

Trends in ITN campaign per diems

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1 Background

The Alliance for Malaria Prevention (AMP) has been supporting national malaria programmes to implement mass ITN campaigns since 2008. AMP coordinates technical assistance, furnished by experienced consultants, in the areas of campaign planning, ITN logistics, social and behaviour change communication, and monitoring and evaluation based on requests from national malaria programmes. AMP has supported the distribution of over two billion ITNs and has developed and disseminated best practice tools and approaches for ITN distributions across a variety of settings.

Part of AMP's function involves the review of campaign budgets with an eye on efficiency and best practices, tailored for context. Through this experience TA providers realized that, for certain countries, per diem rates for campaign household registration and distribution teams were not being updated at each three-yearly campaign. Budgeting for a new campaign frequently involved updating a previous campaign's approved budget file, but while price changes for fuel and other costs were updated to reflect current pricing, personnel rates, particularly for the community-level workers, were not always adjusted. Individuals conducting household registration and/or ITN distribution activities are the backbone of ITN campaigns and represent a good proportion of the total campaign costs, as many thousands are typically needed to reach and register every household, and to distribute ITNs to registered households. Low rates can be demotivating, particularly for registration teams, who frequently walk long distances under difficult conditions to reach every household, which is the core of ensuring a successful campaign.

AMP elected to conduct a review of campaign budget documents to assess changes or lack thereof in basic campaign per diem rates. Given volatility in inflation and in global pricing over the past ten years, the time period was set as 2011—2023 to capture multiple campaigns per country, where possible. The objective of the analysis is to assess the extent to which countries have or have not been adjusting campaign per diem rates to match inflation, and to provide recommendations for budget planning moving forward.

2 Methods

Copies of ITN campaign budgets and associated documents were solicited from AMP technical assistance providers in late 2022. Over 70 Excel files were received. These files were reviewed and data were extracted into a spreadsheet, recording per diem rates for household registration agents, distribution agents and first-

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level supervisors (e.g. at district level) alongside basic information about the campaign (year, location, donor) and the currency of the per diem rates provided.

Data were reviewed and further cleaning was conducted. In some cases, outlier values were investigated and found to be taken from microplanning training budgets, reflecting overnight lodging and transport rates, rather than registration and distribution per diem rates. Different rate values from the same year were also investigated: in some cases this reflected changes in the rates in different drafts of budgets, and in other cases one rate had been abstracted from a supervisory activity. Duplicate values and budget documents that did not list per diem rates were dropped. After cleaning, 46 budget documents contained unique information. Angola, Guinea and Sudan campaign budgets were in US dollars, while the rest were in local currency. Mauritania, Niger, Sierra Leone and Sudan underwent currency conversions during the study period and these are accounted for in the analysis and referenced further below.

For cross-country and multi-year comparability, budgeted per diem rates in non-US currency were first converted to USD using foreign exchange rates from the year of the budget document. Foreign exchange rate data were obtained from Google Finance and an average exchange rate for each year was calculated (e.g. a 2012 budget in the West African franc (CFA) converted the per diem rate into USD using the exchange rates from 2012 for CFA-USD). Next, the historical USD values for the per diem rates were converted into 2022 USD using an inflation calculator from the Bureau of Economic Analysis NIPA tables. It should be noted that while this process adjusts for US inflation, it may not accurately reflect the inflation trends in a given sub-Saharan African (SSA) country. The extent to which countries adjusted campaign per diem rates to match inflation was calculated as the percentage change in the 2022 USD rate from the baseline value to the most recent campaign budget.

3 Results

A total of 46 budget documents were included for analysis over the period 2011—2023 from nineteen malaria-endemic countries (Fig. 1). The number of budget documents per country ranged from one to seven, in some cases reflecting multiple versions of budget documents for the same campaign. There were between one and five different ITN campaigns per country, either nationwide or conducted on a rolling basis by region over multiple years. Of the nineteen countries, eleven had budgets for multiple campaigns, while eight had only one campaign budget.



Budget data provided No ITN campaign budgets obtained

Figure 1: Countries included in the ITN mass campaign per diem analysis

Temporal trends in the 2022 USD per diem rates are shown for household registration teams in Fig. 2 and for district-level supervisors in Fig. 3.



Figure 2: Per diem rates for household registration teams, in 2022 USD, over time

The mean per diem rate (in 2022 USD) for household registration and distribution activities was USD 7.64 and the median was USD 6.27, ranging from a low of USD 2.29 in Sierra Leone to USD 28.12 in Mauritania. For supervisors, the mean and median daily per diem rates were USD 19.73 and USD 19.73, respectively, ranging from USD 4.59 in Sierra Leone to USD 84.14 in Chad.

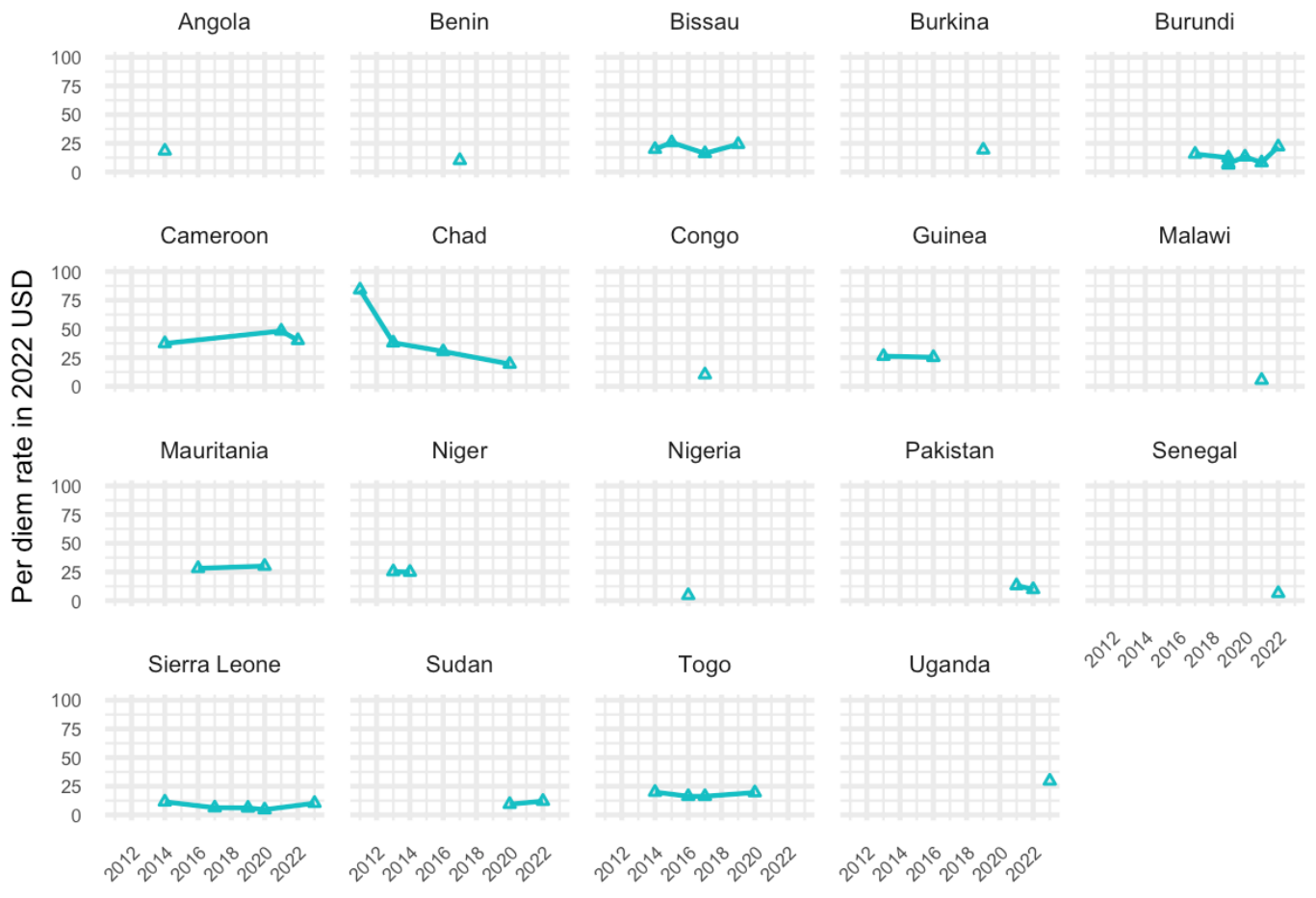


Figure 3: Per diem rates for campaign supervisors at district level, in 2022 USD, over time

The overall percentage change from the oldest to the most recent campaign budget was calculated for the eleven countries with budgets from more than one timepoint. Percentage changes are summarized in Fig. 4 by role for each country.

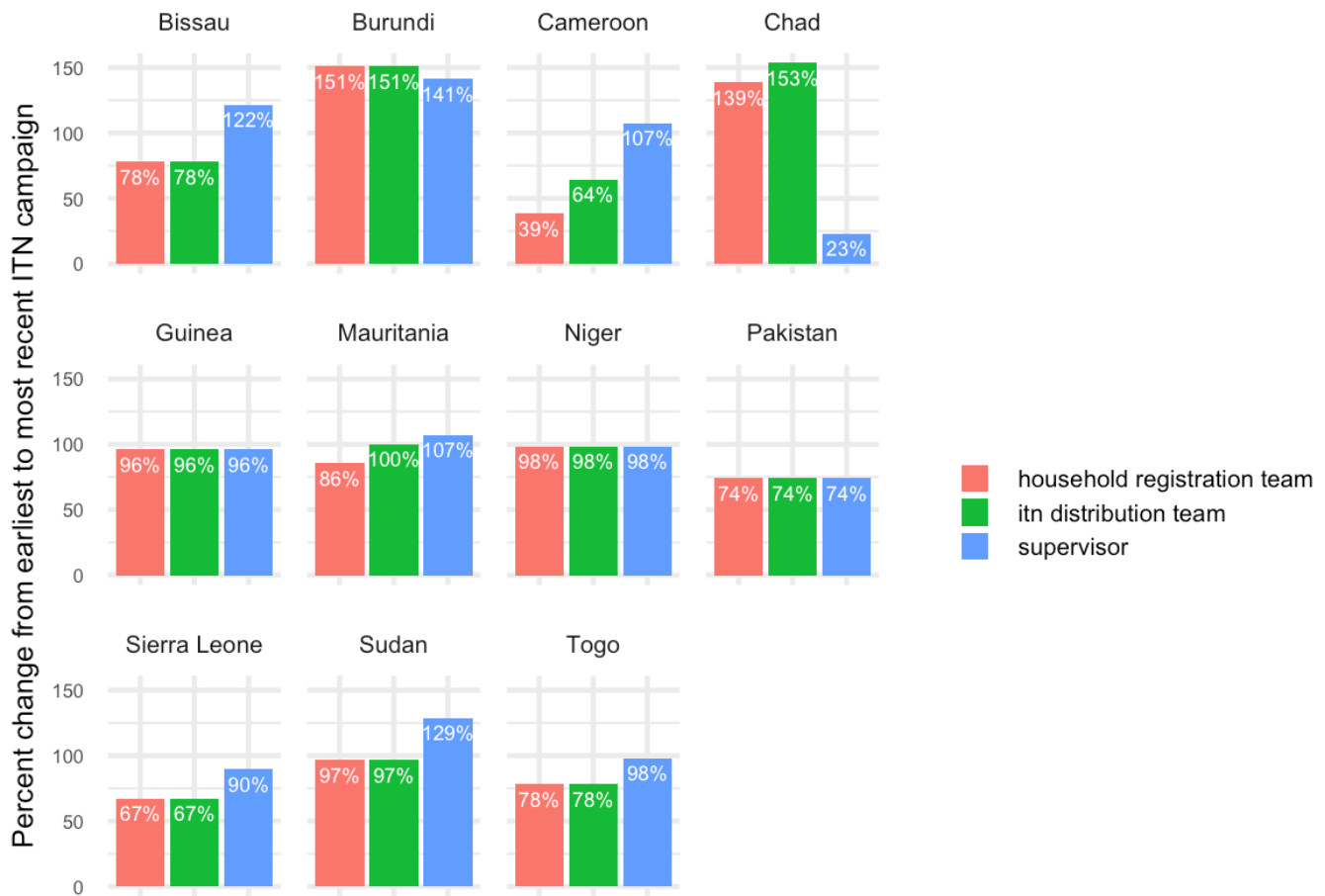


Figure 4: Percentage change in 2022 USD per diem rates from earliest to most recent ITN campaign, by campaign role and country

4 Discussion

For the eleven countries with multiple campaign budget data across 2011 to 2023, the majority of per diem rates have not matched inflation for the household registration team, with nine out of eleven countries paying lower rates for household registration over time. Of those nine, five did not make any changes to the local currency per diem rates: Bissau (2014, 2017 and 2019), Guinea (2013 and 2016), Mauritania (2016, 2020), Pakistan (2021, 2022) and Togo (2011, 2016, 2017, 2020). As these countries did not adjust their rates it is not surprising that they have not matched inflation.

A total of seven countries did adjust rates but not at each campaign cycle. For example, Sierra Leone maintained their per diem rates for their 2014, 2017, 2019 and 2020 campaigns and then adjusted rates in 2023 – however the 2023 rate was still only USD 3.84 in 2022 USD vs. the 2014 adjusted rate of USD 5.71. Both Niger and Sudan provided two campaign budgets, and both adjusted their per diem rates for the second campaign to reflect national currency conversions. As a result, both countries showed a minimal decrease in the 2022 USD rates over time.

Chad was one of only two countries whose adjusted rates increased over time. Chad provided budget data for 2011, 2013, 2016 and 2020 and adjusted their per diem rate once in 2016. Burundi also updated their rates for inflation, increasing from USD 4.87 to USD 7.36 from 2017 to 2022 (2022 USD). Burundi adjusted per diem rates in each budget revision up to 2022.

Cameroon adjusted rates showed the largest decrease from baseline, from USD 12.44 in 2014 to USD 4.81 in 2022 (a reduction from 5000 Central African francs (FCFA) to 3000 FCFA). Reasons for the higher rate in 2014 are not clear but could reflect in-country inflation trends that are not captured here, or that the 2014 rate was deemed too high and thus reduced ahead of the 2021 campaign.

Overall Mauritania had the highest per diem rates for household registration/distribution teams of the countries included in the analysis, with a mean of USD 26.10 in 2022 USD, compared to the mean of USD 7.64 for all countries. Uganda and Sierra Leone had the lowest mean per diem rates, at USD 3.23 and USD 3.49 respectively (2022 USD).

Per diem rate trends for supervisors were largely similar to those for household registration and distribution teams. Of the countries with trend data, six of eleven countries saw reductions in adjusted per diem rates for supervisors: Chad, Guinea, Niger, Pakistan, Sierra Leone and Togo. Guinea, Niger, and Pakistan were the only countries that appeared to adjust both supervisor and household registration team rates to the same degree, while for Cameroon, Sudan and Togo, supervisor rates either increased or were better adjusted for inflation compared to the household registration team rates. Indeed Cameroon had the largest variation in adjustments made to different roles, with 2022 USD rates for household registration teams declining by 61 per cent, and supervisor rates increasing by 7 per cent.

Chad is another example of a notable difference in the rate adjustment between the two roles, with supervisor per diems decreasing by 77 per cent at the same time that household registration and distribution teams saw their rates increase by 39 per cent and 53 per cent, respectively. Bissau and Sudan also saw moderate declines for registration teams (22 per cent and 3 per cent), respectively, while supervisor rates were increased (up 22 per cent for Bissau and 29 per cent for Sudan). Whether these trends reflect baseline disparities in rates, or supervisors receiving a more favourable inflation adjustment is unclear.

When observing the trends across the roles and countries a clear pattern does not emerge, and there is no evidence that per diem rates are regularly adjusted for these roles.

4.1 Limitations

Availability of budget data has been a limitation. Eight countries had only one available campaign budget, and for this reason no in-country trends could be established. However, their data informed the overall mean and median per diem rates across countries. For countries where budgets for multiple campaigns were available, further context may be needed to better understand the timelines and rationales for per diem rate adjustments or lack thereof. For example, Burundi budgets reflected three different rates for supervisors for the 2022 campaign. Equally discussion with Cameroon and Chad would be useful to understand the more substantial changes in rates from a specific year. General discussion at a country level could also help to further explore and situate the budget campaign information to help better understand the approaches to rate review and adjustment and if and how these were synchronized across the different roles.

As mentioned above the methodology adjusted for US inflation and as a result may not accurately reflect the inflation trends in a given SSA country. This approach also does not reflect purchasing power of these rates, and thus comparisons of rates between countries are somewhat limited. Further work would need to be conducted to gather inflation and cost-of-living trends for each country: these are not generally available as public databases.

5 Conclusion

Despite the limitations, the study has been able to show that generally per diem rates in ITN campaign budgets are not consistently adjusted for inflation. Findings have shown that the majority of countries in the analysis are paying lower and lower rates to household registration and distribution teams with each successive campaign, and that rate adjustments are not always harmonized between household registration and supervisor roles. This is likely to be demotivating for community-level workers, impacting campaign outcomes, particularly for reaching remote, hard-to-reach and vulnerable populations.

It is therefore recommended that per diem rates should be reviewed and updated at each campaign, and that Ministries of Health should have policies in place to a) harmonize these rates across different activities and b) adjust them periodically for inflation.

6 Annex

Table 1: Household registration team per diem rates in ITN campaign budgets

Country	Year	2022 USD rate	Percentage change from first year
Bissau	2014	7.46	100%
Bissau	2017	6.08	82%
Bissau	2019	5.81	78%
Burundi	2017	4.87	100%
Burundi	2019	5.28	108%
Burundi	2019	5.28	108%
Burundi	2019	5.28	108%
Burundi	2020	7.66	157%
Burundi	2021	8.19	168%
Burundi	2022	7.36	151%
Cameroon	2014	12.44	100%
Cameroon	2021	5.79	47%
Cameroon	2022	4.81	39%
Chad	2011	7.01	100%
Chad	2013	6.33	90%
Chad	2016	10.14	145%
Chad	2020	9.71	139%
Guinea	2013	8.75	100%
Guinea	2016	8.42	96%
Mauritania	2016	28.12	100%

Country	Year	2022 USD rate	Percentage change from first year
Mauritania	2020	24.08	86%
Niger	2013	6.33	100%
Niger	2014	6.22	98%
Pakistan	2021	9.87	100%
Pakistan	2022	7.34	74%
Sierra Leone	2014	5.71	100%
Sierra Leone	2017	3.15	55%
Sierra Leone	2019	2.44	43%
Sierra Leone	2020	2.29	40%
Sierra Leone	2023	3.84	67%
Sudan	2020	9.32	100%
Sudan	2022	9.00	97%
Togo	2014	7.46	100%
Togo	2016	6.09	82%
Togo	2017	6.08	82%
Togo	2020	5.85	78%

Table 2: Supervisor per diem rates in ITN campaign budgets

Country	Year	2022 USD rate	Percentage change from first year
Bissau	2014	19.90	100%
Bissau	2015	25.69	129%
Bissau	2017	16.22	82%
Bissau	2019	24.19	122%
Burundi	2017	15.65	100%
Burundi	2019	12.42	79%
Burundi	2019	6.21	40%
Burundi	2019	7.45	48%
Burundi	2020	13.26	85%
Burundi	2021	8.19	52%

Country	Year	2022 USD rate	Percentage change from first year
Burundi	2022	22.09	141%
Cameroon	2014	37.31	100%
Cameroon	2021	48.22	129%
Cameroon	2022	40.08	107%
Chad	2011	84.14	100%
Chad	2013	37.97	45%
Chad	2016	30.42	36%
Chad	2020	19.43	23%
Guinea	2013	26.26	100%
Guinea	2016	25.27	96%
Mauritania	2016	28.12	100%
Mauritania	2020	30.10	107%
Niger	2013	25.30	100%
Niger	2014	24.87	98%
Pakistan	2021	13.17	100%
Pakistan	2022	9.79	74%
Sierra Leone	2014	11.42	100%
Sierra Leone	2017	6.30	55%
Sierra Leone	2019	6.10	53%
Sierra Leone	2020	4.59	40%
Sierra Leone	2023	10.23	90%
Sudan	2020	9.32	100%
Sudan	2022	12.00	129%
Togo	2014	19.90	100%
Togo	2016	16.23	82%
Togo	2017	16.22	82%
Togo	2020	19.50	98%