

MALARIA CONTROL IN NIGERIA: AN APPRAISALGoshie, Samuel Ndagi¹, Matthew, Titus²

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Abstract: Malaria has remained a major public health issue in Nigeria, and Africa as a whole. Despite policies and control efforts put in place by government targeted towards its control and eradication, it still remains at the front burner in most public health discourse in Nigeria. Many might think that not much is been done in the control/eradication of the disease in Nigeria, most especially as the morbidity and mortality associated with the disease cannot be quantified. This paper chronicles some of the policies and control measures put in place by the Nigerian government in collaboration with foreign technical partners in its control. It also highlights challenges and gives pragmatic recommendations on way forward. Policies put in place among others include Presidents Malaria initiative (PMI), Roll back Malaria (RBM). Control efforts among others includes provision of Long lasting Insecticide treated nets (LLIN), Indoor residual spraying (IRS) e.t.c. Amongst others the following recommendations were given, that government should expedite funding of control efforts most importantly in giving their counterpart funding to partnership control programmes, it should also provide and encourage the use of long lasting insecticide treated nets (LLIN), and most importantly and as the most cost effective option should support the development of malaria vaccine and researchers on malaria Collaborate with universities and research institutions so as to put in use their research outcomes.

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Introduction

Malaria has remained a major public health issue in Nigeria, Africa and the entire World (Malaria Control Programme 2007, and Narain, 2008). According to FMOH (2007), Malaria accounts for 60% outpatients visits and 30% hospital admissions in Nigeria. According to the Roll back Malaria report (2007), the disease has impacted negatively on the Nigerian economy with about 132 billion naira loss to the disease, and lost in man hours resulting in sickness absence and loss of treatment and that it is a major cause of absenteeism from work and school. Malaria is also confirmed to increase the morbidity and mortality rates as well as health problems of developing countries, Nigeria in particular (Carrington, 2001). Children and pregnant women are the most vulnerable to malaria attacks. Since the introduction of the Roll Back Malaria (RBM) initiative in 1999, malaria control in Nigeria has been transformed but in line with the roadmap to achieve the RBM 2010 targets, much is still desired.

Despite efforts geared towards its eradication and control in Nigeria, much effort is yet needed because it still remains a serious health issue as it is found in almost all discourse on health issues in Nigeria. This paper intends to review some of the policies made on addressing the malaria issue, control efforts so far and also identify the challenges in policy and control

efforts so far and give pragmatic recommendations on way forward.

Malaria: An-Overview

United States Embassy in Nigeria (2011), gave the following as Malaria fact sheet worldwide, Africa and Nigeria.

Malaria Worldwide

- Malaria affects 3.3 billion people, or half of the world population, in 106 countries and territories.
- WHO estimates there were 655,000 malaria deaths in 2010, 91% in the African region and 86% were children under five years of age.
- Malaria is the 3rd leading cause of death for children under five years worldwide, after pneumonia and diarrheal disease.

Malaria in Africa

- Thirty countries in sub-Saharan Africa continent account for 90% of global malaria deaths.
- Nigeria, Democratic Republic of Congo (DRC), Ethiopia and Uganda account for nearly 50% of the global Malaria deaths.
- Malaria is the second leading cause of death from infectious diseases in Africa after HIV/AIDS.
- Almost 1 out of 5 deaths of children under 5 in Africa is due to Malaria.

Malaria in Nigeria

- Malaria is a major public health problem in Nigeria where it accounts for more cases and deaths than any other country in the world.
- Malaria is a risk for 97% of Nigerian population. The remaining 3% of the population live in the malaria free highlands.
- There is an estimated 100 million malaria cases with over 300,000 deaths per year in Nigeria. This compares with 215,000 deaths per year in Nigeria from HIV/AIDS.
- Malaria contributes to an estimated 11% of maternal mortality.

Policies and Programmes Targeted at Malarial Eradication in Nigeria

Several policies have been put in place all geared towards Malaria eradication. Some of the policies are formulated by the Nigerian government, while some others are made in conjunction with other relevant stake holders and technical partners like the United States Agency for International Development (USAID), Centre for Disease Control (CDC), US Global Malarial Control, United Nations International Children Education Fund (UNICEF), e.t.c. Some of these policies include.

Presidential Malaria Initiative (PMI) strategy

PMI is a policy and its goal is to work with partners to reduce by half the burden of malaria in 70% of the at risk populations in sub-Saharan Africa (approximately 450 million residents, thereby eliminating malaria as a major public concern and promoting development throughout Africa (USAID, 2012). PMI works with national malaria control programs and coordinates its activities with national and international partners including rollback malaria partnership e.t.c.

Nigeria in its first year as a PMI focus country (USAID, 2010) with support from PMI and its partners, Malaria control interventions are being implemented and vital commodities are being distributed to vulnerable populations. USAID has funded Malaria activities in Nigeria over the past decade including 18 million dollars in 2010 (USAID 2012), states that 46.9 million insecticide treated nets (ITNS) have been purchased and distributed, ownership of ITNS was dramatically increased in Cross River and Kano states, and packaged, socially marketed Artemisinin based combination therapies (ACT) treatments for Children under five were developed and distributed in 18 states (USAID, 2012).

Lagos state government has as a health care policy, a main goal of the implantation of RBM i.e. to halve the Malaria burden by 2010 (Malaria Control Programme, 2013). The Lagos state government has

always positioned Malaria control as a top priority even before the Roll Back Malaria initiative and Abuja call for action. The state government has been working on ways to improve and increase access to prompt and adequate treatment of Malaria cases in a programme termed Eko Free Malaria. Antimalaria drugs are provided free for all patients who present at the outpatient department of all public health facilities in the state.

The National Malaria Control Programme (NMCP) strategic plan 2009-2013, as conceived was based on the national strategic health development plan 2010-2015, and is in line with national health development priorities. According to (USAID, 2013), the policy outlines the provision of comprehensive package of integrated malaria prevention and treatment through the community, primary, secondary and tertiary levels.

The strategy also defines the role of each health care worker relative to malaria case management and control across all health care services including public, private and traditional health providers. USAID (2013) stated the objectives of the strategic plan 2009-2013 as:

-To provide rapid, national scale up package of high impact interventions, which include appropriate measures to provide behavior change prevention and treatment of malaria.

-Sustain and consolidate gains through strengthened health system that establishes the basis for the future elimination of malaria in Nigeria.

Another collaborative partner to efforts of Malaria control In Nigeria is the UKAID programme (2012), this currently operates in six states namely, Anambra, Kano, Katsina, Lagos, Niger and Ogun states. It's a 50 million pounds project managed by consortium of international organizations, namely Malaria consortium UK, health partners international UK and GRID consultina Nigeria. The objective is to strengthen the delivery of Malarial control efforts, by providing technical support to improve the capacity of national malaria control program (NMCP), and is currently in operation for three years and is now expanding to four additional states namely Enugu, Jigawa, Kaduna and Yobe states.

Malaria Control Efforts in Nigeria

The Nigerian government has been doing a lot in the area of Malaria control and interventions, according to Nigeria MDG+10 (2007), Nigeria during the last decade has been implementing RBM strategies. Several milestones have been achieved. Sleeping under insecticide-treated nets has reduce overall child mortality by twenty percent. There is evidence that nets when consistently and correctly used can save six children per year for every one

thousand children sleeping under them and that Nigeria will meet the target for ensuring national bed net coverage with the Global fund and debt relief gains providing 63 million long lasting treated nets by the end of 2010.

According to USAID (2013), the following progress has been attained in Malaria control in Nigeria so far it said that a total of 64 million long lasting Insecticide treated nets were needed to reach

the target of two LLIN_s for all house hold, and that as at June 2012, 46.9 million LLINs had been distributed to 28 Of Nigeria's 36 states, representing 73% of the total number of LLINs.

planned for universal coverage distribution, of the nine states that are yet to have campaigns, seven will soon be included in the distribution of LLINs (see Table 1 for gap analysis).

Table 1: LLIN gap analysis for nine PMI focus states, Nigeria, 2014

	Estimated Population - 2014 and (universal coverage target)*	Old LLINs available 2013	LLIN need 2013	Expected Donor contribution in 2013	2013 Gap	Old LLINs available 2014	LLIN need 2014	Expected LLIN distribution In 2014	2014 Gap
(in millions)									
Bauchi	5.7(3.17)	1.00	2.17*	3.17**	0	2.92	0.25	0.25	0.0
Benue	5.2(2.89)	1.66	1.23	0.31	0.92	1.35	1.54	0.42	1.12
Cross River	3.6(2.00)	0.87	1.13	0.21	0.91	0.58	1.42	0.29	1.14
Ebonyi	2.7(1.50)	0.81	0.69	0.16	0.53	0.68	0.82	0.22	0.61
Kogi	4.1(2.78)	1.47	0.81	0.24	0.56	1.50	0.77	0.33	0.45
Nassarawa	2.3(1.28)	0.63	0.65	0.14	0.51	0.33	0.95	0.18	0.77
Oyo	6.8(3.78)	2.39	1.39	0.40	0.98	2.45	1.33	0.54	0.78
Sokoto	4.5(2.50)	0.28	2.22	2.50	0	2.54	0	0.20	-0.24
Zamfara	4.0(2.22)	1.38	0.84	0.24	0.60	1.13	1.09	0.32	0.77
Total	38.9(21.6)	10.50	11.12	7.37 (4.20PMI)	5.03	13.47	8.14	2.75 (2.5PMI)	5.6

*Population extrapolated from 2006 census; ITNs needed for universal coverage target calculated at 1 LLIN: 1.8 persons for the entire population of each state

**World Bank will provide LLINs for a universal coverage campaign and continuous distribution

Omolade (2013), in his studies concluded that an integrated management approach should be the best for malaria control in Nigeria and that it should be given greater attention, and that the challenge should be to eradicate mosquitoes completely and therefore (ITNS and IRS), remains a strategic intervention in malaria control as part of the integrated malaria vector control approach (Omolade, 2013). He also posited that (IRS) reduce malaria morbidity and mortality by 50% at an affordable cost in Nigeria. However (ITNS), was considered as the most efficacious of all the currently feasible interventions for malaria control in Africa. Its cost effectiveness in preventing malaria related morbidity is incomparable and is generally found to be easier to implement and better accepted by local communities than most other control measures (Ordinioha, 2012).

The Nigeria's Malaria Control Program (NMCP) strategic plan 2009-2013 advocated for vector control as part of an integrated vector management strategy and includes universal access to

long lasting insecticide treated nets (LLIN_s), increased insecticide residual spraying (IRS) in targeted areas where insecticide treated nets (ITN_s) are not impacting malaria transmission, environmental management to reduce available mosquito breeding sites in urban and periurban areas, and larval control using available larvicides, predators, or growth of inhibitors.

In 2006-2007 (USAID, PMI 2013), several IRS trials using pyrethroids and Carbamate were conducted in five LGAs, one in each of the five states in collaboration with insecticide manufacturing companies. This was expanded to seven states (Akwa Ibom, Anambra, Bauchi, Gombe, Jigawa, Kano and Rivers), with financial assistance from World Bank. WHO vector control staff evaluated these trials and concluded that IRS is feasible and should be scaled up in Nigeria. USAID, (2013), further reiterated that progress has been achieved in the area of implementation of this policy. PMI in collaboration with NMCP and other partners to establish Nigerias

capacity to conduct an IRS program in Nassarawa state. This included technical, strategic, management, and operational support to implement IRS in two LGAs, Doma and Nassarawa Eggon, and in each of the last two years, PMI supported IRS protected 300,000 people in 65,000 structures in these two LGAs.

Challenges to Malaria Control in Nigeria

Amongst several challenges to Malaria control and policies geared towards malaria control are:

- The problem of huge population, vast geographical area of the country, and gap in funding. This then means that some targets could not be met on time (Nigeria MDG+10(2007).

For the NMCP strategic plan 2009-2013 to succeed the following are found as challenges.

- The relatively strong power vested at the state level means that to be successful the program must work intensely at the state level, this therefore adds to the cost and time required for the implementation of the program.

- Violent attacks particularly in the north of the country, are a threat to government and donor funded programs, for instance travel restriction put in place in 2012, restricting movement of USA staff to the south of the country, thereby causing a strain on the program. (USAID, 2013).

- For the nationwide Indoor residual spraying (IRS), the country is lagging behind the target goal of NMCP strategic plan 2009-2013, to scale up IRS to cover 20% of all household by the end of 2013, as this target could not be met due to lack of adequate number of donor supporting IRS. For instance at present the World Bank in collaboration with insecticide manufacturing companies, RBM and PMC are the only sponsors/donors (USAID, 2013).

- In the area of long lasting insecticide treated nets (LLIN, Nigeria has made significant gains in coverage, however the target of two LLINs per household has left the country short of the new goal of LLIN per every two persons now adopted by the National Malaria Control Program.

- Another major area of concern serving as impediment to malaria control efforts in Nigeria is in the mismanagement of funds, for example Umeha (2014), of the National audit office (NAO), UK watchdog indicted Nigeria as amongst the four countries showing spurious spending of 252 million pounds equivalent of 62.5 billion naira meant for the counter prevention measures of Malaria.

Conclusion

This paper dwelt on the appraisal of Malaria Control in Nigeria. It discussed the need to have an

efficient programme for control for Malaria in Nigeria. It also discussed some of the policies and programmes put in place by the Nigerian government to tackle the malaria situation in Nigeria, this includes PMI, and RBM, etc. Practical methods of control adopted were also discussed, such as use of LLINs, IRS, etc. Challenges to effective Malaria control were also highlighted, and finally recommendations given on how to overcome various challenges to Malaria control in Nigeria.

Recommendations

- Policy implementation should be divested from the federal and states to local Governments. This is to allow for coverage of the entire country with its large geographical area and population, so as to be able to meet targets of formulated policies and control Programmes.

- The government should also provide adequate security cover for health workers and various local and international donor agencies, most especially in trouble prone areas of the country, so as to be able to meet eradication targets for malaria.

- The Nigerian government should also step up efforts in providing its counterpart funding alongside foreign donors so as to be able to meet targets of malaria control efforts in Nigeria.

- The Nigerian government and relevant agencies should step up efforts in the areas of getting support for IRS, so as to be able to meet targets. Multinational and Local companies should be made to pay some percentage of their profits to such venture.

- The use of LLNs should be encouraged as it is the most viable and effective option for malaria control in Nigeria. Jingles and other forms of sensitization of the public should be done in radio, TV, and newspapers.

- Free insecticide distribution should not be politicized as it is been done in most states now. There should be sincerity and commitment in distribution.

- Epidemiology i.e. study of diseases and factors affecting their occurrences should be inculcated in the health science curriculum of junior/senior secondary school syllabus especially vector associated diseases like malaria, onchocerciasis trypanosomiasis e.t.c.

- The community health policies of the sixties and seventies should be revisited were emphasis to inspect communities is done by sanitary officers to checkmate squalor living conditions, an avenue for the breeding of the Malaria parasite, and also the spraying of endemic areas with larvicides.

- There should be prudent management and utilization of funds meant for Malaria control, so as to achieve maximum success.

- Finally the most viable option and most cost effective for Malaria control/eradication in Nigeria and Africa as a whole should be in the area of vaccine development.

- Nigeria and Africa as a whole should partner with pharmaceuticals and scientific research institutes to produce Vaccines. There have been some advancements in this area although efforts need to be redoubled. For instance (WHO, 2007), review of candidate vaccine currently in development has identified more than 80 Vaccine at the preclinical developmental stage. It also stated that more than 30 Malaria Vaccines have entered pre clinical testing.

- Cohen (2008), had also made advancements in area of developing vaccines targeted at the pre-erythrocytic and sexual stages of the malaria parasite and this is a major contribution of Glaxo Smithkline Biological, Rixensart Belgium.

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