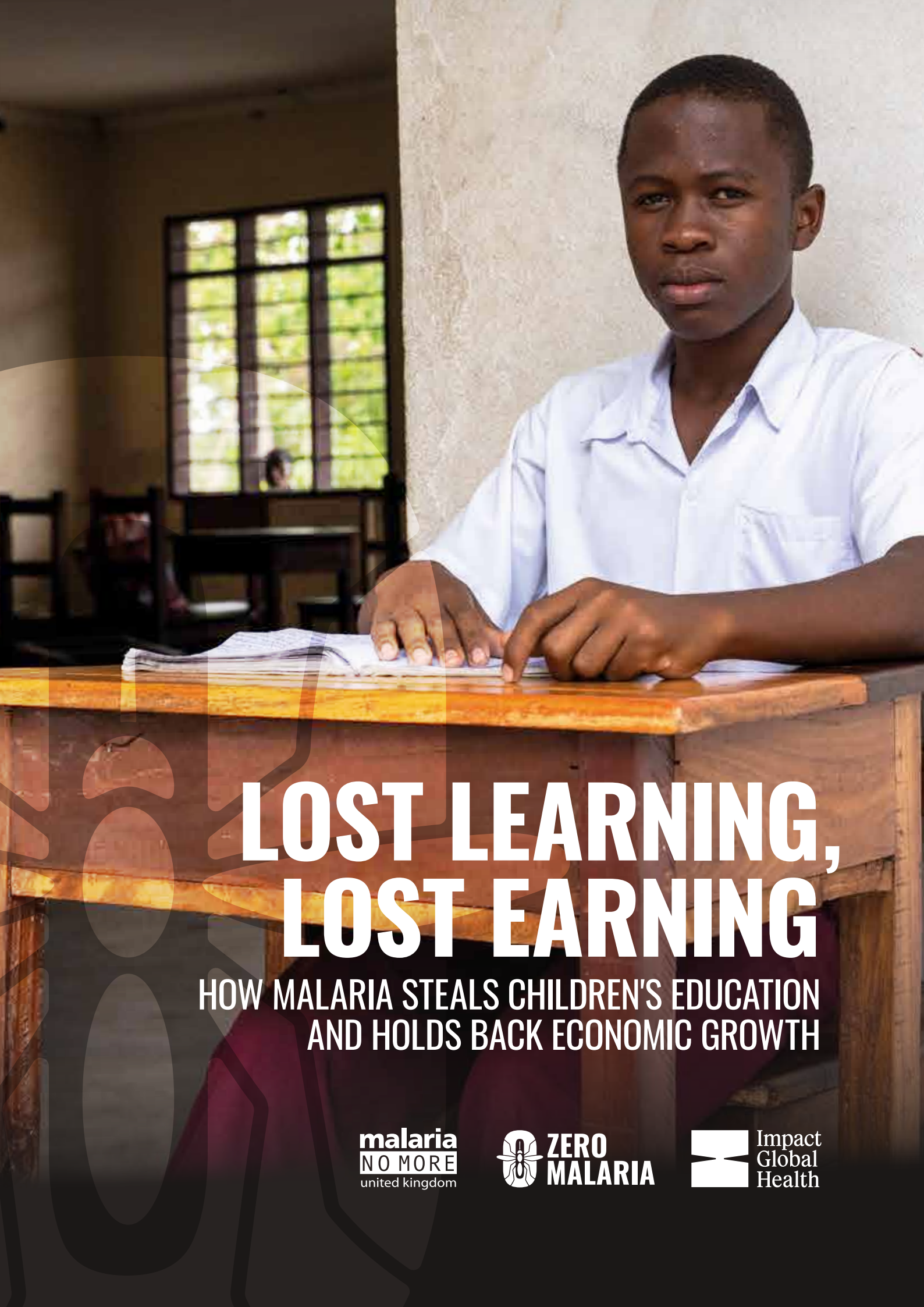

LOST LEARNING, LOST EARNING

HOW MALARIA STEALS CHILDREN'S EDUCATION AND HOLDS BACK ECONOMIC GROWTH

malaria NO MORE united kingdom

ZERO MALARIA

Impact Global Health



ABOUT THE REPORT

This report was published in November 2026 by Malaria No More UK, in partnership with and in support of the RBM Partnership to End Malaria. It draws on analysis by Impact Global Health and was written by Madeleine Webb, Ross Bailey, and Lottie Renwick, with review by Jenny Vaughan and design by 'Tall Man with Glasses.'

The report is published as a contribution to Zero Malaria, a global movement born out of the grassroots pan-African campaign Zero Malaria Starts with Me, that is committed to ending malaria in a generation.

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Sincere thanks are given to Impact Global Health for their crucial contribution to this report. The analysis has moved forward the collective understanding of how malaria holds back the potential of children and young people, denying education and curbing lifetime earnings.

All images credited to **Natalia Msungu/Malaria No More UK**

KEY FIGURES AT A GLANCE

ACROSS THE 48 AFRICAN COUNTRIES ANALYSED IN THIS REPORT:

770 DUE TO MALARIA, CHILDREN BORN BETWEEN 2000-2045 WILL MISS AN ESTIMATED **MILLION** YEARS OF SCHOOLING AND **$2.65 TRILLION** WILL BE LOST IN LIFETIME EARNINGS

71 ON AVERAGE EACH CHILD WILL MISS **DAYS** OF SCHOOL AND LOSE **$1,362** IN POTENTIAL LIFETIME EARNINGS

81 30% CUTS TO EXTERNAL FUNDING FROM 2027 WILL RESULT IN AN ADDITIONAL **MILLION** LOST SCHOOL YEARS AND **$262 BILLION** IN LOST LIFETIME LEARNINGS

377 ACHIEVING THE SDG TARGETS FOR REDUCTIONS IN MALARIA BY 2030 COULD RESTORE **MILLION** SCHOOL YEARS AND **$1.2 TRILLION** IN LIFETIME EARNINGS

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EXECUTIVE SUMMARY

Malaria is a deadly yet preventable disease which hits children the hardest. Every year, almost half a million children will die from it, overwhelmingly in rural areas of sub-Saharan Africa.[1] It is the single largest cause of death for children under 5 in Africa,[2] and its continued existence is a global threat.

Despite the improvements made this century, malaria cases and deaths remain stubbornly high. After years of momentum, hard-won progress has stalled, leading to a growing risk of resurgence. Biological resistance,[3] extreme weather events,[4] and conflict[5] are converging to create a moment of real danger. At the same time, global health financing is declining, placing strain on the systems that help control malaria and increasing uncertainty about the future of the fight.[1]

Malaria is more than a health crisis. Its effects in early childhood shape a person's education, employment, and earnings throughout their life. Reversing progress against the disease is a concern for all of society.

This report, based on modelling conducted by Impact Global Health, examines the lives of children born between 2000 and 2045 in 48 African countries that make up the overwhelming majority of the global malaria disease burden. It tracks how exposure to malaria during childhood affects schooling and cognitive development, reduces participation in employment, and suppresses lifetime earnings. It also compares the consequences of funding cuts with the gains that renewed progress could deliver.

THE REPORT MAKES CLEAR FOUR VITAL TRUTHS:

- **Malaria is stealing children's education.**
  At current exposure levels, malaria will cost children born between 2000 and 2045 a collective **770 million years of schooling**. On average, a child born in these countries will miss more than **71 school days** – almost 4% of their total time at school. The massive progress made on malaria at the start of the century meant that between 2000 and 2013 the amount of schooling lost to the disease was halved. But as progress slowed, so has the improvement in school attendance. A child born in 2026 will attend school for only six days more than one born in 2013.

- **Lost education becomes reduced economic potential.**
  Childhood malaria is projected to cost **$2.65 trillion in lifetime earnings** for those born between 2000 and 2045. On average, a child born during that period would lose **$1,362**, or approximately **8% of their potential lifetime earnings**.

- **Funding cuts reverse hard-won progress.**
  Health financing from donor partners has rapidly declined in recent years and despite some increases in domestic funding, the overall resources are well below what is needed to control and eliminate the disease.[1] Aligned with modelling used in the report "The Price of Retreat", this model demonstrates the devastation that a 30% reduction in official development assistance (ODA) from 2027 onwards would cause. A 30% cut would increase malaria prevalence by 2.2%, cause an additional **$262 billion in lost lifetime earnings** and bring total earnings lost to almost **$3 trillion**. Children would lose a further **81 million years of schooling**.

- **Malaria is a disease the world can end within a generation.**
  Scientific innovation for malaria gives great cause for optimism. The pace of development is accelerating, with new and potentially transformative tools and technologies moving through the pipeline. These advances show how world-class research, grounded in local expertise, can save lives while strengthening health systems. With sufficient funding to deploy these tools and treatments alongside existing defences, the fight against malaria can be won. Leveraging this innovation and achieving the SDG target of a 90% reduction in malaria cases by 2030 from 2015 levels would deliver an additional **377 million years of schooling** and increase lifetime earnings by around **$1.2 trillion**. Achieving a 90% drop in malaria cases by 2040, a decade later than the target date, would save **313 million school years** and increase earnings by **$983 billion**.

RECOMMENDATIONS

Malaria endemic countries should increase their health investments to the level of the Abuja commitment of 15% of national expenditure to be spent on health and prioritise investments in malaria control and elimination to the most vulnerable populations.

Multilateral and regional development banks seeking to support economic growth and development in African countries and improve early childhood development should ensure that malaria is prioritised in efforts to strengthen primary healthcare, fully integrated into early childhood development support, and recognised as a priority during the World Bank's IDA22 replenishment.

Donor partners in high income countries should continue their support for the lifesaving work of the Global Fund to Fight AIDS TB and Malaria and Gavi, the Vaccine Alliance, as well as bilateral programming, and ensure health investments are prioritised in IDA22.

Philanthropic actors should invest through the multilateral global health initiatives and at domestic level support the national End Malaria Councils and Funds.

Private-sector actors should ensure that their operations enable access to malaria care, support national End Malaria Councils and Funds, and demonstrate to governments that malaria investment is an essential component of a successful economic model.

Civil-society actors should demonstrate more clearly the link between malaria and economic outcomes, incorporate this evidence into their advocacy, press for malaria to be prioritised in national health plans, and call on governments to recognise malaria investment as a direct contribution to early childhood development.

Young people joining the workforce in 2026, will have missed 100 days of school and will lose 10% of their potential lifetime earnings, due to the impact of childhood malaria.

INTRODUCTION

"During the time I was sick, I did not even have the strength to walk. About two weeks after I started feeling better, I began working very hard. I hardly had any time to rest because I could see that my classmates were far ahead while I was far behind."

Adam, 15 years old from Tanzania

The fight against malaria was one of the great success stories of global health campaigning in the early 21st century, showing what strong national leadership and international collaboration can achieve.

A child born in a low-income, malaria-endemic country in the early 2000s experienced limited access to insecticide-treated nets or effective treatments, and the prospect of vaccines was still decades away.[6] At the turn of the millennium, more than a million people were dying from malaria each year; within 15 years, that number had more than halved.[1]

Despite this huge achievement, progress against malaria has now plateaued across Africa and, in some countries, reversed. Rising resistance to existing tools and treatments,[3] the impact of extreme weather events,[7] and ODA cuts outweighing increases in domestic financing,[1] all combine to deliver a perfect storm that threatens the possibility of ending malaria. Indeed, given the nature of malaria, every year the disease does not reduce is a chance for it to become more resistant to control and for the impacts of extreme weather events to make it even harder to eventually eradicate.

At the core of this report is the fact that the devastating impact of malaria extends well beyond a child's immediate health. Sick children cannot go to school.[8] Their parents often cannot work.[9] Many children will face life altering consequences from the disease.[10] These factors damage children's education and can inhibit their future participation in the workforce. This is damage which can last a lifetime and shape the destinies of countries that are working so hard to drive economic growth and wider development.

Over the last three years, Malaria No More UK has produced a series of reports telling a bigger story on how malaria shapes the economies of endemic countries and their trading partners. The Malaria Dividend, published in 2024, and The Price of Retreat, in 2025, examined the macroeconomic impacts of the disease. This report now focuses on the impact of malaria on individuals, showing how the illness can destroy educational opportunity and limit economic chances across a lifetime.

The report draws on modelling by Impact Global Health, which focuses on the 48 African countries where the overwhelming majority of the global malaria burden is concentrated. Analysis of the model details



the impact on birth cohorts from 2000 to 2045 and shows the improvements in education and earnings associated with expanded access to tools such as insecticide-treated nets, but also the consequences of progress stalling.

This data makes clear how quickly early 21st-century development gains could unravel and how malaria threatens the opportunity of Africa's 'demographic dividend' which will see the continent have the highest number of working age people by 2040.[11]

In preparing this report, efforts have been made to consult partners and obtain testimony from parents, children, teachers, businesspeople, and health and education ministry staff affected by the disease. Their message is clear: malaria steals education, development, and employment opportunities from children. Ending malaria is a moral imperative to save lives, provide a huge boost to the education system and deliver a sound economic investment in unlocking the power of Africa's surging youth population.

THE STORY OF SAADA

HOW MALARIA THREATENS CHILDREN'S DREAMS AND AMBITIONS

Saada is 17 and lives in Tanzania. She dreams of becoming a doctor. Malaria struck while she was at school. ***"I was afraid. I worried about my studies and my life. My headache was so bad that I could not see properly; everything looked dark or misty."***

Confined to bed for four days, she watched her classmates head to school. ***"That was the hardest part. It really upset me, and I kept worrying about what I would do."***

During her practice exams and with her strength gone, she wrote, stopped to sleep, then wrote again. ***"When I saw my classmates writing their exams while I did not even have the strength to write, I felt terrible."***

Today, the fear of getting malaria during final exams looms still, ***"I would feel extremely anxious and afraid."***

METHODOLOGY

This model was built in collaboration with Impact Global Health to model the impact of childhood malaria on people's time spent in school and lifetime earnings. A detailed explanation of the methodology is available here.

Given the overwhelming percentage of the malaria burden on the continent of Africa, the model includes the 48 countries in this geography that are included in the Malaria Atlas Project (MAP), the world's largest malaria database, which monitors the spread of the disease.

The model includes children born between 2000-2045 in tracking the impact of childhood exposure to malaria until 2065. The impact on each birth cohort and in each country is calculated independently. The model accounts for differences that exist between countries and across time in terms of cohort size, malaria prevalence, labour-market composition and participation rates, and average wages.

CHILDHOOD MALARIA EXPOSURE AND OTHER KEY ASSUMPTIONS

The model defines childhood exposure as the average malaria prevalence between ages 0-10 for each birth cohort, using projected figures for 2025 onwards based on current trends in prevalence in each country.[12]

Children who die of malaria within the exposure window and the impact on total education and lifetime earnings lost are not included in this model, as childhood mortality should not be viewed primarily as an economic issue. Given malaria's large mortality burden, the true cost of childhood malaria is significantly understated in this model.

The model assumes a ten-year lag from birth year to impact on schooling and a further ten years to impact on earnings. The model also assumes 180 days of school per academic year and 10 years of schooling in total.

IMPACT PATHWAYS

This model captures the impact of childhood malaria exposure through the following pathways –

- **Pathway A** - **Lost employment** - decreasing the likelihood of employment during adulthood, regardless of educational background[8],[13]

  (due to the nature of the evidence available, we have limited this impact to only the male population in each cohort, which is likely to underestimate the true impact)

- **Pathway B** - **Lost time in school** - increasing the amount of schooling missed[8]
- **Pathway C** - **Lost cognitive ability** – decreasing literacy rates (which is here being used as the proxy measure for cognitive ability)[14]

CALCULATING ECONOMIC LOSSES

The impacts on people's lifetime earnings -

- **Pathway A losses** – Lifetime earnings lost for each worker pushed out of employment entirely, calculated using country-specific average wages.
- **Pathway B losses** – Lifetime earnings lost for each worker due to lost school time, as wages increase with each year of school completed.[15]
- **Pathway C losses** – Lifetime earnings lost due to lost cognitive ability, as wage increases in line with cognitive ability[16], [17]

The impact of each pathway is calculated based on each country's per worker wage, assuming 35 years of employment. Future earnings are projected based on current trends.

The total economic losses resulting from lost time in school and lost cognitive ability (pathways B and C) are weighted to account for each country's labour-market composition. This is because the degree to which increased school time and cognitive ability will result in higher wages depends on the type of work people are in.

CALCULATING ADDITIONAL IMPACT DUE TO ODA CUTS

The model captures the impact of ODA cuts, which would increase educational and economic losses by increasing childhood malaria exposure.

The cuts have been applied on the assumption that ODA funding for malaria treatment and diagnosis is protected, so funding is reduced specifically for preventative interventions - i.e. the provision of nets, indoor residual spraying, and antimalarial medicines.

Data on the relationship between reduced coverage of preventative interventions and increased malaria cases was used to calculate new childhood exposure figures (prevalence) for each country and birth cohort.[18] The model was run again using the updated figures to capture the increase in educational and economic losses. The rest of the model's existing assumptions were left unchanged.

CALCULATING THE BENEFITS OF MEETING THE SDG TARGET

Finally, the model explores the economic and educational gains delivered by meeting the SDG target of reducing malaria cases by 90%, from 2015 levels in each country across different timespans. It models a linear, year-on-year decrease in the number of malaria cases over the specified timespan.

For each year where case numbers fell, a new childhood exposure figure (prevalence) was calculated for that birth cohort, and the model was run again to capture the education and economic benefits of case reduction. As with the ODA cuts scenario, the other calculations and assumptions were not changed.

SECTION 1
HOW MALARIA DENIES CHILDREN THEIR EDUCATION

ALMOST 770 MILLION YEARS OF SCHOOL LOST DUE TO MALARIA

In 2024, malaria once again became the single largest killer of children under-5 in Africa. There were 579,000 malaria deaths in Africa, over 75% of which were children aged under 5.[1] Despite considerable progress in the early 21st century which saw malaria mortality rates fall by half, the disease is resilient and continues to cause huge harm. Malaria's impact is felt everywhere in areas endemic with the disease.

Because of its prevalence, malaria threatens children's ability to learn, develop, and realise their full potential through missed school time and limiting cognitive development.[14],[19] Short, mild cases of malaria can result in multiple days and weeks off school. More severe cases may result in longer. At its worst, malaria can cause severe damage to a child's internal organs including the brain. For those who survive, a full-time job may no longer be a possibility.[10] And in countries with the highest malaria burden, children are forced to endure multiple malaria infections a year.[20]

Reducing early years exposure to malaria therefore significantly increases the amount of schooling children receive.[8] This has been repeatedly demonstrated across different countries and time periods, with lower levels of malaria being strongly linked to children achieving higher test scores, completing more years of schooling, and having lower rates of absenteeism.[21],[22]

The modelling shows that children born between 2000-2045 are currently on track to miss a collective 770 million years of schooling. This means each child losing out on almost half a year of education on average. This is 4% of their total time in school lost solely because of malaria, with other barriers likely to drive the total level of absenteeism even higher.[23]

In the most heavily impacted country included in the modelling, Democratic Republic of the Congo (DRC), each child is set to miss a full year of school, on average, due to malaria exposure.

Table 1 – *Top ten countries most impacted by malaria in loss of time in school*

Country	Average number of school days missed by each child due to malaria	Average proportion of total time in education missed by each child due to malaria
Democratic Republic of the Congo	182.8	10.2%
Benin	160.6	8.9%
Central African Republic	146.7	8.1%
Sierra Leone	123.2	6.8%
Côte d'Ivoire	116.2	6.5%
Nigeria	115.7	6.4%
Burundi	98.4	5.5%
Cameroon	98.0	5.4%
Angola	93.5	5.2%
South Sudan	92.8	5.2%

THE STORY OF NEEMA AND HER MOTHER MAUA

THE FEARS AND LONELINESS THAT COME WITH MISSING SCHOOL

Neema is head girl at her school in Tanzania. When malaria struck in 2025, she was frightened. ***"I lost my appetite, felt nauseous, and kept vomiting."***

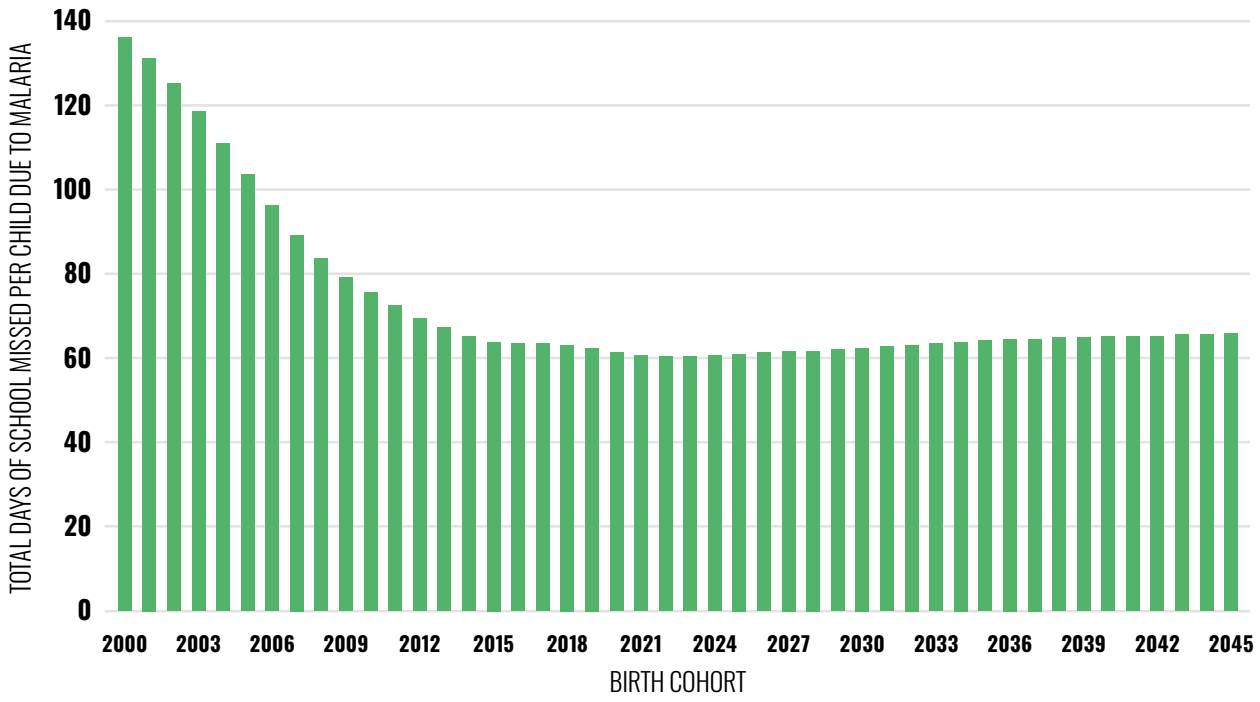
Missing school weighed on her. ***"Two weeks is a long time to stay at home. I was afraid I would fail my exams."*** Seeing her classmates go to school made her feel bad. Returning, she says, ***"I had missed them very much, so I was happy to see them."***

Neema's mother Maua shares her fears about how malaria could affect her education. ***"If they miss exams and keep being ill it could cause problems later, and they could lose the motivation to study... I want her to move forward in life and study. I will keep working hard as long as she wants to continue because she says, 'Mum, I do not want to stay in the village. I want to move forward.'"***

What is most remarkable about these statistics is just how much impact the progress made on malaria from 2000 onwards achieved for children's education. Between 2000 and 2013, the amount of schooling lost to the disease was almost halved. This was an incredible achievement that meant more children could receive an education and flourish. Today, those children are entering the workforce with an education that was not available just a generation earlier. However, as malaria control and elimination has slowed and plateaued since around 2015, so has the improvement in school attendance. A child born in 2026 will attend school for only six days more than one born in 2013.

The graph in Fig.1 demonstrates this and provides a grave warning. Unless current trends are reversed and malaria prevalence begins to decline again, educational gains will fully stall and reverse. This would mean current and future generations of children will lose more school days due to malaria than those born in the most recent years.

Figure 1 – *Average number of school days lost due to childhood exposure to malaria for children born each year between 2000-2045*



THE STORY OF ALEXIS AND HIS FAMILY

THE DEVASTATING CONSEQUENCES OF MALARIA ON LIVES AND LIVELIHOODS

Alexis lives in the Democratic Republic of Congo with his wife and young son. He knows firsthand the devastating knock-on effects malaria can have, after being hospitalised with the disease while studying and working in 2018.

After 2 weeks of absence from work and study, he missed vital classes and lost his job. ***"My two sisters, my brother, and my niece all depended on my salary... I could see my job was at risk, and I didn't want to fall behind in my studies. At the same time, I was really unwell. It was extremely difficult."***

Now a malaria advocate, Alexis is working to change things. ***"My experience with malaria, feeling its severity and how it impacted my life, and then learning more about the disease, has motivated me to raise awareness to fight it."***



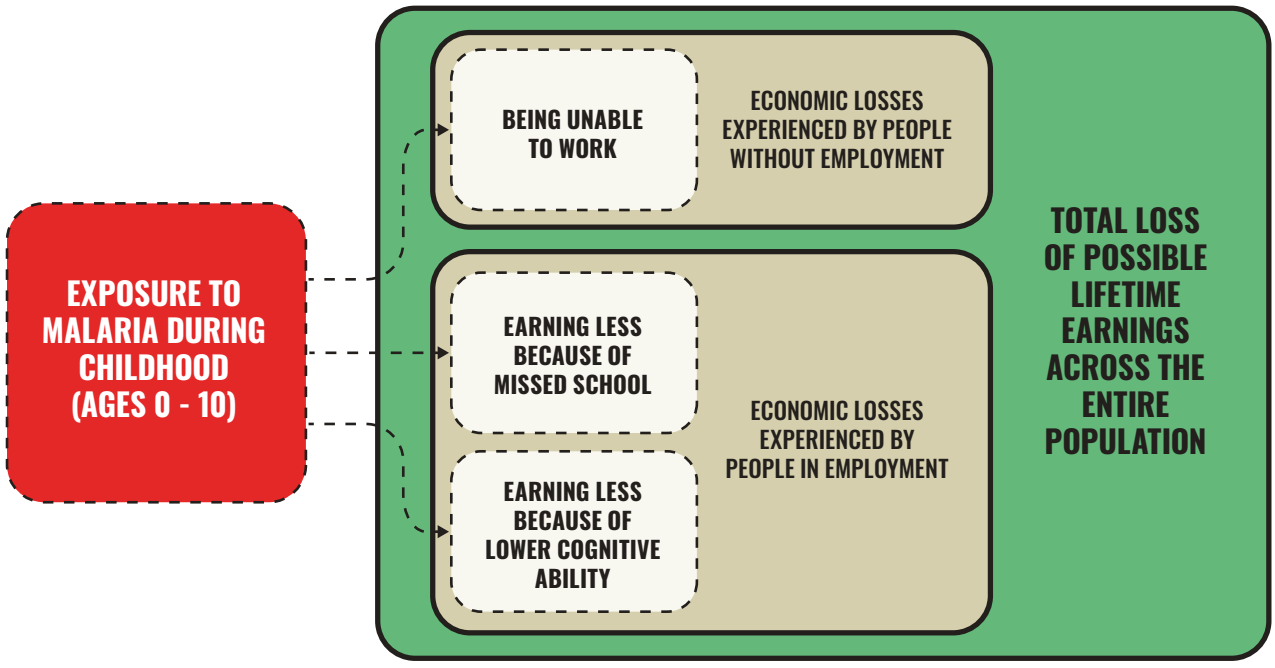
SECTION 2
THE RESULTING IMPACT ON LIFETIME EARNINGS

$1,362
IN LIFETIME EARNINGS LOST BY EVERY CHILD BECAUSE OF MALARIA

When children leave school and enter the workforce, the impact of malaria during their education begins to materialise in the economy. Children who have had less chance to learn and have had their cognitive development stunted cannot perform at the same level as those who have not been impacted by the disease.

The modelling captures the damage malaria does to children's future employment prospects. This happens in three main ways - preventing them from joining the workforce entirely because the impact was so severe, reducing the amount of schooling they received, and damaging their cognitive development.[8,14] The latter two pathways capture the losses experienced by young adults who are still able to earn a living, but whose wages are lower.

Figure 2 – *Summary of the pathways through which childhood malaria exposure results in lost lifetime earnings, and groups that experience those losses*



The modelling shows that a huge $2.65 trillion in potential lifetime earnings will be lost between 2000-2065, due to the impact of childhood malaria on people living in countries where the disease is endemic.

This includes malaria causing –

- **Over $1.4 trillion** in lost earnings, from people being pushed out of employment entirely
- **Almost $1 trillion** in lost earnings, from people earning less due to missed time in school
- **$240 billion** in lost earnings, from people earning less due to the cognitive harms of malaria

These losses act as a massive "drag anchor" on the economic potential of malaria endemic countries in Africa. This burden is not shouldered equally across the region, with over 80% of total lifetime wages lost by people living in just ten countries.

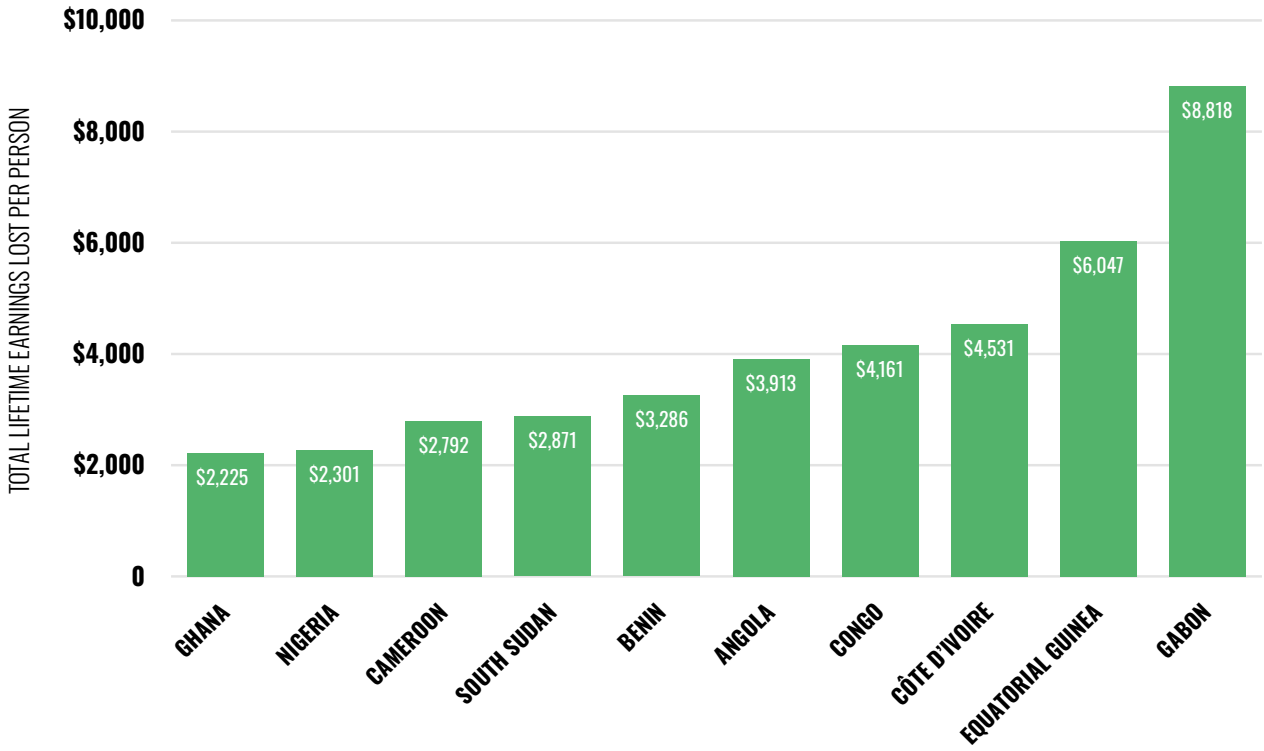
Table 2 – *Top ten countries most impacted by malaria in lost lifetime earnings*

Country	Total lost lifetime earnings ($USD, millions, 2000-2065)
Nigeria	**$785,482**
Democratic Republic of the Congo	**$413,511**
Angola	**$245,340**
Côte d'Ivoire	**$217,258**
Cameroon	**$120,437**
Uganda	**$100,944**
Ghana	**$90,862**
Benin	**$70,615**
South Sudan	**$49,039**
Burkina Faso	**$45,272**

On an individual level, this economic damage represents a huge and tragic loss for the young people affected. It is the equivalent of each person losing $1,362 over their working life or approximately 8% of what they would otherwise earn had they not faced the effects of malaria.

There are many countries where those affected by malaria are set to lose significantly more money than the overall $1,362 region-wide average. Some of these countries have smaller populations but the economic losses experienced by each person are huge. For example, a child born in Gabon, which has a population of just over 3 million people, would lose on average $8,818 of their earnings over a lifetime.

Figure 3 – *Countries with the highest per child figure for lost potential lifetime earnings due to malaria exposure, $USD*



This example perfectly illustrates how malaria solidifies poverty and further contributes to the marginalisation of the poorest communities, creating a never-ending cycle of disempowerment.

Section 1 showed that huge achievements in malaria control directly contributed to significant reductions on years of school lost. The model shows that these reductions in years lost goes on to result in higher lifetime earnings. A child born in 2000 is estimated to lose $3,167 in lifetime earnings, roughly 15% of total potential earnings. For those born in 2013, the estimated loss of earnings fell to $1,309 per child (7% of their total possible earnings and a 60% reduction in economic loss). Unfortunately, as shown in Section 1, progress towards malaria eradication has stalled, and a child born this year (2026) is still facing a $1,112 loss in future earnings (7% of their total lifetime earnings).

SIYAWEZI'S STORY
THE COST OF MALARIA THROUGH THE GENERATIONS



Siyawezi is a mother of four and a farmer from Tanzania. When her daughter Johar got malaria, she was very distressed. ***"I have seen a child die [from malaria]. I was afraid the same thing might happen to Johar."***

Siyawezi earns the equivalent of around $2 USD a day, so when malaria hits, she often has to choose between healthcare and education. ***"I cannot meet all their needs. One child may go to school without shoes. Another goes to school and is sent back home."***

Johar's grandmother Fatuma has seen over time how the cost of malaria treatment acts as a barrier, ***"In the past, as soon as we became ill, we would go to the hospital. But now, even when people are ill, they do not go because they have no money; they are stuck."***

When parents can't afford to get a child with malaria diagnosed and treated quickly, the infection is more likely to become severe, causing them to miss even more school. Families like Siyawezi's are at risk of getting trapped in a cycle of economic damage; parents cannot afford timely treatment, their children's education suffers, and as a result those children earn significantly less as adults.

NIGERIA
COUNTRY SPOTLIGHT ANALYSIS

Nigeria is the country with the highest number of malaria cases globally. In 2024, Nigeria reported 68.5 million cases of malaria, 24% of all cases worldwide. In the same year, Nigeria accounted for **30% of all malaria deaths** and **39% of deaths in children under 5**.[1] As well as being a leading cause of death, malaria has a devastating impact on the education and future of its young people.[24]

On its current trajectory, the country is projected to lose **219 million cumulative years of schooling** and **$786 billion in potential lifetime earnings** for people born between 2000-2045, because of malaria. The economic losses experienced by the Nigerian cohort alone make up 30% of the total loss in lifetime earnings captured by the model.

For each child, this means missing **116 school days on average**, equivalent to 7% of their total education, and **more than $2,300 in lost earnings** over the course of their lifetime. For many people living in Nigeria, that would represent over a year's worth of potential earnings being completely wiped out by the effects of malaria in childhood.[25]

SECTION 3

ANTICIPATED CUTS TO MALARIA FUNDING AND THE DAMAGE TO EDUCATION AND LIFETIME EARNINGS

Recent years have seen a plateau, and in some places a reduction, in global financing for malaria programmes. As of 2024, the available funding for malaria programmes covered less than half (42%) of what was estimated to be needed to achieve the control and elimination targets set out by WHO in the Global Technical Strategy for Malaria.[1] And despite slowly increasing domestic investment, the funding gap has been widening.

Global health financing is falling and anticipated to decrease further in the coming years, placing strain on the systems that support malaria control now and creating increasing uncertainty for the future of the fight. Malaria cannot be defeated with shrinking funds, and less investment means more tough decisions on what to prioritise. Recent cuts have already been felt through limiting mass net distribution campaigns and scaling back monitoring efforts. A further decline in spending risks a crisis.[6]

While the most acute and tragic effects of these cuts will be measured in more illness and death from malaria, it will also deepen the educational and resultant economic damage felt by the current and future generations of children.

The modelling shows us what the expected impact will be from anticipated reductions in ODA signalled by donor commitments in recent years, including the significant cut to the Global Fund to Fight Aids, Tuberculosis and Malaria announced in 2025. The African Leaders Malaria Alliance (ALMA) has previously estimated that ODA cuts could result in a 30% reduction in overall malaria funding.[26]

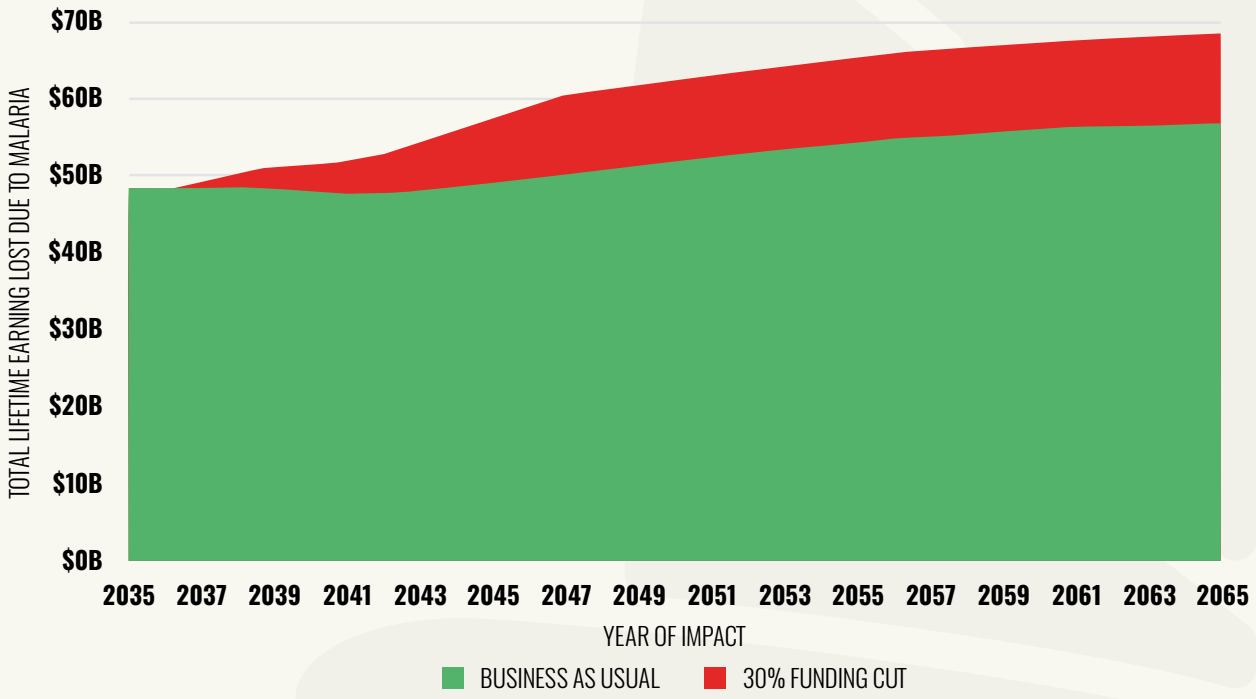
In this scenario, the modelling shows that a 30% reduction in ODA from 2027 would contribute an additional $262 billion in economic damage, as more malaria generates more lost school days which feeds through into reduced lifetime earnings. While the spending cuts would result in malaria prevalence increasing by 2.2% in Sub-Saharan Africa, the knock-on effects would increase the lifetime earnings lost due to childhood malaria by 10%, bringing the total losses captured by the model to almost $3 trillion.

AN ODA CUT WOULD INCREASE ECONOMIC LOSSES TO ALMOST

$3 TRILLION

AND ADD ANOTHER 80 MILLION MORE YEARS OF MISSED SCHOOL

Figure 4 – *Lifetime earnings lost in $USD per year, for the year of impact based on (a) current trajectory of malaria exposure and (b) in the scenario where ODA is reduced by 30% from 2027 (first affected birth cohort being those born in 2017 who would enter the workforce in 2037)*



PERSPECTIVE FROM ZAMBIA

A PUBLIC HEALTH LEADER'S VIEW ON WHY WE CANNOT ALLOW PROGRESS TOWARDS ERADICATION TO STALL

Dr Stephen Bwalya, a medical doctor by background, is a manager for the Zambian National Malaria Elimination Programme. School age children are one of the programme's priorities, as malaria is one of the most common causes of illness in this age group, ***"We have recognised it as a big public health problem."***

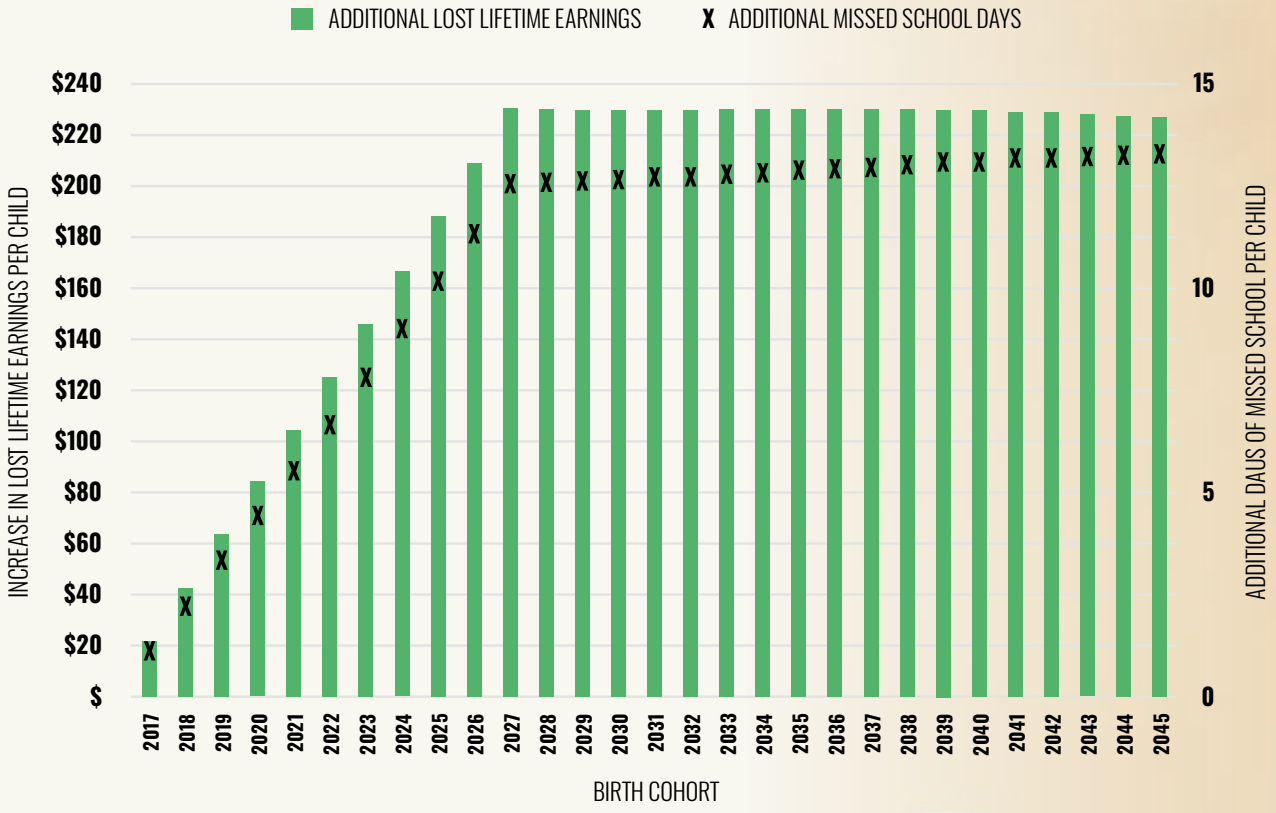
Working with the Ministry of Education, his team is training teachers in high-endemic areas to recognise symptoms, test, give medicine and refer children to facilities, ***"we hope to contribute to stop the spread and also so that the children can have a more productive life."***

While early detection rates are improving. he hopes to see a deliberate policy for providing preventative treatment and monitoring school age children as well, ***"They are the future of the country. We need to invest in them."***

The educational losses from anticipated ODA cuts are just as stark. An additional 81 million years of schooling would be missed by children because of higher malaria prevalence. Just five countries - Benin, Côte d'Ivoire, Uganda, Nigeria, and DRC - make up over 75% of the total additional years lost.

The damage from ODA cuts will increase over time. Because the full impact of the model's ODA cuts on education will not be seen in the economic data until children born in 2027 enter the workplace, only in the longer term will it be possible to truly understand the economic impact of increased exposure to malaria.

Figure 5 – *Additional impact of ODA cuts on number of school days missed and loss of potential lifetime earnings for each birth cohort from the year cuts will begin to have an impact*





SECTION 4
THE POTENTIAL OF GETTING BACK ON TRACK

$1.2 TRILLION

IN LIFETIME EARNINGS WOULD BE REGAINED IF THE TARGET TO ACHIEVE A 90% REDUCTION IN MALARIA CASES BY 2030 IS MET

Turning the tide of stagnant progress towards the elimination and eventual eradication of malaria will be challenging, but malaria is a disease that can be brought down rapidly. If cases were to start falling rapidly this decade, the benefits to children's education and lifetime economic wellbeing, as well as their health, could be transformational. Moreover, whilst the fight against malaria requires constant vigilance, promising new forms of vector control, prevention and treatment give great cause for hope.

Achieving the WHO's Global Technical Strategy target for a 90% reduction in cases by 2030 from 2015 levels would deliver an economic boost of around $1.2 trillion to current and future generations through increased lifetime earnings. These children would also gain 377 million years of additional schooling collectively.

Even if progress was made at a slower pace, a 90% drop in malaria between 2026 and 2040 would still prevent a loss of $983 billion in lifetime earnings and avoid 313 million years of missed schooling amongst the children benefiting.

These reductions in malaria cases require huge and rapid action, but there is good reason to be ambitious and optimistic.

There are now two malaria vaccines shown to reduce cases by more than 50% that are being rolled out across 25 countries.[27] Second-generation vaccines in the pipeline have the potential to be much more effective.[28] Other exciting innovations like long-acting injectables for prevention and single-dose cures could make malaria prevention and treatment easier and more accessible.[29] Efforts to create "malaria free mosquitoes" are also progressing through trials and could be a game changer in dramatically reducing mosquitoes' ability to carry the disease.[30]

These innovations, used in concert with what already works – nets, insecticides, rapid diagnostics, effective medicines – can help make rapid progress towards eradication. Not only would this prevent thousands of children falling ill and dying from malaria, it would also give them the opportunity to live healthier lives, attain in school, flourish in work and ensure their communities and countries can achieve the economic growth and development required to break the cycle of poverty.

Table 3 – *The educational and economic savings estimated for the top ten countries that would see the greatest overall benefit from meeting the 90% reduction target*

Country	If 90% target is reached by 2030		If 90% target is reached by 2040	
	Total lifetime earnings regained	Total school years regained	Total lifetime earnings regained	Total school years regained
Nigeria	$311,273,472,241	105,188,858	$256,408,920,657	87,454,202
DRC	$255,212,981,427	121,914,022	$219,020,460,917	105,121,153
Angola	$177,080,819,784	23,877,053	$156,005,521,567	21,164,215
Côte d'Ivoire	$81,455,938,590	12,414,499	$68,043,243,738	10,459,926
Cameroon	$61,177,202,994	12,247,048	$50,315,468,937	10,160,166
Uganda	$39,525,211,346	15,592,293	$31,027,647,982	12,371,489
Benin	$33,682,567,146	9,628,902	$26,940,435,458	7,768,962
Congo	$22,304,377,649	2,771,485	$18,968,718,003	2,374,510
South Sudan	$21,123,852,549	3,924,888	$16,882,631,305	3,167,500
Tanzania	$20,646,761,718	6,879,104	$16,601,004,051	5,597,453



SECTION 5
WHY URGENT ACTION MATTERS RIGHT NOW

$1 TRILLION

OF THE TOTAL ECONOMIC LOSSES CAUSED BY MALARIA IN THE MODEL WILL BE FELT BY CHILDREN BORN BETWEEN 2027-2045

This report shows how the effects of childhood malaria continue to be felt for decades. On its current trajectory, $1 trillion of the total economic losses caused by malaria in the model will be felt by children who have not yet been born. Condemning future generations to miss schooling and lose out on their highest possible lifetime earnings is a tragedy.

Another dynamic should motivate policymakers even further. Welcome gains in child survival rates mean working aged people will soon make up a much higher proportion of the overall population in many African countries. Africa as a continent is on course to have the world's biggest potential workforce by 2040.[11] This presents a unique but time-limited window of opportunity, often known as a 'demographic dividend', for economic growth that could transform the lives of people living in these countries. But this depends on their young people being "healthy, well-educated and empowered to work."[31]

Reducing the burden that malaria places on children's health, education and employment opportunities is of critical importance so that African countries can realise the potential of economic growth that this demographic dividend presents.[32]

THE STORY OF ALLY
A TEACHER'S HOPE FOR THE FUTURE

Ally has been a teacher in Tanzania for seven years. He's seen the significant impact malaria can have on a child's education. ***"We receive calls such as, 'I am so-and-so's parent. My child woke up with a high fever, and I am taking them to hospital'."***

Children rarely miss only a few days, and they struggle to catch up when they return. ***"They may feel well enough to return [for] exams... but their understanding will not be at the same level as those who attended... [full] school weeks."*** Ally has even seen a student miss out on a university place, after a 3-month absence due to malaria.

"Without malaria, I believe we would have a generation that did very well... more children would have strong understanding and learning abilities."



CONCLUSION

Malaria is well understood as a health issue. Billions of dollars spent on research and development, and even more on delivering prevention and treatment have yielded huge results. Yet, the data makes clear that the burden malaria places on children is an economic drag anchor as well as a moral outrage.

As attention shifts from tackling individual diseases to building broader health systems, it is imperative to recognise that the sheer size of the malaria burden makes it so much more than a health crisis. The catastrophic disruption malaria brings to children's lives means their education suffers and potential earnings are lost. Aggregated, communities and countries fail to receive the full benefits of a large working-age population for economic growth.

With funding under threat, leaders of endemic countries could allow investments in malaria control to diminish. Doing so would mean cases spiralling upwards. This would lead to a devastating and preventable loss of life. Billions of years of schooling would be lost, costing individuals thousands of dollars over their working lives. To follow this path would be a mistake that will define a generation. Conversely, a collective partnership dedicated to getting back on track to the progressive elimination and eventual eradication of malaria would generate billions in earnings for current and future generations.

In response to this crisis, a new model of global health financing and governance is emerging — one anchored in national leadership and predictable financing. The task now is to ensure that transition leads to progress. Malaria-endemic countries are increasing commitments to domestic investment, accelerating national production of life saving commodities, and embedding malaria control within broader health and development plans. External support must evolve in step with national efforts, focused where needs are greatest, while supporting countries to strengthen domestic financing and leadership. Development banks and blended finance can help economies move responsibly toward self-reliance. A coordinated and ambitious next phase — backed by strong national leadership and global partnership — can still end malaria within a generation.

In its demographic dividend, Africa has a unique economic advantage. The power of Africa's youth can enable the continent to surge forward in the 21st century, transforming economies and countries. If leaders are serious about unleashing the potential of their young people, they must commit the resources needed to control and eliminate malaria. In doing so, they can empower children to learn and to earn, giving them the future they deserve.

...the data makes clear that the burden malaria places on children is an economic drag anchor as well as a moral outrage.

RECOMMENDATIONS

- **Malaria endemic countries** should increase their health investments to the level of the Abuja commitment of 15% of national expenditure to be spent on health and prioritise investments in malaria control and elimination to the most vulnerable populations.
- **Multilateral and regional development banks** seeking to support economic growth and development in African countries and improve early childhood development should ensure that malaria is prioritised in efforts to strengthen primary healthcare, fully integrated into early childhood development support, and recognised as a priority during the World Bank's IDA22 replenishment.
- **Donor partners in high income countries** should continue their support for the lifesaving work of the Global Fund to Fight AIDS TB and Malaria and Gavi, the Vaccine Alliance, as well as bilateral programming, and ensure health investments are prioritised in IDA22.
- **Philanthropic actors** should invest through the multilateral global health initiatives and at domestic level support the national End Malaria Councils and Funds.
- **Private-sector actors** should ensure that their operations enable access to malaria care, support national End Malaria Councils and Funds, and demonstrate to governments that malaria investment is an essential component of a successful economic model.
- **Civil-society actors** should demonstrate more clearly the link between malaria and economic outcomes, incorporate this evidence into their advocacy, press for malaria to be prioritised in national health plans, and call on governments to recognise malaria investment as a direct contribution to early childhood development.



LIST OF ABBREVIATIONS

ALMA - *African Leaders Malaria Alliance*

DRC - *Democratic Republic of the Congo*

GDP - *Gross Domestic Product*

GFATM - *Global Fund to Fight AIDS, Tuberculosis and Malaria*

GTS - *Global Technical Strategy for Malaria*

IDA - *International Development Association*

IGH - *Impact Global Health*

MNMUK - *Malaria No More UK*

MAP - *Malaria Atlas Project*

ODA - *Official Development Assistance*

RBM - *RBM Partnership to End Malaria*

SDG - *Sustainable Development Goal*

$ USD - *United States Dollar*

WHO - *World Health Organization*

FREQUENTLY USED TERMS

Birth cohort – *Total number of children born in a single year, based on historical data or as a projection for future years*

Childhood Malaria Exposure - *The level of malaria experienced by a child, measured as average prevalence between ages 0 and 10*

Lifetime Earnings Loss - *The amount of income lost over a person's working life due to childhood malaria exposure*

Official Development Assistance – *International funding provided to support development, including malaria programmes*

SDG Target - *The Sustainable Development Goal target to reduce malaria cases and mortality by 90% from 2015 levels by 2030*

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