



PAN-AFRICAN MOSQUITO CONTROL ASSOCIATION

**PAMCA NEWSLETTER**  
**(World Malaria Day Edition)**

**April 2020**

Dear Partners,

Welcome to our first newsletter of 2020. In this newsletter we include a statement from our Executive Director for World Malaria Day, an update on PAMCA programmes, news from our Regional Knowledge Translation Centres and chapters, upcoming events and opportunities. If you would like to hear more about what we do, partner or work with us, or simply share ideas or inspiration, please get in touch with us at [info@pamca.org](mailto:info@pamca.org). We hope you enjoy the newsletter.

**PAMCA Team**

**PAMCA WORLD MALARIA DAY STATEMENT**

**It is time to stand united to eliminate Malaria!**

On April 25<sup>th</sup>, PAMCA joins the global health community in commemorating this year's World Malaria Day (WMD) amidst the unprecedented circumstances brought about by the COVID-19 pandemic. As a global community we have been put to the test and must remain steadfast in our commitments to continue sustaining gains that we



have made in the fight against malaria. Since the onset of the COVID-19 outbreak, we have witnessed significant impact on vector control activities with many field operations being scaled down or halted as the world diverts its attention to this pandemic. We at PAMCA wholeheartedly stand in support with all affected families, the healthcare



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workers, scientists, and individuals who continue to tirelessly serve our communities, often placing their own lives at risk.

I would like to call upon everyone, to join hands and use this important day to reflect on the great achievements reached in the fight against malaria. World Malaria Day serves as an opportune moment for everyone to reflect on how best we contribute to sustain the gains achieved against a disease that continues to devastate humankind, with women and children being disproportionately affected on the African continent. Now, more than ever, we must stay focused and ensure that the most vulnerable are protected by working together to integrate malaria control with all public health measures in a systematic way. Through our PAMCA network, we will share good practice and innovations that promote the continuation of much needed vector control initiatives across our chapters and collaborators in Africa.

PAMCA is committed to building the best platform for advancing expert knowledge exchange and support for malaria endemic countries in Africa. I urge all PAMCA members, malaria control experts, civil society, NGOs and the private sector to join hands, using all means possible, to support malaria control programs in their respective countries and beyond, so that we may defeat the disease and save lives. We at PAMCA will work to promote cross-country dialogue about the challenges facing malaria control efforts as we work to defeat the COVID-19 pandemic.

Thank you to everyone who has been at the frontline supporting vector control activities in the face of this global crisis, and we look forward to continuing the journey together as we mark this important day!

**Prosper Chaki, PhD**  
**Executive Director, PAMCA**



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## SPOTLIGHT ON PAMCA's PROGRAMMES

In line with our vision of An Africa free of vector-borne diseases, PAMCA is coordinating several programmes on the African continent. We highlight some of these below.

### Strengthening local capacity for malaria surveillance and elimination in Africa



*Training in larval source management in Ghana.*



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Although vector control has been the backbone of the progress made in malaria control, the capacity to conduct practical and effective entomological surveillance in most endemic countries is weak and unresponsive to national or sub-national needs.

In many countries in sub-Saharan Africa, entomological surveillance for malaria control is often weak and fragmented, and many malaria programs lack capacity to collect, analyze, interpret, and report entomological data for decision-making. The gap in entomology capacity within National Malaria Control Programs (NMCPs) is often due to a lack of well-defined career prospects in this field. Although in recent years there has been a growing pool of well-trained entomologists within some research institutions in Africa, their skills and research outputs are not directly at the service of NMCPs, whereas other countries are still with little or no entomology capacity.

Previously, much of malaria vector control consisted of universal coverage with pyrethroid-only insecticide-treated nets and indoor residual spraying. However, this landscape is becoming increasingly complex due to the heterogeneity in malaria prevalence rates, differences in insecticide resistance profiles and underlying mechanisms in dominant malaria vectors and new vector control interventions with new paradigms coming to market. Therefore, quality entomological surveillance data, and people with capacity to interpret it, will be crucial to properly target, evaluate, implement, and monitor new interventions. In addition, in order for vector control and surveillance to be sustainable in Africa, more local entomologists need to be involved in the development, testing, and roll out of new vector control tools, including post-market surveillance of new tools as they are piloted and scaled up.

The long-term vision of PAMCA is to work with other partners to increase substantially the entomology capacity and develop best practices in the surveillance and control of mosquito-borne diseases in Africa and to reach a critical mass of well-trained entomologists and mosquito control officers both in quality and quantity, who will be at the service of Ministries of Health (MoH) and NMCPs to drive malaria elimination efforts.



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In order to address the above challenges and with the generous support of the Bill and Melinda Gates Foundation (BMGF), PAMCA has secured a five-year grant whose primary objective is to increase local involvement, ownership, and integration of vector control implementation, surveillance and operational research. The secondary objectives consist of 1) building or improving functional vector control structures in-country; 2) building and retaining the human capacity needed to staff them and 3) defining and implementing best practices in vector control and surveillance. This program will start in Burkina Faso, Cameroon, and Tanzania, and in the second phase will expand to the Democratic Republic of Congo, Mozambique, Nigeria and Uganda.

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### **New partnership to accelerate research on *Anopheles* genomics in Africa**

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Malaria elimination in Africa requires complementary new tools that can be used alongside existing ones, such as mosquito nets, indoor spraying and larviciding, to rapidly crash malaria vector populations and malaria transmission. Genetic approaches, such as the use of gene-drive technology for mosquito population suppression or replacement offer potential high-impact interventions to achieve this goal. However, successful implementation of such interventions will require improved understanding of the genetic diversity of the common malaria vectors, and the gene-flow patterns across regions.

Recent efforts such as the [Anopheles gambiae 1000 genome consortium](#) have made key contributions to our understanding of the genetic diversity of this important vector and the evolution of resistance to insecticide-based vector control methods. However, much remains to be elucidated including essential information regarding the genetic diversity, evolution, and gene-flow trends among *An. coluzzii*, *An. arabiensis* and *An. funestus* which dominate malaria transmission in Africa as well as several other anopheline vectors which contribute to local transmission across Africa. Though technological advancements already allow for such analysis to be done, there remain



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limitations on local institutional and human capacity, data supply and access to wild-caught field samples from across Africa.

In order to resolve this challenge, PAMCA in collaboration with the Wellcome Trust Sanger Institute and the generous support of the BMGF initiated a partnership to strengthen vector surveillance systems and increase capacity for collection, curation, analysis and interpretation of essential genetic data on diversities and gene flow in *Anopheles* mosquitoes in Africa. This new partnership will accelerate formation of new networks across Africa to address this gap, by leveraging existing synergies and diversities in expertise across geographies. This project is being implemented in Cameroon, Cote d'Ivoire, Democratic Republic of Congo, The Gambia, Kenya, Malawi, Tanzania, South Africa, Uganda, and Zambia.



*Kick-off meeting of the team studying Anopheles genomics in Kenya, Malawi, Tanzania and Uganda.*

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## Strengthening the Role of Women in Vector Control

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*Participants at the Women in Vector Control workshop, Cameroon, September 2019*

As we mark the World Malaria Day, the new norm of lockdowns, social distancing, staying, and working from home is an impediment to the usual festive commemoration of the WMD. The COVID-19 pandemic has disrupted the very fabric of society as events and gatherings are cancelled, the global economy slows down, and health systems grapple with how to respond to the new threat.

For many countries this has meant investing in the promotion of behaviour change and making homesteads the focal point in the fight against infectious diseases. This is not only the common approach to fight COVID-19, it also holds true for defeating malaria. For example, sleeping under insecticide treated nets, and ensuring indoor residual spraying (IRS) of homes in malaria endemic areas cannot be achieved by top-down public health programmes that lack the buy-in of the community.

The Pan-African Mosquito Control Association (PAMCA) recognises that women are key agents of change in programmes to combat public health challenges, including malaria. This is because women are the backbone of better health care particularly when making decisions on issues that affect them, their children, and the entire family. Moreover, societies depend heavily on women who make up most of the health care and nursing professions and as community health workers, yet women's own health needs are frequently neglected, their contributions to health development undervalued,



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and their working conditions ignored. In the fight against malaria, PAMCA identifies the need to build capacity in women leaders in Africa. The association endeavours to develop a bespoke mentorship programme, and strengthening capacity in, but not limited to: proposal writing and communication skills, leadership, and management, specialised courses on vector biology and control. PAMCA foresees these as key to successful women empowerment and career advancement in the control of vector borne diseases.

On this WMD, PAMCA therefore urges the dismantling of gender stereotypes by incorporating women in the research, design, delivery and adoption of malaria interventions. This will not only lead to the decline in morbidity and mortality due to malaria but also fast forward the realisation of its elimination.

### **UPDATES FROM REGIONAL KNOWLEDGE TRANSLATION CENTRES**

PAMCA supports and coordinates capacity strengthening for malaria vector control, surveillance and elimination efforts through its country chapter members and partner institutions, also known as Regional Knowledge Translation Centres, currently consisting of Ifakara Health Institute (IHI – Tanzania), Centre for Research in Infectious Diseases (CRID – Cameroon) and Institut de Recherche en Science de la Santé (IRSS – Burkina Faso). Currently there are nine registered PAMCA chapters with functional secretariat (Burkina Faso, Cameroon, Ghana, Nigeria, Cote d'Ivoire, Kenya, Mali, Tanzania and Zimbabwe). Additionally, five other countries have expressed interest to pursue registration to join the network of PAMCA chapter membership (South Africa, Uganda, Malawi, Benin, Liberia).

Discussions with the country chapters and the Regional Knowledge Translation Centres reveal that malaria surveillance and control operations have been gravely impacted by the COVID-19 pandemic. All field activities including vector surveillance initiatives, larviciding operations, school and community-based outreach programs requiring congregation of people, have all been suspended due to the strict social-distancing regulations now in place. Indeed, COVID-19 has been very disruptive to the



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annual operational plans of the chapters including activities that were geared toward WMD 2020 commemoration. Many activities have either been called off or put on hold and forward planning becomes impractical. The reassignment of the available resources such as laboratory space and equipment, as well as personnel, to respond to COVID-19 further complicates malaria surveillance and control efforts during the pandemic period. With COVID-19 pandemic coinciding with peak malaria transmission season in many of the malaria endemic countries in Africa with the advent of the long rainy season, there are fears of surge in malaria cases with the reduced attention to malaria vector surveillance and control efforts. Recently, key partners in the fight against malaria including the WHO, Alliance for Malaria Prevention, and the RBM Partnership to End Malaria have issued guidelines encouraging malaria endemic countries to maintain and sustain essential malaria prevention efforts during the pandemic period.

The PAMCA Annual Conference and Exhibition is an annual forum that provides an opportunity for all PAMCA chapters and partners to meet, exchange knowledge, advances, and best practice in vector-borne disease surveillance and control. The event, originally scheduled for September 2020, in Accra, Ghana, has now been postponed to 2021 because of the COVID-19 pandemic. PAMCA – Ghana chapter that was originally scheduled to host the 7th Annual Conference and Exhibition, continues to coordinate its planning and organisation.

PAMCA continues to work closely with country chapters and the Regional Knowledge Translation Centres to understand their respective capacity needs and gaps in order to meet our joint objective of maintaining vector surveillance and control efforts during and post COVID-19 pandemic.



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## UPCOMING EVENTS

**World Malaria Day Twitter chat**

**24th April 2020**

[Learn more](#)

**World Health Assembly**

**17-21 May 2020**

[Learn more](#)

**BioMalPar, XVI: Biology and Pathology of the Malaria Parasite**

**18-20 May 2020**

[Learn more](#)

**American Society of Tropical Medicine and Hygiene Annual meeting**

**15-19 November 2020**

[Learn more](#)

## OPPORTUNITIES

Organisation for women in science call for applications: Early Career Fellowship

Application deadline April 30, 2020

Read more [here](#)

AAS Call for Applications: Future Leaders – African Independent Research (FLAIR) Fellowships 2021

Application deadline May 27, 2020

Read more [here](#)

NHMRC Call for Proposals: Ideas Grants 2020

Application deadline June 10, 2020

Read more [here](#)