77%
6	67	11.09%
7	66	10.93%
8	59	9.77%
9	41	6.79%
Grand Total	**604**	**100.00%**

Table: Last digit in population, Mamou Prefecture

# of households, last digit	Number of Villages	%
0	329	54.47%
1	33	5.46%
2	36	5.96%
3	17	2.81%
4	29	4.80%
5	24	3.97%
6	27	4.47%
7	36	5.96%
8	33	5.46%
9	40	6.62%
Grand Total	**604**	**100.00%**

Table: Number of households in each village (last digit of total) in Mamou.

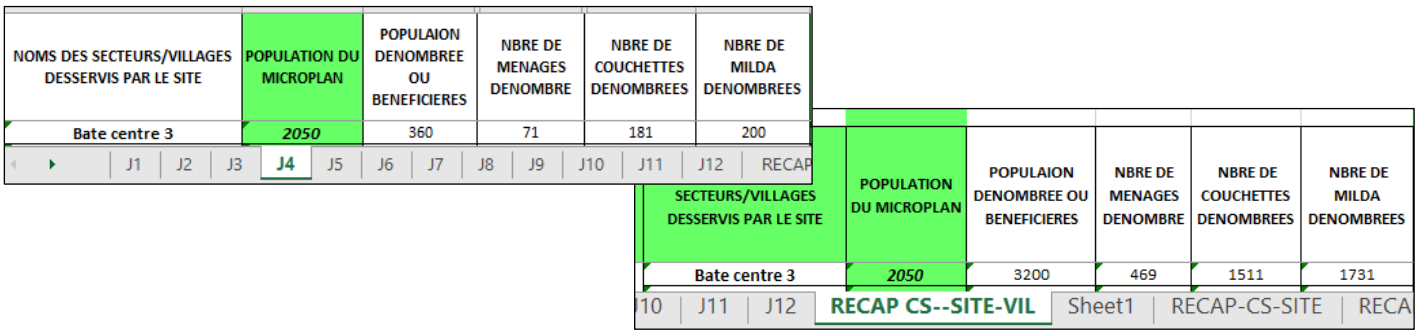
Another 15% (88) of villages (chart, left) also had a total population ending in '0', raising a risk that the population data could have been manipulated to fit a specific desired quantity of LLINs.

Incorrectly recording the number of households counted can make it problematic to account for the coupons issued – each household counted should obtain one coupon during the household counting to exchange for their allocated LLINs.

Examples of implausible averages in key ratios of household counting

Persons per LLIN - Data matching campaign assumption of 1.8

Campaign planning documents called for LLINs to be allocated at the average ratio of one net to every 1.8 persons. In some cases, that ratio was precisely reflected in the count data, such as for Bate center 3 (Image, below left) in Kankan prefecture, where on one day 360 people and 200 LLINs were recorded (360/200 = 1.80). The count also recorded a 'round number' total population of 3,200 in Bate center 3 (image, behind right).



Over-allocation indicated by low ratio of persons per LLIN

The OIG found at least 47 villages across four prefectures (chart, right) had an average of less than 1.4 persons per LLIN, compared to the campaign baseline of 1.8 persons per LLIN. In effect, this means more LLINs were allocated relative to the population in these areas, indicative of potential over-allocation. This includes stark examples, such as 441 LLINs were allocated to an unnamed village with no population in N'zerekore prefecture, and 129 population and 7160 LLINs were recorded as counted on one day of the count in Kerouane prefecture.

Prefecture	Number of villages <1.40 pers/LLIN	Potential overallocation compared to 1.80
Mamou	15	1,957
Kankan	11	2,519
N'zerekore	2	795
Kerouane	19	8,190
Total from sampled prefectures	**47**	**13,461**

As counting databases automatically calculated this ratio, it should have been relatively simple to detect or ratify this anomaly in individual villages. Over-allocation of LLINs not only wastes campaign resources, it can also create an environment vulnerable to diversion of LLINs.

Average persons per household

By dividing the total population by the number of households, a ratio, or average, of persons per household can be calculated. The campaign projections were based on an average of seven people living in each household across Guinea. The OIG found in some areas that the average number of people per household was exactly seven, matching this baseline and suggesting the physical count was not properly completed, or alternatively that the count data did not properly tally the number of houses visited in the census.

Average persons per Household	Number of villages
3.00	1
4.00	4
5.00	9
6.00	4
7.00	15
8.00	1
11.00	1
Grand Total	**35**

Table: Number of villages in Mamou with an 'exact' (whole number) average number of persons per household.

For example, in Mamou prefecture, the average number of persons per household was a whole number in 35 villages (6%). Of these,15 villages had an average of exactly seven persons per household, indicating the household count in these areas may not have occurred, and the population data was an extrapolation. In other areas, the number of persons per household was suspiciously high, such as Moyafara (red highlight in chart, below) which was over double the campaign baseline.

NOMS DES SITES	NOMS DES SECTEURS/VILLAGES DESSERVIS PAR LE SITE	POPULATION DU MICROPLAN	POPULATION	POPULATION VARIANCE TO MICROPLAN	HOUSEHOLDS	BEDS/ SLEEPING SPACES	LLINs	POPUL-ATION PER LLIN	PERSONS PER HOUSE-HOLD
Bolibana 2 (Place Publique) Moyafara I (Place Publique)	Bolibana (Aeroport 1)	2262	11621	414%	1310	5208	5872	1.98	8.871
	Sguirikoura II (Wourouni)	1639	7779	375%	1218	3451	3898	2.00	6.387
	Moyafara I et II	2596	1580	-39%	100	727	803	1.97	15.800
	Tiguibiri-Condeya	2069	2316	12%	266	1143	1158	2.00	8.707
	Gbassani Djodokoun	0	1397	-	120	704	699	2.00	11.642

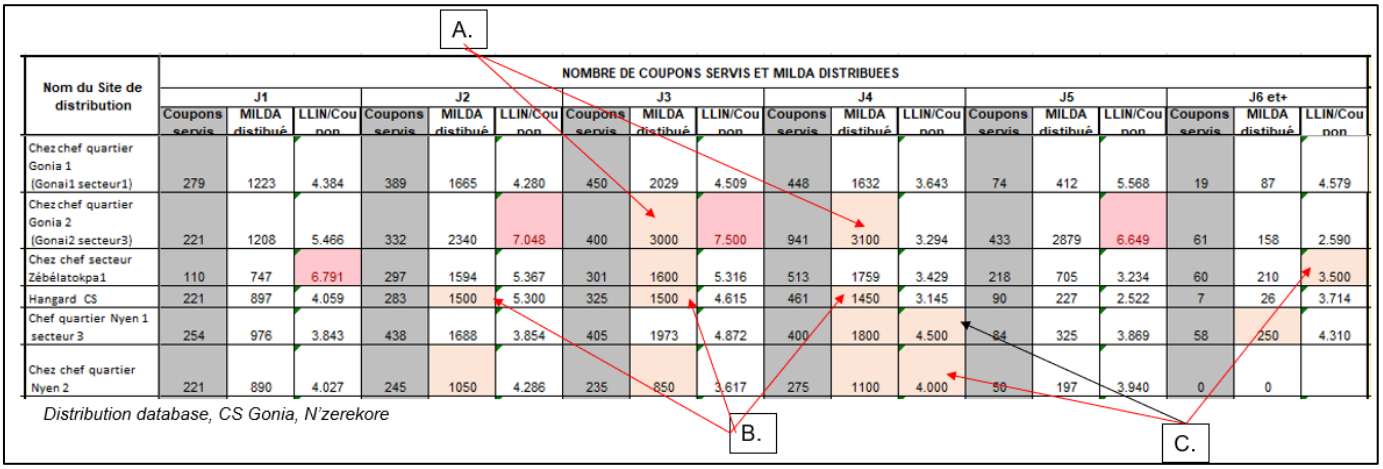
Annex C: Case Study of suspicious distribution data

The OIG identified concerning patterns including a combination of suspicious data points across the six distribution sites in Gonia, an urban health center in the city and prefecture of N'zerekore, in southern Guinea. This indicates the data did not reflect an accurate distribution. Finding 2.2 details why this is considered indicative of data fraud or distribution irregularities.

Round number daily distributions and irregular daily ratios

The OIG found round numbers (multiples of 50, or 'a bale') of LLINs were distributed on 11 of 35 possible distribution days, particularly on days three and four, when four out of six sites distributed round numbers of LLINs (see A in table below). Some sites, including Hangard CS (B) distributed a similar round number of LLINs on consecutive days.

Some sites distributed an 'even' ratio of LLINs to coupons on certain days (C), such as Chez chef quartier Nyen 2 (4.0 LLINs/coupon, day 4) and Chef quartier Nyen 1, secteur 3 (4.5 LLINs/coupon, day 4). Other sites had suspiciously 'high' ratios, such as Chez chef quartier Gonia (day 3, A, red shade), with an exact average of 7.5 LLINs per coupon (3,000 LLINs exchanged for 400 coupons). This was twice the N'zerekore average of 3.6 LLINs per coupon, and well above the average 5.1 LLINs per coupon in the counting database for the site.



Nom du Site de distribution	NOMBRE DE COUPONS SERVIS ET MILDA DISTRIBUEES																	
	J1			J2			J3			J4			J5			J6 et+		
	Coupons servis	MILDA distibué	LLIN/Coupon	Coupons servis	MILDA distibué	LLIN/Coupon	Coupons servis	MILDA distibué	LLIN/Coupon	Coupons servis	MILDA distibué	LLIN/Coupon	Coupons servis	MILDA distibué	LLIN/Coupon	Coupons servis	MILDA distibué	LLIN/Coupon
Chez chef quartier Gonia 1 (Gonai1 secteur1)	279	1223	4.384	389	1665	4.280	450	2029	4.509	448	1632	3.643	74	412	5.568	19	87	4.579
Chez chef quartier Gonia 2 (Gonai2 secteur3)	221	1208	5.466	332	2340	7.048	400	3000	7.500	941	3100	3.294	433	2879	6.649	61	158	2.590
Chez chef secteur Zébélatokpa1	110	747	6.791	297	1594	5.367	301	1600	5.316	513	1759	3.429	218	705	3.234	60	210	3.500
Hangard CS	221	897	4.059	283	1500	5.300	325	1500	4.615	461	1450	3.145	90	227	2.522	7	26	3.714
Chef quartier Nyen 1 secteur 3	254	976	3.843	438	1688	3.854	405	1973	4.872	400	1800	4.500	84	325	3.869	58	250	4.310
Chez chef quartier Nyen 2	221	890	4.027	245	1050	4.286	235	850	3.617	275	1100	4.000	50	197	3.940	0	0	

Distribution database, CS Gonia, N'zerekore

Potential unsupported distribution indicated in coupons received data

Nom du Site de distribution	Indicateurs					LLIN/ Coupon
	Total MILDA distribee	MILDA restantes	MILDA restantes, %	Total coupons/ menage	% Coupons /menage	
Chez chef quartier Gonia 1 (Gonai1 secteur1)	7048	502	6.649%	1659	91.9%	4.248
Chez chef quartier Gonia 2 (Gonai2 secteur3)	12685	315	2.423%	2388	94.4%	5.312
Chez chef secteur Zébélatokpa1	6615	85	1.269%	1499	99.9%	4.413
Hangard CS	5600	97	1.703%	1387	99.9%	4.037
Chef quartier Nyen 1 secteur 3	7012	38	0.539%	1639	91.6%	4.278
Chez chef quartier Nyen 2	4087	63	1.518%	1026	87.6%	3.983

Distribution database, CS Gonia, N'zerekore

D.

As shown on the left (D), three of Gonia's sites distributed substantially more LLINs than they received coupons, an indicator of unsupported distribution. For example, Chef quartier Nyen 1 secteur 3 had just 0.5% LLINs remaining despite only serving 91.6% of coupons. Similarly, in Chez chef quartier Nyen 2, 88% of coupons were served, but only 1.6% of the LLINs remained. Chez chef quartier Gonia 2 served 94.4% of coupons, but had only 2.4% of the 13,000 allocated LLINs left over.

Annex D: Methodology

Why we investigate:

Wrongdoing, in all its forms, is a threat to the Global Fund's mission to end the AIDS, tuberculosis and malaria epidemics. It corrodes public health systems and facilitates human rights abuses, ultimately stunting the quality and quantity of interventions needed to save lives. It diverts funds, medicines and other resources away from countries and communities in need. It limits the Global Fund's impact and reduces trust in its multi-stakeholder partnership model.[9]

The OIG is mandated[10] to investigate any use of Global Fund funds, whether by the Secretariat or grant recipients, or by their suppliers, and to report its findings in a transparent and accountable manner.[11] The Global Fund Secretariat ensures this oversight is included in related agreements.

What we investigate:

The scope of OIG investigations covers operations and activities within the Global Fund and the programs it funds (including those of its program recipients, suppliers, and service providers).

Investigations aim to identify instances of wrongdoing, such as fraudulent and corrupt practices, but also failure to uphold the applicable human rights standards and instances of sexual exploitation and abuse. Investigations are predicated by whistle-blower allegations[12], routine escalation of business information, risk analysis or referrals from other entities.

The OIG bases its investigations on the contractual commitments undertaken by grant recipients and suppliers. Requirements with respect to the management of funds and performance of activities are notably defined in the Global Fund's Code of Conduct for Suppliers and Code of Conduct for Recipients.[13]

OIG investigations aim to:

- identify the nature and extent of wrongdoing affecting Global Fund grants and the entities accountable and, if applicable, determine the amount of grant funds that may have been compromised by wrongdoing; and
- place the Global Fund in a position to understand the root causes for the wrongdoing, to recover funds, and to take remedial action and preventative measures by identifying where and how the misused funds have been spent.

Who we investigate:

The OIG investigates wrongdoing by the entities accountable for performance and execution of activities funded by the Global Fund. These are Principal Recipients and their sub-recipients, Country Coordinating Mechanisms or Board Constituencies receiving financial support from the Global Fund, Local Fund Agents, recipients of Catalytic Funding, and other suppliers and service

[9] Introductory paragraph of the Global Fund Policy to Combat Fraud and Corruption
[10] Charter of the Office of the Inspector General, as amended from time to time
[11] Policy for the Disclosure of Reports Issued by the Office of the Inspector General, as amended from time to time
[12] Whistle-blowing Policy and Procedures for the Global Fund to Fight AIDS, Tuberculosis and Malaria, as amended from time to time
[13] Global Fund Code of Conduct for Suppliers, and the Code of Conduct for Recipients of Global Fund Resources, as amended from time to time. Grants are typically subject to the Grant Regulations (2014), which incorporate the Code of Conduct for Recipients and mandate communication of the Code of Conduct for Suppliers. Terms may vary however in certain agreements

providers to the Global Fund or to recipients. Secretariat activities linked to the use of funds are also within the scope of the OIG's work.

Principal Recipients are accountable to the Global Fund for their compliance in the use of all grant funds, including those disbursed to sub-recipients and paid to suppliers.[14] They ensure the appropriate requirements are made applicable to those entities.

How we investigate:

The OIG conducts administrative, not criminal, investigations. It is not a law enforcement or judicial authority. It is the recipients' and suppliers' responsibility to demonstrate that their actions and those of their agents and employees comply with applicable agreements. OIG findings are based on facts and related analysis, which may include drawing reasonable inferences. Findings are established by a preponderance of evidence. All available information, inculpatory or exculpatory, is considered by the OIG.[15]

Investigations into allegations of human rights violations and sexual exploitation and abuse are conducted with a victim-centred, trauma-informed methodology, following a case-specific risk assessment. This work is guided by the Global Fund's Operational Framework on the Protection from Sexual Exploitation and Abuse, Sexual Harassment, and Related Abuse of Power.[16]

The investigation will attempt to quantify the extent of any non-compliant expenditures, including an amount proposed to the Secretariat as recoverable.

The OIG may also discharge its mandate by overseeing the activities of recipients or other parties having the appropriate capacity and mandate to perform investigative tasks. It may also share allegations and evidence with third parties where it is relevant to their work, in particular where a matter would be outside of its mission.

What happens after an investigation?

The OIG ensures the relevant entities have the opportunity to review and provide evidence or comments on the findings and on the draft report.[17] The OIG has a fact-finding role and does not determine what remedial and preventative measures the Global Fund may take as a result of its findings.

Following an investigation, the OIG and the Secretariat agree on management actions that will mitigate the risks that wrongdoing poses to the Global Fund and its recipients' or suppliers' activities. These may include specific managerial decisions, financial recoveries, instructions applicable to implementers and suppliers, internal process changes, or other contractually available remedies. With respect to suppliers, this can include seeking advice from the Sanction Panel.[18]

The OIG may make referrals to other organizations that have an interest in the investigation outcome, or to national authorities for criminal prosecutions or other regulatory and administrative actions, and support such processes as appropriate.

[14] Compliant expenditures are defined in the Global Fund Guidelines for Grant Budgeting, as amended from time to time
[15] These principles comply with the Uniform Guidelines for Investigations, 2nd edition, Conference of International Investigators
[16] See The Global Fund's Operational Framework on the Protection from Sexual Exploitation and Abuse, Sexual Harassment, and Related Abuse of Power, in particular sections IV. *2. Investigations* and IV. *3. Support to survivors & victims*, as amended from time to time
[17] See the OIG Investigations Stakeholder Engagement Model, as amended from time to time
[18] See the Sanctions Panel Procedures Relating to the Code of Conduct for Suppliers, as amended from time to time