The role of Drive Against Malaria in the fight against malaria in Cameroon

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The Anglo-Dutch NGO, 'Drive Against Malaria (DAM)', has been fighting malaria since 1988 in 36 African countries. During the last 6 years the organization has been involved in malaria campaigns in Kenya, Tanzania, Malawi and Zambia. It has also carried out distribution of 780,000 LLINs in the Democratic Republic of Congo and Angola.

Due to the bad infrastructure it can be a major challenge to monitor the malaria situation in many endemic villages in African countries. The question about the exact malaria situation in the villages cannot be answered with exactitude. Most malaria endemic villages have very weak vital registration and health information systems that greatly underestimate the number of clinical malaria cases and deaths in the general population. This is in large part because most patients with malaria do not seek treatment in formal health facilities - if there are any - and many malaria-related deaths occur at home.

Essential monitoring is needed to recognize the bottlenecks and to put in place a mechanism to help improve the malaria prevention programs and by assessing the degree to which an operational plan or design is implemented. And eventually realize how successfully the intervention has achieved its intended results in the long term.

Monitoring has been undertaken by DAM in the remote village of Kuke in Kumba, on the west-side of Mount Cameroon in order to improve information available on the malaria situation in the village. Data about malaria infections were not available and LLINs did not reach this community. Most bed nets were home-made and some badly damaged. In this village 50 children between 1 and 15 years were tested of Plasmodium falciparum (Pf). Using the RDT (Rapid Diagnostic Test): 26 children were Positive and treated with ACT. Personal Health identification cards for medical history were available in very few homes. Only 17 of the 50 consulted children had a health card. Health card is a necessity for health administration in general and the monitoring of the reception of an LLIN, in particular

THE USE OF RAPID DIAGNOSE TEST

Providing the febrile patient with a correct diagnosis, based on light microscopy or Rapid Diagnose Test (RDT), for the management of all malaria cases is very essential. Diagnosis will reduce delays in the correct management of non-malarial febrile illness. And also may improve adherence to anti-malarial therapy, thus reducing morbidity and allowing for better use of resources.

However, the introduction and maintenance of diagnosis through the use of microscopy requires considerable investment in training, supervision, logistics and education of health workers and the community. Diagnosis through the use of microscopy in rural areas without electricity, without water to clean the microscope, dirty environment and the mismanagement by the health workers can render the diagnosis unreliable.

There is the case of 10-year-old Caleb , in Mutengene South West Region. Caleb had fever: 39.4°C. DAM tested him with RDT within 20 minutes and he was positive. Caleb was also diagnosed in a nearby clinic: The physician took his blood sample for research, not only for malaria, but also for Typhoid and TB at the same time. The Physician told us the high fever could also be caused by a brain tumour which should be investigated.

In Lomie, East Region: The parents of the 4-year old girl Samantha thought she had a high fever. When she was taken to the clinic the Physician put his hand on her forehead and concluded, without even using a thermometer, that she had malaria. He ordered that Samantha be treated with Quinine. DAM insisted on a proper diagnosis. A nurse took a blood sample for a microscopy test but did not know how to go about it. He did not even take the temperature. The real temperature of Samantha was 37.8°. The outcome of DAM's RDT test was negative. The reason Samantha did not feel well was because she did not eat that day and was suffering from an anti-malarial overdose. Using thermometers and parasitological diagnosis with RDT is needed to confirm malaria cases before treatment is started. But unfortunately the use of RDT is still constrained by limited funding and training. It can only be used in public health facilities, whereas they are also well suited for community management of malaria.

EFFECTIVE TREATMENT

Appropriate treatment based on parasitological diagnosis should be provided within one day of the onset of illness. By only treating confirmed cases of malaria, the number of anti-malarial treatments needed is substantially reduced. Unfortunately due to limited access to or the non-availability of ACT s in public health facilities, and the fact that in many endemic countries, most treatments are

health facilities, and the fact that in many endemic countries, most treatments are obtained through the private sector, where ACT s are often too expensive, most poor patients often go for less expensive -- and ineffective - treatments.
Improving the availability and quality of interventions delivered in existing health facilities is the first step to increase effective coverage. This includes offering training programs for care providers, and using program management to improve the quality of interventions delivered and avoid shortages.
In several remote areas where ACT's are not available, children are - as we speak - treated with intramuscular Quinemax which causes severe orthopaedic damage of the legs and feet. The risk of being handicapped for live in these children is very high. In all of these cases the health workers are not aware of the damage caused by this mismanagement.

HEALTH SYSTEM

Strengthening health systems is one of the key solutions to improve health systems. There is a need to provide training for health workers and supervisors and to give them guidelines to ensure that routine service delivery fully supports malaria control and treatment. Health education around malaria prevention and control is needed to be incorporated into routine communication protocols and checklists at the community-level. This includes implementing guidelines for merging malaria messages into school packages, community service outlets and other participatory approaches.

PREVENTION WITH THE LLIN

Above all, it is better to prevent than to cure!! Long Lasting Insecticidal Nets (LLINs) are recommended as the most important and key vector control intervention to protect all populations at risk of malaria. It is particularly effective, where the most aggressive Anopheles species in Cameroon, the Anopheles Gambiae is responsible for 86, 7% of all malaria transmissions with an average of 38.7 bites per human per night. The nocturnal female primarily stays indoors to feed on human blood. The correct use of the LLIN provides both personal protection with the net and the insecticide to kill the mosquito, and community protection by reducing the vector population when implemented at very high coverage.

BEHAVIOUR CHANGE OF COMMUNITY

Malaria control is not only about delivering products like the LLIN. It is also about ensuring they are used properly. Does the recipient of a free LLIN use it correctly? The correct use of the bed nets will require strong local commitment and a continued focus on the health systems activities, particularly communication and behaviour change efforts and monitoring

and evaluation.
Behaviour change methodologies in the communities are essential to ensure the appropriate use of interventions. These programs need to be designed with the active participation of both service providers and intervention-users and should aim at improving health-seeking and care-providing behaviours. At the individual level, they will develop strong messages to improve the correct use of LLINs. For example, research focused on optimizing behaviour change communication and information, education and communication approaches, which can improve intervention uptake, usage, and adherence, and on mechanisms for sharing best practice approaches should be developed.
Whatever communication channel is chosen, messages need to be tailored to address specific regional and community needs and to involve local leaders to increase identification and participation of the population.
After a two phase free distribution of 500.000 and 800.000 LLINs to the communities in Central African Republic in 2008 and 2009, DAM undertook a door-to-door monitoring to see how they were being used.
78% of the LLIN ware found in suitcases and cupboards, and still in the package. The poor communities explained that they wanted to keep them new. Some extremely low income households with families of 12 members, four beds had received 10 LLINs. Not one of them was used. One -home made net - was found above the bed. Another bad case was found in a family where 6 nets were found on the floor as a carpet. Not one net was properly used. 12% of families in the monitored area did not understand the link between the bed net and malaria. They were waiting for the rainy season when the bed net could protect them against the rain through the leaking roof.
Communication is crucial to increase knowledge of the transmission and prevention of malaria, the link between bed net use and malaria control and the consequences of malaria in pregnancy and the need for antenatal care which includes LLINs.
38% of families, who used an old, home-made, non-impregnated net, were not using the donated LLIN because they were waiting until the old net was worn out.
41% were just too lazy to hang the net above the bed.
8% of the families who used the nets washed them once a week, some even with Fasel, and hung it in the sun to dry. This way will destroy the effect of the impregnation.
The community-effect of everybody sleeping under a net should wipe out malaria. Malaria educations activities should be integrated into distribution plans, from the very beginning. Community involvement and participation during the design and implementation of the activities will ensure success. Lessons learned in health promotion have demonstrated that neglecting community involvement in all stages of the program design and implementation will decrease the chances of the program succeeding.
For example, increasing operational effectiveness of LLINs from their current field effectiveness of 50-60% up to 98% can theoretically reduce incidence and therefore treatment costs, by almost 50%. Modelling a 98% effectiveness rate showed a potential cumulative savings globally of US$ 960 million from 2009-15. This makes a powerful argument for investing in communication and behaviour change programs.?