CAMA
Corporate Alliance on Malaria in Africa

Powered by ABCHealth
CAMA Office

Webinar Report

World Malaria Day 2025

APRIL 2025

CAMA access Chevron Aliko Dangote Foundation ExxonMobil envu DCL VESTERGAARD Nigerian Breweries syngenta

CAMA
The Corporate Alliance on Malaria in Africa

Ordering information:
To order copies of this report, please contact:
Publications Section
Corporate Alliance on Malaria in Africa (CAMA)
African Business Coalition for Health (ABCHealth)
Waterfront Plaza, 270a Ozumba Mbadiwe Avenue
Victoria Island, Lagos, Nigeria

Tel: +234 802 478 2021
Email: info@abchealth.com
Web: www.abchealth.com

First printing April 2025

The designations used and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the African Business Coalition for Health (ABCHealth) concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process.

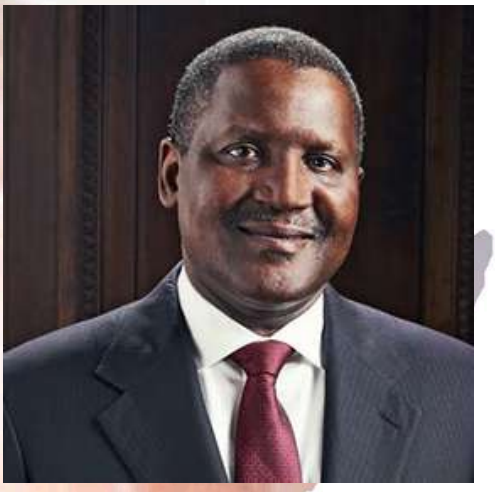
Cover design, layout and printing: ABCHealth Communications and Graphics Division

OUR FOUNDERS

Mr. Aigboje Aig-Imoukhuede FCIB, CON

Aigboje Aig-Imoukhuede is the Founder and Chairman of Africa Initiative for Governance (AIG), a not-for-profit organisation, established to be a catalyst for high public sector performance in Africa by bringing proven private sector innovation, leadership and funding to the public sector in a private-public partnership to attract, inspire and support future leaders of Africa's public sector.

Mr. Aig-Imoukhuede is also the Founder and Chairman of Coronation Capital Limited, an Africa-focused private equity and proprietary investment firm established in 2014. Prior to this, he was Group Managing Director and Chief Executive Officer of Access Bank Plc, where he led the transformation of the bank to rank amongst Africa's leading banks.



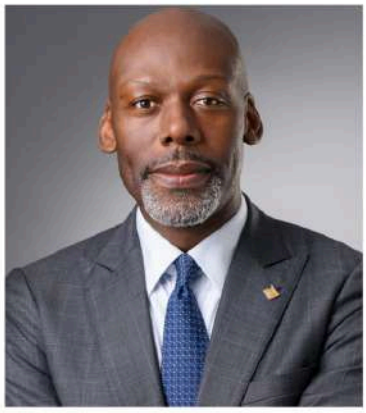
Mr. Aliko Dangote CON

Aliko Dangote is the founder and president/chief executive of the Dangote Group, the largest conglomerate in West Africa. The Group currently has a presence in 17 African countries and is a market leader in cement on the continent. One of the Group's subsidiaries, Dangote Cement Plc, is the largest listed company in West Africa and the first Nigerian company to join the Forbes Global 2000 Companies list.

The Group has diversified into other sectors of the Nigerian economy including agriculture and is currently constructing the largest petroleum refinery, petrochemical plant and fertilizer complex in Africa.

Internationally, Dangote sits on the board of the Corporate Council on Africa and is a member of the Steering Committee of the United Nations Secretary-General's Global Education First Initiative, the Clinton Global Initiative, the McKinsey Advisory Council, and the International Business Council of the World Economic Forum.

THE ALLIANCE CO-CHAIRS & LEADER



Mr. Amaechi Okobi

CO-CHAIR

Amaechi Michael Okobi is the Chief Brand and Communications Officer for Access Corporation. In this role, he oversees the positioning of the Access Corporation brand, including all banking and non-banking subsidiaries, across various markets. Prior to this role, Amaechi served as the Group Head of Corporate Communications for Access Bank, a position he held since joining the organization in 2014.

Amaechi is a marketing and communications professional with over 25 years of experience with global and Nigerian retail brands such as Revlon Inc., Nigerian Breweries Plc, Globacom Ltd, and Diageo Plc. His experience cuts across marketing; communications; brand management; market growth strategy; reputation management; and public relations.

Mr. Michael Steinberg

CO-CHAIR

Michael Steinberg is the HSE lead, Community Health & Partnerships- Chevron and a Population health management and public health professional with over twenty years of experience as a leader and manager.

He has experience in various International assignments; a health subject matter expert; Corporate Pandemic Response Team member; Business Continuity process coordinator; communications lead; external partnerships lead, engagement and social investment lead; project, process, event and program manager; strategic planning and management; strong facilitation and training experience. Under his co-leadership, CAMA continues to play a vital role in advancing private-sector engagement and scaling impactful malaria control interventions across the continent.

Zouera Youssoufou

LEADER

Zouera Youssoufou is the Managing Director/CEO of the Aliko Dangote Foundation (ADF), the largest private Foundation on Africa, based in Lagos. In this role, she leads the Foundation's efforts to improve the health, nutrition, education and economic empowerment outcomes for the needy, primarily in Nigeria and in Africa.

She sits on several Boards including the African Business Coalition for Health (ABCHealth), Women's World Banking, Private Sector Health Alliance of Nigeria, ONE Global Leadership Circle, Center for the Strategic Studies on Africa, and International Institute for Sustainable Development (IISD). As of March 2020, Zouera also coordinates the Secretariat of CACOVID, the Nigerian Private sector coalition against Covid-19.

TABLE OF CONTENTS

CAMA

The Corporate Alliance on Malaria in Africa

Around 260 million insecticide-treated bed nets (ITNs) were delivered in 2022, covering 70% of households and resulting in 56% of children under five and pregnant women sleeping under nets and 59% coverage in 2023.

FOREWORD

CAMA
The Corporate Alliance on Malaria in Africa

Mories Atoki (Dr.)
Chief Executive Officer
ABCHealth

As we commemorate World Malaria Day 2025, it is with great pride and a deep sense of responsibility that I present this report on the recent webinar organized by the Corporate Alliance on Malaria in Africa (CAMA) which brought together a diverse group of stakeholders, including public health officials, researchers, private sector representatives, and community leaders to discuss the impact of technology in the fight against malaria. The theme, "Harnessing Technology for Malaria Control: Sustainable Innovations for the Future," resonates profoundly with our collective mission to eradicate malaria and improve health outcomes across the African continent.

In 2023, the World Health Organization reported a global total of 263 million malaria cases, a worrying increase from previous years. Ninety-four percent of these cases, and 95% of the 597,000 malaria-related deaths, occurred in Africa, underscoring the disproportionate burden borne by our continent. Starkly, four countries, Nigeria, the Democratic Republic of Congo, Niger, and Tanzania, accounted for over 50% of all malaria deaths, and approximately three-quarters of these deaths occurred among children under five. These figures are reminders of the urgency of our mission and the lives that remain at risk if innovation does not meet scale.

Despite commendable efforts, progress has slowed significantly in recent years. Several African countries have witnessed either stagnation or a reversal in malaria outcomes. Today, the malaria mortality rate in Africa stands at 13.7 per 100,000 population at risk, far from the WHO's 2025 target of 5.5. Hope persists! Since the year 2000, global investments have averted an estimated 12.7 million malaria deaths and 2.2 billion cases, with Africa accounting for a significant share of this progress. Such gains affirm what is possible when political will, financing, and innovation converge. This is where **technology** becomes a vital lever.

Through this webinar, we examined how advanced digital innovations, from geospatial risk mapping and predictive analytics to AI-driven diagnostics and mobile health platforms, are reshaping malaria control efforts. Chevron, a CAMA member, offers an example of the private sector's role in leveraging digital health. Its deployment of a proprietary malaria application to monitor exposure among personnel operating in endemic zones illustrates how innovation can translate into tangible protection and operational resilience.

Beyond the private sector, health systems are gradually integrating technology-driven interventions such as insecticide-treated bed nets enhanced with dual-active ingredients, the scale-up of Seasonal Malaria Chemoprevention (SMC) reaching over 53 million children in 2023, and Intermittent Preventive Treatment in pregnancy (IPTp) now reaching 44% of pregnant women across 34 African countries. Most notably, the rollout of malaria vaccines, RTS,S and R21/Matrix-M, across 17 African countries, with over 12 million doses delivered, represents a historic leap toward long-term protection of vulnerable populations. The pilot results, demonstrating a 13% reduction in all-cause child mortality, underscore the promise of these biomedical breakthroughs when effectively integrated with existing public health infrastructure.

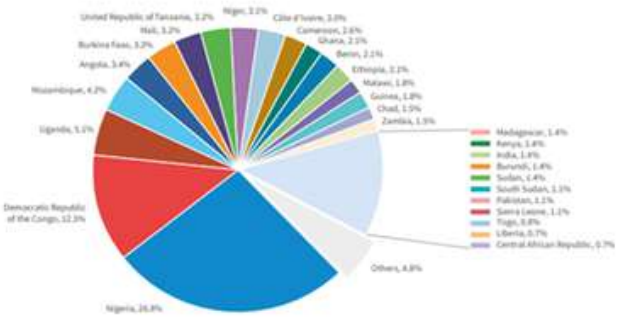
We must address growing threats of drug and insecticide resistance, identified in regions across East and Southern Africa, as well as the compounding effects of climate change, extreme weather events, population displacement, and fragile health systems, all of which continue to fuel malaria resurgence. It is also essential that innovation is context-appropriate, locally manufactured, economically sustainable, and equitably distributed, not just concentrated in pilot programs or urban centers. I am deeply encouraged by the cross-sectoral engagement this webinar has fostered. The private sector's role is pivotal, not just in financing or deploying innovations, but in advocating for accountability, fostering data-driven solutions, and aligning corporate strategies with national malaria control priorities. The scale and persistence of malaria demand nothing less than a whole-of-society response, one that is bold in ambition, integrated in execution, and grounded in the lived realities of our communities.

INTRODUCTION

According to the World Health Organization (WHO), there were an estimated 263 million cases of malaria worldwide in 2023, an increase of 14 million versus 2022. The number of deaths as a result of malaria declined marginally in 2022 to 597,000 in 2023. The majority of these cases and fatalities occurred in Africa, where malaria continues to be a leading cause of morbidity and mortality, particularly among vulnerable populations such as children under five and pregnant women (WHO, 2025).

In Africa, the malaria burden is exacerbated by a combination of factors, including inadequate healthcare infrastructure, poverty, and the increasing resistance of malaria parasites to treatment and mosquitoes to insecticides. The continent accounts for approximately 95% of all malaria cases and deaths, highlighting the urgent need for effective interventions and innovative solutions to combat this persistent menace (WHO, 2025).

Ongoing efforts to combat malaria have seen significant progress over the past two decades, with increased investments in prevention, diagnosis, and treatment. Initiatives such as the Roll Back Malaria Partnership and the Global Fund to Fight AIDS, Tuberculosis, and Malaria have mobilized resources and coordinated efforts to reduce malaria transmission. Countries have implemented various strategies, including the distribution of insecticide treated bed nets, indoor residual spraying, and the use of rapid diagnostic tests and artemisinin based combination therapies. Despite these advancements, the fight against malaria is far from over, and new challenges continue to emerge.



In this context, events such as this webinar hosted by the African Business Coalition for Health (ABCHealth) Corporate Alliance on Malaria in Africa (CAMA) in collaboration with it's members and partners are crucial. The theme of the webinar, "Harnessing Technology for Malaria Control: Sustainable Innovations for the Future," reflects the pressing need to explore and implement innovative solutions that leverage technology to enhance malaria surveillance, response, and control. The integration of digital health, artificial intelligence (AI), and big data into malaria control strategies presents an unprecedented opportunity to improve data collection, analysis, and dissemination, ultimately leading to more effective interventions.

The African Union's Agenda 2063 envisions a prosperous Africa based on inclusive growth and sustainable development. It emphasizes the need for a healthy population as a prerequisite for economic growth and development. The agenda recognizes that health challenges, including malaria, must be addressed to achieve the continent's aspirations for a peaceful, integrated, and prosperous Africa. By aligning our efforts with the goals set forth in Agenda 2063, we can create a comprehensive framework for combating malaria that is sustainable and impactful.

The Sustainable Development Goals (SDGs), particularly Goal 3, which aims to ensure healthy lives and promote wellbeing for all at all ages, underscore the importance of addressing malaria as a critical public health issue. Target 3.3 specifically calls for the end of the epidemics of malaria and other communicable diseases by 2030. Achieving this goal requires a concerted effort from governments, international organizations, the private sector, and civil society to invest in innovative solutions and sustainable practices that can drive progress in malaria elimination.

This fight against malaria requires a multifaceted approach that embraces innovation, collaboration, and sustainable practices. The burden of malaria is not just a health issue; it is a development issue that affects the wellbeing of our communities and the progress of our nations. Together, we can make significant strides toward eliminating malaria and improving health outcomes for all.

WELCOME ADDRESS

Reinvest in Malaria Control

Opening the webinar was an inspiring address delivered by the **Managing Director and Chief Executive Officer of the Aliko Dangote Foundation, Ms. Zouera Youssoufou**. Her remarks framed the moment with clarity, conviction, and a compelling sense of purpose, offering a profound reflection on both the urgency and the opportunity that this moment in history represents for Africa's malaria response. Anchored in the global World Malaria Day 2025 theme, "Malaria Ends with Us: Reinvest, Reimagine, Reignite"—the message underscored the critical need to shift from rhetoric to action,

Ms. Zouera Youssoufou - MD/CEO, Aliko Dangote Foundation

from conventional thinking to innovation, and from siloed efforts to unified partnerships. With precision and depth, the address explored what it truly means to reinvest in malaria control today. This is not merely about increased financing, it's about prioritization. From domestic public health budgets to international donor strategies, the challenge lies in sustaining and scaling commitments that often fluctuate with changing political and economic tides. Emphasis was placed on reinvesting not only financial resources, but also political capital and institutional focus. Across the continent, where over 90% of the world's malaria burden is concentrated, renewed investment must support research, prevention, access to life-saving treatments, and health system resilience. There was a strong call for multi-stakeholder collaboration, between governments, private sector leaders, philanthropists, innovators, and communities, to unlock sustainable funding streams and enable country-led malaria programs to thrive.

Reimagining Our Approach

Transitioning into the second core message, the need to reimagine malaria control resonated strongly. Africa stands at a technological crossroads, and the future of public health lies in its ability to harness and apply innovation meaningfully. The digital revolution is offering unprecedented opportunities to leapfrog challenges that have historically constrained malaria progress. The rise of digital health tools, artificial intelligence (AI), data science, and remote diagnostics can fundamentally reshape how health systems detect, track, and respond to disease outbreaks.

The address spotlighted how these technologies are already transforming malaria control in some contexts, from real-time geospatial surveillance and predictive analytics to mobile health solutions that empower frontline health workers with timely information. The integration of AI allows for the detection of subtle epidemiological trends, while big data systems improve the precision and efficiency of response mechanisms. These innovations also hold promise for reshaping health supply chains, enhancing community health education, and ensuring that interventions are both timely and targeted.

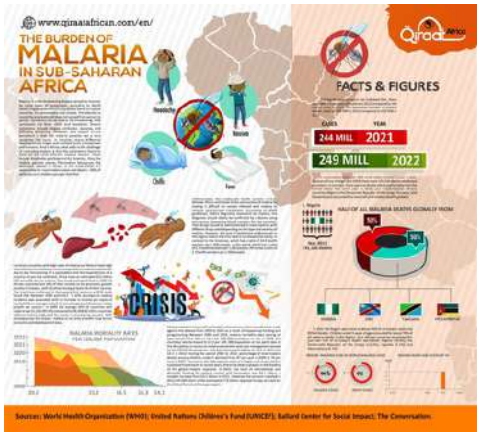
Yet the message went deeper, cautioning that reimagining is not simply about adopting new tools. It is about shifting mindsets and designing systems that are inclusive, sustainable, and embedded in the realities of the people they serve. For technology to truly transform malaria control, solutions must be co-developed with the communities they aim to impact, ensuring relevance and ownership at the local level. The address made it clear: innovation must not widen the digital divide but rather bridge it, ensuring that underserved and remote populations are not left behind.

Reigniting Passion and Energy

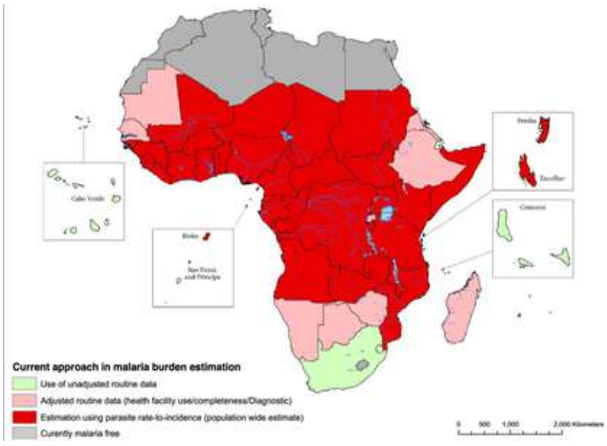
The third pillar, reigniting passion and collective energy, emphasized the human element behind every successful malaria intervention. In recent years, progress against malaria has plateaued in many regions, with fatigue and complacency threatening hard-won gains. The call was therefore for a renewed sense of urgency, a recommitment to the bold vision of a malaria-free Africa. This involves fostering collaboration across sectors and borders, amplifying community voices, and cultivating new champions in the fight.

Participants were reminded that behind every malaria statistic is a story of loss, disruption, and unrealized potential. Reigniting the movement means elevating these narratives, restoring momentum, and recognizing that malaria is more than a health issue, it is intrinsically tied to poverty, inequality, educational attainment, and economic development. The role of partnerships in building resilient systems was emphasized, as was the importance of knowledge exchange and peer learning. CAMA's platform, in convening this webinar, exemplifies the kind of coalition-building that must be scaled across Africa.

This welcome address laid the foundation for the critical conversations that followed. It framed malaria control as a continental imperative, a test of leadership and resolve, and an arena where innovation must be purpose-driven and people-centered. Importantly, it urged stakeholders to move from intention to implementation, from ideas to impact. In reimagining malaria control through technology, there is immense promise, not only to save lives but to reclaim futures. The pathway forward requires an integrated approach that brings together science, technology, political leadership, and grassroots mobilization.



The vision is one where malaria no longer dictates the rhythm of life in African communities, where the next generation grows up free from the disease's burden, and where the systems built to fight malaria also strengthen health outcomes more broadly. In setting the tone for this important dialogue, the Aliko Dangote Foundation's leadership reminded us that the power to end malaria lies within reach, if we are willing to reinvest boldly, reimagine fearlessly, and reignite our collective ambition. This is not simply a health mandate. It is a moral, social, and developmental obligation to ensure that the future of Africa is not held hostage by a preventable and treatable disease. With shared responsibility and innovative spirit, malaria can become a story of the past.



Changing weather patterns, prolonged rainy seasons, and increased humidity levels have expanded the geographic range of malaria transmission and intensified its seasonal unpredictability. Vector habitats are no longer confined to familiar terrains, making traditional control methods increasingly inadequate. This evolving dynamic calls for a more adaptive, data-responsive strategy that anticipates environmental shifts and mitigates their implications for public health. The call was made for stronger linkages between climate modeling and public health planning, ensuring that malaria control interventions are responsive to ecological trends and grounded in climate-resilient designs.

The importance of responsible data governance was also highlighted as an area requiring urgent attention. As technology assumes a more central role in health systems, the collection, storage, and use of personal health data demand stringent safeguards to ensure privacy, equity, and accountability. The call for robust digital infrastructure must be matched with policy frameworks that protect patient rights, promote transparency, and guard against data exploitation. It was emphasized that trust is essential in building public support for digital malaria solutions, and trust is built on ethical principles that balance innovation with protection. In this context, countries must begin to institutionalize health data policies that are interoperable, secure, and people-centered.

OPENING REMARKS

Michael Steinberg - HSE Lead for Community Health & Partnerships, Chevron

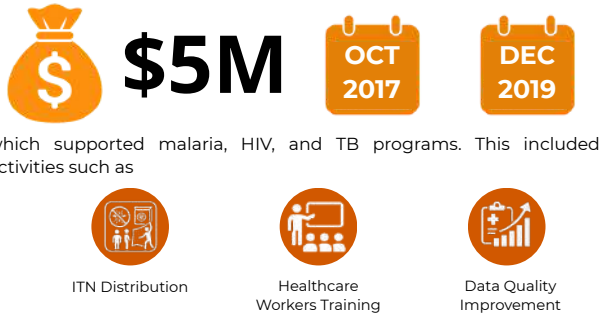
Following the strategically grounded welcome address, the webinar transitioned into the opening remarks delivered by **Michael Steinberg, HSE Lead for Community Health & Partnerships at Chevron and Co-Chair of the Corporate Alliance on Malaria in Africa (CAMA)**. With over two decades of experience in global health and corporate responsibility, Mr. Steinberg brought a distinctive blend of scientific insight, operational expertise, and strategic foresight to his address. His message not only framed the subsequent discussions but laid a foundational narrative that reinforced the urgency, complexity, and promise embedded in Africa's pursuit of malaria elimination through innovation. In this context, the remarks provided a clear-eyed and forward-looking perspective on how strategic partnerships, data-driven interventions, and sustainable technology adoption can collectively transform malaria control efforts from reactive responses into systems-level resilience. His call to action resonated with the multi-sectoral audience, including government representatives, private sector actors, research institutions, and civil society organizations, underscoring that malaria elimination is not the responsibility of any one sector but a shared challenge that demands coordinated, intentional collaboration.

A Call to Action for Malaria Elimination

World Malaria Day, he reminded the audience, is a moment for stakeholders to pause, evaluate progress, and reignite commitments. Framing malaria not only as a health concern but as a critical development issue, his address emphasized that every malaria-related death is a preventable tragedy and a failure of systems, policies, and practices.

Drawing attention to the increasing complexity of the malaria landscape, Mr. Steinberg raised a particular concern over the growing phenomenon of mosquito resistance. Insecticide resistance among Anopheles mosquitoes is threatening to outpace the effectiveness of longstanding interventions such as insecticide-treated nets (ITNs) and indoor residual spraying (IRS). Similarly, the emergence of drug-resistant Plasmodium parasites challenges the efficacy of frontline treatments, demanding a renewed scientific response.

In Nigeria, specifically, the Global Fund Partnership Investment with Chevron has invested



In this evolving environment, innovation cannot be optional. He called for stakeholders to step beyond the constraints of legacy systems and traditional approaches and embrace a fundamentally new change, one that integrates cutting-edge research, real-time data analytics, localized surveillance, and cross-border collaboration. He challenged participants to view technology not simply as an accessory, but as a force multiplier, capable of amplifying the reach, accuracy, and impact of malaria control strategies. Importantly, he emphasized that innovation must be inclusive, designed with frontline users in mind, and guided by data at every stage of deployment.

His remarks also stressed the importance of adopting a systems-thinking approach to malaria control, acknowledging the interconnectedness between health security, infrastructure, education, the environment, and economic development. Eliminating malaria, he argued, requires coordinated effort not only across institutions but across disciplines. Whether through digital epidemiology, geospatial risk mapping, or integrated community-based service delivery models, the pathway to malaria elimination must be rooted in both strategic vision and operational pragmatism.

Chevron's Commitment to Health and Risk Management

In demonstrating how the private sector can be a critical driver of malaria elimination, Mr. Steinberg provided insight into Chevron's own institutional commitment to health and risk management—particularly in malaria-endemic regions where the company operates. He shared that Chevron's malaria prevention efforts are grounded in a rigorous public health framework informed by environmental risk assessment, employee safety protocols, and community health impact evaluations. This integrated approach has enabled the company to not only protect its workforce and supply chains but to actively contribute to the health security of surrounding communities.

Through robust surveillance systems, routine monitoring, and real-time data collection, Chevron is able to continuously evaluate the effectiveness of its interventions and adapt to evolving risks. He emphasized that such adaptive management is crucial, particularly as resistance patterns, population movement, and environmental variables fluctuate with increasing unpredictability. Decisions around resource allocation, vector control, and treatment deployment are all grounded in evidence, allowing for optimized outcomes and reduced wastage. Importantly, this corporate commitment extends beyond organizational boundaries. Chevron's public-private partnerships with national malaria programs, research institutions, and local non-profits reflect the company's belief in shared value, where economic development and community wellbeing are mutually reinforcing goals. Through its work with CAMA, Chevron supports integrated capacity-building efforts, supports policy dialogue, and helps mobilize funding for high-impact malaria interventions across Africa.

He framed this model as one that other corporate actors could emulate, one in which malaria control becomes part of core risk management, sustainability planning, and license-to-operate strategies. Businesses, particularly those operating in high-transmission areas, have both the incentive and the capacity to be transformative actors in the malaria response. The business case for action is clear: healthier communities are more productive, more resilient, and better able to contribute to long-term growth and stability.

The Importance of Sustainability

Sustainability emerged as both a cautionary note and an invitation to reimagine malaria programming. The address underscored that technical brilliance without institutional endurance is a fragile victory. Many well-intentioned malaria initiatives, it was noted, had faltered due to:

- Short-term funding cycles that fail to support long-term behavioral or infrastructural change.
- Workforce attrition, leading to skill gaps in diagnostics, monitoring, and vector management.
- Supply chain fragmentation, often due to weak local manufacturing ecosystems.
- Fluctuating political will, especially in periods of electoral transition or global donor fatigue.

To mitigate these challenges, the following principles were advanced:

- **Institutionalize innovation**: Shift away from pilot syndrome by embedding successful pilots into national health strategies.
- **Localize procurement and talent**: Build capacity for local production of diagnostics and insecticides and invest in community health worker training.
- **Design for scalability**: Any digital or technological tool must be designed with affordability and interoperability in mind from the outset.
- **Sustain through ownership**: Community engagement and government buy-in should be non-negotiable aspects of program design.

The sustainability lens is about building ecosystems that outlast individual projects or partners. True sustainability is measured by whether communities remain protected long after the donor exits.

KEYNOTE ADDRESS

In a world increasingly defined by the convergence of science, policy, and technology, the keynote address delivered by **Dr. Peter Billingsley, Founder of The Vital Narrative**, was both a clarion call and a thought-provoking exposition on the multidimensional approaches required to tackle malaria in the 21st century. With clarity and technical precision, weaving together the scientific imperatives, practical challenges, and socio-economic dimensions that underpin the fight against this enduring global health burden, his keynote emphasized not only what is being done

Dr. Peter Billingsley - Founder, The Vital Narrative

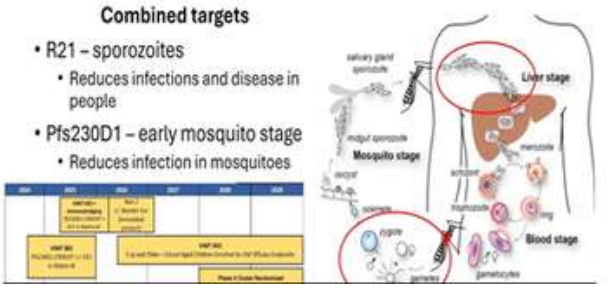
but what must be done, through intentional innovation, sustainable frameworks, and inclusive participation, if malaria is to be eradicated within our lifetime. He defined sustainability in the context of malaria control as interventions that are cost-effective, autonomously operational, minimally labor-intensive, community-acceptable, and safe over extended periods. Drawing attention to the often fragile trajectory of health interventions in low-resource settings, he argued that too many malaria control strategies have historically been derailed by high maintenance costs, logistical inefficiencies, or community resistance. The keynote emphasized that sustainability must be embedded in the DNA of innovation, from design and development to deployment and distribution.

"If a solution cannot outlive the grant that funded it or function independently of international oversight, it is not truly sustainable," he noted.

He further elaborated that sustainable solutions must:

- Be context-specific, taking into account local socio-cultural and ecological factors.
- Require minimal re-training or specialist intervention.
- Integrate into existing community health structures or platforms.
- Be resilient in the face of climate, geopolitical, and economic disruptions.

Innovation in Malaria Control



Transitioning into the core of technological advancement, he presented a compelling overview of the rapid evolution of malaria control technologies, highlighting both biologics and behavioral interventions. He celebrated the scientific community's strides in vaccine development, particularly those based on genetically attenuated parasites, which are engineered to be non-infectious but immunogenic, thereby stimulating an effective immune defense without causing disease.

He singled out two important targets in vaccine research:

1. **R21 – sporozoite stage**: Designed to provoke immunity before the parasite invades liver cells, this approach attempts to halt the infection cycle at its earliest and most vulnerable stage.
2. **Pfs230D1 – early mosquito stage**: Targeted at blocking parasite transmission from humans back to mosquitoes, effectively interrupting the parasite's lifecycle.

These multistage targets, he explained, represent the next frontier in malaria vaccine development, offering hope for a transmission-blocking vaccine that benefits both the individual and the community.
In parallel with vaccine science, he spotlighted behavioral and entomological innovations, such as:

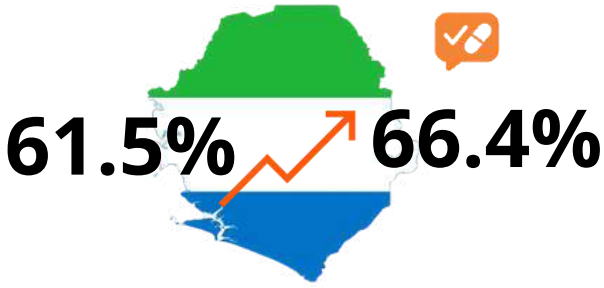
- **Spatial Emanators**: Devices that emit attractants or repellents to either draw mosquitoes away from humans or reduce vector-human contact.

- **Attractive Targeted Sugar Baits (ATSBs)**: A novel approach exploiting the sugar-feeding behavior of mosquitoes to deliver lethal doses of insecticide in a highly selective and environmentally friendly manner.

While acknowledging their potential, he candidly recognized the long timelines often required to bring these tools to full scale. The gestation period for novel vector control products, from lab to field trial, to community acceptance, to regulatory approval, is long and resource-intensive. He called on stakeholders to exercise strategic patience and sustained financing, particularly in transitioning promising concepts to scalable public health interventions.

Spotlight on African SMEs and Local Innovations

One of the most resonant and affirming segments of the keynote was the focus on African ingenuity, a necessary counterpoint to the historically top-down nature of global health innovation. He spotlighted a number of African Small and Medium-sized Enterprises (SMEs) from Ghana, Rwanda, Nigeria, Sierra Leone and Kenya that have successfully designed, manufactured, and distributed health products relevant to malaria control, ranging from diagnostic tools to mobile health platforms and low-cost vector control devices.



In Sierra Leone, a mobile-based SMS reminder intervention increased ACT (artemisinin-based combination therapy) treatment completion from 61.5% to 66.4%, amounting to a 5 percentage point improvement in adherence among malaria patients receiving messages

These homegrown solutions, he noted, are often more aligned with local realities, cheaper to deploy, easier to maintain, and more likely to achieve community buy-in. Yet, these SMEs face substantial barriers, including limited access to venture capital, rigid procurement systems, and lack of visibility on the global health innovation stage.

By investing in African SMEs, he asserted, stakeholders can:

- Enhance self-reliance in disease control tools.
- Promote culturally attuned product design and community uptake.
- Stimulate local economies and build a robust health-tech ecosystem.

He called for regional and international mechanisms to connect these enterprises to funding pipelines, distribution networks, and quality assurance infrastructure, thus ensuring that local innovation is not only recognized but rewarded.

One of the most forward-looking aspects of the address was the exploration of genetic approaches, a domain where science fiction is fast becoming science fact. He elaborated on a suite of advanced genetic technologies currently in development or early-stage field testing. These include:

- Sterile Insect Techniques (SIT): The deliberate release of sterilized male mosquitoes that compete with wild males, resulting in population decline over time.
- Gene Drive Technologies: Engineered genes that spread rapidly through mosquito populations, either suppressing the population or rendering it incapable of transmitting malaria.
- Symbiotic Interventions: Use of microbial symbionts, such as Wolbachia—that either reduce mosquito fertility or inhibit parasite development within the mosquito host.

Bridging the Gap Between Innovators and End Users

A critical insight delivered in the closing portion of the address was the existence of a significant disconnect between the creators of health innovations and the communities they are intended to serve. This “last-mile failure,” as he termed it, has contributed to the underutilization of many high-potential tools.
To address this, he outlined the need for an ecosystem approach that brings together:

- **Investors and Philanthropists**: To provide early-stage and catalytic capital.
- **CSR Networks and Development Partners**: To support pilots, scale-ups, and integration into public health programs.
- **Mentors and Risk-takers**: Who can guide entrepreneurs through the complex path of commercialization.
- **Advisors and Storytellers**: Who can help shape narratives, validate models, and connect innovations to decision-makers.

PRESENTATION

By Dangote Industries Limited

Gabriel Badmus - Group Head,HSSE & Sustainability, GND Terminal

As part of its continued efforts to contribute meaningfully to national and regional malaria elimination goals, Dangote Industries Limited (DIL), Africa's largest conglomerate, made a significant contribution to the CAMA World Malaria Day Webinar through a presentation delivered by **Mr. Gabriel Badmus, the Group Head of Health, Safety, Security, Environment (HSSE) & Sustainability (GND Terminal)**. His presentation provided an in-depth overview of DIL's systemic approach to malaria prevention and control, with specific emphasis on its policy direction, implementation strategies, integration, and measurable impact across its operational business units (BUs). The presentation framed malaria not just as a health challenge but as a developmental barrier that undermines workforce productivity, business continuity, and socio-economic stability in malaria-endemic regions. Therefore, the company's interventions were positioned not just as a corporate social responsibility (CSR) initiative but as a core component of operational risk management and employee wellness.

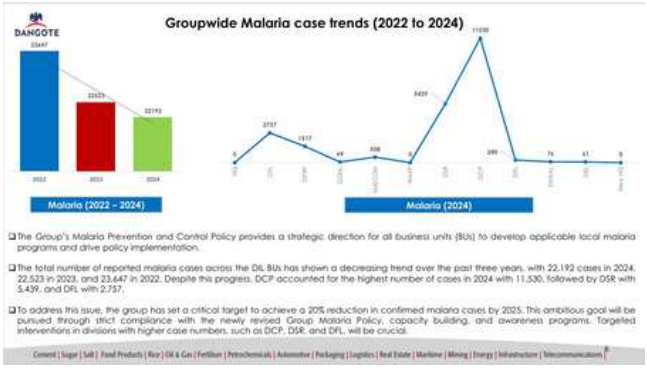
Strategic Direction and Policy Implementation

A major focus of the presentation was the strategic framework under which DIL operates its malaria control initiatives. These efforts are guided by a clearly articulated policy directive from executive leadership, which prioritizes health security as integral to the company's sustainability vision.

The organization has instituted a corporate-wide policy mandate requiring all BUs to design and implement localized malaria control programmes tailored to their unique ecological, geographic, and operational risks. This decentralized but guided model ensures that while there is strategic alignment across the group, implementation is context-sensitive. Each BU is required to conduct an epidemiological and environmental risk mapping to inform its malaria mitigation plan, which is then periodically reviewed and benchmarked against internal performance indicators and national malaria control metrics.

This approach is supported by:

- A robust governance structure that embeds health performance targets, including malaria reduction, into business KPIs.
- Multidisciplinary oversight teams that include occupational health specialists, HSSE officers, sustainability experts, and local community engagement leads.
- Periodic compliance audits to ensure that malaria programs meet both corporate standards and national health regulations.



Under this framework, Dangote Industries has committed to achieving a minimum 20% reduction in malaria incidence across its operations by 2025, compared to baseline figures from 2022. This strategic ambition reflects the organization's shift toward evidence-driven, preventive health management.

Innovations and Operational Approaches to Malaria Control

The presentation provided a deep dive into the operationalisation of malaria control efforts, which combine health education, environmental management, chemical prophylaxis, and digital monitoring.

Key Components of DIL's Multi-Pronged Malaria Control Strategy:

1. Malaria Exposure Self-Assessment Tool

A notable innovation presented was the development and deployment of a Malaria Exposure Self-Assessment Tool, a digital application available through DIL's internal health portal. This tool enables employees to independently evaluate their risk of malaria exposure using a range of parameters such as:

- Work location (e.g., proximity to stagnant water bodies, forested areas)
- Type of job role (e.g., field vs. office)
- Living conditions (e.g., urban vs. rural residence)
- Personal health history and susceptibility indicators

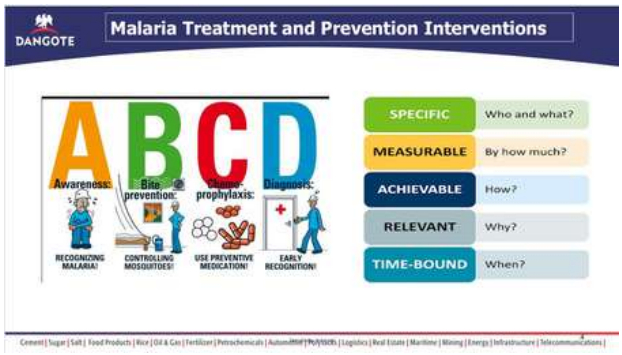
The aggregated data from these assessments informs real-time risk mapping, allowing HSSE teams to prioritize high-risk individuals and zones for targeted interventions such as additional training, personal protective measures, and pre-exposure chemoprophylaxis.

2. The ABCD Malaria Framework

DIL adopts a structured malaria control model known as the ABCD Approach, which stands for Awareness, Bite Prevention, Chemoprophylaxis, Diagnosis and Treatment. Each element of this approach is operationalized with a combination of policy enforcement, workforce sensitization, and technology-enabled delivery.

A – Awareness

- Implementation of weekly digital HSSE bulletins focusing on malaria facts, prevention tips, and early symptom recognition.
- Deployment of behavior change communication (BCC) campaigns using infographics, short videos, and staff testimonials across all locations.
- Mandatory malaria prevention modules integrated into the onboarding process for new employees and contractors.



B – Bite Prevention

- Regular entomological surveillance followed by quarterly indoor and outdoor residual fumigation of operational and residential facilities.
- Distribution of long-lasting insecticide-treated nets (LLINs) and personal repellents to staff, particularly those based in high-transmission zones.
- Environmental management interventions such as drainage clearing, larvicide spraying, and elimination of mosquito breeding habitats within and around industrial sites.

C – Chemoprophylaxis

- Deployment of a risk-based drug administration protocol for prophylactic treatment of employees identified through the Self-Assessment Tool as high-risk.
- Medical teams provide orientation on drug adherence and monitor side effects.
- Pre-deployment prophylaxis is mandatory for contractors or staff temporarily assigned to endemic zones.

D – Diagnosis and Treatment

- Establishment of on-site diagnostic clinics equipped with Rapid Diagnostic Tests (RDTs) and microscopy services.
- Training of medical personnel on WHO treatment protocols, ensuring access to Artemisinin-based Combination Therapies (ACTs) and management of severe cases.
- Digitized patient records for malaria cases to support tracking and case review.

Monitoring Outcomes and Impact

One of the most compelling aspects of the presentation was the empirical data showing tangible impact. Between 2022 and 2024, DIL recorded a significant reduction in reported malaria cases, with a drop from 23,647 in 2022 to 22,192 in 2024, representing approximately a 6.2% decline in incidence. While the full 20% target is still underway, this trajectory reflects the early success of the integrated approach.
Key points of impact include:

- Improved employee wellness, leading to reduced absenteeism and improved productivity.
- Enhanced health-seeking behavior due to increased awareness and access to testing.
- Reduced occupational health claims linked to malaria treatment and complications.
- Increased use of preventive tools, with LLIN utilization rates exceeding 75% among high-risk groups.

Data from internal surveillance platforms also show a higher rate of early diagnosis, with over 60% of confirmed cases treated within 24 hours of symptom onset, significantly reducing complications and transmission risks.

Sustainability, Community Integration, and Future Outlook

The final segment of the presentation addressed DIL's long-term commitment to malaria elimination, highlighting its efforts to embed these programs within the company's sustainability and community development agendas.

Sustainability Dimensions:

- Integration of malaria indicators within DIL's Sustainability Balanced Scorecard (SBS).
- Cross-collaboration with environmental sustainability programs to leverage ecological engineering for vector control (e.g., introduction of mosquito predators in water bodies).
- Engagement with local governments and State Ministries of Health to align with regional malaria strategies and expand best practices.

Community Integration:

- Roll-out of community education programs in host communities around major plants (e.g., Obajana, Gboko, and Apapa), with over 3,000 community members sensitized since 2023.
- Distribution of LLINs to vulnerable groups, including pregnant women and children under 5, in partnership with local PHCs.

Future Plans:

- Exploration of GIS mapping and AI-driven disease modeling to improve prediction and intervention planning.
- Piloting of wearable biosensors to track early symptoms and body temperature for remote field workers.
- Cross-sector collaboration through CAMA to scale these innovations across other private sector actors.

This presentation showcased a comprehensive, structured, and scalable private sector model for malaria control, built on data, discipline, and deep institutional commitment. DIL's approach reflects a mature corporate health strategy that goes beyond compliance to create a resilient, malaria-informed workforce.
Their deliberate alignment with global health targets, national control policies, and internal business metrics ensures that malaria control is embedded in the company's DNA, not just as a health initiative but as a strategic business imperative. As African industries continue to expand, Dangote Industries' experience offers an inspiring roadmap for how private sector leadership can harness technology, innovation, and structure to accelerate progress toward malaria elimination.

PANEL DISCUSSION

The panel discussion, moderated by **Dr. Mories Atoki, CEO, ABCHealth**, featured a diverse and distinguished group of experts. This session was purposefully designed to push boundaries, beyond conventional methods, by spotlighting how technological innovations are already shaping, and can further accelerate, malaria control efforts across high-burden regions. The panel brought together a strategically diverse and multidisciplinary group of experts drawn from the fields of public health, agriscience, digital health, private sector sustainability, and ICT4D (Information and Communication Technology for Development).

Together, they represented the essential spectrum of actors needed to co-develop, co-implement, and scale malaria solutions that are grounded in context and sustainability.
The distinguished panelists included:

- **Elijah Egwu**, Senior Technical Advisor for Digital Health at Catholic Relief Services (CRS)
- **Dr. Rose Peter**, Commercial Head, Vector Control SSA, Syngenta
- **Dr. Akinola Shonde**, Technical Advisor for Malaria and Multisectoral Programming, CRS
- **Varun Basu**, Vice President, Growth & Partnership, eGov Foundation
- **Dr. Chinwe Okala**, Lead Physician at Chevron Corporation
- **Dr. James Adenuga**, Group Chief of HSSE & Sustainability, Dangote Industries Limited
- **Michelle Chigboh**, ICT4D Advisor at Catholic Relief Services

Moderator: **Dr. Mories Atoki**, Lead, CAMA Office, CEO, ABCHealth

As we confront the ongoing challenges posed by malaria, the need for innovative solutions has never been more urgent. The panel session provided a unique platform for thought leaders to explore the intersection of technology and public health, emphasizing the critical role that data driven approaches play in enhancing malaria control efforts. Participants delved into the practicalities of translating cutting edge innovations into tangible impacts on the ground, highlighting real world experiences that demonstrate the efficacy of these technologies in combating malaria.

During a January 2023 insecticide-treated net (ITN) campaign in Kasai Province (DRC), nearly

3M bed nets were distributed to **950,000** households, protecting an estimated

5.3M people

The discussion was framed around key questions: How can digital health tools be effectively integrated into existing malaria control programs? What role does AI play in predicting outbreaks and optimizing resource allocation? How can big data analytics enhance our understanding of malaria transmission dynamics and inform targeted interventions? By addressing these questions, the panelists aimed to challenge traditional approaches to malaria control and inspire new ideas for collective action.

Throughout the session, participants shared insights from successful case studies, underscoring the importance of collaboration among governments, non governmental organizations, private sector partners, and local communities. The dialogue fostered an environment of knowledge exchange, encouraging stakeholders to think critically about the barriers to implementation and the strategies needed to overcome them.

As we move forward in the fight against malaria, this panel session serves as a reminder of the immense potential that lies in harnessing technology for public health transformation. The insights shared underscore the urgent need to integrate digital solutions into national malaria control strategies, ranging from real-time surveillance systems and predictive analytics to remote diagnostics and AI-assisted intervention mapping. The outcomes of this discussion will be instrumental in shaping future interventions, informing investment priorities, and guiding stakeholders across Africa in their efforts to deploy innovative, sustainable, and inclusive approaches to malaria elimination. In doing so, we move closer to building resilient health systems capable not only of combating malaria but also of adapting to the broader challenges of infectious disease control in the digital era.

Digital Public Infrastructure/Digital Health Technologies and Public Health in Africa

The need for innovative and scalable solutions in public health has never been more pressing in Africa's fight against malaria. One such solution is the establishment of Digital Public Infrastructure (DPI), which leverages robust technology owned by governments to deliver impactful health interventions at an affordable unit price. This panel session highlighted the critical role of DPI in enhancing malaria control efforts across the continent.

Varun Basu - Vice President, Growth & Partnership, eGov Foundation

Dr. Varun Basu, Vice President of Growth & Partnership at eGov Foundation, emphasized the transformative potential of DPI in public health. He articulated that DPI is not just a technological upgrade; it is a foundational framework that enables countries to execute health campaigns at scale and with efficiency. By adopting DPI, nations can synchronize multiple malaria control initiatives such as Insecticide Treated Nets (ITN) distribution, Indoor Residual Spraying (IRS), and Artemisinin-Based Combination Therapy (ACT) campaigns simultaneously. This capability is particularly vital in a region where the malaria burden is high and resources are often limited.

One of the key advantages of DPI is its ability to provide real time data from various health campaigns, allowing for timely decision making and resource allocation. This data driven approach enhances the effectiveness of malaria interventions, ensuring that they are responsive to the evolving epidemiological landscape. Dr. Basu noted that the implementation of DPI can significantly reduce costs associated with health campaign execution, enabling countries to conduct comprehensive malaria control efforts without incurring prohibitive expenses.

Moreover, the adoption of DPI fosters local capacity building, empowering African nations to take ownership of their public health strategies. By investing in digital infrastructure, countries can develop the skills and knowledge necessary to manage health campaigns independently, ultimately leading to sustainable health outcomes. This self-sufficiency is crucial for long-term malaria control, as it allows nations to adapt their strategies to local contexts and challenges.

The guiding principles of DPI, as highlighted by Dr. Basu, are essential for ensuring that these digital frameworks are effective and equitable. These principles advocate for inclusivity, transparency, and collaboration among stakeholders, which are vital for fostering trust and engagement within communities. By adhering to these principles, countries can ensure that their digital health initiatives are not only technologically advanced but also socially responsible and culturally relevant.

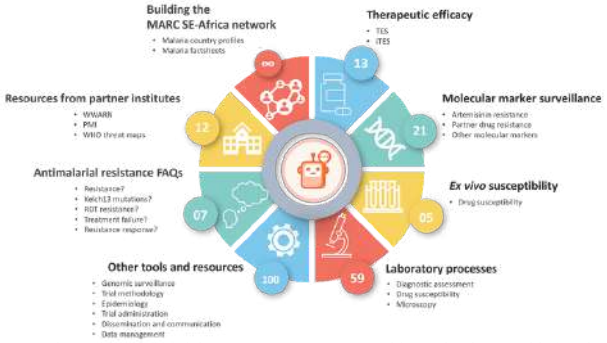
On the effective utilization of digital health technologies in malaria control efforts in Africa, Elijah Egwu, Senior Technical Advisor for Digital Health at Catholic Relief Services, shed light on the ongoing efforts to utilize digital tools in malaria control. He highlighted the ability to track health campaigns digitally, such as monitoring the distribution of insecticide-treated nets (ITNs) and other interventions. However, he also pointed out significant challenges that hinder the effective use of these technologies.

Elijah Egwu- Senior Technical Advisor for Digital Health at Catholic Relief Services

One of the primary challenges identified by Mr. Egwu is the fragmentation of data across various digital health tools. Different interventions often rely on disparate systems, leading to a lack of a unified data repository that encompasses all aspects of malaria control efforts.

This fragmentation complicates the ability to leverage artificial intelligence (AI) for data modeling and analysis, ultimately impeding the effectiveness of malaria control strategies. Without comprehensive data, it becomes difficult to identify trends, allocate resources efficiently, and measure the impact of interventions.

Digital Public Infrastructure (DPI) presents a viable solution to these challenges. By establishing a cohesive framework for digital health, DPI can facilitate the integration of various data sources into a single, accessible platform. This unified approach allows for the collection, storage, and analysis of data from multiple malaria control initiatives, providing a holistic view of the malaria landscape in a given region. With DPI, stakeholders can track the distribution of ITNs, monitor indoor residual spraying campaigns, and evaluate the uptake of Artemisinin Based Combination Therapy (ACT) in real-time. This comprehensive data repository not only enhances transparency but also empowers health officials to make informed decisions based on accurate and timely information. Furthermore, by streamlining data collection and reporting processes, DPI can reduce the administrative burden on health workers, allowing them to focus more on direct patient care and intervention implementation.



How the widespread mobile penetration in Africa enables technology-enabled malaria solutions: predictive analytics, dashboards, clinician support, and mobile data coordination at scale.

The integration of DPI also enhances the potential for AI and big data analytics in malaria control. With a centralized data repository, AI models can be trained on comprehensive datasets, enabling predictive analytics that can forecast malaria outbreaks, optimize resource allocation, and tailor interventions to specific community needs. This data-driven approach can significantly improve the efficiency and effectiveness of malaria control programs, ultimately leading to better health outcomes.

Moreover, DPI fosters collaboration among various stakeholders, including government agencies, non-governmental organizations, and local communities. By creating a shared digital infrastructure, these entities can work together more effectively, sharing insights and resources to tackle malaria comprehensively. This collaborative spirit is essential for building resilient health systems capable of responding to the dynamic challenges posed by malaria.

Digital Technology and Vector Control

Dr. Rose Peter, Commercial Head of Vector Control for Syngenta in Sub Saharan Africa, shared insights into how Syngenta is leveraging technology to improve insecticide manufacturing and application processes. One of the most significant advancements highlighted by Dr. Peter is the use of artificial intelligence (AI) to accelerate the discovery of new insecticides. By employing AI algorithms, Syngenta can streamline the research and development process, enabling faster identification of effective compounds that can combat malaria-carrying mosquitoes. This innovative approach not only shortens the time frame for bringing new insecticides to market but also enhances the efficacy of vector control measures.

Dr. Rose Peter, Commercial Head of Vector Control for Syngenta in Sub Saharan Africa, shared insights into how Syngenta is leveraging technology to improve insecticide manufacturing and application processes. One of the most significant advancements highlighted by Dr. Peter is the use of artificial intelligence (AI) to accelerate the discovery of new insecticides. By employing AI algorithms, Syngenta can streamline the research and development process, enabling faster identification of effective compounds that can combat

Dr. Rose Peters- Head, Vector Control, SSA, Syngenta

malaria-carrying mosquitoes. This innovative approach not only shortens the time frame for bringing new insecticides to market but also enhances the efficacy of vector control measures. In addition to AI, machine learning is being utilized to analyze vast datasets related to insecticide performance and mosquito resistance

patterns. This data-driven approach allows for the identification of new insecticides that are more effective against resistant mosquito populations, ensuring that vector control strategies remain robust in the face of evolving challenges. Dr. Peter also emphasized the importance of precision in insecticide application. Digital technology plays a crucial role in measuring how insecticides are applied to surfaces, such as walls in homes. By utilizing advanced monitoring systems, companies can assess whether insecticides are being applied correctly and effectively. If issues arise such as insufficient coverage or improper application techniques these can be addressed almost immediately, ensuring that the intended protective measures are in place.

Furthermore, there is ongoing work to develop systems that can digitally measure the amount of insecticide remaining on walls. This innovation would provide valuable feedback on the longevity and effectiveness of insecticide treatments, allowing for timely reapplication and better resource management. By understanding how much insecticide is present and its effectiveness over time, health officials can make informed decisions about vector control strategies and resource allocation.

Based on Syngenta's cutting-edge PLINAZOLIN® technology, Sovrenta® introduces a new chemistry for effective mosquito control.

The integration of digital technology in vector control not only enhances the effectiveness of insecticides but also contributes to a more sustainable approach to malaria prevention. By optimizing the use of chemical interventions, we can reduce environmental impact while ensuring that communities are adequately protected from malaria transmission.

Community Engagement and Digital Health Initiatives

Dr. Akinola Shonde- Technical Advisor for Malaria and Multisectoral Programming, CRS

While innovative digital tools and initiatives are essential, their successful implementation hinges on effective community involvement. Dr. Akinola Shonde, Technical Advisor for Malaria and Multisectoral Programming, articulated a critical point: the design and execution of malaria control programs must prioritize community engagement from the very beginning. This approach ensures that local populations are not only informed about the initiatives but also feel a sense of ownership and empowerment regarding their health. When communities are actively involved in the planning and implementation phases, they are more likely to embrace the interventions, leading to higher acceptance and participation rates. One of the key challenges in deploying digital health interventions is the potential for communities to feel intimidated by new technologies. Dr. Shonde stressed that it is vital to demystify these tools and foster an environment of trust and collaboration. By engaging community leaders and stakeholders early in the process, health programs can build relationships that facilitate open communication and feedback. This engagement helps to tailor interventions to the specific needs and cultural contexts of the communities, ensuring that they are relevant and effective.

Moreover, community engagement serves as a bridge between digital health initiatives and the populations they aim to serve. For instance, when implementing digital health tools for malaria surveillance or treatment adherence, it is crucial to educate community members about how these technologies work and how they can benefit from them. Training local health workers and volunteers to use digital tools can also enhance local capacity and foster a sense of pride and responsibility within the community.Dr. Shonde highlighted that advocacy plays a significant role in this process. By advocating for community involvement and addressing any concerns or misconceptions about digital health interventions, stakeholders can create a supportive environment that encourages participation. This advocacy can take many forms, including community meetings, workshops, and informational campaigns that highlight the importance of malaria control and the role of digital health in achieving better health outcomes.

Digital Technologies as Catalysts for Enhanced Surveillance, Predictive Analytics, and Malaria Intelligence

Ms. Chinwe Okala, Lead Physician at Chevron Corporation, offered a forward-looking discourse on how emerging technologies are revolutionizing malaria control and shaping a future where sustainable innovation plays a central role in the eradication of this disease. Drawing on her clinical expertise and practical experience within a globally integrated energy company, she articulated a vision that is both aspirational and grounded in real-world application, illuminating pathways that are already transforming health systems in endemic regions.

One of the most crucial and immediate areas identified as benefiting from technology is enhanced surveillance and data analytics. In malaria-endemic zones, timely, accurate, and granular data has long been a missing link in the cascade of effective response. Ms. Okala explained that digital technologies, through the deployment of integrated health information platforms and interoperable data systems, are now enabling health authorities and implementing partners to track malaria cases with unprecedented precision. Geographic

Chinwe Okala - Lead Physician, Chevron

Information Systems (GIS), electronic medical records, and mobile surveillance tools are capturing real-time case data, helping to map transmission trends, detect outbreaks early, and support agile response strategies. These tools not only enhance data fidelity but also empower health ministries with actionable intelligence that can shape policy and allocation of resources.

In illustrating how technology is not just theoretical but deeply embedded in Chevron's operations, Ms. Okala provided detailed insight into Chevron's innovative use of digital tools for malaria risk mitigation among its employees. One such tool is a proprietary malaria application developed to track and manage malaria exposure for employees traveling to endemic regions. This application automatically triggers alerts and training notifications as soon as travel is booked. Employees receive location-specific training modules, emergency contact details, and access to educational resources, all integrated within a seamless digital experience. The system also ensures compliance monitoring and training completion, thereby reducing the likelihood of missed interventions and improving health outcomes across operational environments. The application is not merely an administrative tool but a strategic component of corporate health and safety, offering a model that could be adapted by other organizations operating in similar high-risk geographies.

Malaria Elimination Targets, Case Burden, and Strategy Implementation Status by Country – Asia Pacific Region

She also shared that Chevron has instituted an eight-month internal Data Science Development Program. This initiative is uniquely designed to build advanced analytics capabilities across disciplines, including medical professionals. Participants are equipped with skills in data analytics, machine learning, and computational modeling, enabling them to identify opportunities for innovation within their domains. For healthcare teams, this means applying data science to understand health trends, optimize service delivery, and contribute to research and development of new tools for malaria control.

Enhancing Campaign Efficiency through Digitalization

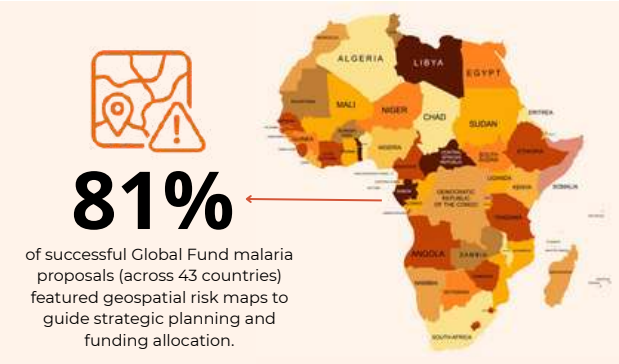
Ms. Michelle Chigboh, ICT4D Advisor at Catholic Relief Services, stated the recent advancements in digital technology have brought a remarkable transformation to malaria control efforts across Africa, particularly in mass campaigns for Insecticide-Treated Nets (ITNs) and Seasonal Malaria Chemoprevention (SMC). Historically, these campaigns were conducted using paper-based tools for household data collection, which resulted in

inefficiencies, high error margins, and slow processing times. In a country like Nigeria, especially in highly populated areas such as Kano, managing vast amounts of household data manually posed significant logistical and accountability challenges. The shift to digital platforms has addressed many of these limitations. With the introduction of digital tools, the quality of data collected during malaria campaigns has improved dramatically. These innovations have shortened data collection times, reduced human error, and provided greater transparency and accountability across all levels of campaign execution.

Michelle Chigboh - ICT4D Advisor, Catholic Relief Services

Mobile applications such as Red Rose, Digital HDM, and DHIS2 have revolutionized how campaign activities are monitored and evaluated. These tools are now operational in multiple countries including Nigeria, Sierra Leone, and Liberia. They enable the real-time tracking of field operations by community health workers (CHWs), offering visibility into every action taken, from household visits to the actual distribution of health commodities. This real-time proof of work ensures that commodities such as ITNs reach the correct recipients in the correct quantities. For instance, if a household is eligible for two nets, the system confirms that the distribution reflects this entitlement. These tools also optimize logistics, enhance supply chain responsiveness, and enable more effective allocation and delivery of critical health commodities.

Geospatial Mapping for Targeted Interventions



Another promising digital innovation is the integration of geospatial mapping in campaign planning and oversight. This approach enables health officials to visualize key indicators such as malaria hotspots and underserved communities, allowing for a more targeted and equitable distribution of health services and resources. Geospatial data enhances precision in the planning of interventions by identifying high-risk areas and enabling the strategic deployment of CHWs. It improves monitoring and evaluation efforts and allows stakeholders to optimize resources and prioritize areas with the greatest need.

Driving Innovation and Digital Transformation Across Business Units

Dangote Industries Limited (DIL) has actively embraced innovation and technological advancement across its business units. One notable initiative, stated by **Dr. James Adenuga, Group Head, HSSE & Sustainability, Dangote Industries Limited (DIL)**, is the piloting of an incident management tool that leverages digital platforms to streamline incident tracking and response. This project began with smaller business units, such as the salt packaging division, and has since been scaled to include the sugar business.

Dr. James Adenuga - Group Head, HSSE & Sustainabilty DIL

Through these efforts, the organization is positioning its operations for greater digital integration, aligning its internal processes with global standards for data and information management. This transformation is not just isolated to individual business units but is being extended group-wide, reinforcing DIL's commitment to operational excellence and continuous improvement. Recognizing the pivotal role of accurate data, the organization emphasizes the importance of robust information management systems to enable real-time decision-making, enhance traceability, and drive cross-functional efficiency.

Strengthening Internal Collaboration and Data Utilization

Collaboration within the Dangote Group has significantly evolved over recent years, particularly as various business arms transitioned from the legacy clinic-based models to a more centralized and structured enterprise health management system. This change has enabled better data generation, aggregation, and utilization, especially in the context of diseases like malaria, where improved visibility of health data has led to more proactive intervention strategies. The platform also facilitates the tracking of health indicators and resource use, ensuring that interventions are both evidence-based and cost-effective. By consolidating efforts across departments and adopting a uniform platform, the organization ensures a consistent approach to workplace health, safety, and sustainability.

Technological Intervention and Public Health Impact

As part of its broader sustainability agenda and corporate social responsibility, Dangote Industries Limited has also made significant contributions through technological partnerships aimed at improving public health awareness. A key intervention includes collaboration with external organizations to develop and deploy a health awareness mobile application. This app serves multiple functions, including first-aid education and general health awareness creation. By leveraging mobile technology, the organization is helping to close the information gap, particularly in underserved communities where access to timely health information remains a challenge. This initiative reflects a proactive stance in community engagement, further underscoring the Group's commitment to leveraging innovation to improve health outcomes both within and outside the organization.

Translating Technological Promise into Practical, Inclusive, and Sustainable Malaria Control Solutions

As the webinar drew to a close, one of the key takeaways highlighted by Dr. Francis Aminu, Director, Health & Nutrition, Aliko Dangote Foundation, is the urgent imperative to ensure that digital health innovations, no matter how sophisticated or promising, are meaningfully accessible, economically viable, culturally appropriate, and environmentally sustainable. This central thesis forms the basis for a new lens through which malaria control innovations must be evaluated and scaled, particularly in resource-constrained settings across Africa.

Dr. Francis Aminu - Director, Health & Nutrition, ADF

Throughout the session, a wide range of promising technologies was explored, from artificial intelligence for predictive analytics and risk stratification, to geospatial mapping, mobile health applications, and real-time digital surveillance. Technological innovation must be grounded in local realities. Sophistication alone does not equate to impact. Innovations must reach underserved communities, adapt to their socio-economic conditions, and function reliably within fragile health systems.

The conversation stressed the need to dissolve traditional boundaries between government, industry, civil society, and academia. Malaria is a disease that transcends institutions, brands, and jurisdictions. As such, effective solutions must also transcend silos. What is required is a collaborative architecture that allows for the pooling of technical expertise, operational capacity, and financial resources. These partnerships must not only accelerate innovation but also ensure last-mile delivery and accountability.

The call to action further included the activation of multi-level networks, from grassroots organizations and local government authorities to regional platforms and global alliances. These networks are critical not only for deployment and scale-up, but also for ensuring that innovations are embedded within long-term national health strategies. Embedding digital tools into routine health practices, policy environments, and community behavior-change campaigns is essential for sustainable impact.

RECOMMENDATIONS

The discussions highlighted the transformative potential of digital health, artificial intelligence (AI), and big data in malaria surveillance, response, and control. Following insightful presentations and discussions, panelists and keynote speakers put forth several key recommendations aimed at enhancing malaria control efforts across Africa.

- **Strengthen Digital Public Infrastructure (DPI):** Stakeholders are encouraged to invest in robust Digital Public Infrastructure that integrates various health data systems. A unified platform will facilitate real-time data sharing and analysis, enhancing the efficiency of malaria control initiatives and enabling better resource allocation.

- **Enhance Community Engagement**: It is essential to prioritize community involvement in the design and implementation of digital health interventions. Engaging local populations fosters ownership, trust, and acceptance of malaria control measures. Advocacy efforts should focus on educating communities about the benefits of digital health technologies and involving them in decision-making processes.

- **Leverage AI and Big Data for Predictive Analytics:** Governments and organizations should harness AI and big data analytics to improve malaria surveillance and response strategies. By utilizing predictive modeling, stakeholders can identify potential outbreaks, optimize intervention strategies, and allocate resources more effectively.

- **Invest in Capacity Building:** Training local health workers and community volunteers in the use of digital health tools is crucial for building local capacity. This investment will empower communities to manage their health interventions effectively and ensure sustainability in malaria control efforts.

- **Promote Public-Private Partnerships**: Collaboration between public health authorities, private sector companies, and non-governmental organizations is vital for driving innovation in malaria control. Public-private partnerships can facilitate the sharing of resources, expertise, and technology, leading to more effective and sustainable solutions.

- **Encourage Research and Development:** Stakeholders should support research initiatives focused on developing new technologies and interventions for malaria control. This includes funding for innovative projects that explore the use of AI, machine learning, and other digital health solutions to combat malaria.

- **Foster Collaboration Across Sectors:** A multisectoral approach is necessary to address the complex factors contributing to malaria transmission. Collaboration between health, education, agriculture, and other sectors can create comprehensive strategies that tackle the social determinants of health and enhance malaria control efforts.

CONCLUSION

The CAMA webinar themed "Harnessing Technology for Malaria Control: Sustainable Innovations for the Future," provided a valuable platform for stakeholders to share insights and explore the critical role of digital health, artificial intelligence (AI), and big data in enhancing malaria surveillance, response, and control efforts across the continent.

Throughout the discussions, it became evident that while technological innovations hold immense potential for transforming malaria control strategies, their successful implementation relies heavily on effective community engagement, robust digital public infrastructure, and collaborative partnerships among various stakeholders. The insights shared by our esteemed speakers and panelists underscored the necessity of integrating local knowledge and perspectives into the design and execution of health interventions to ensure their relevance and effectiveness.

Key takeaways from the webinar include the importance of fostering a multisectoral approach that brings together government agencies, private sector partners, non-governmental organizations, and communities. By working together, we can leverage the strengths of each sector to create comprehensive and sustainable solutions to combat malaria. Additionally, the need for continuous investment in capacity building and training was highlighted, ensuring that local health workers and communities are equipped to utilize digital tools effectively.

As we move forward, the recommendations put forth during the webinar will serve as a guiding framework for stakeholders committed to enhancing malaria control efforts. By prioritizing the integration of technology with community engagement and collaboration, we can create a more responsive and effective public health landscape that addresses the complexities of malaria transmission.

ACKNOWLEDGEMENT

ABCHealth's CAMA extend our heartfelt gratitude to all participants, speakers, and panelists who contributed to the success of the webinar.

We are particularly grateful to our esteemed keynote speakers and panelists, whose expertise and insights greatly enriched the discussions. Their contributions highlighted the critical role of technology in enhancing malaria control efforts and emphasized the importance of community engagement and collaboration among stakeholders.

We would also like to acknowledge the invaluable participation of representatives from various sectors, including government agencies, non governmental organizations, private sector partners, and academic institutions. Your diverse perspectives and experiences are essential in shaping effective malaria control strategies across Africa, and your commitment to addressing the challenges posed by malaria is commendable.

A special thank you goes to the members of CAMA, whose dedication and support are instrumental in driving the mission of malaria control across the continent. Your active involvement and collaboration in this initiative exemplify the spirit of partnership needed to tackle this pressing public health challenge. We recognize the contributions of each member organization.

Finally, we thank all attendees for their engagement and contributions during the webinar. Your active participation and willingness to share knowledge and experiences are vital in fostering a collaborative approach to malaria control. Together, we can harness the power of technology and innovation to create a malaria-free future for Africa.

CAMA

The Corporate Alliance on Malaria in Africa

CONTRIBUTORS

- **Ms. Zouera Youssoufou -** MD/CEO, Aliko Dangote Foundation
- **Michael Steinberg** - HSE Lead & Community Partnerships, Chevron, CAMA Co-Chair
- **Dr. Peter Billingsley** - Founder, The Vital Narrative
- **Dr. James Adenuga** - Group Chief, HSSE & Sustainability, Dangote Industries Limited
- **Mr. Gabriel Badmus** - Group Head of Health, Safety, Security, Environment (HSSE) & Sustainability (GND Terminal), Dangote Industries Limited
- **Dr. Francis Aminu** – Director, Health & Nutrition, Aliko Dangote Foundation (ADF)
- **Elijah Egwu** - Senior Technical Advisor for Digital Health at Catholic Relief Services (CRS)
- **Dr. Akinola Shonde** - Technical Advisor for Malaria and Multisectoral Programming, CRS
- **Varun Basu** - Vice President, Growth & Partnership, eGov Foundation
- **Dr. Chinwe Okala** - Lead Physician at Chevron Corporation
- **Michelle Chigboh** - ICT4D Advisor at Catholic Relief Services
- **Dr. Rose Peters** - Head, Vector Control SSA, Syngenta
- **Dr. Mories Atoki** - Lead, CAMA Office, CEO, African Business Coalition for Health (ABCHealth)
- **Richard Iddrisu** - CAMA Program Officer

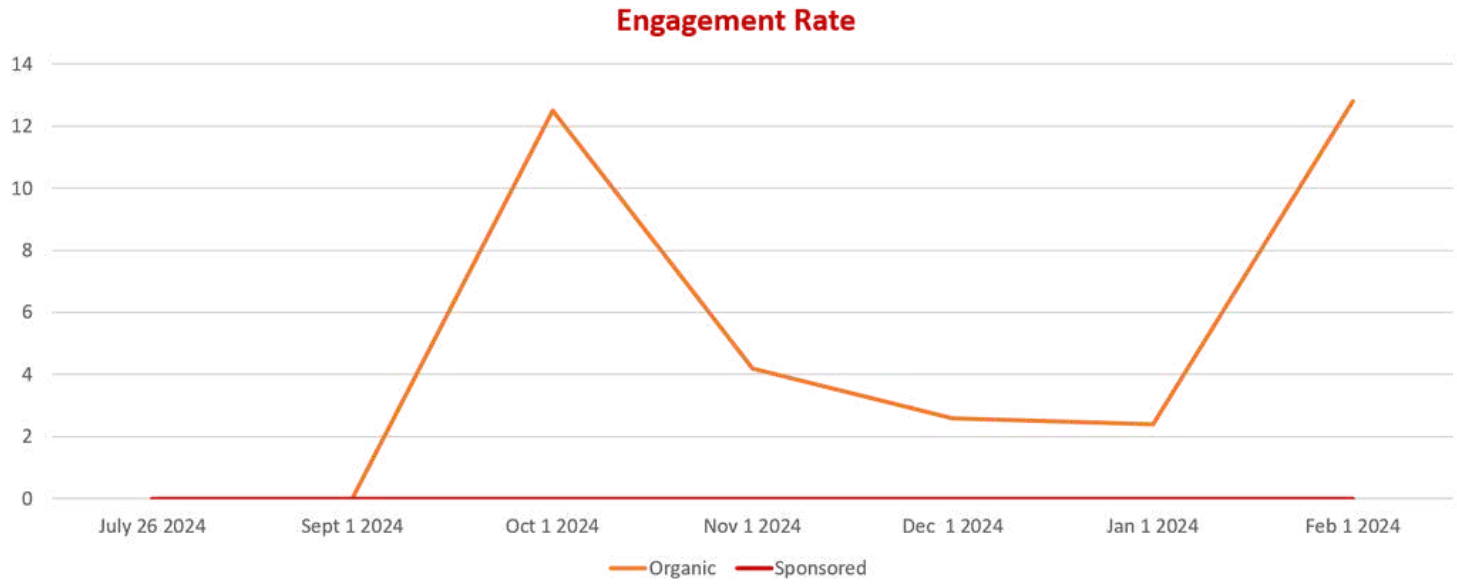
REFERENCES AND SOURCES

African Union. (2015). Agenda 2063: The Africa We Want. Retrieved from [African Union Agenda 2063] (https://au.int/en/agenda2063/overview)
United Nations. (2015). Transforming our world: the 2030 Agenda for Sustainable Development. Retrieved from [UN 2030 Agenda](https://sdgs.un.org/2030agenda)
Roll Back Malaria Partnership. (2020). Global Malaria Action Plan. Retrieved from [RBM Partnership] (https://www.rollbackmalaria.org/)
World Health Organization (WHO). (2024). World Malaria Report 2024. Retrieved from [WHO World Malaria Report] (https://www.who.int/publications/i/item/9789240063447)
https://www.nepad.org/blog/other-pandemic-harnessing-innovation-and-emerging-technologies-combat-malaria
https://www.researchgate.net/figure/Map-of-sub-Saharan-Africa-showing-the-current-methodologies-used-to-estimated-malaria_fig2_341872667
https://www.theglobalfund.org/en/news/2020/2020-10-05-global-fund-and-chevron-united-against-hiv-tb-and-malaria/
https://afidep.org/tools-and-strategies-for-a-malaria-free-world/
https://www.marcse-africa.org/news/blog/introducing-moxie-bot-chatbot-aiding-malaria-control-pan-african-malaria-conference
https://pmc.ncbi.nlm.nih.gov/articles/PMC11660687/
https://worldmalariareport2024.org/progress-made
https://parasitesandvectors.biomedcentral.com/articles/10.1186/s13071-024-06577-
https://qiraatafrican.com/en/12971/infographic-the-burden-of-malaria-in-sub-saharan-africa/
https://apmen.org/blog/why-malaria-dashboards-are-essential-malaria-control-and-elimination-asia-pacific
https://www.afro.who.int/regional-director/speeches-messages/world-malaria-day-2024

CONNECT WITH US

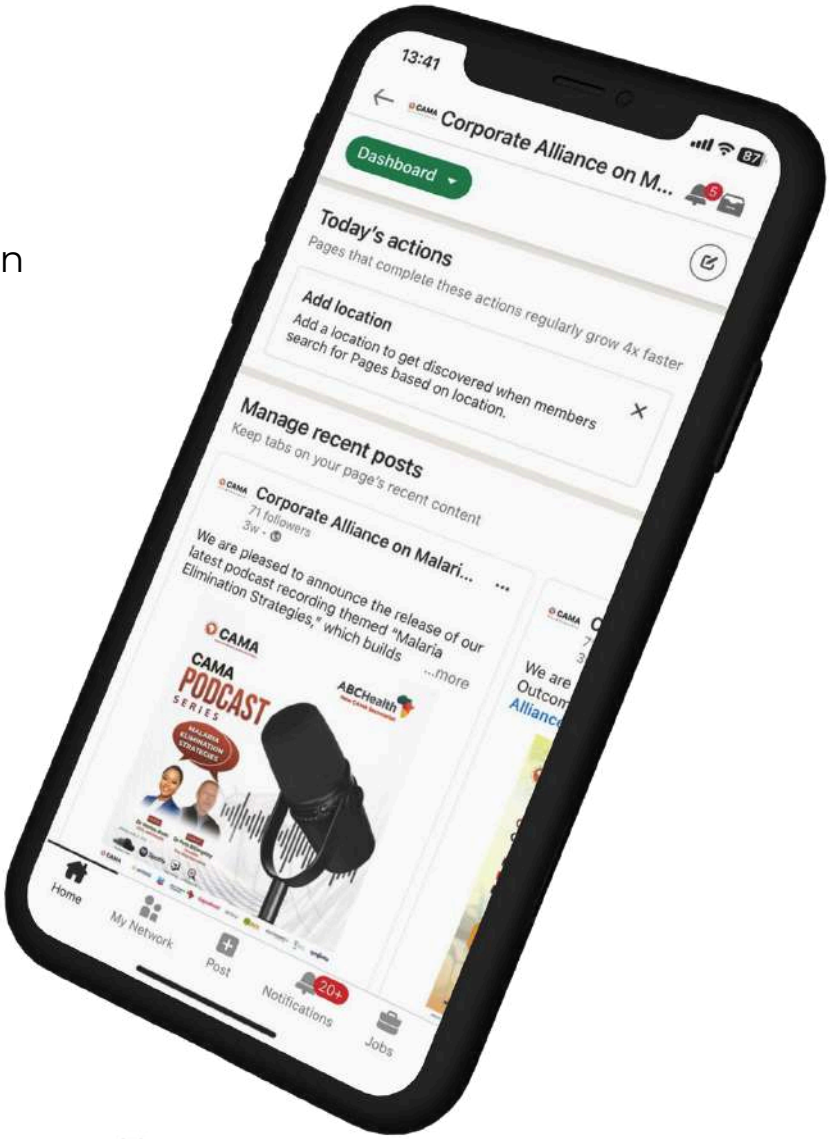
CAMA
The Corporate Alliance on Malaria in Africa

5,240	106	10	1
Impressions	Reactions	Comments	Reposts
●0%	●0%	●0%	●0%



Follow the Corporate Alliance on Malaria in Africa (CAMA) for more info

HERE



@CAMAnews

@Corporate Alliance on Malaria in Africa

CONTACT

African Business Coalition for Health LTD / GTE
Waterfront Plaza, 270a Ozumba Mbadiwe Avenue
Victoria Island, Lagos, Nigeria

Email: info@abchealth.com / adaltonoke@abchealth.com
Mobile: +234 802 478 2021 / +234 803 714 3251

www.abchealth.com

@CAMAnews

@Corporate Alliance on Malaria in Africa