



PROGRESS ON MALARIA CONTROL IN COUNTRIES

WHO in an era of transformation



World Health
Organization

African Region



Contents

Abbreviations	3
Overview	4
Executive Summary	5
1. Transformation Agenda focus on malaria	7
Aligning actions	9
Documenting results	10
Making a difference in 21 countries	11
2. Malaria battle in high-burden countries	13
Stalled progress in the fight against malaria	14
Changing tack in the offensive against malaria	14
3. HBHI approach, objectives & process	15
The HBHI approach process	17
Starting afresh with a new plan	18
4. HBHI implementation	19
Stratification of malaria risk in HBHI countries	21
State of HBHI countries' malaria burden in 2021	21
5. Notable achievements in countries	23
The COVID-19 setback	26
6. Implementing elements of the HBHI approach: country examples	28
Demonstrating strong political will in Uganda	29
Subnational tailoring of malaria interventions in Nigeria	30
Multiple interventions in Ghana	32
Malaria impact on Universal Health Coverage (UHC) index in Ghana	34
Advancing towards the SDG targets for malaria in Ghana	35
7. Lessons learned	36
8. Challenges and difficulties	39
9. Putting people first: Ghana impact stories	41
Long-lasting insecticide treated bed nets	42
Antimalarial during pregnancy	43
10. What next?	45
Accelerating the HBHI approach	46
Progress towards UHC	46
	2

Abbreviations

ACTs	Artemisinin-based combination therapies
BAU	Business as usual
GHS	Ghana Health Service
GPW13	13th General Programme of Work
GTS	Global technical strategy for malaria 2016–2030
HBHI	High burden high impact
IPTp	Intermittent Preventive Treatment of Malaria in Pregnancy
IRS	Indoor Residual Spraying
ITNs	Insecticide treated nets
LGAs	Local government areas
LLINs	Long-lasting insecticidal nets
MAAM	Mass Action Against Malaria
NMEP	National Malaria Elimination Programme
NMSP	National Malaria Strategic Plan
NSPs	National malaria strategic plans
PMI	President’s Malaria Initiative
RDT	Rapid diagnostic test
SDGs	Sustainable Development Goals
SMC	Seasonal malaria campaign
SMC	Seasonal Malaria Chemoprevention
SP	Sulfadoxine-pyrimethamine
TA	Transformation Agenda
UHC	Universal Health Coverage
UPFM	Uganda Parliamentary Forum for Malaria
USAID	US Agency for International Development
WHO	World Health Organization’s

Overview



Significant impact has been made in rolling back malaria in varying countries in the African Region, despite significant COVID-19 related disruptions to treatment and care. Although an 11% increase in malaria cases was recorded in the WHO African Region by 2021 – from 211 million the previous year to 234 million – the estimated number of malaria deaths for the period decreased slightly, from 599 000 in 2020, to 593 000 the following year.¹

Importantly, Cabo Verde has not recorded a single case of malaria since 2018 and has applied for elimination certification. Additionally, significant reductions in case numbers were seen in Mauritania (-71%) Ethiopia (-70%), Zimbabwe (-68%) and Ghana (-33%), with further clear decreases in deaths in Ethiopia (-64%), South Africa (-49%), Togo (-28%) and Sierra Leone (-24%). Conversely, however, progress towards reducing both case and death rates has stalled in several high- and moderate-burden countries.

The threat prompted action to accelerate efforts in 10 high-burden countries to get back on track. Nigeria and the Democratic Republic of the Congo had the largest proportion of cases (41%) and deaths (47%) in 2021, which increased consistently from 2015–2021. After launching the “high burden to high impact” (HBHI) intervention approach in 2018, Burkina Faso (-1%) recorded the only measurable reduction in cases. Although negatively impacted by the COVID-19 pandemic and other health emergencies, this new approach continues to be implemented towards winning the battle against malaria in the African Region. Strong advocacy, along with tailoring of interventions using stratification of malaria risk for all countries, laid a solid foundation for future improvements.

¹ World malaria report 2022 – <https://www.afro.who.int/search/google-cse?keys=malaria%202022>

Executive Summary

The World Health Organization's (WHO) Transformation Agenda (TA), initiated in 2015, aimed to change WHO into a proactive, results-driven, accountable organization that would optimally meet stakeholder expectations. The battle against malaria falls under the smart technical programmatic focus of the TA, due to its high endemicity, morbidity and mortality in the African Region.

Significant improvements were recorded from 2015, with crucial reductions in case numbers achieved in several countries, including Mauritania (-71%), Ethiopia (-70%), Zimbabwe (-68%), The Gambia (-53%), Rwanda (-53%), South Africa (-40%) and Ghana (-33%). Reduced death rates were also recorded in Zimbabwe (-68%), Ethiopia (-64%), South Africa (-49%), Togo (-28%), Sierra Leone (-24%), Central African Republic (-17%) and Burkina Faso (-14%). Cabo Verde was the only country in the African Region to eliminate malaria since 2018, and has applied for certification of malaria elimination. However, lack of progress in high burden countries caused stalling in regional progress and prompted action to help the 10 highest burden countries get back on track.

Among the high burden to high burden high impact (HBHI) countries, malaria cases have increased year-on-year from 2015–2021. The largest proportion of cases and deaths since 2018, increasing consistently over the period under review, were recorded in Nigeria (28% and 35%) and the Democratic Republic of the Congo (13% and 13%). The number of cases in Uganda increased by 37%, against 31% in the DRC and 21% in Nigeria. Also, increases in malaria death rates in the DRC (36%), Uganda (25%) and Nigeria (19%) outpaced other HBHI countries between 2015–2021. This development signals a need to focus and prioritize malaria interventions in these countries.



Executive Summary

Implementation and early successes as a result of the HBHI approach, supported by WHO and other partners, was based on four key elements: strong political will to reduce malaria deaths; strategic information to drive impact; improved guidance, policies and strategies; as well as coordinated national malaria responses. Although measurable impacts are yet to be seen in terms of case and death rates since the start of implementation, which was disrupted by the COVID-19 pandemic, several activities, including strong advocacy and stratification of malaria risk to tailor interventions, among others, have laid a solid foundation for progress and future improvements as effective implementation continues.

Despite the challenges, notable examples of successes were seen in countries including Nigeria and Uganda, and are detailed later in this report. Uganda, for example, demonstrated strong political will through the Mass Action Against Malaria (MAAM) initiative, illustrating clearly how a country-led process of political engagement at all levels can be achieved, and the value of community and multisector mobilization of stakeholders. In Nigeria, the work on subnational stratification of malaria risk, and the tailoring of interventions to each of the 774 local government areas (districts), resulted in the creation of maps which have helped shape the country's new National Malaria Strategic Plan (NMSP). This has, in turn, been utilized to mobilize funding from donor organizations like The Global Fund to Fight AIDS, Tuberculosis and Malaria, and the US President's Malaria Initiative (PMI).

As part of the work on malaria in Ghana, WHO has provided scientific leadership, technical and financial support, while collaborating with partners on interventions and capacity building. In real terms, between 2015–2021 this has protected over 12.8 million people through the use of Indoor Residual Spraying (IRS), treated 30.7 million people with Artemisinin-based combination therapies (ACTs), and facilitated the delivery of 58 million long-lasting insecticidal nets (LLINs) and 36.6 million rapid diagnostic test (RDT) kits. Malaria is one of the main drivers of improvements in the infectious diseases burden, also contributing to improvements in the Universal Health Coverage (UHC) index. The significant reduction in cases and deaths achieved in Ghana is also contributing to the achievement of the health-related Sustainable Development Goals (SDGs).

Important lessons have also been learned, these included effective leadership and governance, early adoption of technical recommendations by countries, innovative evidence-based targeting of malaria interventions, increased capacities across the board, solid and dedicated partnerships over a long time and consistency of intervention implementation within planned timelines. Key challenges and difficulties were inadequate resources in WHO country offices, behavioural issues among populations in countries, Supply chain issues, competing programmes and inadequate enforcement by countries.

Finally, there is need for continued advocacy to accelerate ongoing implementation of the HBHI approach towards realizing the goals and objectives. Efforts should also be made to promote the utilization of innovative techniques, such as risk stratification, to effectively plan, prioritize and tailor packages of interventions to optimize the malaria response, and ensure allocation of resources for the greatest impact. Nigeria and the DRC, which account for 41% and 47% of global malaria cases and deaths respectively, should be prioritized. This will increase the chances of controlling the burden of the malaria disease globally, but also contribute to achieving the Global technical strategy for malaria 2016–2030 (GTS) targets of reducing malaria case incidence and mortality rates by at least 75% by 2025, and by 90% by 2030.



1

**Transformation
Agenda focus
on malaria**

1. Transformation Agenda focus on malaria

The Transformation Agenda (TA), initiated in 2015, was an earnest effort to shift the way in which public health was being administered, and how WHO works in the African Region. The aim was to change the organization into one that is more “proactive, results-driven, accountable and appropriately resourced to deliver on its mandate”. The intention was to have a WHO that optimally meets the expectations of its stakeholders, by aligning its activities with regional priorities, commitments and interventions, guided by evidence and lessons learned. The expectation was that this would be achieved through four key areas: pro-results values, smart technical focus, responsive strategic operations, and effective communications and partnerships.² Malaria is one of the technical programmatic areas on which WHO has focused for many years. This is because of its endemicity in the region, but also the high associated morbidity and mortality in many countries.



Malaria is an infectious disease caused by a parasite carried by mosquitoes, with symptoms that include chills, fever and flu-like illness. It is curable, provided it is diagnosed early and treated properly. Left untreated, however, it can lead to severe complications, and death.³ Malaria occurs widely in Sub-Saharan Africa, where it is a leading cause of disease and death, resulting in an estimated 234 million cases and 593 000 deaths in 2021.⁴ People living or travelling to areas where malaria vectors are common, mostly the Anopheles species, are at risk of becoming infected, with pregnant women and children younger than five years of age, especially vulnerable to infection and severe outcomes. Malaria has been the dominant cause of death among children in WHO’s Africa Region.

2 The Transformation Agenda of the World Health Organization Secretariat in the African Region 2015–2020 [Online] accessed 3rd June 2022. Available at: <https://www.afro.who.int/regional-director/transformation-agenda>

3 Malaria, [Online] accessed 20th June 2022. Available at: <https://www.afro.who.int/health-topics/malaria>

4 World Malaria report 2022 [Online] accessed 16th February 2023. Available at: <https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2022>

1. Transformation Agenda focus on malaria

Aligning actions

In consonance with the smart technical focus of the TA (2015–2021), WHO in the Africa Region has been providing technical, financial and other forms of support to various interventions in countries, with a view to accelerating the reduction of the burden of malaria disease.

This focus also aligns with the Global technical strategy for malaria 2016–2030 (GTS), which details four goals and related targets to be achieved by 2030. The GTS interventions comprise three pillars, which are expected to “ensure universal access to malaria prevention, diagnosis and treatment; accelerate efforts towards elimination and attainment of malaria-free status; and transform malaria surveillance into a core intervention”. Two supporting elements are focused on harnessing innovation and expanding research, while strengthening the enabling environment to achieve the GTS objectives.



Among other things, the GTS aims to reduce malaria case incidence and mortality rates by at least 75% by 2025, and by 90% by 2030, when compared with the 2015 baseline. Another objective is to eliminate malaria from at least 20 malaria-endemic countries by 2025, and from 35 countries by 2030. It also seeks to prevent the re-establishment of malaria in all Member States that are malaria-free.⁵ A WHO Africa framework for implementing the GTS was signed off in 2016 at the 66th session of the WHO Regional Committee for Africa,⁶ with a view to actualizing the set objectives.

5 Global Technical Strategy for Malaria 2016-2030 [Online] accessed 3rd June 2022.

Available at: <https://www.who.int/docs/default-source/documents/global-technical-strategy-for-malaria-2016-2030.pdf>

6 WHO/AFRO framework for the implementation of GTS signed off at RC66 [Online] accessed 10th July 2022.

Available at: <https://apps.who.int/iris/handle/10665/251419>

1. Transformation Agenda focus on malaria

Documenting results

The TA was initiated to provide solutions to concerns among Member States. One of these was the high endemicity of malaria disease, which constitutes a major health threat in the African Region.

As such, addressing malaria is not only necessary for the achievement of infectious diseases objectives, but will also contribute significantly towards the achievement of the Universal Health Coverage (UHC) outcomes of WHO's 13th General Programme of Work (GPW13), and the health-related Sustainable Development Goals.

In addition, the spotlight on malaria disease aligns with the smart technical focus of the TA, bringing it into sharp focus but also to make WHO in the African Region a more responsive and results-driven organization. This is therefore an important component of the documented results of the TA accomplishments (2015–2021), through a combination of several interventions and contributions by WHO, in collaboration with Member States, development partners and donors, as WHO continues its fight against malaria.

All these interventions were focused on reducing the burden of malaria in WHO's Africa Region, by at least 40% in 2020, and 75% in 2030, in line with the malaria GTS target. Success of these interventions can serve as examples and lessons to be adopted by neighbouring countries of how similar successes can be achieved.



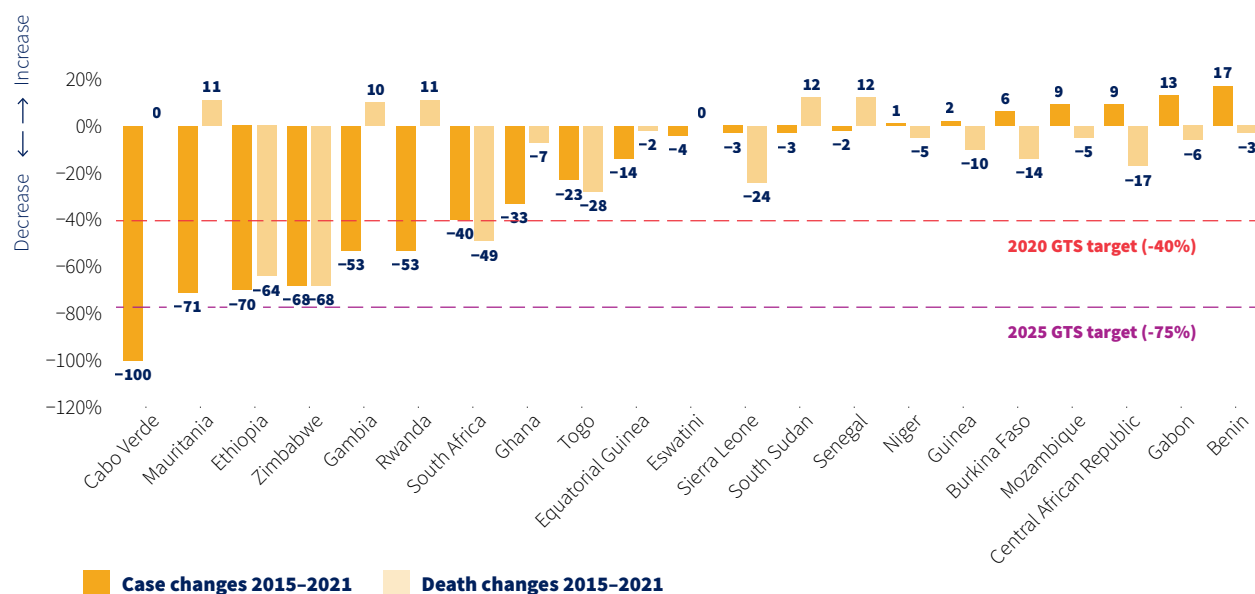
1. Transformation Agenda focus on malaria

Making a difference in 21 countries

WHO and other partners in the region have been at the forefront, investing meaningful time in the fight against the scourge of malaria. Although Member States have not achieved the GTS framework targets, analysis of available data reveals that there have been significant achievements between 2015 and 2021 in some Africa Region countries towards rolling back malaria. (Figure 1.1)

For malaria cases and deaths, 21⁷ key countries demonstrated progress, with significant reductions in case numbers recorded in Mauritania (-71%) Ethiopia (-70%), Zimbabwe (-68%), The Gambia (-53%), Rwanda (-53%), South Africa (-40%) and Ghana (-33%). There were also clear reductions in deaths from malaria recorded in Zimbabwe (-68%), Ethiopia (-64%), South Africa (-49%), Togo (-28%), Sierra Leone (-24%), Central African Republic (-17%) and Burkina Faso (-14%), for example. Of these 21 countries, however, only Burkina Faso, Ghana, Mozambique and Niger are classified as having a high burden of malaria disease.

Figure 1.1 Shows significant changes and reductions in malaria cases and deaths in 18 key countries from 2015–2020 in WHO’s African Region



Conversely, many countries fell short of the targets, with observational data suggesting that only seven (Cabo Verde, Ethiopia, Mauritania, Rwanda, South Africa, The Gambia and Zimbabwe) met or surpassed the 2020 GTS target of achieving a 40% reduction in malaria cases by the end of 2021. Ghana and Togo came close, with a 33% and 28% reduction respectively.

Ethiopia, South Africa and Zimbabwe were the only countries to achieve the set targets for reductions in deaths from malaria, while Cabo Verde was the only country to eliminate all cases, with no deaths recorded since 2018.

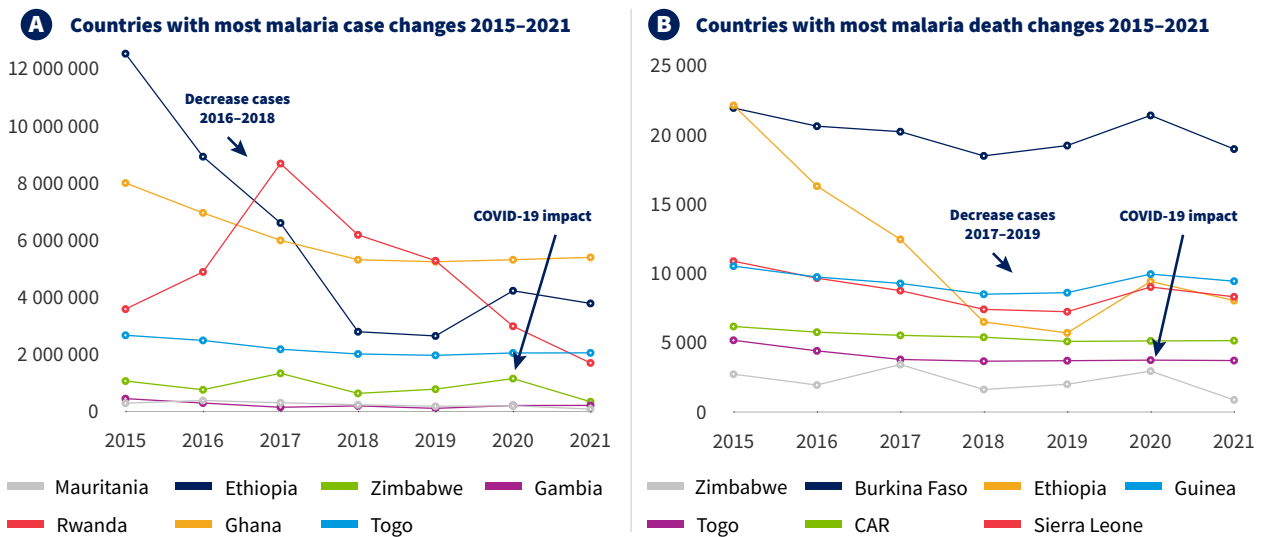
⁷ Benin, Burkina Faso, Cabo Verde, Central African Republic, Equatorial Guinea, Ethiopia, Eswatini, Gabon, Gambia, Ghana, Guinea, Mozambique, Mauritania, Niger, Rwanda, Senegal, Sierra Leone, South Africa, South Sudan, Togo, Zimbabwe

1. Transformation Agenda focus on malaria



Rwanda also achieved a notable decrease in malaria case numbers since 2017, while decreases in death rates were recorded in Burkina Faso, Guinea, Niger and Sierra Leone between 2017–2019. These were however followed by increases in 2020, coinciding with the COVID-19 disruptions. (Figure 1.2)

Figure 1.2 Shows meaningful decreases in malaria cases in key countries (A) and deaths (B) from 2015–2019, as well as the 2020 increases due to COVID-19





2

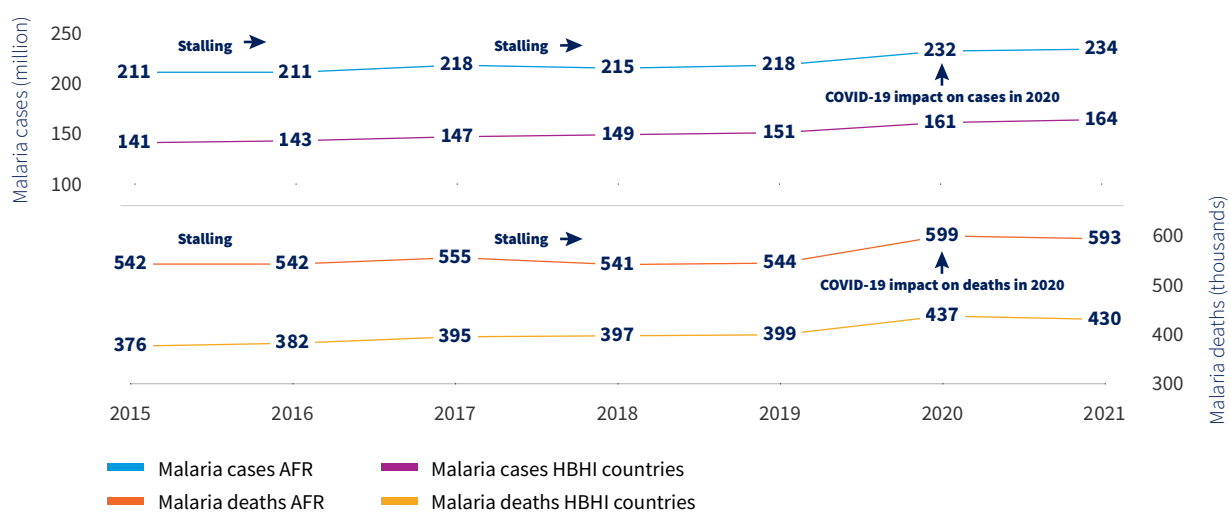
Malaria battle in high-burden countries

2. Malaria battle in high-burden countries

Stalled progress in the fight against malaria

It is concerning that overall progress towards rolling back malaria in the African Region has stalled, with numbers climbing in many countries. The situation is primarily driven by the malaria-endemic countries with a high burden of disease, 10⁸ of the total global 11 of which are in WHO’s African Region. This impasse, for both case numbers and death rates in the high-burden countries, occurred during the periods 2015–2016 and 2017–2018. The trend was also reflected in the overall number of cases and deaths in the Africa Region over similar periods. (Figure 2.1)

Figure 2.1 Trends demonstrate regional stalling or increases in malaria cases and deaths, driven mainly by high-burden countries. Increases in 2020 were due to COVID-19 disruptions.



Changing tack in the offensive against malaria

Consequently, WHO, in conjunction with the RBM Partnership to End Malaria, enlisted the HBHI approach as a mechanism to help the 11 highest-burden countries get back on track, and ultimately achieve the GTS 2025 milestones.⁹ The HBHI was expected to be a focused approach to drive down malaria cases and deaths more rapidly, while aligning with the smart technical focus area of the TA in the African Region.

8 Burkina Faso, Cameroon, Democratic Republic of the Congo, Ghana, Mali, Mozambique, Niger, Nigeria, Uganda, United Republic of Tanzania

9 GMP: Global Malaria Programme; HBHI: high burden to high impact; WHO: World Health Organization



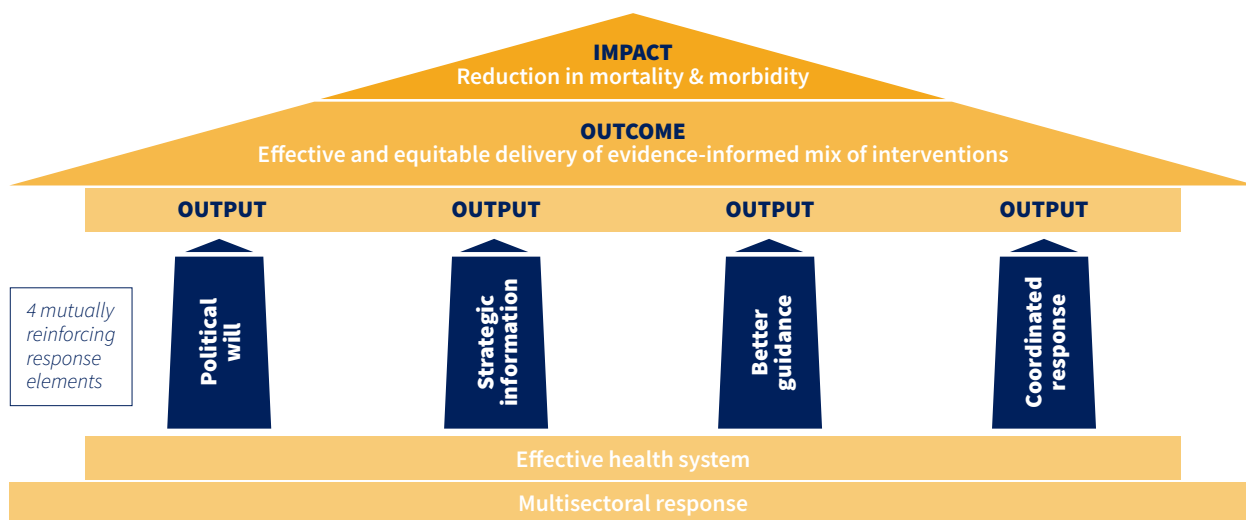
3

HBHI approach, objectives & process

3. HBHI approach, objectives & process

The key aim of the HBHI approach was prompt renewed commitment and targeted intervention activities in the highest-burden countries initially, before being expanded to other medium/lower malaria endemic countries. As a holistic approach, it also focused specifically on reversing the declines, and accelerating progress towards getting countries back on track to achieve the GTS 2025 milestones. It included four primary response elements: political will to reduce malaria deaths; strategic information to drive impact; a coordinated national malaria response; and improved guidance, policies and strategies.¹⁰ (Figure 3.1)

Figure 3.1 HBHI approach framework and interrelationships based on key elements.
 Source: WHO GMP and RBM Partnership to End Malaria



The four elements feed into concrete actions executed through an evidence-informed mix of interventions in various national malaria strategic plans, and subsequently into the overarching implementation process to drive outcomes and impact.

The key objectives of each of the four response elements are described below:

Strong political will to reduce malaria deaths

Political will to reduce malaria deaths is the first response element of the HBHI approach, and features an empowered political structure to ensure support for malaria and accountability for stakeholder commitment and action. These were expected to translate into financing and resource mobilization to increase awareness of malaria, through targeted communication and the fostering of active participation by communities in the fight against malaria.

Strategic information to drive impact

This second response element is aimed at establishing operational national malaria data repositories, alongside ongoing country-level situation analysis and review of malaria programmes. It promoted the use of data analysis for stratification, optimal intervention mixes and prioritization for the development of strategic plans, subnational operations plans, and monitoring and evaluation of activities and impact.

¹⁰ World Malaria report 2019 [Online] accessed 5th July 2022. Available at: <https://www.who.int/publications/i/item/9789240015791>

3. HBHI approach, objectives & process

Better guidance, policies & strategies

This refers to the need for continually updated global guidelines, based on best available evidence. Such guidance should incorporate country needs, while allowing space for innovation. Its intention is to improve the dissemination and uptake of global policies, via individual country adoption and adaptation to local contexts, including intervention mixes and prioritization. It pushes for country-level implementation of guidance tools to inform effective and optimal deployment of national policies, to improve tracking of policy uptake.

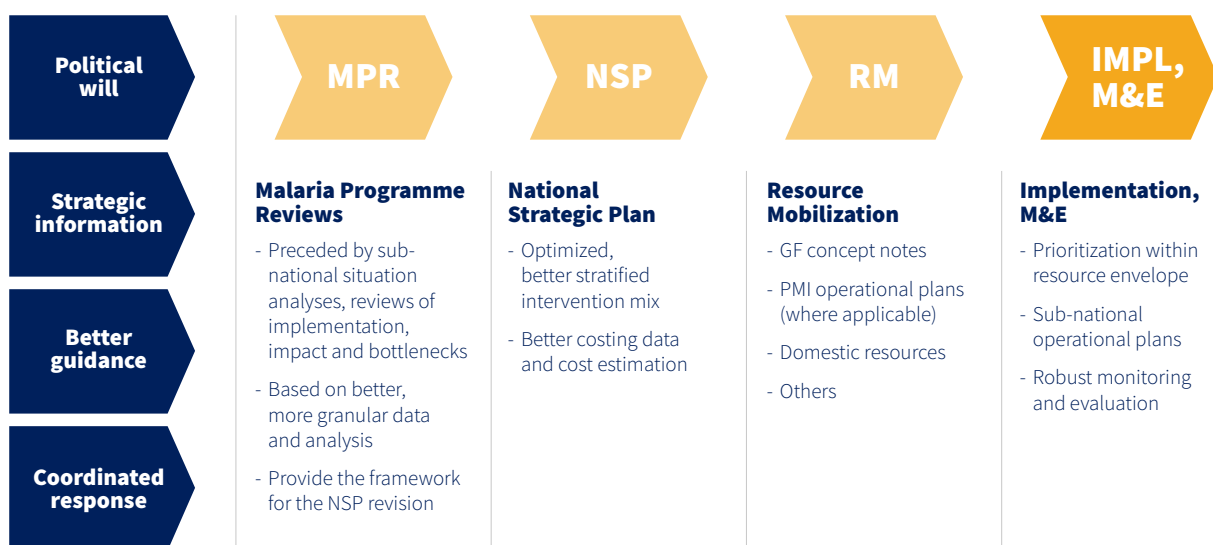
Coordinated national malaria response

The purpose of this response element was to ascertain a clear overview of multisectoral engagement by relevant stakeholders and partners in countries, and to understand their financial and technical contributions. It also aspires to achieve clarity around processes requiring coordination, including respective roles, responsibilities and timelines. It requires dedicated structures to ensure systematic coordination and alignment of partner support and funding, in line with costed national strategic plans and health sector priorities.

The HBHI approach process

The process features the four response elements, including the review of malaria programmes. This comprises essential aspects such as subnational situation analyses, as well as reassessments of implementation, impact and impediments to progress.¹¹ It utilized superior, more granular data and analysis, which provided the framework for improvement of national malaria strategic plans (NSPs). (Figure 3.2)

Figure 3.2 Demonstrates the relationships between four key elements of the HBHI approach and the implementation process



¹¹ High Burden High Impact (HBHI), internal document used for MPAC presentation, 10 April 2019

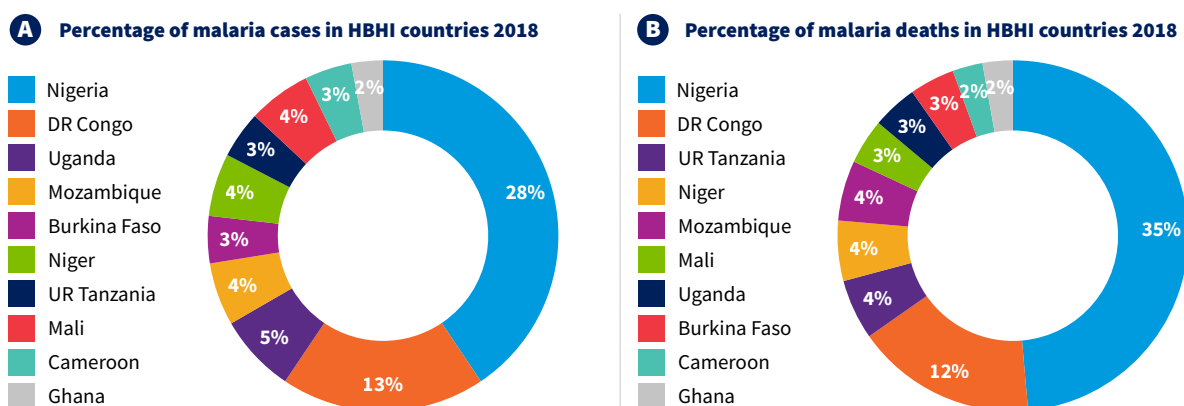
3. HBHI approach, objectives & process

This has led to further optimization of NSPs, resulting in improved stratified intervention mixes and cost estimates. It has also provided robust evidence and information for use for resource mobilization. The extent of implementation was prioritized according to the availability of resources for the operationalization of subnational plans, to be followed by vigorous monitoring and evaluation.

Starting afresh with a new plan

The new plan was launched in Mozambique towards the end of 2018, followed by similar events in Burkina Faso, Cameroon, the DRC, Ghana, Niger, Nigeria and Uganda in 2019, and in Mali and the United Republic of Tanzania in 2020. In 2018, the 10 high-burden African Region countries accounted for approximately 93% of cases globally, reducing slightly to 92% in 2020 and increasing to 95% in 2021 due to the negative impacts of the COVID-19 pandemic. In 2018, about four¹² countries constituted up to 50%, or more than half, of the region’s malaria burden, and 55% of deaths. This remained unchanged by the end of 2021. (Figure 3.3)

Figure 3.3 Distribution of malaria cases and deaths in the high-burden countries in 2018



12 Democratic Republic of the Congo, Mozambique, Nigeria, Uganda



4

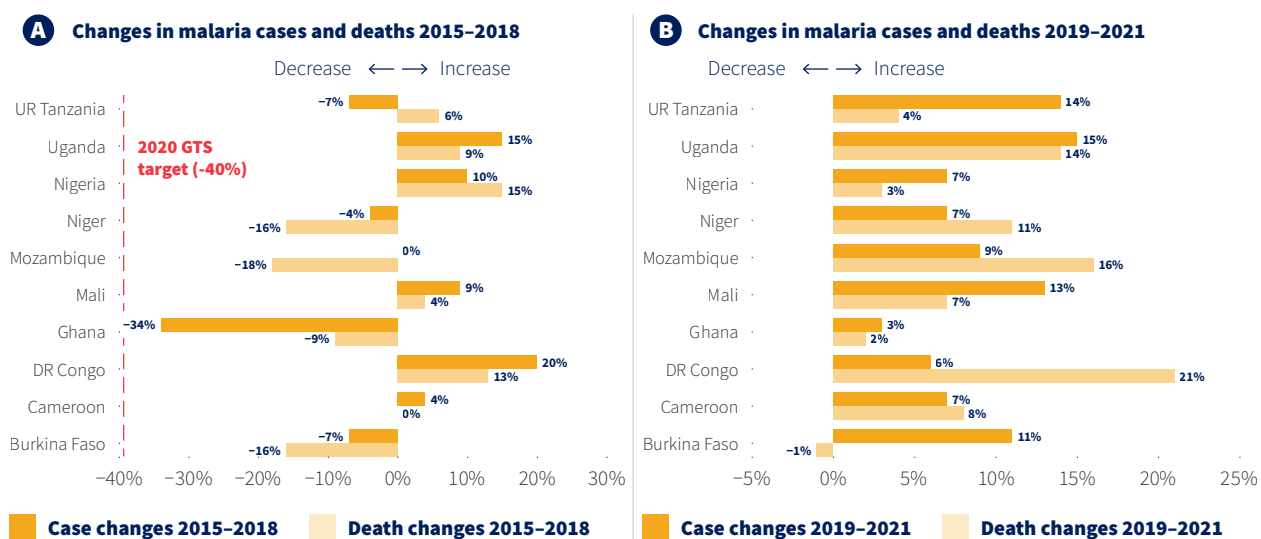
**HBHI
implementation**

4. HBHI implementation

In the years preceding the launch of the HBHI strategy, some positive reductions in malaria cases and deaths were recorded in the high-burden countries between 2015–2018. For case numbers, examples include Ghana (-34%), Burkina Faso (-7%), Tanzania (-7%) and Niger (-4%). Examples of death rate decreases were Mozambique (-18%), Burkina Faso (-16%), Niger (-16%) and Ghana (-9%). All these were however far off the 2020 GTS milestones, with no chance of meeting the targets by that year, except for Ghana which came close.

As such, an important objective of the HBHI strategy was to get especially high-burden countries back on track. Since the initiation of the approach between 2018–2021, including the reversal of gains following the onset of COVID-19, only one additional reduction in death rates was seen, in Burkina Faso (-1%). The increases in several other countries demonstrate the depth of the challenge, but also highlight the negative impact of COVID-19 on previous progress achieved. (Figure 4.1)

Figure 4.1 Demonstrates changes resulting in decreases in malaria cases and deaths, (A) indicates impact between 2015–2018 and (B) within the period after HBHI launch from 2019–2021



This is understandable given that the first year following HBHI implementation largely comprised of stakeholder consultations and self-assessments within targeted Member States, and aligning expectations of progress. It is worth noting that various countries with high malaria incidence but smaller populations, which were not part of the first strategic intervention, also adopted the HBHI approach. These included Burundi, Guinea and Somalia, among others.

Key elements of the HBHI approach were expected to address the intensity of malaria transmission in high-burden areas, poor access to care, epidemiological and socio-demographic risk factors, as well as suboptimal coverage of malaria interventions, and financing constraints.¹³ All these factors were responsible for the increasing malaria burden in the HBHI countries.

13 HBHI Approach in World Malaria report 2019 [Online] accessed 5th July 2022. Available at: <https://www.who.int/publications/i/item/9789240015791>

4. HBHI implementation

Stratification of malaria risk in HBHI countries

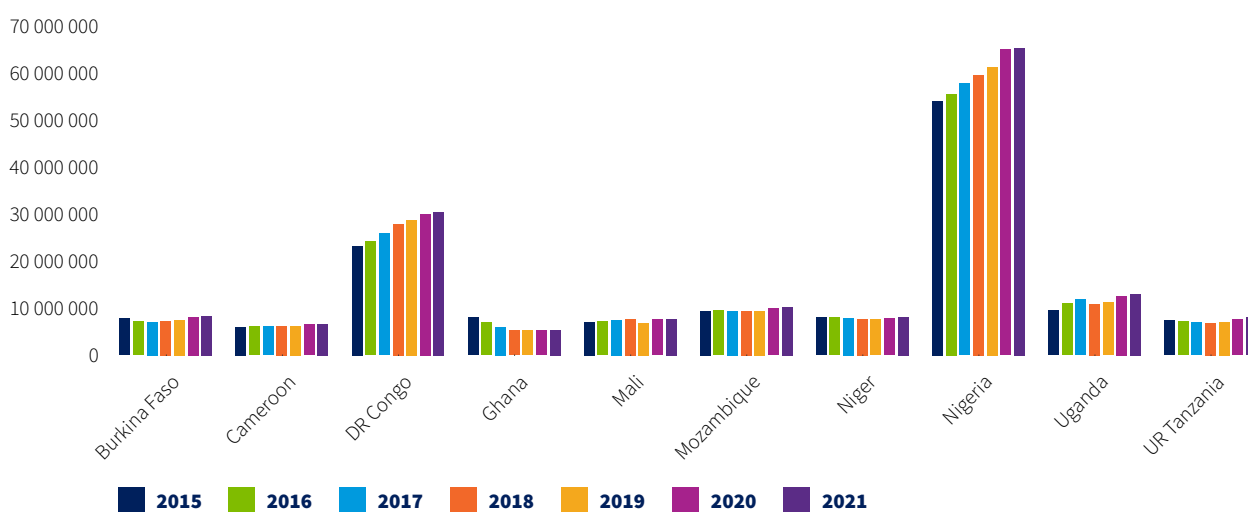
Since 2016, WHO has recommended the use of stratification of malaria risk for better targeting of interventions. This is achieved by using demographic, climatic, entomological, epidemiological, health system and other contextual information to define malaria risk. The operational units in each of the HBHI countries utilized this technique to design flexible, context-specific and targeted interventions.

This process resulted in a tailored package of interventions for each unit.¹⁴ In addition, mathematical models were employed at several stages to help countries understand the impacts of these interventions, through scenario analysis of a variety of intervention combinations. This information was then used to reassess and refine the goals of national malaria strategic plans, while also assisting with costing as well as prioritization of resources when making funding requests to governments and donors. The entire process was coordinated by WHO, in addition to the organization’s analysis support to countries. WHO also collaborated with various mapping and modelling organizations to support HBHI countries.¹⁵ The stratification process was conducted in all the HBHI countries and completed by the end of 2020.

State of HBHI countries’ malaria burden in 2021

Despite efforts, malaria cases have historically continued to rise, especially in HBHI countries. (Figure 4.2) From 2015–2021, malaria cases increased year-on-year in several HBHI countries. The DRC and Nigeria have the largest proportion of cases, which have increased consistently during the review period. However, Uganda appeared to have recorded a 37% increase in cases, against 31% in the DRC and 21% in Nigeria. (Figure 4.3)

Figure 4.2 Shows historical malaria cases highlighting continuous increases in key countries, Nigeria and the DRC as main drivers of the burden of disease

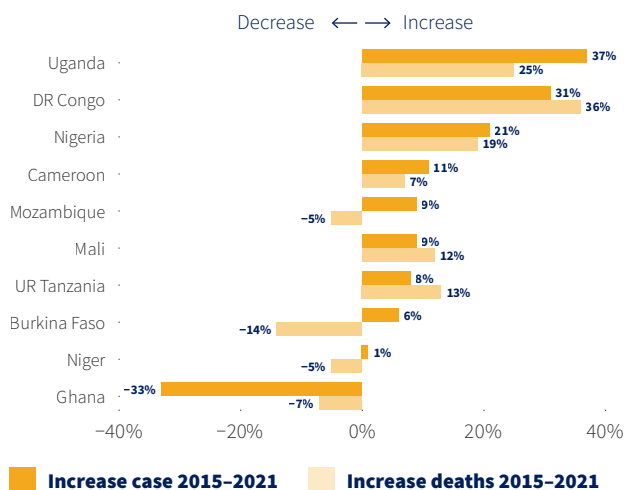


14 High Burden to High Impact Approach in World Malaria 2020. Available at: <https://www.who.int/publications/i/item/9789240015791>

15 The North-western University and the Institute for Disease Modelling assisted Nigeria and Burkina Faso, the Swiss Tropical and Public Health Institute supported Cameroon, Ghana, Mozambique, Uganda and the United Republic of Tanzania, PATH supported the Democratic Republic of the Congo, Mali and Niger, and. Subnational maps of parasite prevalence and all-cause mortality in children aged under 5 years were received from the Malaria Atlas Project (MAP) and the Institute for Health Metrics and Evaluations, respectively.

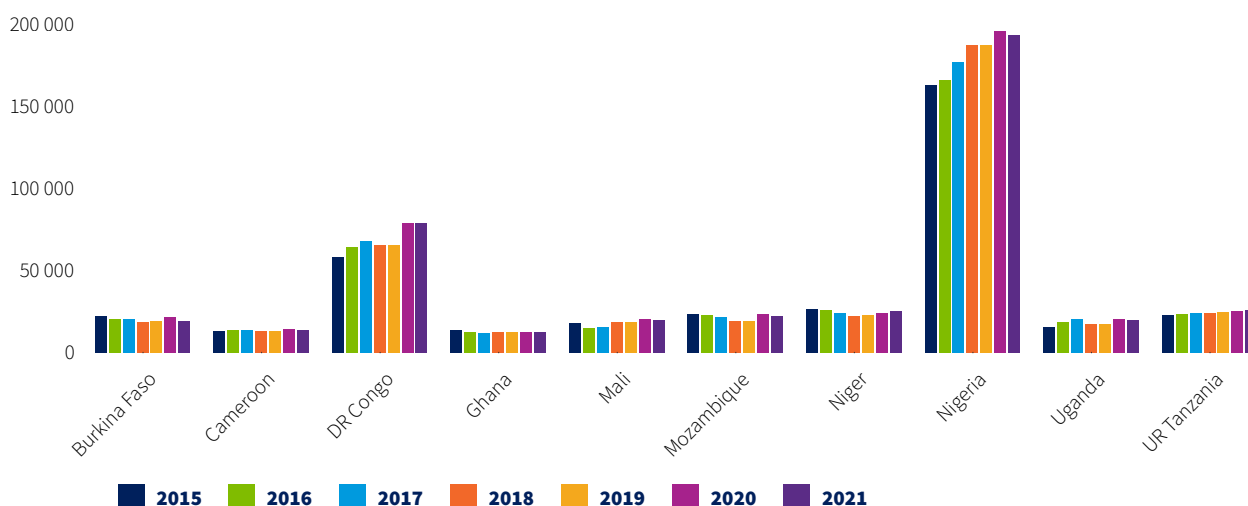
4. HBHI implementation

Figure 4.3 Shows significant increases in malaria cases and deaths in several HBHI countries between 2015–2021 in the WHO African Region



Similarly, deaths attributed to malaria also continued to climb, following the same trend as cases. Again, Nigeria (33%) and the DRC (13%) accounted for the largest proportion of deaths in 2021 among the HBHI countries globally. (Figure 4.4) The DRC (36%), Uganda (25%) and Nigeria (19%) also outpaced other HBHI countries in terms of increases in malaria deaths between 2015–2021. (Figure 4.3)

Figure 4.4 Shows historical malaria deaths highlighting continuous increases in key countries, Nigeria and the DRC, as major drivers of malaria deaths



If the GTS targets to reduce malaria case incidence and mortality rates by at least 75% in 2025, and by 90% in 2030, are to be achieved, the focus needs to be on the DRC and Nigeria. Together, these two countries account for 41% and 47% of malaria cases and deaths globally.



5

**Notable
achievements
in countries**

5. Notable achievements in countries

Several actions have been initiated as part of a coordinated response for the HBHI approach. The vital initial implementation activities and outcomes in the high-burden countries, in line with the key important elements (strong political will to reduce malaria deaths; strategic information to drive impact; better guidance, policies and strategies; and coordinated national malaria response) are described below:

Doing everything to move the ball

Activities under this response element involved vigorous advocacy for support of the malaria response in urban areas of Burkina Faso, and for reduced taxes and tariffs on malaria inputs in the DRC. WHO also supported the DRC to plan activities in four of its six provinces earmarked for the HBHI approach. High-level implementation task forces/councils were established in Cameroon and the DRC to drive, among other things, widespread advocacy via social media.



The Global Fund made available a US\$ 70-million grant, while Mali also received technical and financial support from WHO and UNICEF. In Mozambique and Uganda, the social and behaviour change communication strategy was updated, and malaria was included as part of the Presidential Agenda, with continuous engagement between the country's parliament and executives. Furthermore, political, traditional and religious authorities became involved in malaria training and response activities in Niger and Uganda, with parliamentarians, religious and civil society leaders participating in the launch of the seasonal malaria campaign (SMC) in Niger. This utilized radio, community and social media for messaging. Meanwhile, Uganda focused on long-lasting insecticidal nets (LLIN) information, while state policymakers in Nigeria attended regional review meetings for state schemes and lessons learned, including national level planning for LLIN and SMC mass campaigns. As part of advocacy to build strong political will, a meeting was held with Nigeria's chair of the legislative committee on health.

5. Notable achievements in countries

Building platforms for generating evidence

Digitization of LLINs and SMC data, and the subnational tailoring of malaria interventions, were conducted in collaboration with WHO and partners. This included work to establish data repositories in seven¹⁶ high-burden countries. An integrated data repository with an interactive dashboard, capability for monitoring data quality, producing bulletins and which is accessible to partners, was operationalized at national and subnational level, including staff training, in Mozambique.

Leaving no stone unturned

Burkina Faso evaluated the effectiveness of new LLINs in preparation for their use in the next phase of interventions, while Niger reviewed and updated the distribution guideline. Workshops were also held in Burkina Faso for national stakeholders to share research results, best practices and experiences. Treatment guidelines were updated alongside compliance verification and supply chain assessment, with resource support from the Global Fund.



Efficacy studies of antimalarials were also conducted with funding from WHO, along with the training of 25 National Malaria Control Programme (NMCP) and partner members in the DRC. In Mali, malaria control was integrated into regional and district operational plans, with quarterly data reviews. In Mali and Uganda, analyses of malaria data and stratification of transmission risk at both national and subnational levels were conducted in 2018, and repeated in 2020, with outputs informing the current national strategic plan (2021–2025). Ghana and Nigeria also carried out stratification of malaria transmission risks.

In Burkina Faso, environmental management and sanitation activities were integrated into the national strategic plan. In Cameroon, the DRC, Mali, Mozambique, Nigeria and the United Republic of Tanzania, train-

¹⁶ Burkina Faso, Cameroon, Mali, Niger, Nigeria, Tanzania and Uganda

5. Notable achievements in countries

ings were conducted with several guidelines updated for malaria treatment, vector management, insecticide resistance and chemoprevention, including stock management and supply policies. Malaria epidemic management plans, including surveillance guides, were also developed concurrently, and validated.

All hands on deck

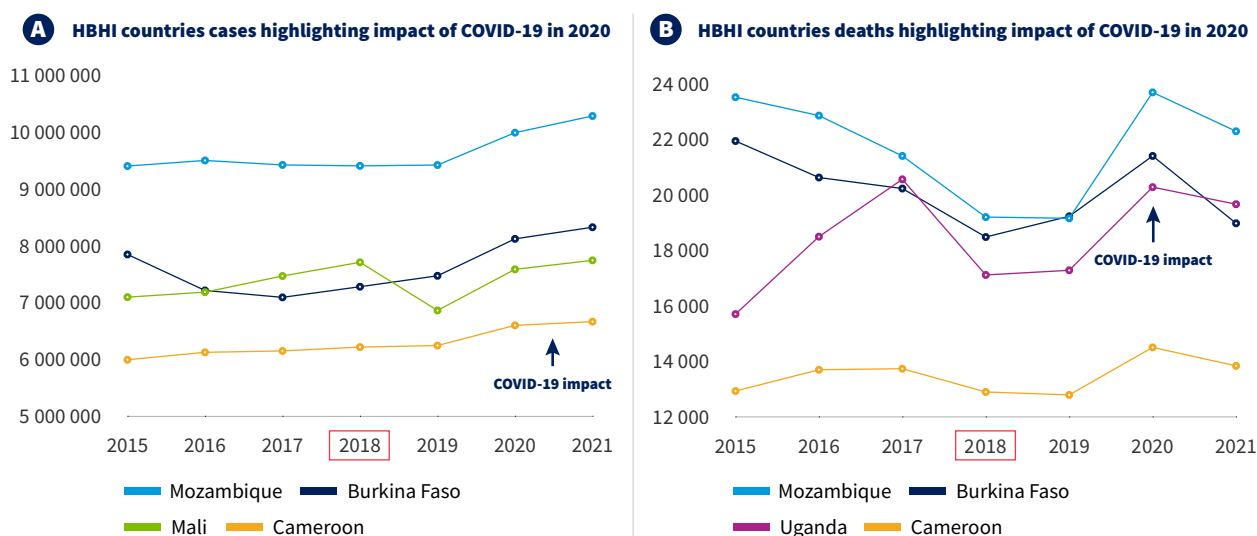
To foster an effective coordinated response, Burkina Faso improved its procurement processes by integrating pooled inputs, while technical committee meetings were organized at all levels, with work on advocacy plans completed in Cameroon and Mali. Institutional strengthening of the NMCPs of the DRC and Mali was carried out, via restructuring and malaria management capacity building. This was also introduced in Nigeria, with two sets of trainings completed, and more to follow.

Mozambique strengthened its coordination mechanisms at subnational level, as well as ongoing partner engagement. In Tanzania, improved access was achieved, with all health facilities now providing malaria services. In Uganda, cross-border and international collaboration was reinvigorated in collaboration with WHO’s Regional Office for Africa, networks for HBHI and WHO’s Global Malaria Programme. Collaborative workshops were held in Mali in 2020 to share lessons learned, while a similar workshop was held with partners to review and validate the annual action plan, to quantify malaria control inputs, and for data updates.

The COVID-19 setback

Malaria trends in some HBHI countries, which recorded decreases in malaria cases and deaths between 2018–2019, are evidence of the positive impact during that period. In 2020, however, a reversal of the gains was seen as the negative impacts of the COVID-19 pandemic took hold. Cameroon, Mali and Mozambique saw only marginal decreases in malaria cases, although decreased deaths from malaria were recorded in Burkina Faso, Cameroon, Mozambique and Uganda. (Figure 5.1)

Figure 5.1 Malaria trends in some HBHI countries indicating increase in malaria cases (A) and deaths (B) highlighting impact of COVID-19 in 2020



5. Notable achievements in countries

The COVID-19 pandemic disrupted delivery of essential services, including those for malaria, in the HBHI countries. This left them facing a prolonged triple challenge: mitigating the immediate health impact of COVID-19, reducing disruptions to essential services, and managing the health of populations in the face of broader economic disruptions.¹⁷ Most of the gains achieved prior to starting the HBHI approach were consequently reversed, a situation that has continued and negatively impacted the pace at which the HBHI approach was rolled out. This also influenced the 2021 results as observed in countries, with several yet to get back to their levels of pre-pandemic progress in 2019. The examples of Burkina Faso, Cameroon and Mozambique are shown in Figure 5.1.

Countries will need to adapt to a world with COVID-19 and establish their own recovery pathways to reach the health-related SDGs and the GTS targets. The attainment of the GTS targets – or the failure to do so – will be the ultimate measure of the success of HBHI.



¹⁷ Evaluating High Burden High Impact Approach (2021), an internal WHO document.



6

**Implementing
elements of the
HBHI approach:**
Country examples

6. Implementing elements of the HBHI approach: Country examples

This section details three implementation examples, from Uganda, Nigeria and Ghana. These included a demonstration of strong political will in Uganda, subnational tailoring of malaria intervention combinations in Nigeria, and multiple malaria interventions in Ghana.

Demonstrating strong political will in Uganda

The Mass Action Against Malaria (MAAM) initiative is a critical manifestation of the HBHI approach, and demonstrates clearly how a country-led process of political engagement at all levels can be achieved, while highlighting the process of community and multisector mobilization of stakeholders. The MAAM initiative was launched in 2018 to focus efforts on the high burden of malaria disease in Uganda, and to understand its impact on the development of communities and individuals. A MAAM guide was developed, defining all key stakeholders and their roles and responsibilities. These stakeholders included the cabinet, parliamentarians, government ministries, parastatals and departments, religious and cultural leaders, as well as the private sector. Others were the media, regional health directors and administrators, district leaders, healthcare facility service providers, community leaders, school administrators, households, teachers and other staff.

The stakeholders at all levels were expected to reorient their own values, with a view to prioritizing the prevention of malaria to save lives. It urged people to recognize that their behaviours do indeed impact others, and encouraged them to take accountability and fully commit to the fight against malaria. It advocated for support to scale up interventions against malaria, but also promoted a sense of urgency and acknowledgment that delays cost lives, with negative outcomes for all – economies, communities and individuals.

There was strong sensitization, with a high-level launch and extensive propagation of information by the media. The 2021–2025 malaria agenda was also integrated into both the National Development and the Health Sector Development Plan. The Uganda Parliamentary Forum for Malaria (UPFM) was established, along with the UPFM scorecard for periodic monitoring of performance at constituency level. All these efforts were supported by the government. The malaria agenda also featured in the manifestoes of political parties for the 2021 national election in Uganda.¹⁸

District task forces were formed and malaria-related operational interventions received significant support, including in the form of music, dance and drama, for local distribution. There was a boost in domestic funding for malaria through government institutions, with a clear budget call to prioritize the malaria agenda. The Malaria Free Uganda Initiative and Rotary Malaria Partnership were established as part of private mechanisms to advance the malaria agenda.

Despite all these achievements, there were also challenges. These included lack of sustained funding for MAAM, which was essential for greater impact. There was a notable increase in domestic funding, but it has yet to reach optimal levels for capacity-building. There were also delays that led to an often very slow pace of operationalization of initiatives.

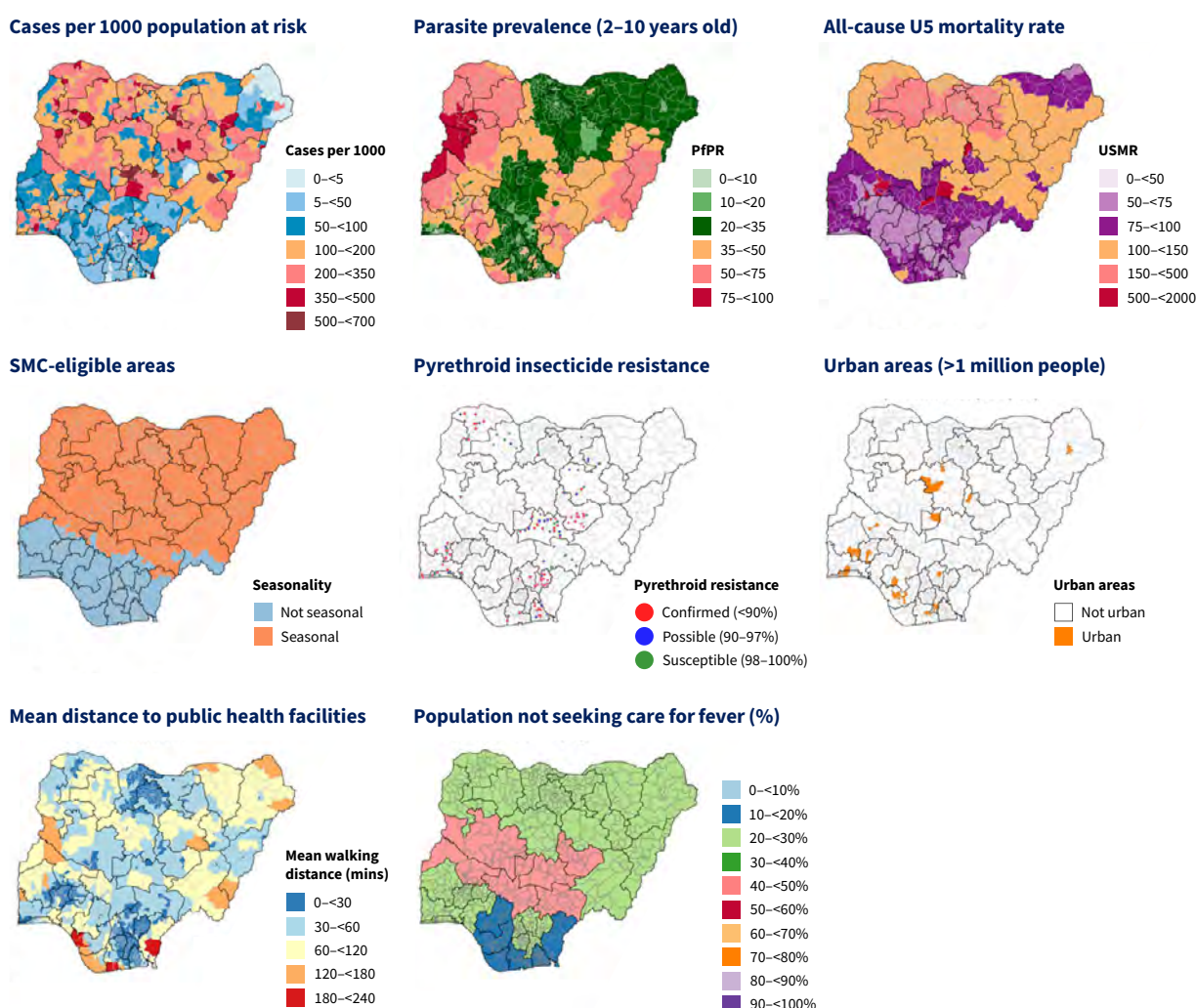
18 HBHI Approach in World Malaria report 2018 [Online] accessed 5th July 2022

6. Implementing elements of the HBHI approach: Country examples

Subnational tailoring of malaria interventions in Nigeria

In Nigeria, the malaria risk stratification process helped define intervention packages for each local government area. (Figure 6.1) This intervention-mix map has been utilized to shape the country’s new National Malaria Strategic Plan (NMSP), and to support requests for funding from the Global Fund and PMI. (Figure 6.2) It also aided the planning of malaria interventions to be implemented once a joint loan from the World Bank and the Islamic Development Bank was approved, for use in states that have not received financial support from the Global Fund, PMI or other donors.

Figure 6.1 Stratification showing subnational tailoring of malaria intervention mixes implemented as part of the HBHI response in Nigeria. Sources: NMEP, WHO, Northwestern University, Institute for Disease Modelling (IDM).

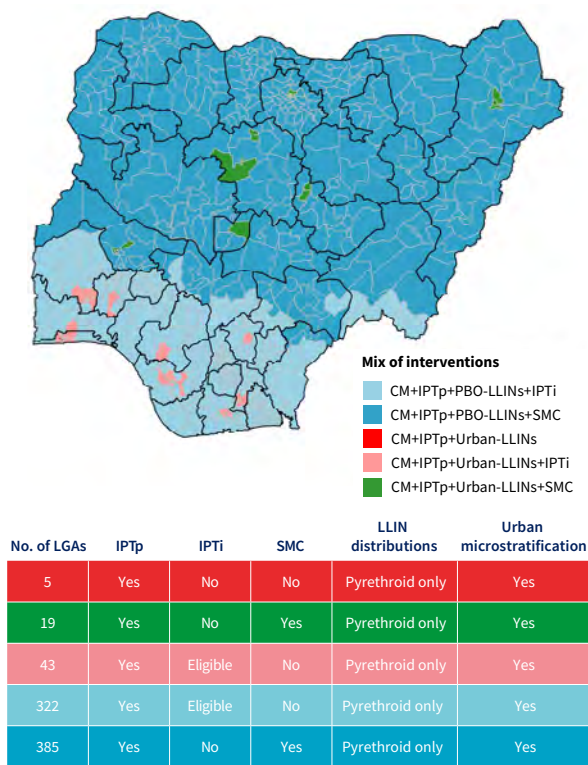


The key highlights of the subnational analysis to tailor intervention mixes in Nigeria included increases in the number of states targeted for Seasonal Malaria Chemoprevention (SMC), from 114 to 395 local government areas (LGAs). However, based on available funding, actual planned implementation expanded from 114 to 305 LGAs. This boosted the number of children targeted for SMC from about 4 million to 16 million. The results of the subnational analysis were also utilized to secure funding for new-generation insecticide treated nets (ITNs) for more than 160 million people.

6. Implementing elements of the HBHI approach: Country examples

Figure 6.2 Shows Nigeria’s subnational tailored national malaria strategic plan from malaria risk stratification

Source: World Malaria Report 2021



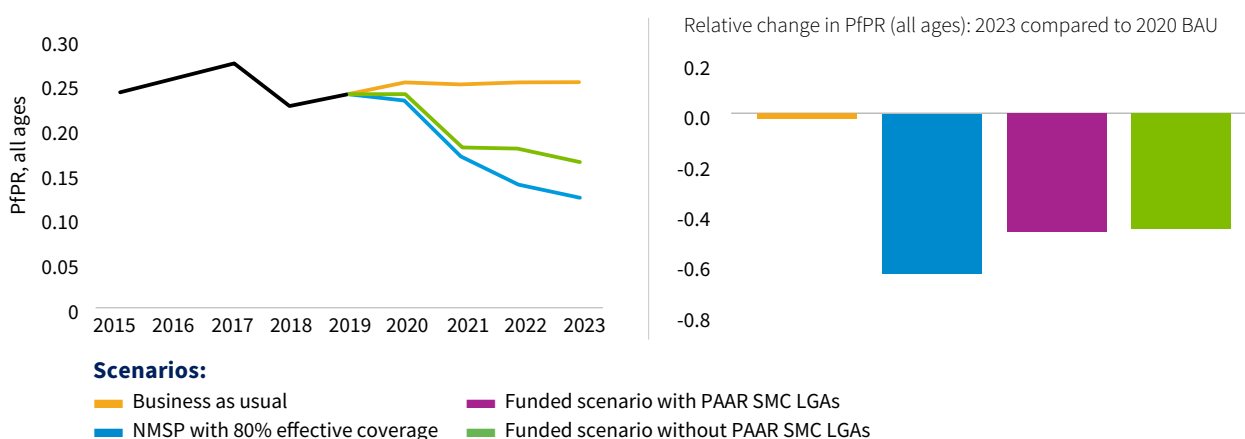
A modelling analysis of the impacts of four intervention scenarios was conducted. These included: (a) Business as usual (BAU), which was the pre-HBHI approach. (b) HBHI approach to a fully-funded NMSP, where coverage of 80% or more of core interventions is achieved in targeted areas. (c) A financing request based on an updated NMSP, limiting SMC intervention to five states. (d) One that expands SMC intervention to five additional states.

The analysis showed that the BAU scenario would result in a very limited decline in the prevalence of malaria in Nigeria. However, a considerable decline of about 16% in malaria prevalence in children younger than five could be achieved by 2023 with full implementation of the sub-nationally tailored NMSP. The predicted reduction would significantly reduce the estimated 28% prevalence rate in 2021 in this age group. (Figure 6.3)

The modelling, in conjunction with other information, was used to determine the type of intervention mix, and helped define the potential funding gap.

Figure 6.3 Demonstrating impact of new subnational targeting of interventions and prioritization.

Source: World Malaria Report 2021



Preliminary analysis by the National Malaria Elimination Programme (NMEP) in Nigeria suggested that US\$ 2.75 billion would be required to achieve high coverage of interventions, coupled with a complete suite of diagnosis and treatment in public health facilities for the period 2020–2023 in targeted areas. With only US\$ 1.75 billion in financing available for LLINs, RDTs and ACTs for the period (2020–2023), additional funding would be needed to cover all SMC-eligible populations, and to significantly improve access to care, com-

6. Implementing elements of the HBHI approach: Country examples

pliance with SMC and use of LLINs, among other things. The modelling scenario forecast that if the funding gap was addressed through to 2023, about 73 million more malaria cases and 66 000 deaths would be prevented, compared with BAU. The process helped facilitate decisionmaking and optimized the expected results.

Multiple interventions in Ghana

Since 2015 and after the start of the HBHI approach, Ghana was the only one of the 10 high-burden African Region countries to achieve a significant reduction in cases (-33%) and deaths (- 7%) between 2015–2021.

This section highlights the example of a country that has demonstrated notable achievements and outcomes.

WHO interventions in Ghana

WHO, through its country office, provided technical, financial and other forms of support to various interventions embarked upon by key health institutions, mainly the Ministry of Health and Ghana Health Service, in the following key areas:

Scientific leadership

WHO provided scientific leadership and technical assistance for the implementation of the NMCP strategic plan, including support during country consultative visits by PATH and GSK Pharmaceuticals regarding the RTS,S malaria vaccine advocacy campaign. The organization also strengthened country capacity for improved malaria surveillance, data collection and analysis, and its utilization in decisionmaking.

WHO also engaged a consultant to support malaria advocacy and partnerships. It supported trainings and reviewed several guidelines, including those on malaria treatment, malaria in pregnancy, and for laboratories, as well as quarterly dashboard reviews to assess the performance of Global Fund resource recipients.

Figure 6.4 WHO has provided funds for training of malaria research teams to support efficacy monitoring of antimalarials in Ghana



Figure 6.5 To date, over 1 million doses of the first malaria vaccine RTS,S have been administered to 320 000 children in Ghana



6. Implementing elements of the HBHI approach: Country examples

Logistics support

WHO provided logistics support to prevent stockouts of key medicines, such as ACTs, sulfadoxine-pyrimethamine (SP) and other essential medicines, as well as intervention items such as LLINs and RDT kits.

Figure 6.6 Delivered about 58 million LONG LASTING INSECTICIDAL NETS (LLINs) in Ghana between 2015-2021



Seasonal malaria chemoprevention (SMC)

This includes technical support and assistance for piloting, planning, preparedness, logistics, dosage quality and field supervision annually in five regions of northern Ghana for over five years. Four rounds were carried out in 2019, reaching over 1 million children and achieving 94% coverage.

Indoor residual spraying (IRS)

WHO conducted oversight visits to parts of Ghana for the IRS scheme implementation, while funding the training of research teams to support efficacy monitoring of antimalarials. The organization also provided technical and financial support for annual insecticide resistance monitoring and data collection. Results informed the current insecticide rotation policy for IRS in Ghana.

National Insecticide Resistance Management Plan (NIRMP)

WHO engaged experts to provide technical assistance to develop the plan and, in collaboration with partners, provided ongoing funding and technical support, including field supervision at 10 sentinel sites for Annual Insecticide Resistance Surveillance.

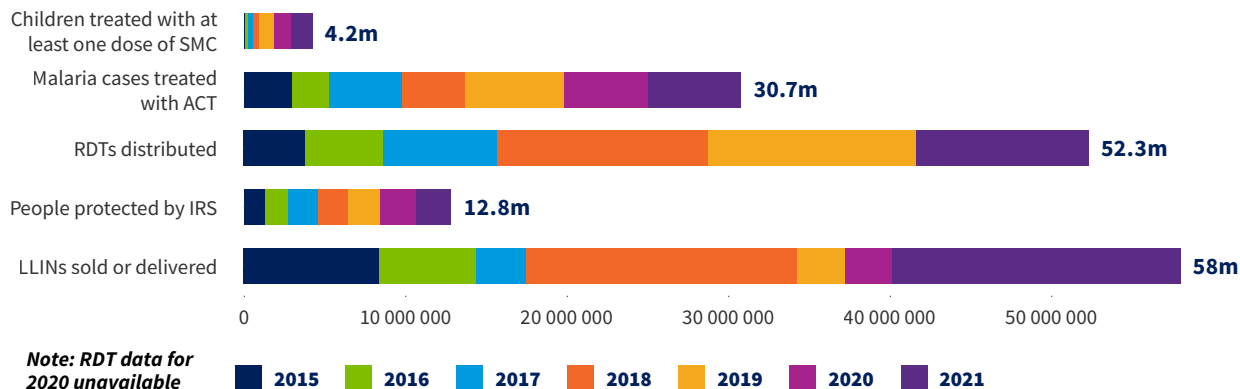
6. Implementing elements of the HBHI approach: Country examples

Figure 6.7 Over 12.8 million protected from malaria infection using indoor residual spraying between 2015–2021



Outcomes of interventions in Ghana

Figure 6.8 Shows a summary of various outcomes of malaria intervention in the prevention, diagnosis and treatment of malaria in Ghana from 2015–2021



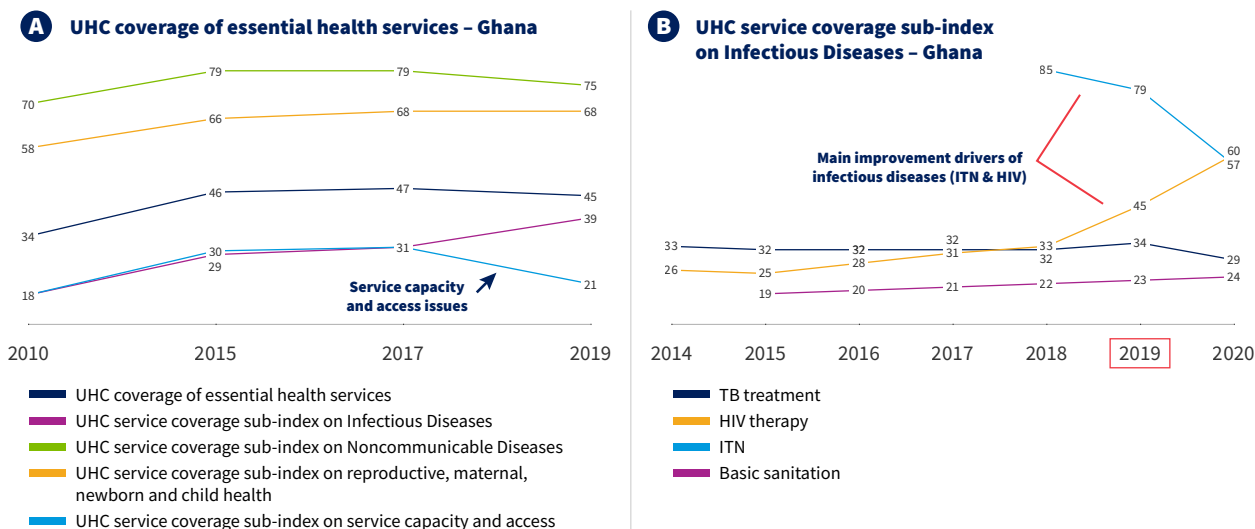
Malaria interventions supported by WHO in Ghana contributed to the delivery of 58 million LLINs between 2015–2021, and the protection from infection of about 13 million people through the IRS scheme. Other outcomes included the treatment of 30.7 million malaria patients with ACTs, and 4.2 million children through the SMC initiative. About 36.6 million RDT kits were distributed over the period under review. (Figure 6.8)

Malaria impact on Universal Health Coverage (UHC) index in Ghana

The UHC coverage of essential services improved marginally between 2015–2017, from 46% to 47%, subsequently decreasing to 45% by 2019, largely due to declines in service capacity and access. However, the Infectious Diseases sub-index increased from 29% in 2015 to 39% in 2019, apparently driving improvements. (Figure 6.9A)

6. Implementing elements of the HBHI approach: Country examples

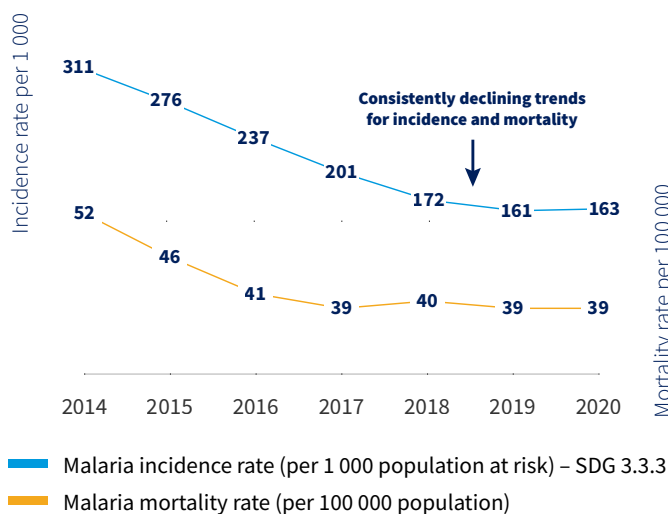
Figure 6.9 Demonstrates (A) how the Infectious Diseases sub-index contributed to UHC service coverage from 2015-2019, while detailing service capacity issues in Ghana. (B) Indicates ITN and HIV treatment are the main improvement drivers of the Infectious Diseases sub-index



ITN, a key malaria intervention, is among the four components of the Infectious Diseases sub-index, along with tuberculosis, ART and WASH.¹⁹ In Ghana, ITN and antiretroviral therapy (ART) are the main drivers of improvements in service coverage, with the ITN contribution from malaria accelerating the Infectious Diseases sub-index increases. (Figure 6.9B) The infectious diseases contribution, in turn, improved progress in UHC service coverage from 46% to 47% between 2015–2017, and improved the service capacity and access rate.

Advancing towards the SDG targets for malaria in Ghana

Figure 6.10 Demonstrates consistent decreases in both incidence and mortality rates from 2015–2020.



The 2030 SDG 3.3 target aims to end the epidemics of HIV, tuberculosis, malaria and neglected tropical diseases, and combat hepatitis, water-borne diseases and other communicable diseases.²⁰ Malaria incidence and mortality rates contribute directly to the SDG 3.3 objective in Ghana, as represented by the -34% and -5% reduction in malaria cases and deaths between 2015–2020 respectively. (Figure 6.10) It is worth noting that Ghana is indeed advancing towards the achievement of the SDG 3.3 target, albeit not fast enough.

19 Tuberculosis treatment (TB), antiretroviral treatment (ART), insecticide treated net (ITN) and basic sanitation (WASH)

20 Sustainable Development Goals 3.3 [Online] accessed 20th June 2022.

Available at: https://www.who.int/data/gho/data/themes/topics/sdg-target-3_3-communicable-diseases



7

**Lessons
learned**

7. Lessons learned

Improved malaria outcomes in countries like Ethiopia, Ghana and Rwanda, among others, when compared to their peers, cannot be attributed to a single factor but rather to a cumulative combination of interventions. This section outlines some of the key lessons learned that have the potential to contribute to better outcomes and impacts more broadly on the continent.

Effective leadership and governance

There is strong and committed leadership at various levels, notably within national malaria control programmes. There has also been strong support over the years from governments and parliaments, including Kenya and Uganda, for example, to working together to prioritize the control of malaria. In Ghana, National Malaria Programme governance has continued to improve, resulting in the more efficient use of resources and the upscaling of many interventions which started out small, but which have benefited from improved knowledge, experience and capacities.

Early adoption of technical recommendations

Countries like Ghana, Nigeria and Uganda, among others, have been very receptive and have speedily adopted WHO's recommended guidelines. Ghana, for example, adopted the WHO malaria treatment policy, and revises and adapts theirs every time this is reviewed. The country has done the same for policies related to LLINs, IRS and larvae source management, while all its policy documents on malaria are up to date and being implemented.

Innovative evidence-based targeting

Malaria risk stratification studies, supported by WHO headquarters and the Africa Regional Office since 2017, have quantified parasitic prevalence and regional variations, including the heterogeneity of the malaria burden and its transmission in relation to countries' ecological zones. This has aided reviews of implementation gaps, assisted with evidence-based planning and tailoring of interventions, as well as resource mobilization. It also informed the formulation of improved intervention mixes, strategic priorities and optimization of resource allocation for greater impact. In fact, results from these studies have also been utilized for 2021–2025 malaria national strategic plans in several countries. All the 10 high-burden malaria countries have utilized stratification for subnational analysis.

Increased capacities across the board

There has been a consistent focus on capacity building around malaria, with NMPs growing as funding improved, with new staff recruited and trained. WHO provided strong support to build capacities, not only of WHO country office malaria staff, but also those within the national malaria country programmes. Trainings have also incorporated participants from the private sector. Capacity building efforts included leadership training for everyone, organized through the TA in the region. As a result, all implementation agents are familiar with relevant malaria policies, and are fully conversant with the processes. The Global Fund has also contributed immensely to capacity building, specifically dedicating necessary resources.

7. Lessons learned

Solid and dedicated partnerships

WHO, the US President's Malaria Initiative (PMI) and the US Agency for International Development (USAID), including The Global Fund, are consistent partners who have shown unwavering commitment over the years. USAID, for example, not only provides funding, but has also contributed significantly to technical needs and improved accountability and governance. These partnerships have fostered collaborative working relationships, including with local players. In Ghana, for example, the mining company Anglo Gold has been involved in the national IRS scheme, sponsoring its rollout to all the country's 49 prisons, and establishing a malaria control centre. These types of relationships have significantly aided the response, evolving into a solid partnership for fighting malaria.

Consistency and timelines

Consistent malaria interventions over the years include, for example, the SMC intervention which has been conducted annually from 2016 during the rainy season, which provides excellent breeding conditions for mosquitoes. Coverage of targeted populations, as well as other areas, continues to increase, along with other interventions, like the IRS. Planned interventions for malaria are mostly realized annually, except in exceptional circumstances, since timing is key for breaking the chain of transmission, especially during the wet seasons.





Challenges and difficulties

8. Challenges and difficulties

Inadequate resources in WHO country offices

WHO is a major partner in several countries, and is looked to for both leadership, as well as technical and funding support. However, lack of adequate resources hampers WHO's ability to provide optimal technical and financial support, especially when new interventions are introduced.

Behavioural issues

Behavioural issues among populations remain a challenge and require effective health promotion, such as the Mass Action Against Malaria Initiative in Uganda. There is often resistance to the consistent use of some of the intervention commodities, like LLINs, or to following instructions for what is required for IRS, for example.

Supply chain issues

Supply chain issues have become a recurring challenge in the region as a result of poor stock management. WHO has provided logistical support and intervened in various countries on several occasions.

Competing programmes

This has been the experience of many countries in the African Region, hampering certain planned activities, especially during emergencies. The COVID-19 related disruptions are a recent example which restricted the implementation of many of the planned activities, especially in 2020 at the height of the pandemic.

Inadequate enforcement

Poor enforcement of government policies in several countries has been a difficult challenge. In Ghana, for example, environmental problems caused by widespread illegal mining of natural resources continue to create ponds which serve as containers for stagnant water, creating huge breeding sites for mosquitoes. Although there are laws governing these activities, inadequate enforcement has allowed the problem to persist, and it remains largely unaddressed.



9

Putting people first:
Ghana impact stories

9. Putting people first: Ghana impact stories

Malaria is the leading cause of hospital admissions and deaths across all ages in Ghana.²¹ Apart from the human suffering caused by disease and loss of life, malaria has huge economic consequences, notably through lost work productivity (absenteeism) and performance in the labour sector. This is especially the case in settings like the fishing settlement of Chorkor, a district in the Greater Accra region. With a population of approximately 3000, most of whom live as informal settlers, population density is high. It is a city within a city, lacking basic living amenities such as toilets, bath houses, drains and schools, resulting in wastewater from homes often running through other homes. Most of the residents live in abject poverty.

WHO, through the Ghana Health Service (GHS) and with support from the Ghana NMCP, has been producing guidelines for promoting low-cost, long-lasting insecticide treated nets, and distributing these free-of-charge to those at high risk for contracting malaria, especially women, children and People Living with HIV. Fewer and less severe malaria episodes occur when using these nets. WHO has also been recommending Intermittent Preventive Treatment of Malaria in Pregnancy (IPTp), using the antimalarial Sulphadoxine-Pyrimethamine (SP), which is usually administered monthly from the fourth month of pregnancy, alongside the use of bed nets. These LLINs are preferred over conventional nets, as they provide more effective insecticide protection for at least three years, rather than needing to be replaced every six to twelve months.

Long-lasting insecticide treated bed nets



The LLINs are provided by WHO, through the Ghana Health Services, to protect people at high risk for contracting malaria – like 46-year-old Mary, a mother-of-five (one deceased), who has lived in Chorkor since she was two years old. Like most women in her community, Mary makes a living as a fishmonger. A few days before this interview, Mary had had a serious altercation with her daughter Elizabeth over her LLIN.

“I remember the fever, the profuse sweating and chills that shook my entire body. And I never want to go through that again.”

Mary took it down to wash it, but when she went to put it back, she realized that Elizabeth had given it to a friend. Mary was furious. Although she has endured several bouts of malaria, she says that since sleeping under the net, she has not once fallen ill with malaria. Speaking in her native Ga (language), she explained that she was very happy that since starting to use the net, her risk of contracting malaria had clearly diminished significantly. Prior to using it, she recalled that she had been sick all the time: “I remember the fever, the profuse sweating and chills that shook my entire body. And I never want to go through that again.” She attributes her previous bouts of illness to being bitten by mosquitoes, even when she wrapped herself in her blanket.

21 Divino J. J., (2022) Putting people first – Eliminating malaria in Ghana, personal stories of individuals impacted by malaria interventions supported by WHO

9. Putting people first: Ghana impact stories



Elizabeth, 24 and unemployed, lives with her partner and seven-year-old son, Leo. Like her mother, she has lived in Chorkor all her life. She agreed that since using the medicated mosquito net, neither she nor Leo had contracted malaria, except for when she has travelled outside of Accra without the net. It is very easy to use, she said, and she is especially grateful for the protection it affords little Leo.

Elizabeth expresses her thanks to the GHS and the NMCP for their efforts in distributing the nets free of charge, and pleads for more to be made available more regularly. Pointing to healed mosquito bite marks on her arms and legs, she said that without the LLINs, she would be sick all the time. Now, she cannot imagine not sleeping under a bed net.

Jonathan, 33, is another local resident who was born and raised in Chorkor. He was excited to share his story, explaining that he was thrilled to receive a free medicated mosquito bed. Adding his voice to the plea for more supplies, he said the mosquito situation in Chorkor is very bad, especially during the rainy season. He has had malaria more than once, and would do anything to prevent it from happening again. “We need more nets. We really need them here.”



Antimalarial during pregnancy

Pregnant women are among the most vulnerable to contracting malaria, being three times more likely to experience severe disease from malarial infection. Mortality rates for severe disease is estimated at 50%. In countries like Ghana, where malaria is endemic, it is estimated that at least 25% of pregnant women are infected with malaria. The highest infection rates are recorded during the second trimester, which highlights the critical importance of supporting antepartum care needs as part of malarial prevention and treatment efforts.

Although adults who live in malaria-endemic regions are reported to have developed immunity to malarial infections in childhood, this protection diminishes significantly during pregnancy. Moreover, babies born to mothers with placental malaria infection are more than twice as likely to be underweight at birth. For this reason and more, WHO and partners in Ghana are focused on preventing infection during pregnancy.

9. Putting people first: Ghana impact stories



Just north of Chorkor is a neighbourhood called Sukura, also in the Mamprobi District. Like Chorkor, it is also a poverty-stricken area, with similar social and environmental challenges. In Sukura, Grace, a 28-year-old pregnant woman and mother to two-year-old George, is seven months pregnant. As part of her antenatal care at the Mamprobi Polyclinic, she had been taking antimalarials since entering her first trimester. This is part of the prenatal care programme for pregnant women at the municipal hospital.

Sulfadoxine Pyrimethamine is on WHO's List of Essential Medicines, and its use has been recommended for many years to protect women against malaria during pregnancy. Because of poor patient compliance with prophylaxis, and increasing resistance of parasite strains to chloroquine in pregnancy, sulfadoxine/pyrimethamine has been recommended by WHO for all pregnant women living in areas with malaria transmission.

Although she initially felt nauseous after swallowing the tablets, this eventually subsided, and Grace is now grateful that she had access to the treatment before George was born. She attributed his normal delivery, and her not being sick with malaria when she was pregnant with him, to the antimalarials she received during her visits with midwives at the Mamprobi Polyclinic.

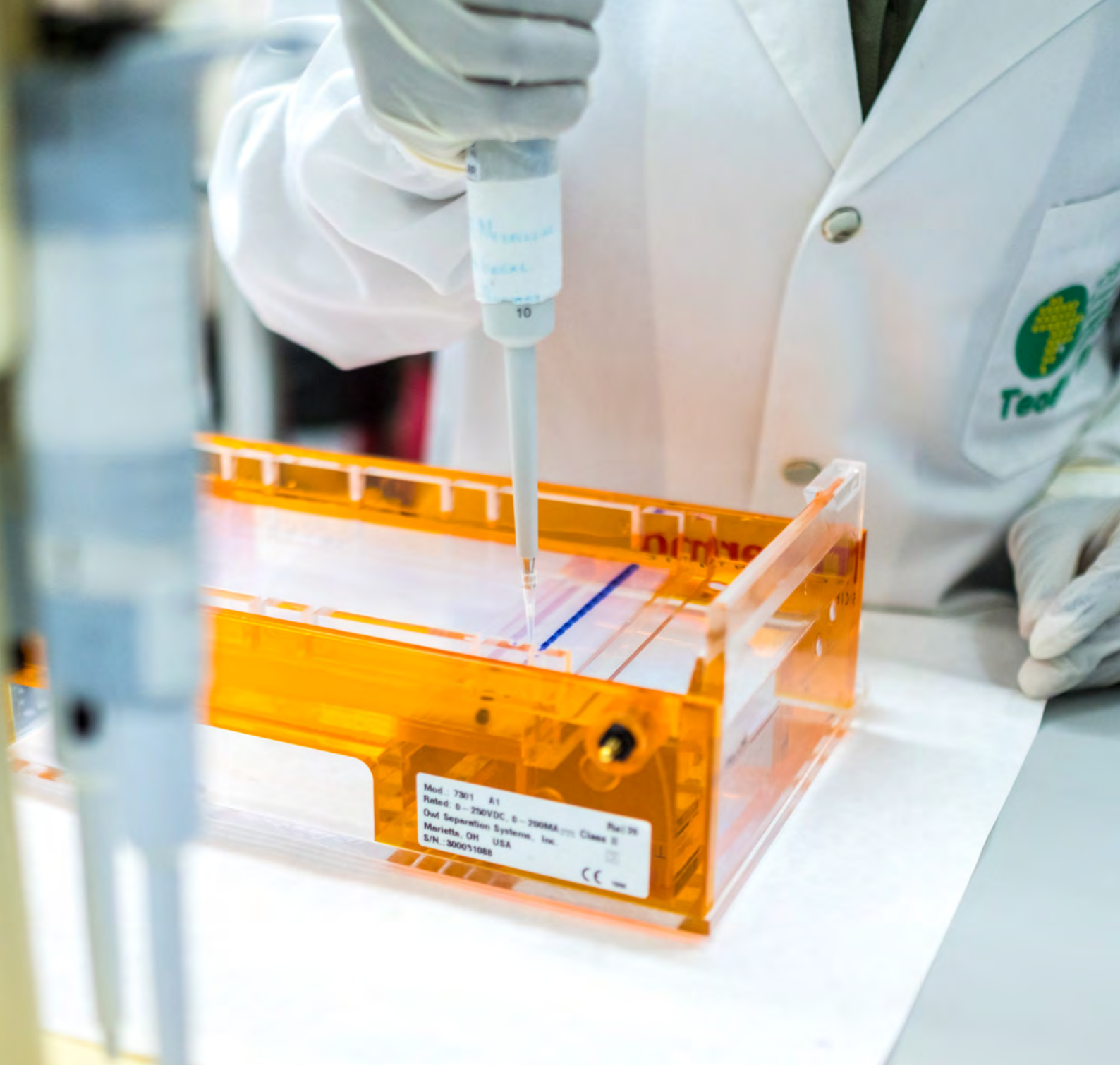
“With me being pregnant again, I am relieved that I have been taking the medicine against malaria. I no longer feel anxious all the time about getting malaria, even if I am bitten by mosquitoes.”

Her friend Gladys is currently three months pregnant. She recently relocated from the Cape Coast when her taxi driver husband found a good job in Accra. As with Grace, Gladys had just started taking the antimalarials. When she was pregnant with her daughter Priscilla some eight years ago, she did the same, in front of the midwife, during her first trimester.

She too was nauseous and felt sick for a couple of days. But, as with Grace, this went away. “With me being pregnant again, I am relieved that I have been taking the medicine against malaria. I no longer feel anxious all the time about getting malaria, even if I am bitten by mosquitoes,” Gladys said.



Both women received their antenatal care at the Mamprobi Polyclinic, which is close to both the Chorkor and Suruka neighbourhoods, and expected healthy deliveries.



10

What next?

10. What next?

In view of the current observations, the lessons learned and in consonance with the objectives of the TA, as well as the management priorities going forward, future focus should be on the following:

Accelerating the HBHI approach

Going forward, advocating for the continuity, acceleration and implementation of the HBHI plan post COVID-19 is critical.

Continue to utilize innovative techniques such as risk stratification to plan, prioritize and tailor packages of interventions, as well as to optimize allocation of resources for greater impact in countries, especially those with high burdens of malaria disease.

Focus on the DRC and Nigeria to significantly reduce both malaria cases and deaths to have a chance at controlling the burden of the disease in these countries, in the African Region and globally. These two countries account for 47% and 41% respectively of global malaria cases and deaths.

Progress towards UHC

Push towards integrated interventions in view of the interrelationships between UHC sub-index indicator on infectious diseases, to contribute and make more impact towards UHC into the future.

Promote and support Member States to also prioritize service capacity and access improvements, for higher impact on UHC in the African Region

Accelerate HBHI approach, utilize innovative techniques such as risk stratification to tailor interventions, push towards integrated interventions, focus on DRC and Nigeria, and prioritize service capacity and access improvements.



**World Health
Organization**

African Region

Cité du Djoué, P.O. Box 06, Brazzaville, Republic of the Congo
Telephone: + (47 241) 39100 | + (242) 770 0202 | Fax: + (47 241) 39503

www.afro.who.int | afroorgcommunications@who.int

Twitter: [@WHOAFRO](https://twitter.com/WHOAFRO) | Facebook: www.facebook.com/WHOAFRO