



# Funding Request Form

Tailored for National Strategic Plans

**Allocation Period 2023-2025**

## Summary Information

Country(s)	Uganda
Component(s)	Malaria
Planned grant start date(s)	January 1 <sup>st</sup> 2024
Planned grant end date(s)	December 31 <sup>st</sup> 2026
Principal Recipient(s)	Ministry of Finance, Planning and Economic Development (MoFPED) The AIDS Support Organisation (TASO)
Currency	USD
Allocation Funding Request Amount	USD 252,250,747
Prioritized Above Allocation Request (PAAR) Amount	USD 143,007,442
Matching Funds Request Amount (if applicable)	Not Applicable

Refer to the [Tailored for National Strategic Plans Instructions](#) for detailed elements related to each question which should be addressed for a response to be considered complete. The Instructions also include information, resources, and a description of necessary documents to be submitted along with this form.

# Uganda Context for the GC7 Malaria grant

Uganda is a high malaria transmission country with 95% population at risk of *Plasmodium falciparum* malaria all year round. It is third out of four countries that accounted for half of all malaria cases in 2021 (WMR, 2022). The risk of malaria transmission in Uganda varies geographically, from less than 1% malaria prevalence in Southwest Uganda) to greater than 20% in Busoga, Northwest and 34% in Northeast Uganda (UMIS 2019).

Uganda made tremendous progress by reducing malaria parasite prevalence from 42% (based on microscopy in under five children) in 2009 to 9.1% in 2018 (Figure 1.1). However, this progress stagnated after 2015, and the number of cases started to increase, a trend observed in other malaria high burden countries. In 2022, Uganda experienced a rebound epidemic leading to a 30 percent increase in the 2021 total number of malaria confirmed cases (HMIS). Malaria incidence rose from 277/1000 (2020/2021) to 374/1000 (2021/22), 50 percent higher than the set target of 246/1000 (UMRESP 2020/21 – 2024/25 MTR). The OPD malaria attendance and inpatient incidence due to malaria rose from 31% to 32.2% and 16/1000 to 17.1/1000 from 2019 to 2022, respectively. Although, there was modest decrease in malaria mortality from 8.9/100,000 (2019) to 6.8/100,000 (2022), it fell short of the target of 6.3/100,000 persons per year (Figure 1.2).

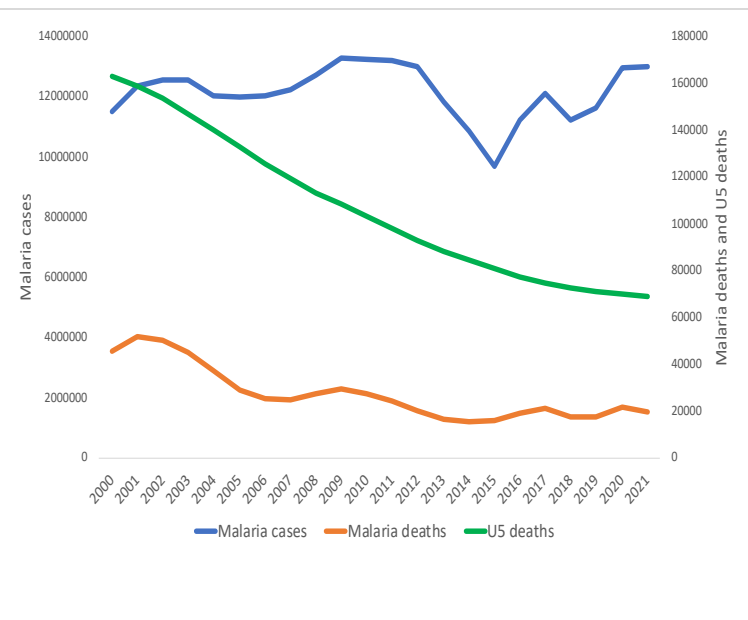
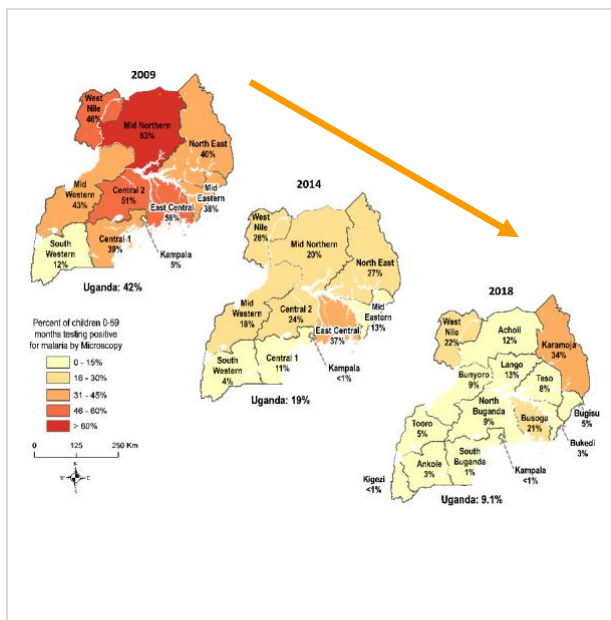


Figure 1.1. Malaria parasite prevalence in Uganda from Malaria Indicator Surveys in 2009, 2014 and 2018.

Figure 2.2 Malaria Morbidity, Mortality and U5 Mortality trend.

The reasons for this performance are likely the waning effect of ITNs from the 2020 mass campaign, inadequate deployment, and performance of the different interventions in scale and scope to achieve maximum impact due to suboptimal efficacy and longevity of insecticides used for IRS, poor health seeking behaviour, and poor ITN use, care, and repair by communities and inadequate and often delayed response to the malaria rebound epidemic.

This Global Fund Grant Cycle 7 (GC7) malaria funding request is tailored to the Uganda Malaria Reduction and Elimination Strategic Plan (UMRESP 2021 – 2025), whose goal is to reduce malaria deaths by 75% and malaria cases by 50% of the 2019 levels and to move the country towards elimination. It is based on the High Burden, High Impact (HBHI) and Mass Action Against Malaria (MAAM) principles of high political will, use of strategic information to drive impact, better guidance for policies and strategies and a coordinated national malaria response. It also

considers malaria risk stratification and subnational tailoring in deployment of priority interventions.

The National Malaria Control Division (NMCD) coordinated the Mid Term Review (MTR) of the UMRESP supported by WHO, Global Fund, USAID/PMI and other partners and stakeholders in a comprehensive, consultative, and iterative process. Furthermore, the Malaria Scientific Advisory Committee undertook additional deeper analysis of emerging findings and potential threats to current malaria interventions. The MTR details progress achieved under the UMRESP, identifies gaps and challenges, and has provided a rationalization for the prioritization of the interventions in this funding request. Some of the key findings from the performance assessments and expert reviews include, core interventions of malaria control should be judiciously and consistently deployed, the period of preventive protection against malaria transmission offered by ITNs following mass campaigns is less than the recommended three years, insecticide resistance is on the increase requiring that only PBO and next generation be considered and their deployment be informed by ongoing entomological monitoring of metabolic and non-metabolic insecticide resistance, prevalence of artemisinin resistance markers is on the rise but effect on malaria parasite clearance is minimal, HRP2/3 gene deletions have emerged and should be monitored as part of quality assurance of malaria parasitological diagnosis. Additionally, programming and deployment of malaria interventions should strongly address equity in access to malaria services, human rights barriers to access and should target the most vulnerable groups with high malaria risk.

Of note, the current malaria grant provided funds to conduct a malaria matchbox assessment to identify gaps and generate key information to guide equitable, efficient, and effective implementation of quality, accessible malaria interventions and services. It identified the populations most at risk of malaria, including underserved populations, access barriers to malaria services for those most at risk and underserved and explained how gender, human rights and socio-economic factors affect access to and utilization of core malaria interventions. Specifically, the malaria matchbox assessment established a baseline of human rights-related barriers malaria services and existing programs to remove them. The following findings from the matchbox assessment have informed the rationalization and prioritization of the interventions in this funding request.

1. **Key relevant policy and regulatory instruments exist.** These include the “Leaving No One Behind: A Revised National Plan for Achieving Equity in Access to HIV, TB, Malaria and Covid 19 Services in Uganda, 2020-2024”, the National Youth Action Plan, the National Gender Policy, the Persons with Disabilities Act. Other national strategic plans such as the Ministry of Health Strategic Plan 2020/21 – 2024/25 and the UMRESP 2020/21 – 2024/25, the Reproductive Maternal Neonatal Child Adolescent Health Sharpened Plan clearly prioritize interventions to address community, human rights and gender factors that affect equity in access to health services.
2. **The population groups with the highest risk for malaria or are likely to be stigmatized, marginalized and underserved** are children less than 5 years old, pregnant women, people living with HIV, people with disabilities, inmates and other detainees, people in closed/congregate settings such as boarding schools, prisons, the Uganda Police Force, and Uganda Peoples Defence Forces, migrant/mobile populations including the hotels where they may reside, internally displaced populations, refugees and asylum seekers, older persons, adolescent girls and young women, populations in hard to reach areas including islands and mountainous areas.
3. **Important biological, environmental, social, cultural and gender factors that influence access to and utilization of core malaria interventions** include,

socioeconomic status with being poor a disadvantage, low education level, low literacy, enforcement of children's rights, transport and communication infrastructure developments, geographical residence such as islands or mountains or sparsely populated areas, gender, having disabilities, occupations that predispose one to constant mobility such as among truck drivers, teenage pregnancy.

The matchbox assessment findings inform continuous deployment and subnational tailoring of interventions as follows; universal ITN mass campaign has been prioritized for the entire population and its implementation will keep track of the stigmatized, marginalized and underserved. The NMCD will set up a monitoring framework for coverage of malaria interventions in special groups including refugees, internally displaced persons, fishing communities, armed forces and people living with disabilities. ITN routine distribution has been prioritized for pregnant mothers at ANC, for children through the EPI channel and school going children through the routine school distribution channel. IRS will be implemented to ensure full district cover in malaria high burden districts of West Nile and Lango region (funds for 14 districts for 3 years within allocation, and 5 districts as quality demand in PAAR). All segregated and boarding institutions such as schools, police, prison, and army installations in these districts will be covered. The Presidential Malaria Initiative (PMI) will continue implementing in high burden districts in Eastern Uganda. Seasonal Malaria Chemoprevention will be implemented in Karamoja, another high burden region, albeit, occupied by pastoralist communities in houses that are not amenable for conventional deployment of malaria interventions. IPTp will be implemented through community outreaches and CHWs and will target all mothers including teenage mothers, those in rural areas, those affected by chronic diseases. iCCM has been adapted for malaria epidemic prone areas, where the formal health facilities

As demonstrated above, the matchbox assessment findings have informed ongoing malaria programming and intervention implementation. They have also played an important role in the rationale for prioritizing interventions for the Global Fund GC7 malaria funding request. The theme for this application is to reverse the country's trajectory of malaria burden and accelerate malaria reduction. Focus is on optimal implementation of core interventions of vector control – ITN mass campaign, continuous distribution, and indoor residual spraying -, case management interventions and interventions to collect routine data, analyze and support malaria surveillance. To consolidate the implementation of the Mass Action Against Malaria approach using the MAAM guidelines, funds have been prioritized in program management for NMCD to engage with Office of the Prime Minister, Local Government and Ministry of Education and Sports with support from the WHO country office. Given the biological threats of insecticide and drug resistance, entomological monitoring, therapeutic surveillance and determining the prevalence of artemisinin resistance markers have also been prioritized.

# Malaria interventions within and above allocation

Intervention	Within allocation	Above allocation
<b>Vector control</b>		
Insecticide treated nets (ITNs) - mass campaign: universal	77,955,877	19,239,392
Insecticide treated nets (ITNs) - continuous distribution: EPI, ANC, School based and smart discharge	12,499,424	32,437,418
Indoor residual spraying (IRS) including implementation costs	41,482,487	19,180,608
Other vector control measures – LSM	123,495	5,435,000
Entomological monitoring	945,671	0
Social and behavior change (SBC), integrated for vector control, case management and special preventive interventions.	2,305,266	2,540,000
Removing human rights and gender-related barriers to vector control, case management and special preventive intervention programs	730,340	0
<b>Sub-total</b>	<b>136,042,560</b>	<b>78,832,418</b>
<b>Case management</b>		
Facility-based treatment - malaria commodities and implementation costs	62,339,286	2,633,649
Integrated community case management (iCCM) - malaria and non-malaria commodities and implementation costs	25,197,806	21,700,615
Private sector co-payment mechanism – commodities and implementation costs	3,461,872	17,261,565
Epidemic preparedness - malaria commodities, implementation costs and MDA	6,128,566	5,295,029
Therapeutic efficacy surveillance for 3 sites + survey for artemisinin resistance markers	660,000	150,000
Interventions to address drivers Artemisinin resistance	599,208	123,200
<b>Sub-total</b>	<b>98,386,738</b>	<b>47,164,058</b>
<b>Specific Preventive Interventions</b>		
Intermittent preventive treatment (IPT) - in pregnancy	2,363,995	1,867,443
Seasonal malaria chemoprevention and implementation costs	2,440,738	1,540,646
Intermittent preventive treatment for school children (IPTsc)	0	11,752,027
<b>Sub-total</b>	<b>4,804,733</b>	<b>15,160,116</b>
<b>Program management</b>		
Coordination and management of national disease control programs - OPM, MLG, MOES, WHO		
GF Technical assistance in to NMCD	1,762,200	0
NMCD coordination and administration activities	1,592,376	600,450
WCO TA to NMCD and Uganda	450,000	0
Support to OPM, MLG and MOES in Mass Action Against Malaria	1,073,021	0
Grant Management	2,050,402	0
<b>Sub-total</b>	<b>6,927,999</b>	<b>600,450</b>
<b>RSSH: Monitoring and Evaluation Systems</b>		
Malaria Indicator Survey	1,800,000	0
Sentinel surveillance for malaria at 100 sites	1,230,320	0
Analyses, evaluations, reviews, and data use	800,000	0
Operational research	1,500,000	1,250,400
National malaria repository	534,373	0
Malaria program review	224,024	0
<b>Sub-total</b>	<b>6,088,717</b>	<b>1,250,400</b>

	<b>252,250,747</b>	143,007,442
<b>Total malaria commodities</b>	<b>189,745,619</b>	75%
<b>Total implementation costs</b>	<b>62,505,129</b>	25%
	<b>252,250,747</b>	

# Section 1. Funding Request and Rationale

## 1.1 Prioritized Request (if applicable)

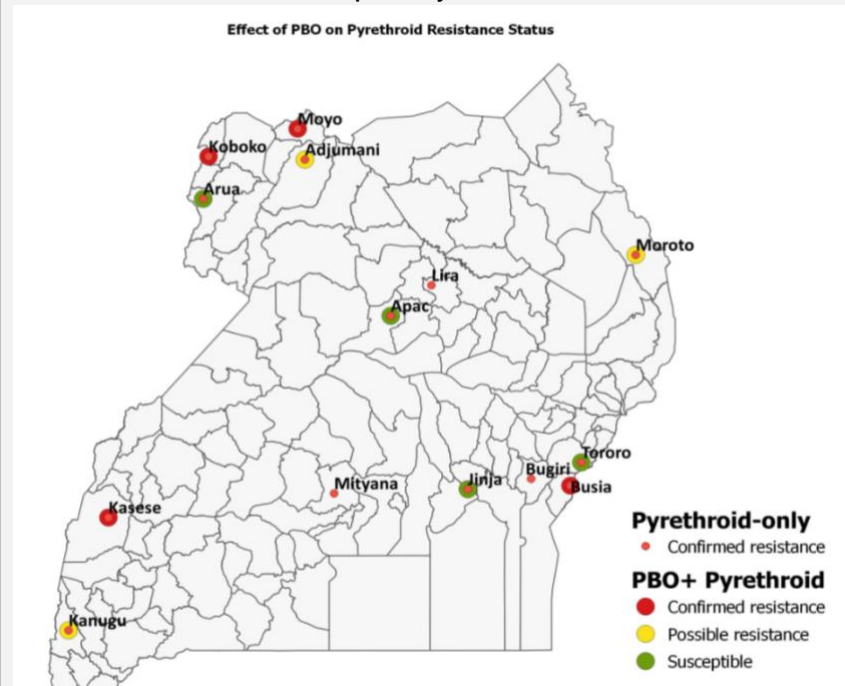
For each NSP strategic area or module, provide information about interventions included in the National Strategic Plan(s) that are included in this funding request. Specify the rationale for prioritization and the amount requested.

Component	Malaria
<b>Module</b>	<b>Vector Control</b>
<b>NSPs Strategic Area</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	<Insecticide treated nets (ITNs) – mass campaign: universal> - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	<p>The UMRESP (p. 45) recommends the ITN use as the primary vector control intervention for all epidemiological settings. ITN mass campaign is the greatest contributor to universal access and maintains equity in access to nets. Twenty-eight million nets were distributed through the mass campaign to achieve universal ITN coverage in 2020 (UCC report, 2020). Data from the 3-year period (2021-2023) shows a significant reduction in malaria cases reported that was sustained for about 16 months from the start of ITN mass campaign. After the 16-month period, the number of malaria cases started to increase, a pattern observed previous net mass campaigns (figure 5.1.2, p.36, MTR). This is likely explained by a shorter protective period of ITNs than previously anticipated, the growing resistance to pyrethroids, a chemical in 78% of the ITNs that were distributed in 2020 campaign.</p> <p>In the ITN mass campaign planned for 2026, a total of 29 million ITNs and a buffer of 2 million ITNs have been prioritized. Funds have been allocated in this GC7 malaria funding request for fourteen million nets within allocation. Of the remaining gap, a fourteen million ITN gap will be covered by AMF, 1 million by PMI, leaving a gap of two million campaign nets that has been presented as PAAR. For the GC7 malaria funding request, PBO and new generation nets have been prioritized. The choice is informed by findings from</p>

studies that reported up to 25 months of ITN effectiveness for PBO nets<sup>1</sup>, which is a longer duration compared to the pyrethroid nets whose effectiveness seems to last for about 16 months (LLIN study).

With entomological studies demonstrating increasing insecticide resistance to pyrethroid, PBO and new generation nets will be prioritized in the GC 7 grant, guided by the resistance pattern as depicted in figure 1.1. The new generation nets will be distributed in 38 districts where sentinel site monitoring have shown that PBO did not restore the susceptibility of malaria vectors to pyrethroids, expanded to include contiguous districts in the ecological zone. In addition, these are districts with high malaria transmission and burden, and have non metabolic resistance mechanism driving insecticide resistance.

The PBO nets will be distributed in 87 districts with widespread pyrethroid resistance and areas of moderate to high malaria transmission/burden where metabolic resistance is the main mechanism. In these districts, PBO restored the susceptibility of malaria vectors to the chemical in the PBO nets.



To address the operational gaps in the mass campaign, NMCD plans to complete the nationwide campaign in fewer waves, with targeted delivery systems such as mobile community outreaches based on mapping of hard-to-reach areas, and targeted SBC activities.

Figure 1.1: Effect of PBO on Pyrethroid Resistance Status

The mass campaign will be complemented by focused attention on the continuous distribution channels (ANC, EPI, and schools). The ITN mass campaign has been prioritized to cover the whole country in line with the principle of combination

interventions for maximum effect. Special groups such as the vulnerable populations of pregnant women, children under five years, refugees, internally displaced persons (IDPs), fishing communities, Armed Forces

<sup>1</sup> [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(22\)00469-8/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00469-8/fulltext)



	(UPDF, UPF, and UPS), and persons living with disabilities will be particularly targeted. Additionally, underserved populations including indigenous populations, internal migrants, mobile and hard to reach populations, nomadic pastoral populations, and institutionalized populations have been earmarked by NMCD. Karamoja which has unique context will also receive nets and enhanced SBC through community health workers. The district and community structures including CSOs/CBOs will contribute to community mobilization and sensitization and support the monitoring of appropriate use of the nets, including repair practices to improve net longevity.
<b>Amount requested</b>	A sum of <b>US\$ 77,955,877</b> is requested from the GF within allocation for procurement and distribution of ITNs. Available funds for ITN mass campaign including GF allocation, AMF, PMI cover 85% of the total need, leaving <b>US\$ 8,055,435</b> that has been included as quality demand prioritized above allocation. Additionally, USD 11,183,957 (corresponding to 41% of the total in-country operational costs) is included at PAAR for ITN operational costs.

<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Vector Control</b>
<b>NSPs Strategic Area</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	< <b>Insecticide treated nets (ITNs) – continuous distribution: ANC</b> > - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	Pregnant women are a key vulnerable population identified in the UMRESP (p 48). The continuous distribution of nets to pregnant women attending ANCs is prioritized in this application to complement nets received by households during campaigns. During the current grant, ITN distribution during ANC1 was below 50% (MTR p 21-22), much less than the UMRESP target. The MTR noted continuing challenges with ANC attendance impacting the number of pregnant women who received ITNs over the period. Several factors have been adduced to contribute to this below target uptake of ITNs through the ANC channel, including possible effect of the COVID-19 pandemic, poor parallel distribution channel used to get the ITNs to the health facilities, and the low ITN stocks at health facilities following their diversion to address the epidemic. To mitigate the problem of nets unavailability at ANCs in the new grant, the NMCD will integrate

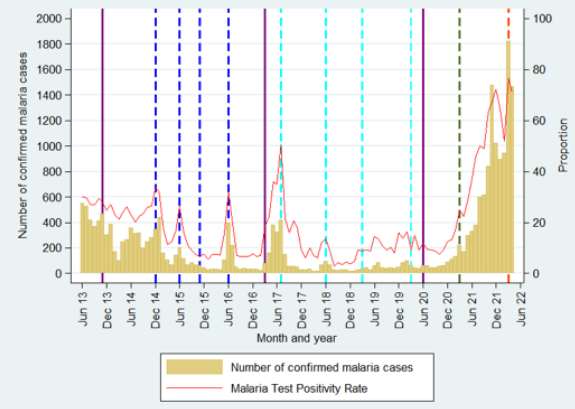
	nets delivery into the essential medicines delivery system of the National Medical Stores (NMS). A total of 6.4 million nets will be required over the grant period for the ANC distribution channel, and 40% of these are requested within allocation and the remainder in PAAR. The NMCD will strictly monitor ITN routine distribution through ANCs in districts with a high concentration of refugees, IDPs, and hard-to-reach areas. Interpersonal communication will be prioritized at the distribution points to increase ITN uptake, and emphasize appropriate net use, care, and repair practices to improve net longevity, a gap identified in the MTR.
<b>Amount requested</b>	A sum of <b>USD 5,110,907</b> is requested within allocation and <b>USD 9,937,176</b> in PAAR

<b>Component</b>	<b>Malaria</b>
Module	<b>Vector Control</b>
<b>NSPs Strategic Area #&lt;SO1&gt;</b>	<i>&lt; To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025&gt;</i>
<b>Intervention(s)</b>	<b>&lt;Insecticide treated nets (ITNs) – continuous distribution: EPI&gt;</b> - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	Children under 5 years of age are another vulnerable group and reaching them with ITNs through the EPI structures is mandated under the UMRESP (p 48). With the prioritization of this intervention, and given the high national EPI coverage levels, the NMCD will continue to provide nets routinely to all children across the country through EPI clinics, engendering equity in access. The programme needs to distribute 9.8 million nets to children through this channel over the grant period. The GF is requested to support the procurement and distribution of 60% of the needs within allocation for distribution in EPI facilities with priority for the high burden districts. The gap, amounting to 3.8 million nets required in 2025 and 2026, is placed in PAAR. To promote access to children in high-risk and underserved populations as identified by the Matchbox assessment, the NMCD will work through EPI and community outreaches to provide ITNs to children who miss ITNs from the static immunization sites, particularly children in hard-to-reach areas, IDPs, and refugee settlements. Nomadic populations in Karamoja will benefit from routine ITN distribution implemented through mobile iCCM intervention, alongside SMC and enhanced SBC. All health facilities in this region will receive ITNs for hospital beds of admitted severe malaria cases, and each patient will receive an ITN on discharge alongside post-discharge chemoprevention.

<b>Amount requested</b>	The sum of US\$7,388,517 is requested within allocation for routine ITNs distribution through EPI channel. A gap of 3.8 million nets exists that costs <b>US\$ 10,717,443</b> , requested under PAAR.
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<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Vector Control</b>
<b>NSPs Strategic Area</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	<Insecticide treated nets (ITNs) – continuous distribution: school based> - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	The UMRESP recognizes School-based continuous distribution of nets (p. 46). The matchbox assessment identified school going children (5-19 years) amongst high risk/underserved populations, this group accounted for 43% of OPD malaria cases in 2021. In the current grant, owing to resource constraints, the NMCD targeted children in primary 1 and 4 in public schools in 11 high-burden and -transmission districts in the regions of Acholi and Lango, covering 819 schools mainly in the country's rural areas. To promote efficiencies, there will be no school-based distribution in the year of mass campaign. Based on lessons learned during the current grant this intervention is prioritized with a proposal to cover an additional high-burden region, Busoga. A total of 543,000 nets are required for this channel during the grant period, placed under PAAR. The NMCD will collaborate with and leverage resources of the School Health Programme of the MoH and the MOES to implement this intervention effectively and efficiently. The NMCD shall ensure sustained ITN supply in all public primary schools in high transmission areas, including refugees and IDP camps. A study tour to Tanzania recommended by the TRP to learn from experiences in implementing this intervention which has not been undertaken, is prioritized in this application.
<b>Amount requested</b>	A request of the sum of US\$ 11,782,799 is required for the procurement and distribution of nets for school children that is requested in PAAR. This amount includes nets to complement severe malaria post-discharge chemoprevention.

Component	Malaria
<b>Module</b>	<b>Vector Control</b>
<b>NSPs Strategic Area</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	<Indoor residual spraying (IRS)> - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	<p>IRS is one of the primary vector control interventions recommended in the UMRESP (p. 45). The plan calls for the expansion of the intervention to contiguous regions with high transmission and high malaria burden (UMRESP, figures 3.4 and 3.5 pp. 36-37). IRS was conducted in 23 districts (10 funded by PMI and 13 by GF) in 2022. Data from DHIS-2 reveals decline in malaria cases in IRS districts following spraying operations compared with corresponding periods when no spraying was done, especially when full district coverage is achieved.</p> <p>The MTR noted that during the epidemic in 2022 IRS districts had incidences of malaria higher than pre-IRS period (MTR, p. 14). The rise in cases in the IRS districts coincided with the deployment of clothianidin-based insecticide and pyrethroid-only LLINs. Post-IRS entomology monitoring revealed that the insecticide remained efficacious for 4-6 months depending on the wall surface and thus not covering the country's two peak malaria transmission seasons, a requirement for effective performance. A switch to a more effective Chemical, Actellic 300 CS is planned in the new grant in line with the WHO Global Plan for Insecticide Resistance Management and the National Insecticide Resistance Management Plan 2017.</p> <p>Suboptimal performance of IRS was noted in the 4 Mid North districts where only a few sub counties were covered in the current grant. To ensure maximum impact, the NMCD proposes full coverage of these districts with IRS within allocation in the new grant. In addition, the NMCD proposes to cover the entire West Nile region, taking up four districts not covered in the current grant cycle. These additional 4 West Nile districts will be covered under PAAR. Should funds not be availed for IRS in these districts, they will be given priority in the ITNs distribution through the routine and campaign channels. Given that these two</p>



regions contributed 31% of the total cases in the country between 2020 and 2022, the requested support targets areas of the greatest burden.

With support from PMI, the country has sustained IRS in 10 high burden districts in Teso and Bukedi since 2015. However, PMI will exit from two districts (Serere and Lira) in 2023. To mitigate the resurgence of malaria in these districts that remain receptive and vulnerable, the programme proposes to transition IRS support within allocation for GF funding. In the new grant, the NMCD will commence spray operations in a timely and efficient manner, as well as cover all sub counties in the targeted districts. IRS data will be digitalized from the household to the national level. The programme will ensure

that IRS districts are prioritized to receive other malaria interventions (routine ITNs, iCCM, enhanced surveillance, and SBC) to sustain the accrued IRS gains.

Detention centers of armed forces, barracks, and boarding schools are overcrowded and are therefore specially at a higher risk for malaria, with challenges and/or unsuitability for the use of ITNs. These institutions have been identified in the Matchbox assessment as underserved populations. The Forces (UPF, UPDF & UPS) will be empowered and capacitated through provision of insecticides, training, and supervision, to continue implementing IRS in their institutions in IRS implementing districts.

With the exiting of some partners that previously supported IRS in the country, the NMCD will address sustainability concerns in the new grant period through the progressive integration of the IRS operations within the structures and systems of the Local governments and districts and build the capacity of private sprayers and companies to increase the resource envelope for this intervention from domestic sources. The NMCD proposes to set up a functional private-sector IRS implementation structure (accreditation, capacity building, policy formulation) and regulate insecticide use in the private sector to safeguard against insecticide resistance. In addition to entomological monitoring of the susceptibility of the insecticides, the NMCD will undertake operations research studies to understand/evaluate IRS impact on vectors and malaria burden in the new IRS areas and the best sustainability measures. The CSOs/CBOs VHTs, influencers, and community leaders, will undertake community sensitization and mobilization to intensify community ownership, acceptance, and participation in IRS interventions.

<b>Amount requested</b>	An amount of <b>US\$ 30,727,768 is requested within allocation</b> for IRS commodities and an additional <b>USD 10,754,719</b> has been allocated for implementation costs to cover the needs for 14 districts and <b>US\$ 19,180,608</b> for 5 additional districts in PAAR
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<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Vector Control</b>
<b>NSPs Strategic Area</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	<Other vector control measures> - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down

**Rationale for Prioritization**

The UMRESP (p. 45) lists LSM as a recommended vector control intervention. LSM is currently being implemented in 6 districts of the country with strong political support (NMCD, 2022: Larviciding report). Post-deployment surveys conducted in the implementation districts have revealed significant decreases in vector density, as seen in figure 1.3. Data from the DHIS-2 also show an appreciable decline in malaria cases, for example, in Kabale district in the southwestern part of the country, where cases went down from 623 in August 2020 to 381 in September 2022 immediately after the larviciding highlighting the contributions of the intervention to burden reduction in these districts. Based on this experience, the NMCD proposes

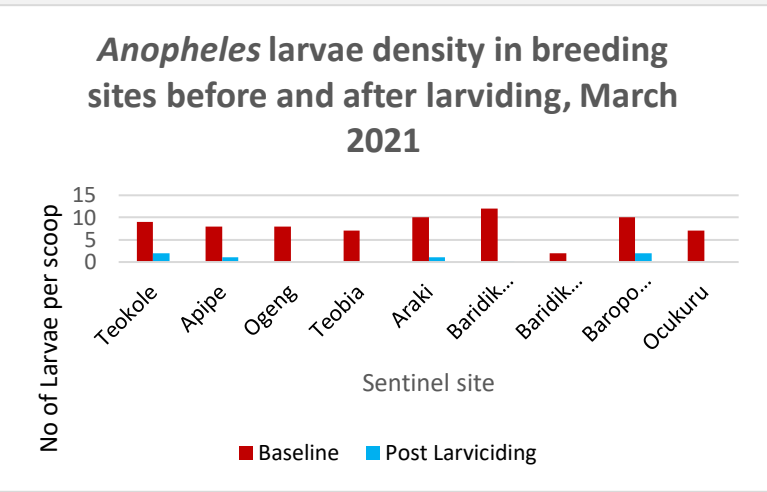


Figure 3: Anopheles mosquito larval reduction one week post larviciding in sentinel sites

consolidating its efforts in these six districts focused on more efficient intervention implementation. Currently, only high burden sub-counties in the targeted districts are prioritized for larviciding, as part of consolidation of efforts, the programme will increase on the larviciding coverage within these targeted districts.

In line with UMRESP, the NMCD will advocate through the multisectoral strategy and targeted SBC for malaria smart programming and for households under the MAAM approach, to take responsibilities of keeping their environment vector free. The CSOs/CBOs will support the implementation of the activities under this intervention through engagement of communities during scheduled dialogues and facilitate VHTs to

promote malaria smart homes. This intervention has strong support from the Ministry of Health management and the presidency<sup>2</sup>.

**Amount requested**

A sum of USD 123,495 has been allocated within allocation for preparatory activities and **USD 5,435,000** is requested in **PAAR** for this intervention

<sup>2</sup> <https://kampalapost.com/content/us-africa-summit-president-museveni-explains-how-uganda-will-reverse-medical-tourism>  
<https://sph.mak.ac.ug/news/uganda-ready-launch-full-war-against-malaria-president-museveni>  
<https://www.defeatingmalaria.harvard.edu/press/>  
<https://twitter.com/KagutaMuseveni/status/989935376537137153>  
[https://www.yowerikmuseveni.com/"maximize-efforts-eradicate-malaria"](https://www.yowerikmuseveni.com/)—president-directs-district-medical-officers

<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Vector Control</b>
<b>NSPs Strategic Area</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	< Entomological Monitoring > - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	<p>During the current grant, the Program's capacity for entomology surveillance was strengthened through the provision of essential supplies and equipment, integration of entomology data into the DHIS-2, as well as mentorship to improve the skills and competencies of Vector Control Officers (VCOs). Entomology Surveillance is conducted through a community driven approach with Village Health Teams collecting mosquito samples from households under the supervision of Health Assistance and VCOs. In the new grant, the NMCD will build on these gains to continue routine entomological monitoring in 54 districts with training, mentorships, and provision of supplies. The specific focus will be on building the capacity of VCOs in government structures, including the Forces, in entomological surveillance in line with UMRESP objective of strengthening district capacity to conduct IRS and other vector control interventions. In addition, the Programme will collaborate with the Central Public Health Laboratory / VCD to conduct molecular analysis of mosquito samples.</p> <p>To ensure that programmatic decisions continue to be based on evidence, entomological data, including vector behaviour; insecticide susceptibility status and underlying resistance mechanisms; coverage of interventions; LLIN use, efficacy, and durability, will be collected routinely and periodically across all geographical areas to enable effective vector control and response.</p>
<b>Amount requested</b>	A sum of <b>USD 945,671</b> is requested for this intervention from within allocation

<b>Component</b>	<b>Malaria</b>
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<b>Module</b>  <b>NSPs Strategic Area #&lt;SO1&gt;</b>	<h2 style="color: #008080;">Vector Control</h2> <p><i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i></p>
<b>Intervention(s)</b>	<p>&lt; <b>Social and Behaviour Change (SBC)</b> &gt; - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down</p>
<b>Rationale for Prioritization</b>	<p><b><i>THIS SECTION PROVIDES CONTENT FOR BOTH VECTOR CONTROL AND CASE MANAGEMENT</i></b></p> <p>The MTR report (p. 31) notes a low-risk perception of malaria resulting in poor uptake and utilization of malaria prevention and control measures. The scale and intensity of implementation and monitoring of SBC interventions to drive positive behaviour change during the current grant were very low. In the current grant, the NMCD developed a communication strategy focused largely in sustaining knowledge and addressing behavioural gaps. Community based activations, high level advocacy, client health provider communication and use of key societal influencers were employed to motivate communities to adopt desired practices. The post mass distribution monitoring survey conducted to track LLIN usage and behaviours among households showed an increase on net use from 65% to 77% (MIS).</p> <p>With the new funding, the NMCD will embark on a unified, focused, and concerted approach to Advocacy and Social Behaviour Communication to raise the profile of malaria at all levels and among key stakeholders to increase demand for and appropriate utilization of malaria prevention and control capitalizing on use of mass and media platforms. The NMCD will strengthen and deepen its cooperation and collaboration with multisectoral stakeholders (including the MOES, cultural institutions, Uganda Parliamentary Forum on Malaria / Members of parliament, Inter-Religious Council of Uganda, and non-health corporate companies), to leverage resources from them, provide technical guidance and BCC materials to facilitate their participation in malaria prevention and control interventions. The NMCD proposes the creation of a youth movement at national and district levels to advocate for malaria reduction and elimination in Uganda, leveraging on the large youth population in the country.</p> <p>NMCD will reach underserved communities through its formal structures. The Program will develop and disseminate audio and visual IEC materials through targeted communication campaigns and channels, cognizant of the blind and deaf populations. To optimally monitor this engagement at the community level,</p>

	the vulnerable groups will be supported to identify champions who will be oriented and supported with interpersonal communication materials, to conduct community dialogues in conjunction with CSOs/CBOs. The recently launched national community health strategy provides the basis for an integrated approach in the delivery of SBC interventions in the communities. By working within the framework of the strategy and through its structures, the NMCD will be able to maximize the impact of its investments in this area and promote its sustainability.
<b>Amount requested</b>	A sum of <b>USD 2,305,266</b> is requested within allocation for the SBC intervention under both vector control and case management, and <b>USD 2,540,000</b> in PAAR

<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Vector Control and Case management</b>
<b>NSPs Strategic Area #&lt;SO1&gt;</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	< Removing human rights and gender-related barriers to vector control programs) > - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	The MOH employs a human rights approach to health service delivery through its National Strategic Framework (2015-2020), recognizing that all citizens should have unhindered access to healthcare services and drawing attention to the unique vulnerabilities of pregnant women, the elderly, children, and PWDs, among others. The National Health Sector Development Plan (HSDP) (2015-2020) mandates free health services at the point of use to reduce the financial barriers to service use. Moreover, by linking the community to the formal health system and through community outreach, the HSDP aims to engage historically hard-to-reach populations. While Uganda has made significant improvements in social services, the MoH emphasizes that major barriers, beyond financial, remain in the uptake of social services related to health, housing, education, water and sanitation, and others. Barriers are attributed to demand-side factors, including the lack of power for women and other vulnerable populations to make decisions around finances, transport use, and health and social service access. During the new grant period, the NMCD will undertake an assessment on Equity Human Rights, and Gender Equality (EHG) malaria dynamics and utilize the findings, in conjunction with the results of the Matchbox analysis, to inform the development of

	<p>EHG malaria guidelines, programmatic strategies, and action plans to advance Human Rights, gender equality, youth participation, and inclusion. The plan will include capacity building to strengthen key stakeholders – health workers at all levels and CSOs, including CHWs on EHG in malaria in the provision of responsive malaria services and the development of EHG IEC materials targeting special and vulnerable groups in the community. The NMCD will initiate actions that will culminate in the routine collection of disaggregated health data to enable the program track progress on EHG issues.</p> <p>The Matchbox assessment report (p. 15-24) and others (USAID 2017 baseline report) document CRG issues that constitute barriers to access, utilization, and effective participation in malaria prevention and curative interventions. Since CSOs/CBOs are close to communities and formed by community members, they understand the needs of their community’s needs. Engaging them increases opportunities for sharing knowledge and practices with their communities to minimize missed opportunities and improve the prevention and control malaria. In line with recommendations of the Matchbox assessment (p. 30,32), this grant proposes strengthening the capacity of the NMCD and district structures, CSOs/CBOs and other community actors/influencers, including representatives of key and vulnerable groups/populations in social mobilization, monitoring, and accountability for malaria control interventions. With grant resources, VHTs and representatives from CSOs/CBOs supporting key and vulnerable populations will be facilitated to document high-risk and underserved persons during household registration for the mass campaign, conduct community mobilization and dialogue meetings at districts, sub-county, and community levels, to increase acceptance and uptake of vector control and case management interventions within communities, and to generate demand for and appropriate use of malaria prevention and curative services in communities including key and vulnerable populations through community-led models.</p> <p><b><i>The Matchbox assessment report (p. 19-20) notes that addressing gender inequalities can accelerate burden reduction. With men having been identified as key priority audiences for change by the Chase malaria campaign assessment, the NMCD proposes to increase both women's and men's participation in malaria prevention and control through multisectoral collaboration and specifically with the Ministry of Gender, Labour and Social Development and their constituents to create forums for mobilizing communities for Malaria prevention and control.</i></b></p>
<b>Amount requested</b>	A sum of <b>USD 730,340</b> is requested within allocation for this intervention

<b>Component</b>	<b>Malaria</b>
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<b>Module</b> <b>NSPs Strategic Area</b>	<h2 style="color: #008080;">Case management</h2> <p><b><i>Strategic Objective 1: To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i></b></p>
<b>Intervention(s)</b>	<p>&lt; <b>Facility-based treatment</b>&gt; - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> <b>Continuation</b>, or <input type="checkbox"/> Scale-down</p>
<b>Rationale for Prioritization</b>	<p>In line with the WHO guidance, early diagnosis, prompt, and effective treatment of malaria through facility-based care (public and private sector) and community case management is a key intervention (UMRESP, p. 38).</p> <p>With the support of the current grant, the proportion of suspected cases that received parasitological testing was 97% in the public sector, 96% in the private sector (that are currently reporting), and 89% in the community (in 67 districts) in 2021/22. There was an improvement in the proportion of confirmed malaria cases that received first-line ACT treatment according to the national treatment policy to 99% in health facilities and 90% in the community in 2021/2022. There were modest improvements in the in-patient malaria deaths per 100,000 persons per year from 7.3 to 6.8 and the proportion of malaria deaths from 5.7 to 5.0 from 2020/21 to 2021/2022, respectively. The availability of malaria commodities at health facilities was 90% until July 2021, when there were disruptions in supplies due to rebound malaria epidemics in several districts. This stockout of malaria commodities also affected community interventions.</p> <p>The total number (health facility and community) of confirmed malaria cases was 15,587,459 (<b>2020</b>), 14,620,800 (<b>2021</b>), and 18,577,534 (<b>2022</b>). The notable increase from 2021 to 2022 in malaria cases was due to the rebound epidemic, probably explained by the waning effects of the ITNs from the 2020 mass campaign (GF LLIN study PACE) (Post distribution monitoring AMF), among other possible causes. However, as of March 2023, the malaria upsurge was regressing as observed from the monthly malaria cases (DHIS2); as observed from the monthly total malaria cases reduced to 601,333 in <b>February 2023</b>. In addition, the number of districts affected by the malaria upsurges dropped from 75 districts at the peak in the week of June 6th to 12th, 2022, to 20 districts in the week of February 27th to March 5th, 2023.</p> <p>Programmatic assessments and expert reviews reported the following; overall, there was a gradual increase in malaria confirmed cases, test positivity rate, and OPD malaria burden since 2017, only interrupted by the ITN mass campaign in preceding years as noted by decreases in 2018 and 2021. However, the 2021 effect was compromised by high net attrition, low physical durability, rapid loss of efficacy, and potentially high use of the cheaper standard nets instead of PBO or next-generation nets.</p>

A recent study<sup>3</sup> documents challenges with managing malaria cases in public facilities, pointing to knowledge and skills gaps that manifest in poor adherence to treatment guidelines and low quality of care, despite investments in capacity-building activities for health workers.

In the GC7 Malaria grant, the NMCD prioritizes access to early, accurate diagnosis and prompt, effective malaria treatment for all populations. This will be achieved through regular health worker trainings and mentorships (conducted biannually), clinical and death audits (conducted once a year for all health workers), supportive supervision (biannually), grand rounds (twice a year at two national referral hospitals, 18 regional referrals, and 50 general hospitals), and routine clinical drills (IMM guidelines edition 3, 2021). The “test, treat and track” policy is in place, and will be implemented to improve quality of care and surveillance. The country has also prioritized the death reduction strategy which will include strategies aimed at reducing deaths by utilizing smart discharge model and integrating the mortality audits into the MPDSR platform in RMNCAH department. The interventions for integration will include training health workers on malaria death review and surveillance in collaboration with the maternal mortality audit team and clinical services teams.

The UMRESP recommends that all suspected malaria cases in all settings be confirmed with a parasitological test, and a quality assurance program must support both microscopy and malaria RDTs. Malaria parasitological diagnosis is expected to reduce the overuse of antimalarial medicines by ensuring that treatment is given only to patients with confirmed malaria infection. In this grant malaria RDTs and the purchase of pan lactate dehydrogenase (pLDH) of up to 12% of the total malaria RDT need will be prioritized. Given the importance of improving the quality of malaria diagnosis occasioned by factors such as new findings in HRP2 deletions patterns and recruitment of new staff, NMCD has prioritized the training of a pool of national experts in malaria diagnosis, including microscopy (WHO certification and competency assessment model)

Over the next three years, it is envisaged that a total of 21,536,816 cases will need treatment (ref quantification workbooks) in 2024 taking all the assumptions into account. Artemether/ Lumefantrine will remain the preferred first line treatment, and DP as the alternative (6%) of the cases that fail to respond to the first-line treatment). For severe malaria management, injectable artesunate (7.6% of uncomplicated malaria cases) remains the preferred treatment. In community and outpatient facilities, pre-referral treatment with rectal artesunate suppositories will be used 1.5% of malaria cases seen in the community. NMCD has allocated funds to procure 100% of malaria commodities for case management. Other malaria

<sup>3</sup> Moffitt, C.A., Olupot-Olupot, P., Onen, J.W. *et al.* Adherence to severe malaria treatment guidelines in children at a Ugandan regional hospital: a baseline assessment for a malaria treatment quality improvement project. *Malar J* **22**, 67 (2023). <https://doi.org/10.1186/s12936-023-04507-4>

	<p>commodities required to support facility-based case management are gloves, blood, medical oxygen, and health supplies</p> <p>In this grant, NMCD proposes a different approach to capacity building using the low dose high frequency model<sup>4,5</sup> using findings from clinical audits and support supervision visits to inform components to address during trainings; and the clinical audits to inform mentorships. The skills labs will be established in selected referral hospitals to address gaps highlighted in severe malaria management.</p> <p>These activities will be backed by focused and targeted SBC activities that will create awareness about the availability of quality services and care at the health facilities and promote appropriate care-seeking practices for febrile illness among the population.</p> <p>NMCD has also prioritized the conduct of a systematic analysis to understand the prevalence of known drivers of artemisinin resistance such as presence and use of artemisinin monotherapies, characterization of the quality of malaria commodities used in Uganda. This activity will be supported by Makerere University School of Public Health given their previous record in supporting evidence generation and strengthening policy formulation and implementation. Funds of USD 599,208 have been provided within allocation for this activity.</p> <p><b>Post severe malaria discharge and chemoprevention:</b> According to the Integrated Malaria Management manual (2020), all patients admitted to health facilities for treatment of severe malaria should be given a package of preventive measures, including ITNs on discharge, to protect them from re-infection. A programmatic review of malaria-related deaths revealed that many of these deaths occur amongst persons re-admitted within 3 months post discharge following treatment for anemia and severe malaria<sup>6</sup>. The National Malaria Dialogue also recommended the placement of nets on hospital beds in high volume health facilities. The NMCD proposes to implement this recommendation with annual supplies of ITNs (because of the need for frequent washing) in a phased manner, starting with all 55 hospitals (100 beds) and 230 Health Center 4s (24 beds) across the country. The nets required under these interventions are placed under PAAR.</p>
<b>Amount requested</b>	A sum of <b>US\$ 62,339,286</b> is requested to cover the full needs for antimalarial medicines and mRDTs, of which <b>USD 2,503,558</b> is for implementation of interventions to improve quality of care and ensure adherence to malaria treatment guidelines from within allocation. An additional total of funds <b>USD</b>

<sup>4</sup> JHPIEGO, *Low Dose, High Frequency: A Learning Approach to Improve Health Workforce Competence, Confidence and Performance* 2011.

<sup>5</sup> Willcox, M., et al., *Incremental cost and cost-effectiveness of low-dose, high-frequency training in basic emergency obstetric and newborn care as compared to status quo: part of a cluster-randomized training intervention evaluation in Ghana*. *Global Health*, 2017. **13**(1): p. 88

<sup>6</sup> Nuwa, A. et.al. A non-randomized controlled trial to assess the protective effect of SMC in the context of high parasite resistance in Uganda (2023) *Malaria Journal* 22:63 <https://doi.org/10.1186/s12936-023-04488-4>

	<b>2,633,649</b> has been prioritized as above allocation request for injectable artesunate and implementation costs.
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Component	Malaria
<b>Module</b>	<b>Case management</b>
<b>NSPs Strategic Area</b>	<i>To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025</i>
<b>Intervention(s)</b>	< Integrated Community Case Management (iCCM) > - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	<p>Uganda has implemented the iCCM strategy since 2010 with the support of partners focusing on training, continuous support, and equipping VHTs with tools to provide diagnostics and treatment for pneumonia, diarrhea, and malaria for children under five years as well referrals for very sick children. iCCM is a vital intervention targeted to under-five children, a known vulnerable group at high risk of malaria morbidity and mortality (UMRESP, page 47/48). In the current malaria grant, iCCM was scaled up from 33 to 67 districts out of a targeted total of 136 districts in Uganda. The MTR noted that the scope and coverage of the intervention remain low at 49% (MTR, p. 45). Within iCCM-supported districts, over 62,000 VHTs have been trained, and the proportion of sick children two months - 5 years seen by VHT and treated within 24hrs for fever increased from 46% in 2020 to 60% in 2022. Between the 2019/2020 and 2021/2022 financial years, inpatient admissions for under five years children decreased by 9% from 189,038 to 171,948, and deaths decreased by 35% from 1,333 to 866 in ICCM-supported districts (DHIS2 report). The proportion of confirmed malaria cases that received first-line antimalarial treatment in the community increased from 88% to 90%.</p> <p>The MTR identified several gaps that resulted in suboptimal performance of this intervention during the current grant, including frequent stock outs of commodities and limited capacity in stock management at the community level, high VHT attrition (5%), inadequate supervision and mentorship, limited engagement with HMUCs in VHT activities, limited district engagement and delayed SR onboarding (MTR, p 45).</p> <p>This application prioritizes the iCCM intervention for hard-to-reach areas, high malaria burden, and epidemic-prone districts, addressing the needs of a key vulnerable population. Availability of malaria case</p>

management services at community level does not only make them easily accessible but also accelerates early treatment seeking thus reducing severe malaria and deaths. Based on lessons learned from the current grant, the proposal is to remain within the current iCCM scope and focus on improving the quality and effectiveness of implementation in these 67 districts. The overarching goal of the new grant will be to strengthen district ownership and participation in iCCM to promote sustainability through continuous advocacy and sensitization at the district, sub-county, and parish levels and in line with the recently launched community health strategy.

The proposal supports the procurement of iCCM commodities and supplies, including non-malarial drugs (ACTs, RDTs, RAS, gloves, safety boxes, reporting tools, medicine bags, zinc tablets and oral rehydration salt). With concerns of amoxicillin resistance in the country and limited evidence, the NMCD in collaboration with Child Health will review the available evidence to inform the implementation of current iCCM guidelines that still include dispersible amoxycillin tablets for treatment of pneumonia symptoms in under-fives in the community. The support will also cover data management and use, capacity building and support supervision, community-led monitoring, and sensitization and targeted home visits.

With support from GC7 funding for operational research (USD 300,000), NMCD working with Child Health Division will conduct evidence synthesis on the effectiveness of dispersible tablet amoxycillin as part of the iCCM of childhood febrile illness to treat pneumonia symptoms among the under-five children. This evidence synthesis will include review of the most recent data on bacteria resistance patterns to amoxycillin with particular focus on dispersible amoxycillin and causative organisms for community acquired pneumonia and related respiratory infections among the under-five children.

Findings from this review will inform the next course of action regarding the need to review the current treatments recommended as part of iCCM for childhood febrile illness among under-five children and the need for assessment of prevalence of resistant microbes to dispersible tablet amoxycillin.

Currently, with support from Fleming Fund country grant, Uganda has been establishing hospital-based AMR surveillance system at selected sentinel sites in regional referral hospitals <sup>7</sup>. The available data on resistance to commonly used antibiotics is from specimens obtained from patients in higher level hospitals. This is not representative of the prevalence of resistance in the community. In keeping in line with GF guidance on the importance of monitoring antimicrobial resistance with specific focus on use of dispersible tablet amoxicillin community treatment of under five children with pneumonia symptoms in the community, the Ministry of Health will support the AMR surveillance in the community among under-five children. Funds

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<sup>7</sup> Mugerwa I, Nabadda SN, Midega J, Guma C, Kalyesubula S, Muwonge A. Antimicrobial Resistance Situational Analysis 2019-2020: Design and Performance for Human Health Surveillance in Uganda. *Trop Med Infect Dis.* 2021 Sep 29;6(4):178. doi: 10.3390/tropicalmed6040178. PMID: 34698282; PMCID: PMC8544686.



(USD 300,000) requested for operational research will be used to conduct pilot studies. This activity will be led by Makerere University collaborating with the One-health platform, Antimicrobial Stewardship, Optimal Access and use technical working committee, NMCD and Child health. Findings from these studies will be used to catalyze additional resource mobilization and AMR surveillance from health sector partners such as the UK Fleming fund and US CDC and researchers in Uganda. However, additional funds as stated in Annex 3 of the RSSH Information Note may be required. These have not been prioritized in GC7 funding request.

Additionally, funds have been provided for within allocation in the GC7 malaria to support improvement of quality of fever management as part of iCCM and promote responsible and judicious use of dispersible tablet amoxicillin in treatment of pneumonia symptoms among under-five children (antimicrobial stewardship in iCCM).

Funding is requested to continue implementing iCCM in the 67 districts supported by GF in the current grant (figure 1.4). Funding for non-malaria commodities for 28 districts previously supported by FCDO, UNICEF

and World Bank who will exit in 2024 is included in this request. The PMI currently supports some community interventions in 17 districts but does not provide medicines for the VHTs. It is anticipated that this support will continue through the new grant period.

Funding has been requested to capacitate and facilitate the subnational structures including CSOs and CBOs to support the effective delivery of the ICCM intervention under the RSSH community systems strengthening interventions. Funds to support development of financial policies and operational manuals for CSOs will cover malaria, iCCM related provisions.

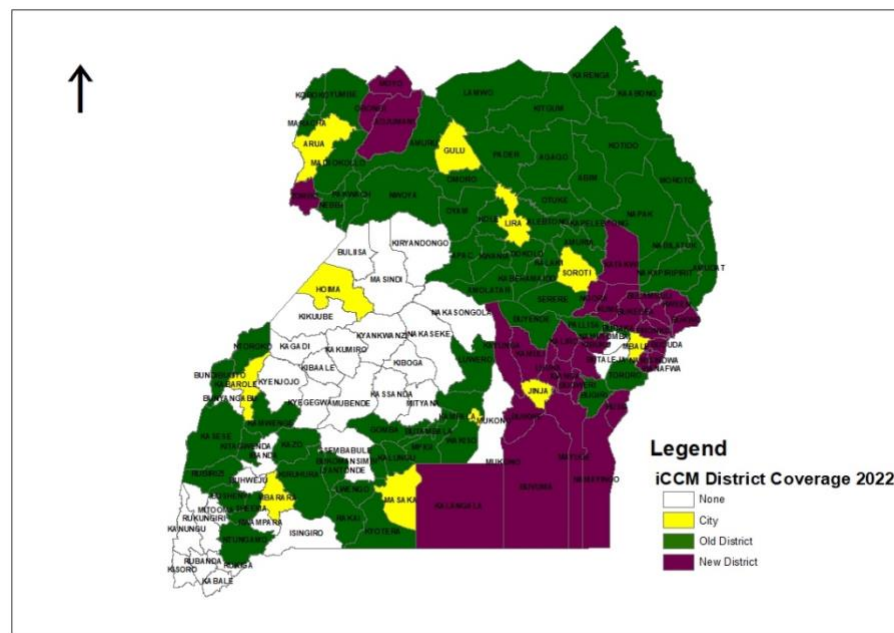


Figure 1.4: Distribution of iCCM Districts

<p><b>Amount requested</b></p>	<p>A sum of <b>US\$15,275,254</b> for first line ACTs and mRDTs (100% for three years), <b>USD 2,329,612</b> for <b>non-malaria iCCM commodities (dispersible Amoxicillin tabs, Zinc and ORS) (for one year ) are allocated within</b> allocation.</p> <p>An additional USD 7,592,940 has been allocated within allocation for iCCM implementation costs.</p> <p>A total of USD 21,700,615 has been presented as priority above allocation request for iCCM commodities and implementation costs. Of this, the total amount funds for contribute to transport for VHT members to pick malaria commodities from health facilities and submit reports is <b>USD 5,005,348</b>, for a total of 52,000 VHT members for 3 years at an approximate cost of USD 2.6 per month.</p> <p>The total amount of funds for examination gloves is USD 2,511,191; for sharps containers is USD 112,170, and for non-malaria commodities is USD 4,306,652.</p> <p>The rest of the budgeted funds totalling to USD 9,765,254 are to cover implementation costs for the introduction and implementation of iCCM in 8 additional districts that meet the criteria for prioritization of iCCM (high burden, epidemic prone, poorly served by formal health system and have substantial population of the stigmatized, overlooked and underserved vulnerable populations).</p>
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Component	Malaria
Module	<p><b>Case management</b></p>
NSPs Strategic Area	<p><i>Enhance quality of malaria services in the private sector with at least 80% of the private health facilities managing malaria according to national guidelines and reporting quality data by 2025</i></p>
Intervention(s)	<p>&lt; <b>Private sector case management</b> &gt; - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input type="checkbox"/> Continuation, or <input checked="" type="checkbox"/> Scale-down</p>
Rationale for Prioritization	<p>Uganda has been a beneficiary of the private sector co-payment scheme in the current and preceding grants, Given the pluralistic nature of the health system in Uganda, a substantial proportion of suspected malaria cases first seek care from private sector (~ 59% of febrile under-five children first seek care in private medicine outlets – UMIS 2019/20). NMCD has recently noted that the private sector co-payment mechanism has stagnated in achieving its intended objectives of increasing availability of affordable quality assured ACTs. As such, NMCD has prioritized funds to conduct a systematic analysis of outcomes of</p>

	<p>previous investments and operational research to understand the dynamics and relationships that influence the outcomes of the private sector co-payment mechanism.</p> <p>A recent survey reported that all visited health facilities had at least one co-paid ACT, and 56% had an mRDT on the day of the visit (ACT Co-payment Compliance report, 2021 p. 14, 18). However, many of the brands of mRDTs on the market have questionable quality. Providing subsidized RDTs is necessary not only to increase testing of malaria in the private sector, which further reduces the consumption of ACTs among patients that could potentially pass for malaria but are not, it also improves the quality of diagnosis by increasing access to quality affordable malaria testing. In the new grant, the NMCD prioritizes improving access to quality and reporting of malaria testing and treatment in the private sector by allocating resources to co-payment for commodities, and working through professional councils, associations, and the District Health Supervisory Authority to build capacity of private sector health care providers to train, mentor, and reinforce quality malaria case management. These will be achieved through refresher trainings, continuous professional development, clinical and mortality audits, value chain analysis, provider feedback meetings, facilitation of the task force to coordinate stakeholders and monitor the implementation of subsidy activities, commodities availability, and price; implementation of Standardized Quality Improvement System (SQIS). These activities will be backstopped by targeted SBC activities that will create the awareness about the availability of subsidized quality assured ACTs, the recommended retail price, and care seeking practices for febrile illness. Given resource constraints, only 20% of the required funds for malaria commodities for private sector will be within allocation and the rest prioritized as above allocation request.</p>
<b>Amount requested</b>	A sum of <b>USD 3,461,872 for co-payment commodities and PSCM co-interventions</b> is requested within allocation and <b>USD 17,261,565</b> in PAAR to cover commodity costs

<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Case management</b>
<b>NSPs Strategic Area</b>	<i>Strategy 4.7: Strengthen malaria Epidemic Prevention, Preparedness and Response at all levels</i>
<b>Intervention(s)</b>	<Case Management - Epidemic preparedness > - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down

## Rationale for Prioritization

Despite the unprecedented investment and deployment of recommended malaria interventions over the last 20 years, Uganda experienced a generalized increase in malaria cases affecting more than 75 districts in 2022. Surprisingly, there was a disproportionate increase in malaria cases in the districts of regions (Bukedi, Busoga, Lango and Teso regions) that were receiving IRS, likely due to the change in IRS insecticide to Clothianidin-based insecticides in 2020. Non-IRS districts also experienced malaria epidemics in 2022.

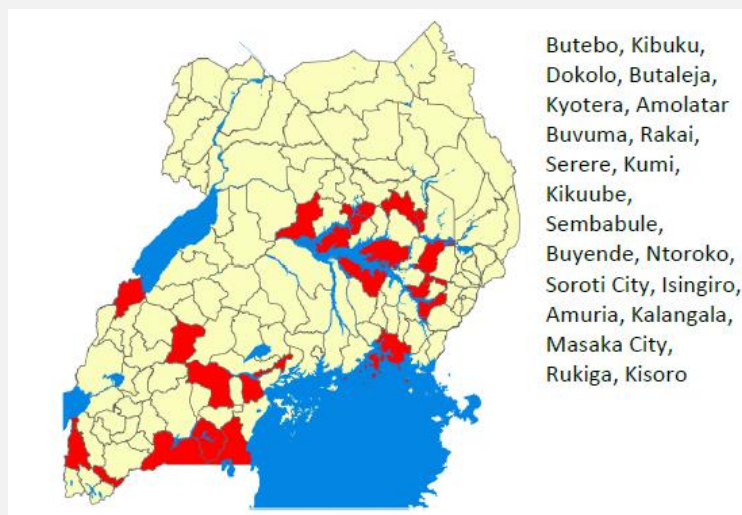


Figure 4. Map showing 21 districts in Uganda that are on the malaria epidemic alert

Some potential causes of the rebound malaria epidemic are low effective coverage of LLINs, suboptimal efficacy and longevity of insecticides used for IRS, poor health seeking behavior, and poor LLIN use, care, and repair by communities. Response to the epidemics was hampered by lack of a costed epidemic response plan. The existing plan has not been disseminated to the district level to clarify to them their roles and responsibilities and mode of operation. The midterm review also suggested structural and socioeconomic factors that influenced the prevalence of inequities and inadequate access to key antimalaria interventions; programme management limitations to engage and support the districts, and inability to address the behavioral issues at community level hindering maximal use of the interventions and services.

The NMCD was supported by donors (GF and PMI) and stakeholders to reactivate district malaria task forces; and enhance the availability of malaria diagnostics, medicines, and blood to minimize the impact of the epidemic in the affected districts.

For GC7 malaria funding request, NMCD and MoH will transform the epidemic response out of the routine malaria programming to the Incident Management System (IMS). IMS is an approach for organizing and managing emergency responses through a common framework. Uganda has used the IMS to successfully respond to and manage the recent COVID19 pandemic and Ebola epidemic. Surveillance and epidemiologic investigations, laboratory services, medical care, medical countermeasure, public messaging and risk communications, and partner coordination are all organized in a series of task-similar structures within an IMS known as pillars. It also enacts implementation through the Rapid Response Teams, District Task Forces, Emergency Operations Center. MoH adapted the IMS model to improve the efficiency of

malaria epidemic response for impact having used the similar model to successfully respond and control COVID-19 and Ebola outbreaks in the country. The IMS for malaria has been set up and in-country team have been on the management of malaria outbreaks in the context of the IMS.

The IMS applies the WATCH>ALERT>RESPONSE>RECOVERY framework.

The watch phase includes activities to create watch list by mapping epidemic prone regions, districts and sub-counties and conducting risk stratification based on flooding, temperature variations, intense vector, refugee movements, and low transmission settings.

The alert phase entails investigating threats including case rises and foci, increased admissions, deaths, availability of malaria commodities, entomological assessments, capacity to respond, risk assessment and detect epidemics for response.

The response phase involves deploying predefined intervention packages such as MDA and ITNs for malaria epidemics in high transmission settings and test and treat and ITNs in low transmission settings. The intervention packages in the different phases are based on the seasonal calendar such as prevention, routine nets, SMC, IRS. It also involves activation structures across all levels.

The improve/recovery phase involves risk communication, community engagement and intra and after-action reviews.

MDA can be a powerful and synergistic new tool to reduce malaria transmission in regions with epidemic or seasonal malaria transmission. Additionally, WHO recommends Malaria Mass Drug Administration during Malaria epidemic as a means for reducing severe malaria cases and deaths and complex emergencies for reducing the workload for staff and de-bulking the overwhelmed health care system.

In the UMRESP 2021-2025 MDA has been evaluated for consideration as one of the key interventions during epidemics and complex emergencies. The country has just recently implemented MDA during the EVD outbreak in Mubende and Kasanda and the major limitations included delay in resource mobilization and non-availability of commodities. Use of MDA in the context of Ebola provided protection to the suspected malaria cases and also eliminated Ebola false alerts from fevers. In the GC7 malaria funding request, funds for MDA have been provided for as PAAR.

Using the IMS approach will reduce these barriers to the barest minimum. Funds are requested from the GF in the new grant for operationalizing the IMS for malaria epidemics preparedness and response with specific support for the optimal functioning of the pillars.

<b>Amount requested</b>	<b>US\$ 6,128,566 (malaria commodities), of which USD 1,505,933 is for implementation costs is requested within allocation and US\$ 5,295,029 is requested under PAAR for MDA (100%) and for additional commodity needs.</b>
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<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Case management</b>
<b>NSPs Strategic Area</b>	<b>Strategy 4.4: Strengthen surveillance for vector bionomics, insecticide, and drug Resistance</b>
<b>Intervention(s)</b>	<Case Management- <b>Therapeutic efficacy surveillance</b> > - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	Recent studies to assess efficacy of the artemether/lumefantrine (AL), the first line ACT for uncomplicated malaria in Uganda, artesunate/amodiaquine (ASAQ), the alternative first line ACT and dihydroartemisinin/piperaquine (DP) have consistently reported genotype-corrected efficacies above the 90% WHO threshold, above which there is no need to consider change of the malaria treatment policy. However, other studies have demonstrated emergency and expansion of the prevalence of K13 propeller domain mutations (469Y and 675V) that have been associated with artemisinin resistance in Uganda. Such findings provide a strong basis for regular surveillance of markers of artemisinin resistance to inform the malaria treatment policy and continued efficacy studies to assess parasitological and clinical outcomes of the recommended antimalarial agents. In accordance with WHO guidance, NMCD tests efficacy of first- and second-line antimalarial treatment at least once every 24 months at sentinel sites. Therefore, Therapeutic Efficacy Studies at three sites will be conducted with support from the US Presidential Malaria Initiative (PMI) and a provision for funds for an additional three sites has been made in this funding request.
<b>Amount requested</b>	<b>Funds USD 660,000 is requested for Therapeutic Efficacy Studies within allocation and USD 150,000 as PAAR to supplement support from US PMI.</b>

<b>Component</b>	<b>Malaria</b>
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<b>Module</b>	<b>Case management</b>
<b>NSPs Strategic Area</b>	<b>Strategy 4.4: Strengthen surveillance for vector bionomics, insecticide, and drug Resistance</b>
<b>Intervention(s)</b>	<Case Management – Interventions to address drivers of artemisinin resistance> - Change in Programming from current grant: <input type="checkbox"/> New, <input checked="" type="checkbox"/> Scale-up, <input type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	Several studies have signaled increasing and expanding prevalence of the K13 C469Y marker for artemisinin resistance, particularly in the Northern part of Uganda. Other studies have detected these resistance markers in other locations across the country. This is likely due to widespread use of artemisinin monotherapies such as rectal artesunate and injectable artesunate through community and private sector channels are recognized in the UMRESP arrangements for malaria service delivery. Reviews of this evidence have called on the NMCD, the public, NGO, and private sectors to strongly promote adherence to malaria treatment guidelines as one the measures to reverse the expanding prevalence of artemisinin resistance markers. As part of this funding request, NMCD requests for funds within allocation to conduct operational studies to generate evidence about the prevalence and factors associated with known drivers of artemisinin resistance such availability and use of monotherapies, adherence to treatment guidelines, particularly in the private sector. These studies will conduct a deeper analysis of follow-up treatment with a full course of ACTs following the prereferral or injectable artesunate in severe malaria, quality of malaria commodities and services including the ACTs and malaria RDTs. This is crucial given anecdotal evidence shows that supply chain actors may have taken advantage of the recent disruptions to the commodity supply chain occasioned by the COVID19 pandemic. A sum of USD 599,208 has been requested for this activity. For implementation readiness, this activity will be implemented by the Makerere University School of Public Health given their record in generating evidence and collaborating with MOH and providing support in addressing the main health challenges in Uganda.
<b>Amount requested</b>	<b>Funds USD 599,208 is requested for this activity within allocation and USD 123,200 as PAAR.</b>

<b>Component</b>	<b>Malaria</b>
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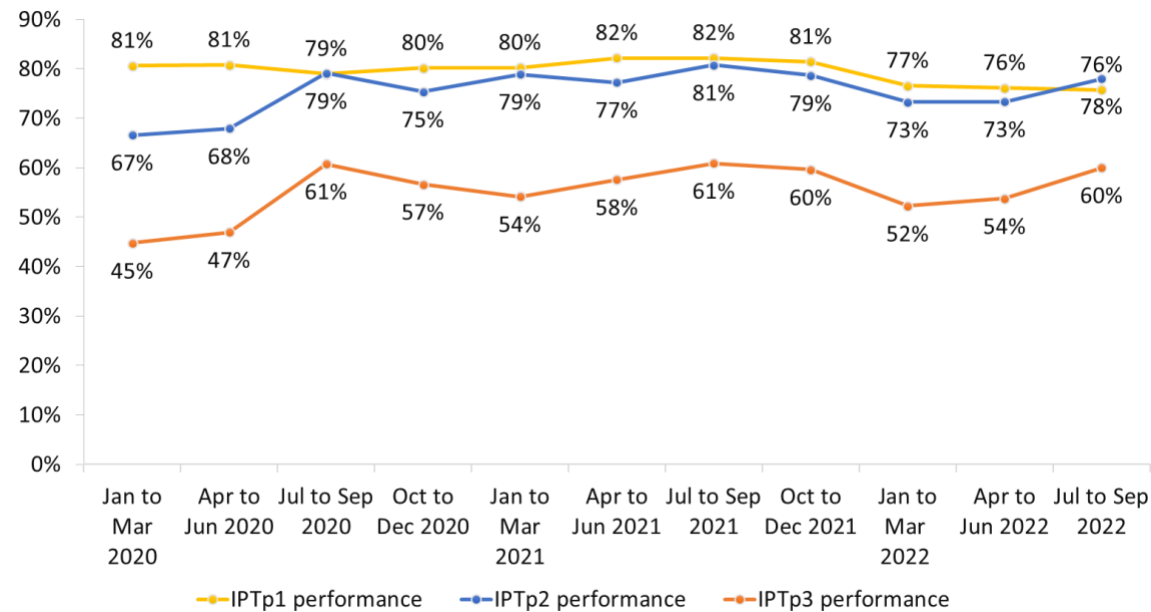
<b>Module</b>	<b>Case management</b>
<b>NSPs Strategic Area</b>	<b>Strategy 1.2: Improve and sustain parasite-based diagnosis</b>
<b>Intervention(s)</b>	<Case Management - <b>HRP 2/3 gene deletion surveys</b> > - Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	The discovery of malaria RDTs was of fundamental importance for malaria case management, for targeting therapy, reducing drug wastage, and limiting pressure towards the development of resistance and transformed universal access to malaria parasitological testing from a “ <i>pipe dream</i> ” to a tangible possibility. The <i>Pf-HRP2</i> RDTs are most widely used because they are cheaper, have better sensitivity and greater thermal stability than the pan lactate dehydrogenase (pLDH) detecting RDTs, and they detect <i>P. falciparum</i> malaria, the most predominant and virulent of the <i>Plasmodium species</i> . The usefulness of HRP-only malaria RDTs is threatened by the identification of patients infected with <i>P. falciparum</i> strains that have acquired deletions in the genes that encode the proteins (pfhrp2 and pfhrp3), rendering them undetectable by <i>HRP2-based RDTs</i> . As such, it is a priority for NMCD (as stated in the UMRESP, page 46 - 47) to conduct studies to define the frequency and distribution of these diagnostically relevant mutations in circulating <i>P. falciparum</i> strains; and to generate and use concrete guidance on malaria diagnosis and treatment in settings where such mutations may be found to be frequent. It is important to determine whether the local prevalence of mutations in the <i>P. falciparum HRP2/3</i> genes that lead to false negative malaria RDTs has reached a threshold that might require a local or national change in diagnostic strategy. The first wide scale survey in 48 districts of Uganda between 2017/2019 confirmed presence of HRP2/3 gene deletions <sup>8</sup> . This intervention will be supported by funds from Gates Foundation and thus no allocation has been made for it in this funding request.
<b>Amount requested</b>	No amount is requested for this intervention that is supported by the Gates Foundation

<b>Component</b>	<b>Malaria</b>
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<sup>8</sup> Agaba, B.B., Anderson, K., Gresty, K. *et al.* Molecular surveillance reveals the presence of *pfhrp2* and *pfhrp3* gene deletions in *Plasmodium falciparum* parasite populations in Uganda, 2017–2019. *Malar J* **19**, 300 (2020). <https://doi.org/10.1186/s12936-020-03362-x>



<b>Module</b> <b>NSPs Strategic Area</b>	<h2 style="text-align: center;">Specific Prevention Interventions</h2> <p><b><i>Strategy 1.4: At least 85% of all pregnant women are protected with quality malaria prevention interventions</i></b></p>
<b>Intervention(s)</b>	<p><b>Intermittent preventive treatment (IPT) – in pregnancy</b></p> <p>Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> <b>Continuation</b>, or <input type="checkbox"/> Scale-down</p>
<b>Rationale for Prioritization</b>	<p>The UMRESP (p. 48) recognizes pregnant women as a vulnerable group with a higher risk for malaria compared to rest of the population. Ugandan IPTp guidelines recommend SP 1500mg/75mg given monthly to all mothers (regardless of malaria transmission risk, gravidity, suspected SP resistance), started as early as possible in the second trimester and after 13 weeks of gestation, with the aim of the pregnant mother receiving at least 3 doses or more during a pregnancy.</p> <p>The uptake for IPTp-3 has increased from 40% 2019 to 62% in 2022/23 (MTR, page 4), attributable to the strengthened coordination and collaboration between key stakeholders at national level, especially between the NMCD and the Reproductive and Infant Health Division, that was reinforced through monthly Thematic Working Group (TWG) meetings, quarterly ANC sub-committee review meetings and biannual stakeholders’ meeting. These fora facilitated joint planning and implementation, regular reviews, feedback, and accountability and collective, corrective action. Cascaded trainings to over 70% of the public health facilities, onsite mentorships, availability of IPTp operational guidelines in 55% of public health facilities also contributed to improving IPTp uptake. Additionally, the stock outs of sulfadoxine/pyrimethamine (SP) reduced from 10% (2019) to 6% (2022/23).</p> <p>However, coverage remains below the set target of 67%, the performance is sub-optimal and below impactful levels in terms of frequency (number of IPTp doses) and coverage.</p>



*Figure 5. Pattern of performance of IPTp1, IPTp2 and IPTp3 coverage from January 2020 to September 2022*

The MTR noted delayed ANC initiation with only 37% of the pregnant women having attended ANC 1 in the 1st trimester coupled with the low ANC retention with only 52% of pregnant women attending ANC 4 as a key limitation. This is due to low awareness levels for benefits of early ANC initiation and strict adherence to ANC visit schedules, unfavorable misconceptions held by the communities, and cultural beliefs. Worse still, some mothers are hindered by the long distance to the health facilities, the long waiting time that is worsened by their minimal or non-participation in decision making in the household. These challenges are worse among the vulnerable groups (teenagers that make up 25% of the total pregnancies and others like the female prisoners, refugees and disabled pregnant women).

The decreasing availability of Directly Observed Therapy (DOT) commodities that is worsened by the increasing need for infection control during DOT, in the context of emerging and re-emerging diseases like the COVID19 pandemic has also been noted as a key barrier. Other limitations include the non-adherence to the standard guidelines in the private sector leading to suboptimal implementation of IPTp and other MIP interventions. This affects a substantial proportion of the population (49%) who seek care from private sector in the peri-urban and urban setting. While trainings and provision of guidelines has happened for

	<p>most public facilities, the change in provider practices has not been sustained as noted by the inconsistent trend for performance indicators. Other gaps include the low rate at which mothers are tested for Malaria at 1<sup>st</sup> ANC. Lastly, the weak coordination of key actors at the subnational level hinders follow up of key actions for lower-level implementation including efforts to adopt the new WHO guidelines on Malaria in Pregnancy (WHO ANC model 2016).</p> <p>The priority is to expand access to malaria in pregnancy interventions to the eligible population, including teenage mothers, young women, single mothers, those who are poor and less educated and those who reside in remote and rural areas, tailoring the deployment to subnational and district contexts. Prioritized activities within allocation in the GC7 grant include coordination and collaboration of stakeholders at all levels for joint programming, implementation, accountability, and review and feedback; scale up of community led approaches for consistent improvement of ANC services; procurement and distribution of IPTp DOT support commodities to public facilities and private-not-for-profit; updating and disseminating MIP standard operational guidelines and tools to include current WHO guidance; strengthening and sustaining the capacity of health workers in all facilities (Public, PNFPs and PFP) to deliver quality MIP services; streamlining the linkage and referral of pregnant women within the health facilities, from community to facility and vice versa with emphasis to the underserved mothers, teenagers/adolescents, prisoners, refugees, those from remote areas or affected by distance, poor road infrastructure with the support of community health workers, CBOs, CSOs and FBOs. Operational research will be conducted to assess the feasibility, acceptability, safety and effectiveness of community IPTp.</p>
<b>Amount requested</b>	The GOU provides funding for the SP tablets required for this intervention. A sum of <b>USD 2,363,995</b> is requested within allocation for the implementation costs. <b>USD 1,867,443</b> has been requested as PAAR.

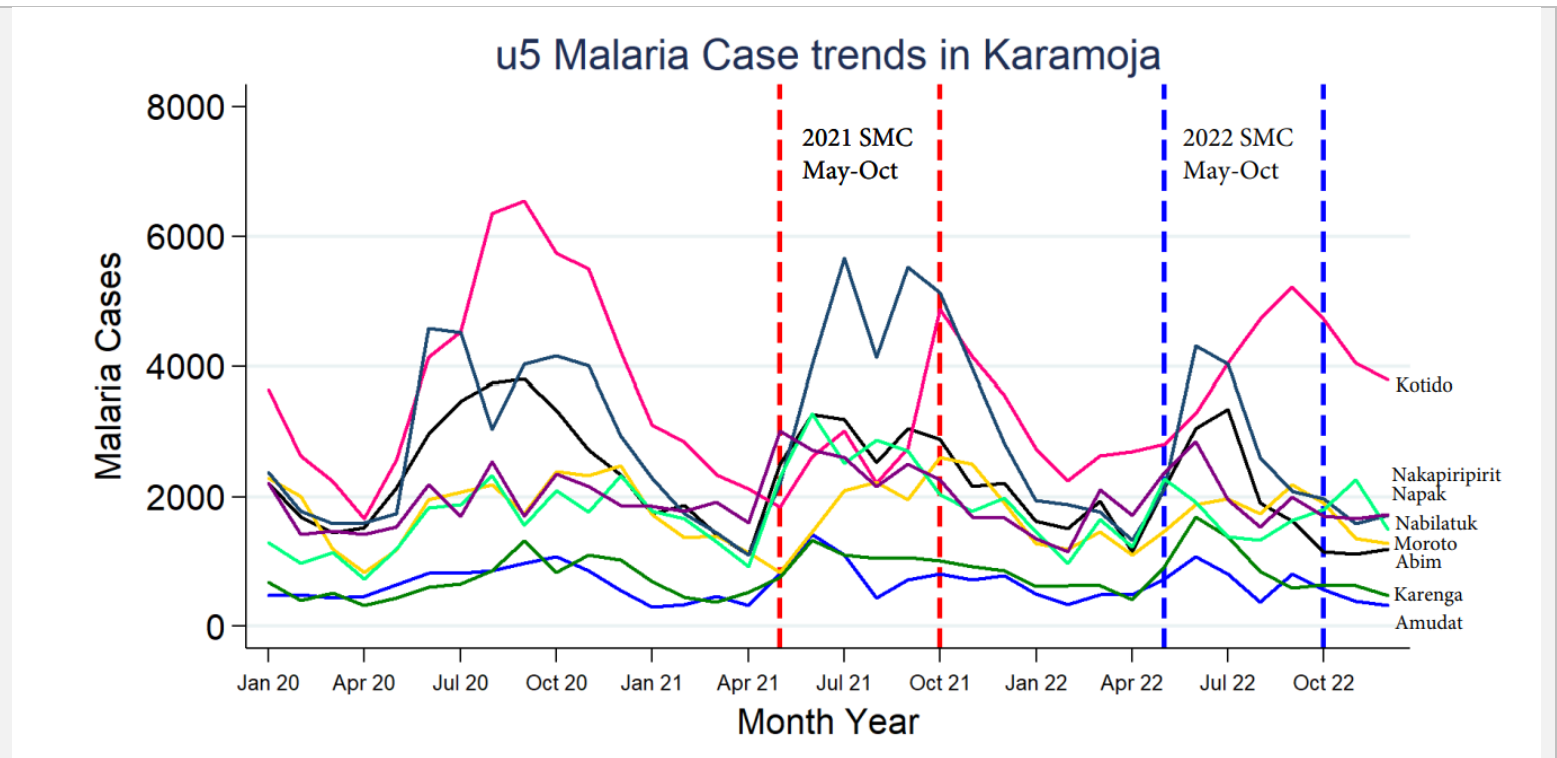
<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<p><b>Specific Prevention Interventions</b></p> <p><i>Strategy 1.4: At least 90% children 3-59 months in areas with seasonal malaria transmission are protected through malaria chemoprevention.</i></p>
<b>NSPs Strategic Area #&lt;SO1&gt;</b>	
<b>Interventions</b>	<p><b>Seasonal Malaria Chemoprevention</b></p> <p>Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> <b>Continuation</b>, or <input type="checkbox"/> Scale-down</p>

**Rationale**

Stratification and subnational tailoring of malaria interventions was incorporated into the UMRESP 2020/21 - 2024/25. This was informed by review of malaria burden and modelling led by Swiss Tropical Institute on the best mix of malaria interventions for maximum reduction of malaria morbidity and mortality. The Karamoja subregion consistently reports the highest malaria prevalence rates (34% in U5 children by microscopy – UMIS 2019). Malaria transmission is seasonal, and it is highest from May to September (>60 of malaria transmission), which coincides with the unimodal patterned rainy season. Karamoja, is sparsely populated by nomadic pastoralist communities, and has unique housing infrastructure thus may not be amenable to conventional deployment of priority malaria interventions. Therefore, it is a suitable context to maximize the benefit of seasonal malaria chemoprevention (SMC) using SP and amodiaquine (SPAQ) among the U5 children, a high malaria risk group.

In line with the priorities in the UMRESP (p. 55), the NMCD in collaboration with Malaria Consortium assessed the protective effectiveness of seasonal malaria chemoprevention - monthly administration of SP and amodiaquine (SPAQ) - to children aged 3–59 months in Karamoja. The study applied the standard door-to-door distribution model using village health teams (VHTs) members and demonstrated U5 children in intervention districts had a 92.2 percent lower risk of developing confirmed malaria in the five-month follow-up versus those in the control district. This study also found that SMC using SPAQ was highly feasible, acceptable, and safe<sup>9</sup>. Similarly, a systematic analysis of routine health facility data revealed substantial reduction in malaria incidence among under five before and after SMC in intervention districts compared to control. Uganda is thus among the 1<sup>st</sup> countries outside the Sahel region to successfully test SMC implementation.

<sup>9</sup> Nuwa, A., Baker, K., Bonnington, C. *et al.* A non-randomized controlled trial to assess the protective effect of SMC in the context of high parasite resistance in Uganda. *Malar J* 22, 63 (2023). <https://doi.org/10.1186/s12936-023-04488-4>



Based on this evidence, the SMC intervention was expanded from 2 to 8 districts out of the 9 in Karamoja in 2022.

For this GC7 malaria funding request, given the limited funds, we have prioritized SMC for all the 9 districts in Karamoja, and allocated funds within funds to continue SMC implementation in 4 districts leaving costs for five SMC in five districts prioritized as above allocation request. NMCD will engage with *Givewell*, an existing health sector partner, to mobilise resources to cover this gap. Additionally, districts will be empowered gradually to take over leadership of its implementation. Activities to build district capacity will include provision of approved updated SMC operational guidelines and tools, refresher training for district trainers, VHT supervisors and VHTs support supervision during the distribution, conduct sensitization meetings, media activities, community dialogues within the districts to facilitate implementation microplanning, advocacy, risk communication and community engagement and SBC, procure and distribute SMC commodities, support the implementation data collection, analysis and reporting, and monitoring and evaluation activities, including

	end of cycle survey using the Lot Quality Assurance Sampling (LQAS), surveillance and data utilization and joint review meetings.
<b>Amount requested</b>	<b>USD 2,440,738</b> is requested for SMC, of which <b>USD 1,407,221</b> is for implementation costs within allocation and <b>USD 1,540,646</b> under PAAR for this intervention

<b>Component</b>	<b>Malaria</b>
<b>Module</b>	<b>Module: Specific Prevention Interventions</b>
<b>NSPs Strategic Area</b>	<b><i>Strategic Objective 01: To accelerate access to malaria preventive and curative services to achieve universal coverage in all eligible populations by 2025.</i></b>
<b>Interventions</b>	<b>Intermittent Preventive Treatment in School Children</b> Change in Programming from current grant: <input checked="" type="checkbox"/> <b>New</b> , <input type="checkbox"/> Scale-up, <input type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down
<b>Rationale</b>	The malaria burden among school-aged children is substantial and has often been overlooked. Program assessments and expert reviews have noted the increase of severe malaria cases among school aged children. They are at risk for asymptomatic malaria and often have higher parasite prevalence as compared to other populations. They are recognized as important contributors to the infectious reservoir for onward transmission of malaria. This age group is of concern as they may become the next high malaria risk group after the under five children as the level of acquired immunity in the population falls. The UMRESP, thus prioritizes piloting efforts to address this risk. There was a notable increase in confirmed malaria cases among children aged 5 to 19 years from 5,198,562 in 2021 to 7,428,949 in 2022 (HMIS). Local studies demonstrated that monthly IPT with DP offered protection against clinical malaria, parasitemia and anemia in school children living in a high malaria transmission setting <sup>10</sup> . Therefore, the NMCD has prioritized conduct of a pilot of IPTsc in high burden districts in Busoga, Lango and Acholi areas, regions that contribute substantially to the confirmed malaria cases. Additionally, hot spots will be targeted within these

<sup>10</sup> Rehman, A.M., Maiteki-Sebuguzi, C., Gonahasa, S. *et al.* Intermittent preventive treatment of malaria delivered to primary schoolchildren provided effective individual protection in Jinja, Uganda: secondary outcomes of a cluster-randomized trial (START-IPT). *Malar J* **18**, 318 (2019). <https://doi.org/10.1186/s12936-019-2954-0>

	regions. Activities include a pilot to generate lessons for adaptation of IPTsc including development and field testing of implementation guidelines and monitoring and evaluation, distribution and administration of the malaria commodities and pharmacovigilance. The implementation of IPTsc will use established structures of the Neglected Tropical Diseases (NTDs) program that has been in place for over 10 years. This program relies on science teachers and school nurse dispensaries.
<b>Amount requested</b>	<b>USD 11,752,027</b> is requested Priority Above Allocation Request this intervention

<b>Component</b>	<b>Program management (Malaria)</b>
<b>Module</b>	<b>Module: Program management</b>
<b>NSPs Strategic Area</b>	<b><i>Strategic Objective 6: By 2025, at least 80% of districts will have strengthened enabling environment to deliver malaria interventions and measure progress through coordinated partnership and multi-sectoral collaboration.</i></b>
<b>Intervention 1</b>	< <b>Coordination and management of national disease control programs</b> >  Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> <b>Continuation</b> , or <input type="checkbox"/> Scale-down
<b>Intervention 2</b>	< <b>Grant management</b> >  Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> <b>Continuation</b> , or <input type="checkbox"/> Scale-down
<b>Rationale for Prioritization</b>	The NMCD is mandated to provide strategic oversight for the effective and efficient delivery of malaria interventions in the country (UMRESP p. 45). It led the development of the UMRESP 2020/21 – 2024/25 and its implementation is based in the foundation of Mass Action Against Malaria (MAAM) and High Burden to High Impact (HBHI) initiatives. It promotes ownership and strong political leadership of all levels of government with involvement of communities and stakeholders in the context of multi-sectoral approach to deliver equitable, systemic, and sustainable access to quality services. The principles of sound stewardship, transparency, and accountability underpin the performance of these functions.

In the new grant, the NMCD will continue to ensure that malaria and related statutory policies, regulations, and guidelines are updated as and when due, guided by global, regional, and national guidance. These will be disseminated, and efforts for ensure compliance and appropriate use among all stakeholders will be supported. The structures required to operationalize these policies and guidelines at all levels, will be capacitated and facilitated for optimal functionality. Work plans and accountability requirements, as well as support supervision and mentorship of stakeholders in line with the MOH's integrated supervision strategy, will guide the implementation of interventions. Feedback mechanisms at all levels will be strengthened through joint review and planning meetings for technical and managerial accountability.

Although the implementation of GF grants has been mainstreamed into the Government of Uganda structures, insufficient staffing numbers necessitated the filling of critical gaps in human resources to ensure the effective implementation of interventions in previous grants. Under the new grant, the country proposes to continue supporting these staffing positions.

Uganda is progressively moving from a biomedical model of disease control, recognizing that several determinants of the burden of malaria in the country are outside the health sector. The need for a concerted multisectoral approach to malaria programming is imperative to leverage and mobilize additional domestic resources for malaria prevention and control from other sectors, public and private.

Under the current grant, a multisectoral partnerships and collaboration strategy was developed and adopted. With the new funding cycle, NMCD proposes to operationalize this strategy with the support of the Office of the Prime Minister (Prime Minister's Delivery Unit), which has an oversight role over all government MDAs. The OPM, through this collaboration, will ensure the systematic mainstreaming of malaria control and prevention activities into sector-specific programs and facilitate a robust coordination mechanism beyond the health sector. Funds have been allocated for the following priority activities.

1. Conduct national, regional and district coordination meetings: RBM in-country partnership, NMCD performance and budget review and planning meetings, malaria technical working group meetings, integrated health sector planning at districts, private sector co-payment mechanism taskforce, East Africa Community (EAC), GLMI technical working group. NMCD has prioritized efforts to support coordination mechanisms for Civil Society Organizations including their secretariat and malaria CSO networks - Malaria and Childhood Illness NGO Secretariat (MACIS) and Uganda CSO Alliance Against Malaria (UCAAM). Funds to support office space, furnishing and modest administrative costs have been prioritized as above allocation request.
2. Conduct monitoring using malaria score cards and adapted tools for gender, equity, and human rights priority interventions.



3. Develop and disseminate strategic plans, guidelines, standard operating procedures, and reporting tools at regional, national and district levels. These include EAC/GLMI, equity, human rights, and gender equality (EHG), malaria work plans, national malaria strategic plan 2025/26 to 2029/30.
4. Continue Global Fund technical assistance to program management; the Epidemiologist, NMCP BCC Specialist, Accountant Malaria, LLIN Coordinator, Senior Finance Officer, iCCM Coordinator, PSM Officer Malaria, Senior Advocacy Officer, Finance & Multi Sectoral Collaboration Coordinator, Private Sector coordinator, Policy & Strategy Analyst and Entomologist.
5. Reskilling and retooling staff learning and exposure visits for innovative initiatives; School ITNs distribution in Tanzania, malaria data repository in Nigeria, malaria elimination initiatives -Zanzibar and malaria leadership training courses in malariology for district health team staff to improve the buy in into elimination strategy.
6. Engage, orient and facilitate the Office of the Prime Minister, Ministries of Local Government, Education and Sports and district local governments in implementation of the Mass Action Against Malaria guidelines and other relevant malaria interventions, and to hold relevant accounting officers for implementation of priority malaria interventions.

**Grant management:** Grant management costs by Principal recipients are required to cover over heads, office running and communication costs, coordination and audit fees for oversight and compliance review. This grant will be implemented by Ministry of Finance, Planning and Economic Development (MoFPED) as PR1 and The AIDS Support Organization (TASO) as the non-public sector principal Recipient. PR2 thus requests funds to support oversight, administrative and human resource costs for staff that coordinate/implement activities under PR 2, under two categories: full time staff and those that provide a Level of Effort.

Human Resource costs for Grants Management Unit: Implementation of Global Fund grants is coordinated by the Grants Management Unit (GMU) at TASO. Staff positions in the current NFM3 grant ending December 2023 have been maintained. These include the Project Coordinator, M & E Manager, Technical Advisors, Finance Manager, Procurement Manager, Senior Internal Auditors, Project Officers, M & E specialists, Accountants, HR specialist, IT specialist, Compliance Specialists, Accounts Assistants, Project Assistants, Drivers, and Office Attendant. A total amount of \$ 1,938,733 has been requested within allocation for remuneration of the staff in these positions.

Additional costs relate to other mainstream TASO staff that provide a level of effort towards coordination, oversight during implementation of GF grant activities including 11 regional TASO Centers- of Excellence that provide additional liaison/oversight/supervision roles. They are the first point of contact for districts and implementers for the respective regions. They participate in district level planning and oversight of

	<p>implementation, and these include: - the Executive Director, 5 Chiefs, 8 Senior management team, 11 Centre Program Managers, and 8 Support staff. A total of \$ 179,126 has been requested.</p> <p>Oversight and administrative costs: \$ 432,542 have been appropriated to training, supervision, performance reviews, compliance and audit reviews, mentorship and capacity building of Sub-Recipients. Assurance and other operational costs: governance, Equipment and maintenance costs, rent &amp; utilities, IT, audit, and software &amp; system maintenance are covered in this priority area. A total of \$ 2,050,402 has been requested within allocation for grant management costs for this second PR.</p>
<b>Amount requested</b>	<p>A sum of USD 6,927,999 is requested within allocation for NMCD coordination, management and grant management costs. Specifically, technical assistance and HR support to NMCD (USD 1,762,200), program management, coordination meetings, joint reviews and program reviews, development of NSP (USD 1,592,376), Office of Prime Minister (USD 432,550), Ministry of Local Government (USD 308,021) Ministry of Education and Sports (USD 332,450) and grant management (USD 2,050,402). An additional USD 600,450 has been requested above allocation to support the coordination of non-state actors including CSOs and CBOs</p>

Component	RSSH
Module	<b>Monitoring and Evaluation Systems</b>
NSPs Strategic Area #<SO4>	<i>Strategic Objective 4: By 2025, decisions for malaria programming at all levels are guided by a functional and comprehensive surveillance system and data repository for effective sub-national response, monitoring and evaluation as well as priority operations research</i>
Intervention(s)	<p>&lt; RSSH: Monitoring and Evaluation Systems &gt;</p> <p>Change in Programming from current grant: <input type="checkbox"/> New, <input type="checkbox"/> Scale-up, <input checked="" type="checkbox"/> Continuation, or <input type="checkbox"/> Scale-down</p>
Rationale for Prioritization	<p>The UMRESP calls for a robust malaria surveillance system anchored on collecting, storing, analysis and using quality data to inform programmatic decisions (UMRESP, p. 53 – 56). Such an optimally functioning system would ensure that the NMCD can measure and demonstrate the progress towards reducing the burden of Malaria through tracking the implementation of interventions. The plan enumerates several</p>

methods and systems for data collection and management, including routine HMIS, the IDSR system, surveys, special studies, periodic evaluations, and reviews.

The MTR noted a significant improvement in HMIS reporting rates, with over 95% of facilities registered in DHIS2 submitting monthly outpatient and inpatient reports. Community reporting rates have also improved from 53.6% in FY2020/21 to 61% in FY2021/22. More than 80% of VHTs in districts implementing iCCM report into DHISS 2 quarterly (MTR, p. 32). However, concerns remain regarding data flow in the private sector. High staff turnover, lack of HMIS tools, especially in private sector facilities, inadequate tools at the community level, tight reporting schedules, and DHIS2 systems-generated deadlines adversely affect this strategic objective.

Under the current grant, with support from the Clinton Health Initiative (CHAI), a malaria repository was designed and tested by introducing some indicators. Funding under this grant will enable the NMCP to fully operationalize the repository, including perfecting its interface with the DHIS-2 and the inclusion of the vector control module. Funds will also be allocated to the extension of malaria dashboards, with key indicators and scorecards to the district level to promote data use at the subnational level.

Surveys provide specific information about the epidemiological situation of malaria at points in time and offer trends to malaria control tracking indicators, behaviours relevant to malaria control and treatment, and the use of health services, among others. The Malaria Indicator Surveys, Demographic and Health Surveys, National Household Surveys (conducted by the Uganda National Bureau of Statistics), the End User Verification Surveys (funded by PMI), and the therapeutic efficacy studies (funded by PMI and WHO) among others, are the principal surveys of interest to the NMCD. The most recent nationally representative survey was conducted in 2018/19 with GF funding. A malaria Indicator survey is prioritized within the allocation.

Funds are requested to enable the NMCD undertake and or commission operational research studies to provide evidence to guide the effective implementation of interventions. Specifically, support is requested surveillance for Insecticide resistance marker for surveillance of resistance of local vectors to current insecticides used or those planned for future use, and type of resistance is critical for the effective deployment of vector control tools. The programme will conduct studies to assess the physical durability, insecticidal effectiveness, and estimation of the median survival determinants of ITNs through post-distribution monitoring to inform interventions to address the behavioral aspects of the net hung up, use, care, and repair.

With support from GC7 funding for operational research (USD 300,000), NMCD working with Child Health Division will conduct evidence synthesis on the effectiveness of dispersible tablet amoxicillin as part of the iCCM of childhood febrile illness to treat pneumonia symptoms among the under-five children. This

evidence synthesis will include review of the most recent data on bacteria resistance patterns to amoxicillin with particular focus on dispersible amoxicillin and causative organisms for community acquired pneumonia and related respiratory infections among the under-five children.

Findings from this review will inform the next course of action regarding the need to review the current treatments recommended as part of iCCM for childhood febrile illness among under-five children and the need for assessment of prevalence of resistant microbes to dispersible tablet amoxicillin.

In keeping in line with GF guidance on the importance of monitoring antimicrobial resistance with specific focus on use of dispersible tablet amoxicillin community treatment of under five children with pneumonia symptoms in the community, the Ministry of Health will support the AMR surveillance in the community among under-five children. Funds (USD 300,000) requested for operational research will be used to conduct pilot studies. However, additional funds as stated in Annex 3 of the RSSH Information Note may be required. These have not been prioritized in GC7 funding request.

Quarterly and annual performance reviews at national and regional levels are held to highlight performance, promote accountability, and ensure appropriate, actionable remedial measures are taken to keep the programme on track. These meetings in addition to other key activities that support the optimal functioning of the programme in general and the HMIS/DHIS-2, are prioritized under programme management and RSSH component.

**Outpatient malaria sentinel site surveillance in Uganda:** Over the last decade, significant progress in malaria control has changed malaria epidemiology in Uganda. In addition, malaria control is challenged by the emergence of resistance to drug and vector control interventions. Therefore, reliable surveillance is essential for tracking disease and programmatic responses and taking action. Pillar 3 of the Global technical strategy for malaria 2016–2030 recommends transforming malaria surveillance into a key intervention in all malaria-endemic countries. For over 15 years, the Uganda Malaria Surveillance Project (UMSP) of the Infectious Diseases Research Collaboration (IDRC) has implemented a multi-site surveillance system in Uganda. The 70 Health facilities selected for our malaria surveillance network are called Malaria Reference Centers (MRCs) and have been established in most regions in Uganda. Funding for these MRC's have come from study grants that are time bound and with specific objectives. This MRC infrastructure offers an incredible opportunity to rapidly evaluate various malaria control interventions, including vaccine rollout, to routine surveillance activities. Funds USD 1230,320 have been prioritized for this purpose. We, therefore, propose to adopt the existing 70 MRCs and expand to 100 with the following objectives:

- 1) To generate high-quality routine malaria surveillance data from public health facilities using the HMIS framework in Uganda to complement DHIS2 data
- 2) To evaluate malaria-associated morbidity and mortality

	<ul style="list-style-type: none"> <li>3) To assess the efficacy and safety of available antimalarial therapies</li> <li>4) To evaluate the effect of different malaria control interventions (e.g., indoor residual spraying of insecticide and use of long-lasting insecticidal nets) on malaria incidence</li> <li>5) To build the capacity of health workers in the generation of high-quality malaria surveillance data at MRCs</li> <li>6) To conduct malaria molecular and genomic surveillance for drug and diagnostic resistance in Uganda.</li> </ul>
<b>Amount requested</b>	A sum of 6,088,717 is requested within allocation to support the conduct of the malaria indicator survey (USD 1,800,000), sentinel surveillance of malaria at 100 sites (USD 1,230,320), analysis and reviews (USD 800,000) and NMCD commissioned operational research (USD 1,500,000 of which USD 300,000 will support assessment of community resistance patterns to penicillins in iCCM and under-five children), national malaria repository (USD 534,373) and Malaria program review (USD 224,024) for this intervention

*Add additional tables as relevant*

## 1.2 Payment for Results (if applicable)

If the Funding Request is using a Payment for Results modality to fund the NSP, provide information on the performance indicators / milestones, targets and amounts that are proposed.

Performance indicator or milestone	Target				Rationale for selection of the indicator/milestone	Amount requested	Expected outcome	Specify how the accuracy and reliability of the reported results will be ensured
	Baseline	Y1	Y2	Y3				
<i>Add rows as relevant</i>								

*Countries should discuss with their country teams if they are considering the use of a Payment for Results modality as the basis of the funding request.*

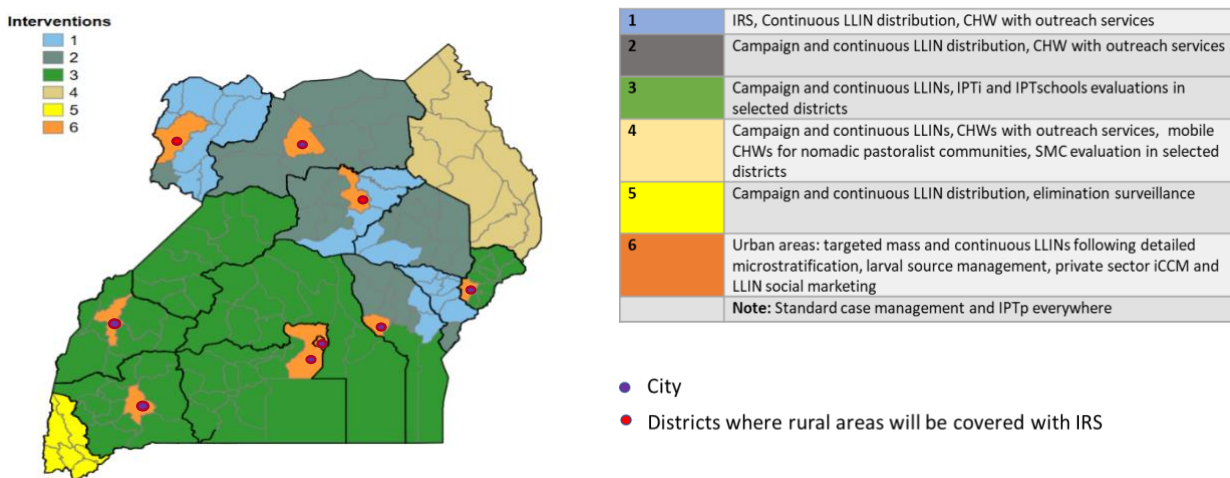


### 1.3 Rationale

A. Describe the overall approach to how you selected and prioritized the requested interventions (or indicator/milestone if using a Payments for Results modality). Please refer to the NSP if the prioritization approach is described there.

The funding priorities in this application are guided by the UMRESP (2021 - 2025), that aims to move the country towards elimination by accelerating and sustaining malaria burden reduction in high and moderate transmission areas while reducing transmission intensity in all low transmission areas. Anchored on the HBHI approach, the Plan adopted a stratification of the country with deployment of different intervention mixes per strata through the most appropriate delivery approaches for maximum impact (UMRESP, Figure 3.6. p 39), shown in Figure 1.1.

**Figure 1.1: Interventions delivery approaches for impact**



The MTR and the rapid assessment informed by the Malaria Scientific and Advisory Committee on the increasing malaria burden provide insights to the factors responsible for the stagnation and thus pointers to areas to be prioritized in this application.

Universal coverage for all populations at risk, coupled with equity, equality and non-discrimination considerations are the primary drivers of the prioritization approach. Therefore, in line with the objectives of the UMRESP (p. 45) preventive and curative interventions have been prioritized. Prioritization of the selected interventions has also been guided by the findings of the Matchbox Assessment that identified key vulnerable and underserved populations with recommendations on activities to mitigate the access barriers. Prioritization has also been benchmarked against the Leaving No One Behind National Equity Plan, 2022 (p. 25-30), which provides guidance to address and remove equity barriers to malaria interventions and services.

Finally, driven by the desire to obtain maximum impact from the prioritized interventions, the country is compelled to further prioritize within the priorities given the resource envelope, the need to consolidate and deepen the scope of ongoing interventions rather than taking on new ones, guidance of the TRP recommendations, and the community engagements that culminated in the National Malaria Dialogue, and the readiness of the NMCD to implement the activities under the selected intervention.

B. Describe the decision process for interventions selected for allocation funding versus those included in the unfunded Prioritized Above Allocation Request.

Interventions have been selected for allocation funding based on their impact on the disease burden and coverage of key and vulnerable populations. The distribution of ITNs through mass campaigns has been placed within allocation to ensure that the country maintains universal coverage while meeting equity concerns. The highest burden districts are prioritized for nets with the type distributed based on resistance patterns. The requested funding within allocation, combined with the contributions of AMF and PMI, leaves a gap of 2 million campaign net needs placed in PAAR.

Given concerns about the longevity of the efficacy of the ITNs and the need to ensure effective coverage between campaign years for the most vulnerable groups - pregnant women and children under five, the provision of ITNs through routine channels is prioritized. Although continuous distribution through the ANCs and EPI have been selected for allocation funding, the large number of nets required for the EPI channel leaves a gap of 2.6 million that is placed in PAAR. The nets required for distribution to school children, Smart Discharge (patients treated for severe malaria given nets on discharge), and the nets for hospital beds under routine distribution is requested within placed in PAAR.

Funding has been requested within allocation to enable the country to implement IRS coverage in 14 districts supported in the current grant including one exited by PMI. Due to resource constraints, five districts, including one exited by PMI have been prioritized as above allocation request.

With respect to case management, support has been requested for procurement of commodities within allocation to ensure availability of RDTs and antimalarial medicines at the public sector and private not for profit facilities and at the community level. Support for the private sector through the co-payment mechanism is largely requested in PAAR to allow the NMCD undertake an assessment to justify the investment. Based on experience during the outbreak in 2022, medicines and supplies for epidemic preparedness and response have been selected for within allocation funding.

Commodities for case management, have largely been placed within allocation to ensure their availability for quality care at the public facilities and the community level. Only 25% of commodity needs in the private sector are within allocation, with the reminder in PAAR, from the second year after guidance from a proposed systematic analysis of outcomes of previous investments and operational research to understand the dynamics and relationships that influence the outcomes of the private sector co-payment mechanism is obtained. Fifty percent of the non-malaria iCCM commodities are placed within allocation, with the purchase of amoxicillin placed in the second year to be guided by evidence of study on its efficacy that is planned in the first year.

The IPTp intervention is prioritized within allocation,



## 1.4 Context

A. Indicate where information about the following key areas can be found in the NSP or other relevant documents.

Key area	Check the box if in NSP	Relevant section(s) and/or page(s) in NSP	If not in NSP, refer to another document (specifying page number) or refer to question 1.4.B
<b>Maximizing People-centered Integrated Systems for Health to Deliver Impact, Resilience and Sustainability</b>			
Epidemiological profile	<input checked="" type="checkbox"/>	Sec 2.1, p25, Sec 2.2, p26 Sec 2.3, p26 Sec 2.4, p27 Sec 2.5, p27	
Health system overview	<input checked="" type="checkbox"/>	Sec 1.7&1.8, p 19-24	
Health sector strategy	<input checked="" type="checkbox"/>	Sec 1.4, p18	Ministry of Health Strategic Plan
Integrated, people-centered quality services	<input checked="" type="checkbox"/>	Sec 2.8, p28	
Disease-specific national policies and guidelines	<input checked="" type="checkbox"/>	Sec 2.8, p28	
Supply chain strategic plan(s)	<input type="checkbox"/>		National Pharmaceutical Services Strategic Plan 2020/21 to 2024/25
Health data systems	<input checked="" type="checkbox"/>	Sec 7.2, p69	
Monitoring and evaluation plan	<input checked="" type="checkbox"/>	Sec 7.1, p69 Sec 7.3 p70	UMRESP M&E Plan
Role of the private sector	<input checked="" type="checkbox"/>	Sec 2.9, p30 Sec 4.9, p49&p50	Private Sector Strategy
<b>Maximizing the Engagement and Leadership of Most Affected Communities</b>			
Analysis of key, vulnerable and/or underserved populations	<input checked="" type="checkbox"/>	Sec 2.6, p27	
Community led and based responses and systems	<input checked="" type="checkbox"/>	Sec 4.9, p53	
Community engagement in development of NSP	<input checked="" type="checkbox"/>	Foreword, p7	
<b>Maximizing Health Equity, Gender Equality and Human Rights</b>			
Evidence based programs to remove human rights-related barriers	<input checked="" type="checkbox"/>	Sec 5.2.6, p65	

Evidence based programs to maximize gender equality	<input checked="" type="checkbox"/>	Sec 4.5, p43 Sec 5.2, p60 Sec 5.2.6, p65	
Evidence based programs to reduce health inequity	<input checked="" type="checkbox"/>	Sec 4.5, p43 Sec 4.7, p44 Sec 5.2, p60 Sec 5.2.6, p65	
<b>Mobilizing Increased Resources</b>			
Health financing	<input checked="" type="checkbox"/>	Sec 6.2, p69 Sec 4.9, p58 Sec 5.2.5, p64	
Costing/budgeting of the NSP	<input type="checkbox"/>		In progress
NSP operational plan	<input type="checkbox"/>		
Sustainability and transition considerations/plans	<input type="checkbox"/>		
Program's prioritization approach and evidence used to rationalize resource allocation across interventions, population groups and geographic areas	<input checked="" type="checkbox"/>	Sec 3.2.5, p34 Sec3.2.5.1, p35-36	
<b>Others</b>			
Pandemic preparedness	<input type="checkbox"/>		Continuity of essential health services Annex 5.10, p 62, 63  Uganda One Health strategic plan 2018 – 2022 Page 18, 20, 21  National Action Plan for Health Security 2019 – 2023 Page 61, 62
Lessons learned from past programs implementation	<input checked="" type="checkbox"/>	Sec 3.3, p39&40	UCC report 2021 SEC 4.6, p39
Environmental and climate related health risk factors	<input checked="" type="checkbox"/>	Sec 2.2, p26	

B. Provide information on key areas listed in Section 1.4.A that are not covered within NSPs or other national documents.

## 1.5 Program Essentials

Indicate if any of the Program Essentials are currently not fulfilled, explain why, and describe the proposed pathway to reach them in coming years.<sup>11</sup>

### **Ensuring optimal ANC nets distribution coverage**

The essential data tables show inadequate progress on the indicator: “Number of LLINs Distributed delivered through ANC”. Three routine channels of delivering nets to the key and vulnerable populations, - pregnant women and children - EPI, ANC, and schools, have been prioritized in the new grant. The major concern for programme essential for vector control is delivery through the ANC channel. With the performance of this intervention dependent on the ANC attendance rate, currently at 60%, the programme stands the chance of not achieving its targets because of the deficiencies of the sister programmes. In the new grant therefore, the NMCD has prioritized activities that will strengthen the coordination and collaboration with the Reproductive Health Department and other stakeholders at all levels for joint programming, implementation, accountability, and review and feedback; scale up of community led approaches for consistent improvement of ANC services; procurement and distribution of IPTp DOT support commodities to public facilities and private-not-for-profit; and targeted SBC activities to address community barriers to utilization of ANC services.

The problems of stockouts experienced during the current grant are not unrelated to the global supply chain challenges occasioned by the COVID-19 pandemic. These problems have largely reduced, and with the plan to streamline the delivery of the nets to the ANC facilities through the National Medical Stores, nets availability will improve significantly. These investments will propel the NMCD on the path to attaining targeted levels of nets distributed through the ANC channel.

### **Malaria Matchbox Tool**

From the essential data table sheet, the Malaria Matchbox Tool analysis is a gap. The desk review of the Malaria Matchbox Tool assessment has been completed and plans are under way to conduct field visits to complete the exercise in 2023 with funding from the current grant. During the new grant period, the NMCD will undertake an assessment on Equity Human Rights, and Gender Equality (EHG) malaria dynamics and utilize the findings, in conjunction with the results of the Matchbox analysis, to inform the development of EHG malaria guidelines, programmatic strategies, and action plans to advance Human Rights, gender equality, and inclusion. The plan will include capacity building to strengthen key stakeholders – CSOs and health workers, including CHWs on EHG in malaria in the provision of responsive malaria services and the development of EHG IEC materials targeting special and vulnerable groups in the community. These investments will enable the NMCD ultimately to routinely collect disaggregated health data to enable the program track progress on EHG issues.

## **1.6 Focus of Application Requirements**

Describe how the funding request complies with the focus of application requirements specified in the Allocation Letter.

Theme	Requirement as indicated in allocation letter	Detail of how it is addressed?
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<sup>11</sup> Please note that countries classified by the Global Fund as Focused Portfolios are not required to fill in this section.

1	<b>Epidemiology Context</b>	Considering the current malaria epidemiology including the context of epidemics in Uganda, it is critically important that malaria strategies be updated and implementation of the new strategies.	The application draws extensively from the results of the MTR and recommendations of the report of a rapid assessment of the malaria situation following the epidemic of 2022 mandated by the Malaria Scientific and Advisory Committee with the support of WHO. Based on the recommendations, for example, the NMCD in this application plans to rotate to a more effective insecticide for the IRS intervention. Another strategic shift sees the adoption of the Incident Management System to address upsurges in cases and epidemic preparedness in the application. Refugees have been identified as a key vulnerable population in the report of the Matchbox analysis and are specifically targeted with all preventive and curative interventions in the application.
2	<b>RSSH</b>	The Global Fund recommends that the level of country investment in RSSH be maintained where appropriate and increased where possible.	Under the current grant, a sum of USD 30 million was allocated to RSSH. In this application, the country has allocated USD 35 million. This application has prioritized Community Systems Strengthening, that will provide the platform and support the iCCM intervention, Health Information Management System, Integration including laboratory system strengthening and Product Supply Mechanism under the RSSH component.
3	<b>Proportion of Funding allocation</b>	To indicate the intended investment amount for RSSH from within the allocation for each disease component	USD 15 million, representing 5.6% of the Malaria allocation, as approved by the CCM, has been contributed towards the RSSH component. This amount is 3% of the overall country allocation.

4	<b>Human rights and gender related</b>	<p>Countries are expected to make an accelerated effort to advance gender equality and adopt gender-transformative approaches, in line with the Global Fund's Strategy</p>	<p>The MOH takes a human rights approach to health service delivery through its National Strategic Framework (2015-2020), recognizing that all citizens should have unhindered access to healthcare services and drawing attention to the unique vulnerabilities of pregnant women, the elderly, children, and PWDs, among others. The National Health Sector Development Plan (2015-2020) mandates free health services at the point of use to reduce the financial barriers to service use. Since malaria is a disease that affects the entire population at different levels of risk, this application aims for universal coverage for the major preventive and curative interventions.</p> <p>The application uses guidance from the Leaving No One Behind National Equity Plan and the Malaria Matchbox Assessment report to prioritize interventions and delivery approaches and mechanisms that target the key and vulnerable populations - refugees, asylum seekers, prisoners, individuals living in closed settings, children below five years, pregnant and adolescent women, people affected by ethnic, geographical, or cultural barriers.</p> <p>Specifically, the distribution of nets through the mass campaign and dedicated routine channels has been prioritized for pregnant women and children under five years and persons treated and discharged for severe malaria. Pregnant women will receive IPT, while children under five years will benefit from SMC. IRS been prioritized to be implemented in prisons and boarding schools. Case management is prioritized for all key and vulnerable populations, including hard-to-reach areas, islands, and disaster-prone areas. ICCM has been prioritized for the hard-to-reach areas, refugee settlements and IDP camps.</p> <p>The application has prioritized the development of Equity, Human Rights, and Gender Equality malaria guidelines, programmatic strategies, and action plans to advance human rights, gender equality, youth participation, and inclusion.</p>
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5	<b>Co-financing</b>	All countries are expected to progressively increase their domestic public spending for health to improve performance for both health financing and health outcomes, and to progressively pay for a growing share of key program costs of national responses, especially those currently financed entirely or in large part by the Global Fund.	The GOU has committed to providing SP for the intermittent preventive treatment in pregnancy.  On an annual basis, the GOU commits UGX 2 billion towards the Larval Source Management intervention.
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## 1.7 Matching Funds (if applicable)

If Matching Funds were designated for the 2023-2025 allocation period:

- A. Describe how integrating the Matching Funds will increase the impact and improve the outcome of the allocation for the Matching Funds area.
- B. Describe how programmatic and access conditions have been met.

## 1.8 Sustainability, Domestic Financing and Resource Mobilization

- A. Describe the major challenges to the sustainability of the national response and efforts to address these challenges.

The major challenges to sustainability of the national response relate to the dependence on external funding for the major interventions, and moving from pilot, donor-driven implementation models to national systems.

The goal of the interventions selected for funding by the Global fund in the new grant is to have these interventions, ultimately, implemented by the country, using its systems that are funded predominantly by domestic resources. There is, therefore, a conscious effort in this application to ensure that the NMCD implements the proposed interventions through existing, nationally recognized structures rather than parallel project-driven systems. Based on lessons learned in the current grant, for example, the implementation of the iCCM in the selected districts that had not been explicitly district-owned will have the district structures at the heart of the intervention in the new grant. This will contribute to the decentralization agenda of the government, strengthen the oversight role of the district leadership, and stimulate the mobilization of additional resources from this level.

In the same vein, implementing the IRS intervention in the new grant period will address sustainability concerns through the progressive integration of the IRS operations within the structures and systems of the Local governments and districts and the involvement of the private sector in its operations. By ensuring that these IRS districts receive other malaria interventions (routine ITNs, iCCM, enhanced surveillance, and SBC), the accrued gains of the IRS intervention

are consolidated, and the districts can be progressively weaned off the intervention over time, based on evidence of significant decline in the disease burden.

The request to support capacity building of health workers at the technical and managerial levels is anchored on the goal of improving the quality, effectiveness, and efficiency of health care delivery long term. Through this approach, the programme's overall supply-side sustainability will be enhanced, and the grassroots-driven structures will be empowered to deliver quality services at the community level. At the level of the NMCD, support has been requested in the new grant for continued staffing of technical advisor positions to ensure quality service delivery and mentoring to promote structural sustainability.

The efforts to reduce dependence on external sources of funding while increasing domestic financing is expressed in this application through the expansion of the role of the private sector and multisectoral engagements. Furthermore, through the MAAM, there has been an intense effort to increase the availability of domestic resources. The use of the head of household as a unit of malaria messaging and implementation has been designed to facilitate household obligations and the concept of everyone being a stakeholder. Finally, this grant focuses on supporting the MoH to build a robust and resilient health system and integration of implementation arrangements as much as practicable to ensure no slippage of gains made and longer-term sustainability.

**Efforts to address some of the challenges:** The country's ruling party manifesto sets forth an ambitious agenda to move the country closer to the overall vision of "A Malaria-Free Uganda" by 2030. This provides a strong basis for tapping into the political will and structures for support for the implementation of the UMRESP.

One component of the Malaria Resource Mobilization Strategy is the establishment of the Malaria Free Uganda Fund, a Private-Public Partnership initiative to provide high-level advocacy and mobilize resources for malaria elimination in Uganda by 2030, like the End Malaria Council and Fund in other HBHI countries. Malaria affects the private sector through the loss of productive working hours and expenditure on health services as well as the employee's huge out of pocket expenditures on ill health due to malaria. The direct and indirect contribution of the private sector will facilitate the filling of the resource envelope gap and truncate the perennial donor dependency.

The MFU aims to mobilize domestic resources in partnership with private sector organizations to leverage and intensify government efforts in the national Malaria response that will significantly benefit the working population. Recently it mobilized and handed over 160 million Uganda shillings to the Minister of Health.

This strategy promotes the private sector channel of delivery of the IRS intervention with a strong regulatory framework. This involves a shift in the approach to IRS service delivery to a private sector-driven model, especially targeting the middle class or elites who can directly purchase IRS services, given their relatively high ability to pay. Here, government SOPs will be established (with guidance from MoH) and will be contracted by private individuals to spray their houses—the money paid can be channeled to government coffers to support IRS. Potential markets include private individuals, hotels, schools, and plantations, among others. The private-sector approach will help to transfer some of the costs of IRS to households and other actors. This strategy can be combined with the application of a public health approach targeting the poor or rural households.

B. Describe how co-financing commitments for the 2020-2022 allocation period have been realized.

From 2019 to 2022/23, a total of US \$3,837,021, an average of \$1,279,007 was available for malaria supporting mainly the procurement of ACTs, SP and support for environmental management interventions, including LSM and IRS. These commitments were realized over the duration of the current grant.

C. Describe how co-financing will increase over the 2023-2025 allocation period, and how these commitments will be tracked and reported, and planned actions to address remaining funding gaps.

Government co-financing in direct spending on malaria over the new grant period will remain at the same levels as in the current, estimated to be USD 3,837,021, averaging USD 1.3 million annually. This contribution will go primarily to the purchase of AL, SP for the MIP programme, and support for IRS and larviciding operations. The government will continue to provide and maintain the health facilities and the human resources that provide the services and plan and monitor the implementation of the different interventions across the country. The government's commitments will be tracked through statutory mechanisms at the MoFPED and the Ministry of Health. The quarterly and annual budgetary performance review meetings held by the budget monitoring units of the Ministries to inform top management will provide the information that enables the programme to track Government commitment over the grant period.

New domestic resources are anticipated to come during the new grant period based on the 2nd Budget Call Circular 2023/2024 issued by the Permanent Secretary/ Secretary to the Treasury, MoFPED, in February 2023 requesting all Government Ministries, Departments, and Agencies (MDAs) to mainstream malaria at the workplace and in their budgets (section 83-86 p. 19 - 20). The NMCD will work with the Office of the Prime Minister to monitor adherence to this circular that is expected to mobilize additional domestic resources for malaria programming in the country. The NMCD hopes that the multisectoral approach that underlines this application will propel significant contributions from the private sector to fill up some of the funding gaps.

D. If applicable, describe specific arrangements and modalities related to innovative financing approaches linked to this funding request and/or the national response.

Not applicable



## Section 2: Implementation

### 2.1 Key Risks and Mitigation Measures

Describe up to three risks and mitigating measures for the following risk areas:

- A. Procurement of health products, management of health products and laboratory related activities.

Risk Category	Key Implementation Risks	Corresponding Mitigation Measures	Entity Responsible
PSM	Inadequate funding allocated to respond to commodity needs occasioned by malaria rebound epidemics.	Allocate adequate funding in anticipation of upsurge.  Secure and ensure availability of stock to be prepositioned at regional medicine stores to support rapid response to handle upsurges. This stock should occasionally be replaced by fresher stock in the absence of an upsurge. This is a priority in the intervention to transform epidemic response to the incident management system.	MoH, NMS, JMS, RRH, DHO
	Stock-out of malaria commodities that might disrupt delivery of quality services.  Stock out of commodities at facility level during upsurge due to inadequate stock levels  Long processes involved in sending emergency order	Strengthen inventory management practices at the district and facility levels.  Support NMS to strengthen LMIS to ensure end-to-end visibility of commodities and supplies.  Increase commodity allocation during upsurge period.  Sensitize health facilities, DHOs RRHs, CAO on the process to follow in events of out-breaks.  Develop SOPs on the process to follow to address stock and stock out issues during outbreak period.  Work with NMS to increase efficiency in processing emergency orders.	MOH, District  MOH, District, NMS
	Risk of adverse events from newer antimalarial drugs multiple first-line treatments.	Strengthen pharmacovigilance at central and facility level.	MoH, NDA,
Political	General election during the implementation period.	Frontload interventions as much as possible  Avoiding mass interventions requiring mass movement of products and human resource during the peak election period  Decentralization of storage	MoH, UPFM, MoIA,

		Utilization of just in time delivery models Procurement of insurance on malaria health commodities	
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## B. Flow of data from service delivery points.

Risk Category	Key Implementation Risks	Corresponding Mitigation Measures	Entity Responsible
<b>Information Technology</b>	Threat of compromise of ICT operations e.g., for financial management systems, product supply chain, HMIS	Robust ICT architecture with safeguard measures on cyber security  Defining and restricting levels of access on government ICT platforms e.g., IFMIS which can only be installed on desktops and in government offices	MoH, MoFPED, MoICT
<b>Human Resource for data management systems.</b>	Risk of losing current staff upon expiry of GF support for salaries and most of staff are TAs supported by partners.	Existing staff mentored for domestication of technical skill.  Updating the technical assessment requirements periodically to be needs-based.  Collaborate with local institutions to facilitate cross fertilization between academia and the programme.  Engagement to utilize the existing government appraisal system for replacement of staff	MOH, MoFPED

## C. Financial and fiduciary concerns.

Risk Category	Key Implementation Risks	Corresponding Mitigation Measures	Entity Responsible
<b>Financial Management</b>	Relatively slow absorption of funds due to inefficient financial management systems resulting in delayed disbursements to implementers.	GF CT regularly requests and nudges the PR for any need of disbursements. On a routine basis, CT requests PRs to review their budgets and initiate reprogramming as necessary, especially in the context of UCC 2023 gap as well as to ensure a full absorption of the grants.  Improve the engagement with the GF CT for increased flexibility in the absorption of the funds e.g., reprogramming.  Reducing the level of micromanagement of planned activities.  Improve planning for instance, ensuring that there is no lag in programme implementation with every financial year.  Ensuring that planned activities are incorporated at district planning for faster absorption of funds when availed to them.	Global Fund, MoFPED, MOH TASO

Risk Category	Key Implementation Risks	Corresponding Mitigation Measures	Entity Responsible
		<p>To consider direct release of funds from MoFPED for some activities to the districts subject to an approved detailed work plan and accountability framework</p> <p>Concurrent approval of SRs at the grant making stage to allow for immediate implementation of activities</p>	
	Withdrawal of key partners in malaria programming and attendant negative impact on programme implementation	<p>All partner interventions to have an exit strategy that are time bound and monitored</p> <p>Engagement of new partners particularly with the stratification strategy, expansion of the role of private sector in resource mobilization</p> <p>Introduction of innovative resource mobilization such as the social health insurance, creation of basic health care fund (e.g., Malaria Trust Fund)</p> <p>Accessing the malaria risk mitigation fund within construction activity budgets and leveraging on other multisectoral opportunities.</p>	GoU, MOH, OPM, Partners, Private Sector
	Unauthorized activities which lead to ineligible expenditures	<p>Close monitoring of budget</p> <p>Strict adherence to request approval process and control measures to avert transactions that are not approved in the budget of grant</p>	MoH, MoFPED, PR2
<b>Grant Management</b>	Protracted in-country procurement and recruitment processes leading to low absorption of grant funds	Reference response on slow absorption in 1 above	MOH, District
Inefficient financial flows	Inefficient flow of funds arising because of the possibility that funds are not used within the approved grant budget timelines inadequate implementation readiness and bottlenecks in the flow of funds from the Principal Recipients to the SRs and other implementing partners including beneficiaries.	<ul style="list-style-type: none"> <li>• Concurrent approval of SRs at the grant making stage to allow for immediate implementation of activities.</li> <li>• Early initiation of the SR contracting process.</li> <li>• Analyze causes of delays in GF requisition, procurement, implementation, and payment processes.</li> <li>• Identify improvements in in GF requisition, procurement, implementation, and payment processes for change that will improve funds flow/absorption.</li> <li>• Continuously monitor and report on efficiency of procurement and payment processes</li> <li>• Use of the local government treasury single account (TSA) to ease transfer of funds to the districts subject to an approved detailed work plan.</li> <li>• Ensuring that planned activities are incorporated at district planning for faster absorption of funds when availed to them.</li> </ul>	Global Fund, MoFPED, MoH & TASO

Risk Category	Key Implementation Risks	Corresponding Mitigation Measures	Entity Responsible
<b>Financial Fraud, Corruption and Theft</b>	The possibility that Global Fund assets (financial and non-financial) are misappropriated, and financial statements reported to the Global Fund are intentionally misstated and, Global Fund incurs financial loss because of corruption (including conflict of interest and bribery/ extortion).	<ul style="list-style-type: none"> <li>• Implementation of the fraud prevention measures as detailed in the Grants Implementation manual. These include: <ul style="list-style-type: none"> <li>• Fraud awareness</li> <li>• Building fraud prevention into activity and project design</li> <li>• Fraud risk assessment to inform management of the risk of fraud and corruption.</li> <li>• Application and adherence to Codes of Conduct and Code of Ethical Conduct in Business for Bidders and Providers.</li> <li>• Publicizing channels for reporting fraud or/ and unethical behavior</li> </ul> </li> </ul>	MoFPED, MoH, TASO & SRs
<b>Non-compliant expenditures</b>	The possibility that expenses incurred are not in line with the provisions the signed grant agreement or the appropriate financial and procurement procedures of the implementer or grant because of lack of well-designed and effective control at entity, process, and transactional levels and compliance with policies, procedures, and applicable law	<ul style="list-style-type: none"> <li>• Adequate policies, procedures and manual in place</li> <li>• Staff are orientated and/or regularly trained regarding the Global Fund and implementer processes and standards.</li> <li>• Monitoring of the key controls/ processes in the grant implementation.</li> </ul>	MoFPED, MoH, TASO
<b>Sustainability</b>	Disruption in program implementation with termination of donor funding	<p>Deploy and ensure the incorporation of the multiple layers of sustainability in the design of programmes. This will border on ownership, buy-in governance structure, alternate funding, sustainable capacity development amongst others.</p> <p>Build in sustainability continuum with successive locally generated malaria funding.</p> <p>Sustain advocacy for political will at all levels to increase domestic resource mobilization (sub county level implementation of MAAM)</p> <p>Creation of the Malaria Trust Fund as agreed by the African Head of States</p>	MOH, MoFPED

## **Annex 1: Documents Checklist**

Use the list below to verify the completeness of your application package.

This checklist only applies to applicants requested to apply using the Tailored for National Strategic Plans Application Approach. Refer to the [Tailored for National Strategic Plans Instructions](#)<sup>12</sup> for details, applicability and resources.

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<sup>12</sup> Tailored for National Strategic Plans Instructions - [https://www.theglobalfund.org/media/5738/fundingrequest\\_nsp\\_instructions\\_en.pdf](https://www.theglobalfund.org/media/5738/fundingrequest_nsp_instructions_en.pdf)

## Documents Reviewed by the Technical Review Panel

<input checked="" type="checkbox"/>	Funding Request Form
<input checked="" type="checkbox"/>	Performance Framework
<input checked="" type="checkbox"/>	Detailed Budget
<input checked="" type="checkbox"/>	Programmatic Gap Table(s)
<input checked="" type="checkbox"/>	Funding Landscape Table(s)
<input checked="" type="checkbox"/>	Prioritized Above Allocation Request (PAAR)
<input checked="" type="checkbox"/>	Health Product Management Template
<input checked="" type="checkbox"/>	Implementation Arrangement Map(s)
<input checked="" type="checkbox"/>	RSSH Gaps and Priorities Annex
<input type="checkbox"/>	Gender Assessment (if available)
<input checked="" type="checkbox"/>	Assessment of Human Rights-related Barriers to Services (if available)
<input checked="" type="checkbox"/>	Essential Data Table(s)
<input checked="" type="checkbox"/>	National Strategic Plans
<input type="checkbox"/>	Innovative Financing Documentation (if applicable)
<input type="checkbox"/>	Supporting Documentation Related to Sustainability and Transition
<input checked="" type="checkbox"/>	List of Abbreviations and Annexes

## Documents Assessed by the Global Fund Secretariat

<input checked="" type="checkbox"/>	Funding Priorities from Civil Society and Communities Annex
<input checked="" type="checkbox"/>	Country Dialogue Narrative
<input checked="" type="checkbox"/>	CCM Endorsement of Funding Request
<input checked="" type="checkbox"/>	CCM Statement of Compliance
<input checked="" type="checkbox"/>	Additional documentation to support co-financing requirements
<input type="checkbox"/>	Sexual Exploitation, Abuse and Harassment (SEAH) Risk Assessment (optional)