



UGANDA NATIONAL MALARIA CONTROL POLICY

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**National Malaria Control Program
Ministry of Health
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Foreword

Malaria is still a major cause of sickness and death in Uganda. Children under five years of age and pregnant women are at risk of serious illness, but malaria also affects all levels of society. The wide ranging impact of the disease in all dimensions ranging from health to social and economic impacts, means it presents a considerable barrier to the national programs to improve the lives of all Ugandans and to achieving the Millennium Development Goals (MDGs).

The Ministry of Health (MoH) is absolutely dedicated to ensuring that this disease is addressed at all levels and on all fronts. The MoH approach to ensure maximum impact on malaria focuses on the integration of the most effective prevention and treatment tools. Both indoor residual spraying of insecticides and large-scale use of long lasting insecticide treated nets will be promoted to have the most rapid and sizable impact on the transmission of the disease. The importance attached to the management of malaria at the community level, availability of the most effective medicines at all levels and use of the newest diagnostic tools including rapid diagnostic tests, to ensure proper diagnosis at lower health facilities and even at the community level are all key approaches to ensure the highest possible quality of case management. With this combination of approaches, the MoH aims to have a dramatic impact on the level of malaria in the country.

Recently, there has been an increase in attention, funding and political will to improve malaria control and prevention, with a focus on achieving the MDGs and the Abuja and Global Malaria elimination targets. To take advantage of this supportive environment, we need clear, up to date and effective policies to guide and co-ordinate the malaria control efforts in the country. This policy document plays a key role in this process and is complemented by the National Malaria Control Strategic Plan (2010/11 – 2014/15).

Within the MoH, the National Malaria Control Program (NMCP) has the mandate to reduce malaria morbidity and prevent mortality, and minimize the social effects and economic losses attributable to malaria in Uganda. The MoH recognises the efforts made by the NMCP as well as other implementing partners and donors. The success of this policy will require continued close linkages and coordination between all partners to ensure we meet the common goal of malaria control and eventual elimination in Uganda and attain the vision of a “Malaria Free Uganda”.



Hon. Dr. Christine Ondo
Minister of Health

Preface

The national malaria control policy provides a framework and environment within the overall context of the National Health Policy and the Health Sector Strategic and Investment plan of the country for sustainable malaria prevention and control in order to prevent mortality, reduce morbidity and minimize socio-economic losses due to malaria. This policy document is an update of the existing national malaria control policies and takes into consideration the improving supportive environment for malaria control, current updates and WHO guidance on malaria treatment and prevention measures. The policy accommodates changes in the malaria situation in the country, progress in implementation and emerging research findings and lessons learnt.

The purpose of the policy is to provide all malaria control stakeholders and partners including Government ministries and agencies with a single policy framework for malaria control in Uganda and strategic orientations for its implementation. It has been necessary to revise some of the policy directions in line with the new developments and recommendations from the Roll Back Malaria Partnership regarding the implementation of malaria control interventions in the country.

This policy covers the main malaria control and prevention interventions namely, provision of prompt diagnosis and effective treatment at all levels of the health care system including the community; integrated vector management including the use of long lasting insecticidal nets, indoor residual spraying and other measures; intermittent preventive treatment of malaria in pregnancy; surveillance, monitoring and evaluation and operations research; and advocacy, communication and social mobilization.

The policy document is intended to serve as a guide to all health workers, partners and stakeholders in planning, resource mobilization and implementation of malaria control in the country. The national malaria control policy is operationalized through the national malaria control strategic plan and implementation guidelines for the different interventions.



Dr. Aceng Jane Ruth
Director General of Health Services

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Last but not least the untiring efforts of the Program Manager NMCP Dr. Seraphine Adibaku together with all NMCP officers who took the lead in ensuring that partner consultations were adequately undertaken are greatly appreciated.



Dr. D.K.W. Lwamafa

Commissioner Health Services – National Disease Control

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1.0 Malaria Case Management

1.1 Background

The public health goal of treatment is to reduce malaria transmission to others and prevent emergence and spread of drug resistance. For the individual, the goal is full and rapid recovery from the malaria episode. In uncomplicated malaria the objective is to cure malaria and prevent progression to severe disease, while in severe malaria, the primary objective of treatment is to prevent death. The primary objective of treatment in severe malaria in pregnancy is to save the life of the mother.

A major challenge to effective malaria case management is the emergence of parasite resistance to antimalarial medicines. In 2000, monotherapy with chloroquine was associated with a failure rate of 28% (in patients aged over 5 years) to 76% (in children under 5 years).¹ Subsequently, the World Health Organization (WHO) recommended that treatment of uncomplicated malaria should be combination therapy. In June 2000, Uganda revised the malaria treatment policy and adopted an interim policy of chloroquine plus sulfadoxine/pyrimethamine (CQ+SP) for treatment of uncomplicated malaria while better alternatives were sought.

Efficacy studies on CQ+SP conducted at the Ministry of Health (MoH) sentinel sites in 2002-2004 showed a pattern of progressively increasing treatment failure.² Therefore in 2004, a decision was made to change the policy on malaria treatment from CQ+SP to Artemisinin-based Combination Therapy (ACT) as first line treatment for uncomplicated malaria.

1.2 Policy Goal

To reduce morbidity and prevent mortality attributable to malaria.

1.3 Policy Objectives

- (i) To ensure early diagnosis and prompt, effective treatment of malaria
- (ii) To ensure that all suspected malaria cases are subjected to parasitological testing where feasible

2.0 Malaria Diagnostics

2.1 Background

Demonstration of the presence of malaria parasites prior to treatment with antimalarial medicines is fundamental to effective malaria case management. Clinical diagnosis has limitations and can lead to misdiagnosis of malaria with resultant

¹ Kanya MR, Dorsey G, Gasasira A, Ndeezi G, Babirye JN, Staedke SG, Rosenthal PJ. (2001) "The comparative efficacy of chloroquine and sulfadoxine-pyrimethamine for the treatment of uncomplicated falciparum malaria in Kampala, Uganda," *Transactions of the Royal Society of Tropical Medicine and Hygiene*. Jan-Feb; 95(1):50-5.

² Bakyaaita N, Dorsey G, Yeka A, Banek K, Staedke SG, Kanya MR, Talisuna A, Kironde F, Nsobya S, Kilian A, Reingold A, Rosenthal PJ, Wabwire-Mangen F. (2005) "Sulfadoxine-pyrimethamine plus chloroquine or amodiaquine for uncomplicated malaria: a randomized, multisite trial to guide national policy in Uganda," *American Journal of Tropical Medicine and Hygiene*. May; 72(5):573-80.

mismanagement of non-malaria febrile illness, wastage of antimalarial medicines and potential risk of contributing to the development of resistance.^{3,4}

2.2 Policy Goal

To improve the quality of malaria case management through accurate parasitological diagnosis.

2.3 Policy Objective

To provide quality-assured, timely parasitological diagnosis of malaria to guide case management.

2.4 Policy Statement

Parasite-based diagnosis with Microscopy or Rapid Diagnostic Tests (RDTs) shall be part of malaria case management in all health facilities and at the community level

- (i) Suspected malaria cases will be subjected to parasite-based diagnosis.
- (ii) Microscopy remains the "reference or gold standard" for malaria diagnosis in case management and shall be the diagnostic method at all Health Facilities from level III and above.
- (iii) RDTs will be used at HC II and community levels and to fill the gaps at higher level HCs whenever microscopy is not possible.
- (iv) The type of RDTs to be deployed in the country will be guided by evidence on sensitivity, specificity, ease of use and stability in the field, as determined by the performance evaluation and pre-qualification schemes of the WHO coupled with in-country testing.

2.5 Strategies

- (i) Procure and distribute adequate equipment, consumables and supplies for microscopy and RDTs at all levels in a timely manner and ensure appropriate logistics and supply management.
- (ii) Training on use of malaria diagnostics.
- (iii) Provide supervision for sustained quality services.
- (iv) Establish a centrally coordinated system to oversee quality assurance for malaria parasitological diagnosis.
- (v) Conduct research to improve diagnostic capacity in the country

³ WHO Treatment Guidelines (2010)

⁴ Inpatient mortality in children with clinically diagnosed malaria as compared with microscopically confirmed malaria, *Dr. Robert O Opoka, Pediatr Infect Dis J* 27:319-2

3.0 Treatment

3.1 Policy Statement

Treatment of uncomplicated malaria

The **first line treatment** for uncomplicated malaria is an ACT, currently Artemether/Lumefantrine (AL). The alternative first line treatment is Artesunate/Amodiaquine.

Note:

The **second line treatment** for uncomplicated malaria is also an ACT, Dihydroartemisinin Piperaquine (DHA-PPQ). Quinine will be the alternative second line treatment.

- *Note:*
 - *Other ACTs that are recommended by the WHO (artesunate/mefloquine⁵ and artesunate/sulfadoxine-pyrimethamine⁶) are not suitable for use in Uganda.*
 - *WHO recommends that Quinine be administered with tetracycline or doxycycline or clindamycin.*

Notes on treatment of uncomplicated malaria:

- Treatment with an ACT should last a minimum of three days, as recommended by the WHO
- ACTs are currently not recommended for pregnant women in the first trimester, until conclusive evidence about their safety is established
- In children below 4 months of age or 5 kg body weight, any recommended effective anti-malarials including ACTs may be used under medical supervision in confirmed cases of malaria.
- Quinine is the treatment of choice when ACTs are contraindicated

The first line medicines for uncomplicated malaria shall be the drug of choice for *Home Management of Malaria (HMM) or Integrated Community Case Management (ICCM)*.

Treatment of severe malaria

Artesunate (given intravenously) is the recommended medicine for the treatment of severe malaria. Intravenous Quinine or Intramuscular Artemether are the alternatives to be used when Artesunate is not available.

Once a patient is able to take orally after at least 24 hours of parenteral artesunate (irrespective of the patient's ability to tolerate oral medication earlier), treatment should be completed with a full course of oral first line ACT

⁵ Ministry of Health Expert Report, unpublished (2004)

⁶ *Intensity of Malaria Transmission and the Spread of Plasmodium falciparum-Resistant Malaria: A Review of Epidemiologic Field Evidence.* Ambrose O. Talisuna, Paul E. Okello, Annette Erhart, Marc Coosemans, and Umberto D'Alessandro. *The American Journal of Tropical Medicine and Hygiene*, 2007.

Note: For children below 4 months of age or 5 kg bodyweight and pregnant women in the first trimester the most effective anti-malarial medicine should be used under medical supervision as the major objective in treatment of severe malaria is to prevent death.

Pre-referral treatment for severe malaria

At the lower level health facilities or where treatment for severe malaria is not available, rectal artesunate shall be used as pre-referral treatment.

When rectal artesunate is not available or contraindicated, IM Quinine will be the alternative pre-referral treatment.

3.2 Strategies

- (i) Procure and distribute the following in a timely manner:
 - Adequate quantities of the recommended antimalarial medicines, diagnostics and other supplies. The first line medicine for uncomplicated malaria shall be provided in colour-coded packs according to age/weight bands to ensure high levels of uptake, compliance and ease of dispensing
 - Development and provision of appropriate guidelines and tools
- (ii) Implement HMM/ICCM countrywide
- (iii) Conduct key supportive activities for treatment including:
 - Training and supervision of the health work force
 - Advocacy and social mobilisation
 - Private sector engagement in the deployment of case management activities.
- (iv) Conduct operational research in case management

3.3 Chemoprophylaxis

Non immune visitors, people with sickle cell disease and those who have had splenectomy or have Tropical Splenomegaly Syndrome have a high risk of malaria and need to be protected.

Appropriate routine malaria prevention measures together with chemoprophylactic medicines for malaria where appropriate are recommended in line with the national treatment guidelines.

4.0 Malaria in Pregnancy

4.1 Background

Pregnant mothers in malaria endemic areas may have malaria parasites but remain asymptomatic. They may have negative blood smears, while parasites are sequestered in the placenta. Malaria in pregnancy poses great public health concerns because of its maternal and foetal effects such as maternal anaemia, frequent febrile episodes, abortions, stillbirths, pre-term deliveries, intra-uterine growth retardation and low

birth weights.

4.2 Policy Goal

To reduce maternal morbidity and prevent maternal mortality due to malaria and prevent infant mortality and disability.

4.3 Policy Objectives

- (i) To ensure every pregnant woman sleeps under a long lasting insecticidal net (LLIN) throughout her pregnancy and thereafter
- (ii) To ensure pregnant women receive intermittent preventive treatment in pregnancy (IPTp) with an appropriate medicine and receive early diagnosis and prompt management of malaria episodes

4.4 Policy Statement

- (i) All pregnant women shall have access to cost-effective preventive interventions including LLINs and IPTp
- (ii) IPTp will consist of two doses of Sulfadoxine-Pyrimethamine (SP) given 4 weeks (one month) apart starting in the second trimester

Note:

- The use of SP will be reviewed when a more appropriate medicine is recommended by the WHO for IPTp
 - HIV positive pregnant women who are not on Cotrimaxazole prophylaxis should receive three doses of SP
- (iii) All pregnant women who present with suspected malaria shall receive prompt diagnosis and effective case management using Quinine during the first trimester and a first line ACT during the second and third trimesters.

4.5 Strategies

- (i) Procure and distribute the following in a timely manner:
 - Sulfadoxine-Pyrimethamine to all health units offering antenatal care (ANC) services
 - LLINs
 - Supplies for delivery of IPTp by Directly Observed Therapy (DOT)
- (ii) Increase awareness on the importance of focused goal-oriented ANC services including IPTp, through advocacy and social mobilization, supported by training and supervision of health workers
- (iii) Monitor the appropriateness of SP for IPTp

5.0 Malaria Vector Control

5.1 Background

Use of Insecticide Treated Mosquito Nets (ITNs), and /or Indoor Residual Spraying (IRS) are the two main approaches to malaria vector control. These are complemented by other measures to reduce mosquito breeding (such as source reduction and larval control measures). Integrated Vector Management (IVM) is now the recommended way forward in controlling disease vectors as there is no single vector control tool able to effectively control disease vectors when deployed alone. Two or more interventions may be combined as an ‘integrated vector management approach’ which may also target vectors of diseases other than malaria.

IVM is a rational decision-making process for the management of vector populations, so as to reduce or interrupt transmission of vector-borne diseases in a more efficient, effective and ecologically sound manner. An IVM approach takes into account the available health infrastructure and resources and integrates all available and effective measures, whether chemical, biological, or environmental, based on local evidence. IVM also encourages collaboration within the health sector and with other sectors, and active engagement of communities.⁷

Other new technologies and innovations will be evaluated for their suitability in the Ugandan situation and their adoption for use in the country determined by the results of those evaluations.

5.2 Policy Goal

To reduce malaria transmission through an evidence-based Integrated Vector Management (IVM) approach.

5.3 Policy Objectives

- (i) To promote the use of the most effective malaria vector control interventions, singly or in combination
- (ii) To reduce and/or eliminate human-mosquito contact thus reducing malaria transmission
- (iii) To reduce and/or eliminate mosquito breeding sites
- (iv) To maintain an enabling environment for sector-wide active and effective participation in the scale up and maintenance of malaria vector control interventions
- (v) To promote the rational application of malaria vector control interventions
- (vi) To document the implementation of malaria vector control interventions

5.4 Policy Statement

⁷ WHO, 2010. Handbook on Integrated Vector Management (IVM). Final Draft. Vector Ecology and Management Unit, Control of Neglected Tropical Diseases.

- (i) Implementation of malaria vector control interventions shall be conducted in an integrated manner within the NMCP, in collaboration with other departments within the health sector, and with other public and private sector partners
- (ii) Training and education of key stakeholders shall be an integral part of all the interventions i.e. LLINs, IRS, Larviciding and Environmental Management
- (iii) Regular insecticide resistance studies shall be conducted to guide insecticide selection for IRS
- (iv) Bio-assay tests will be conducted on LLINs on a routine basis to monitor the insecticide resistance status of local malaria vectors to the LLINs

LLINs

Any insecticide treated materials sold or distributed for vector borne disease control through the public, civil society or private sectors shall be “long lasting insecticidal” as defined by WHOPEs. LLINs to be sold or distributed in the public, civil society and the private sectors must have the current WHOPEs Phase (interim or full) approval. Methods for distribution will be a combination of mass campaigns and routine through Antenatal Care (ANC) clinics and immunization clinics under the Expanded Programme on Immunization (EPI).

IRS

IRS will be applied in both endemic and epidemic prone areas in a systematically phased manner using WHOPEs approved insecticides.

Larviciding

Larviciding using chemical and biological larvicides recommended by WHO and Ugandan Regulatory Authorities shall complement LLINs and IRS where appropriate.

Environmental management

Selective, cost-effective and sustainable environmental management measures shall be applied where appropriate.

5.5 Strategies

The general strategies for IVM shall include:

- (i) Utilization of a range of malaria control interventions in combination to achieve synergistic effect based on knowledge of local vector biology, disease transmission and morbidity
- (ii) Collaboration within the health sector and with other public and private sectors that have an impact on vector populations
- (iii) Advocacy for revitalization of the relevant public health regulatory and legislative framework
- (iv) Promote rational use of insecticides
- (v) Promote good management practices
- (vi) Creation of awareness at all levels about IVM interventions to increase community participation and involvement

Specific intervention strategies shall include:

LLINs

- (i) All mosquito nets imported into or manufactured in Uganda shall conform to the current WHO and Government of Uganda Standard Specifications for Mosquito Nets as gazetted by the Uganda National Bureau of Standards (UNBS). Quality of net fabric will be ensured through the Uganda National Bureau of Standards (UNBS) and the quality of insecticide component of the nets and materials through the National Drug Authority (NDA)
- (ii) Uganda will continue with a mixed-model LLINs distribution approach: large scale free nets campaign distributions, targeted routine distribution through antenatal care and EPI clinics and institutional distribution including support to the commercial sector. All partners intending to distribute nets in Uganda shall do so in conformity with this policy
- (iii) In universal coverage and replacement campaigns, LLINs shall be distributed to every household in a phased manner covering cluster by cluster (e.g. sub county by sub county until one district is covered) to ensure complete coverage of all households in any area. To maintain high coverage, there will still be need to target specific groups such as pregnant women, children under five and other vulnerable groups, as need arises
- (iv) Distribution of free nets to the public shall be organized in such a manner that the LLIN commercial market will not be adversely affected but rather supported where possible
- (v) Increase commercial outlets through price/market and business development support

IRS

- (i) Register all insecticides and relevant equipment for IRS with the NDA and UNBS respectively in consultation with the NMCP and the Vector Control Division (MoH). Registration shall conform to WHO specifications and standards
- (ii) Standardize the importation, distribution, storage, use and disposal of insecticides with support of National Regulatory bodies - NDA and National Environment Management Authority (NEMA)
- (iii) Register all private companies and NGOs offering IRS to the public with the MoH. These partners shall offer these services according to NMCP guidelines, and shall work within the national IRS structures and systems
- (iv) Use evidence of insecticide resistance patterns and other relevant operational research findings to guide IRS
- (v) Promote use of alternative insecticides for IRS with different modes of action from those used in LLINs so as to prolong their effectiveness due to increasing and spreading insecticide resistance to pyrethroids in Africa^{8,9,10}

Larviciding

- (i) Selective cost-effective and sustainable larval control measures shall be applied where appropriate

⁸ Reimer L, Fondjo E, Patchoké S, Diallo B, Lee Y, Ng A, Ndjemai HM, Atangana J, Traore SF, Lanzaro G, Cornel AJ. (2008). Relationship between *kdr* mutation and resistance to pyrethroid and DDT insecticides in natural populations of *Anopheles gambiae*. *J Med Entomol.* 2008 Mar;45(2):260-6.

⁹ Alemayehu Abate and Mamuye Hadis, 2011. Susceptibility of *Anopheles gambiae* s.l. to DDT, malathion, permethrin and deltamethrin in Ethiopia. *Tropical Medicine & International Health, Volume 16, Issue 4, pages 486–491*

¹⁰ Urvashi Ramphul, Thomas Boase, Chris Bass, Loyce M. Okedi, Martin J. Donnelly and Pie Müller, (2009). Insecticide resistance and its association with target-site mutations in natural populations of *Anopheles gambiae* from eastern Uganda. Available online 19 March 2009.

- (ii) Larval control measures should be a supportive approach as part of integrated vector management rather than a stand-alone approach
- (iii) Chemical and/or biological larvicides recommended by WHO and/or Ugandan Regulatory Authorities shall be used to complement LLINs and IRS where appropriate

Environmental Management

- (i) Liaise with Environmental Health Division of the MoH and Local Governments to ensure the operationalization of the Kampala Declaration on Sanitation, 1997 and the Public Health Act, 2000.
- (ii) Promote principles of larval control and encourage line ministries, departments and organizations to support its implementation.

6.0 Advocacy and Social Mobilisation

6.1 Background

Advocacy and Social Mobilization are means of increasing individual and collective participation in health action for strengthening interventions for malaria control and eventual elimination.

6.2 Policy Goal

To ensure stakeholder commitment for malaria control and eventual elimination.

6.3 Policy Objectives

- (i) To ensure that malaria control and elimination strategies are prioritised by decision makers and communities to warrant increased resource allocation.
- (ii) To enhance collaboration among stakeholders in malaria control and eventual elimination.
- (iii) To promote desired changes in knowledge, attitudes and behaviour towards malaria control and eventual elimination.

6.4 Policy Statement

- (i) Advocacy and Social mobilization shall be an integral part of all malaria interventions.
- (ii) MoH shall guide, recommend and approve all health education and promotion initiatives in malaria control.

6.5 Strategies

- (i) Continuous advocacy to put malaria control and elimination high on the agenda.
- (ii) Coordination of communication stakeholders.
- (iii) Ensure compliance to the National Malaria Communication Strategy.
- (iv) Standardization of communication materials.
- (v) Harmonization of all communication channels among stakeholders.

- (vi) Operational research for effectiveness, efficiency and impact of BCC interventions.

7.0 Epidemic Preparedness and Response

7.1 Background

Although the majority of districts in Uganda experience high transmission of malaria, a significant proportion (5-10%) experience malaria epidemics and upsurges due to climatic conditions and changes in social organisation. Populations in these districts are prone to epidemics due to little or no immunity to malaria. In such situations, people of all age groups are equally affected by risk of death or severe disease, the consequences of which can be devastating if the epidemic is not appropriately controlled in a timely manner.

7.2 Policy Goal

To appropriately control malaria epidemics in a timely manner to prevent or mitigate their adverse effects.

7.3 Policy Objectives

To predict, detect early and manage malaria outbreaks and epidemics in a timely and appropriate manner.

7.4 Policy Statement

The Epidemic Preparedness and Response (EPR) approach shall include timely and accurate forecasting, early detection and appropriate response to contain malaria outbreaks and epidemics in order to reduce associated morbidity and mortality.

7.5 Strategies

- (i) Collaborate with the Meteorological department to regularly monitor weather changes (rainfall, temperature and humidity) that determine malaria epidemics
- (ii) Strengthen district health systems in routine monitoring of malaria cases using epidemiological data that includes, but is not limited to: new,suspected or confirmed malaria cases, rate of consumption of anti-malarial medicines, blood transfusions rates and reported deaths
- (iii) Strengthen national and district Epidemic Preparedness and Response systems to predict, detect and manage epidemics. This shall be done through: training of staff, provision of guidelines, drawing of emergency action plans, stocking of emergency drugs, LLINs and insecticides

8.0 Health Systems Strengthening

8.1 Background

A health system is the sum of all organizations, institutions and resources whose primary purpose is to improve health. As described by the WHO, the building blocks of a well-functioning health system include:

- Good health service delivery
- A well-performing health workforce
- A well-functioning health information system
- A well-functioning system for providing pharmaceuticals, health products and technologies equitably
- Good health financing systems and
- Effective leadership and governance¹¹

All components must be strong in order to provide a comprehensive range of quality health services that are accessible to the population.

Health systems strengthening (HSS) refers to initiatives and strategies that improve one or more functions of the health system as well as the interactions between them, leading to better health through improvements in access, coverage, quality and efficiency.

While there have been increased efforts and resources for malaria prevention and control, the implementation and scale up of these efforts has been limited to date, largely due to weak health systems. Therefore, achievements in malaria control can only be accomplished if the overall health system is strong.

8.2 Policy Goal

To attain a strong national health system that ensures delivery of effective and efficient malaria prevention and control services.

8.3 Policy Objectives

- (i) To work with other stakeholders in health to build a strong health system that will deliver quality malaria services in an equitable and efficient way
- (ii) To implement malaria activities in a way that strengthens the overall health system

8.4 Policy Statement

All malaria activities will be implemented in a way that strengthens the health system, focusing on all of the “six essential building blocks” (WHO 2007).

8.5 Strategies

A strong health system must include the efforts of all health stakeholders. Therefore, the NMCP will collaborate with other departments in the MoH, GOU sectors and other stakeholders to do the following:

¹¹ World Health Organization. (2007) *Everybody's Business: Strengthening Health Systems to Improve Health Outcomes, WHO's Framework for Action*. http://www.who.int/entity/healthsystems/strategy/everybodys_business.pdf

- (i) Advocate for adequate funding to strengthen the core components of the health system
- (ii) Work with relevant organs to ensure that resources, including those of malaria, are distributed and used equitably, according to need, in an efficient and appropriate way to maximize impact
- (iii) Provide technical, operational and logistical support to decentralized district health systems to improve their capacity to deliver quality services
- (iv) Increase collaboration with medical regulatory bodies to ensure appropriate monitoring of the quality of medicines, diagnostics and supplies, as well as ITNs and insecticides used for malaria control
- (v) To build capacity of national and district managers to spearhead implementation and coordination of health activities including malaria
- (vi) To strengthen national and district supply chain management systems so as to ensure that adequate medicines and supplies are procured, delivered and accessed by the intended beneficiaries in a timely manner

9.0 Monitoring and Evaluation

9.1 Background

A sound Monitoring and Evaluation (M&E) programme for malaria control at the country level is critical in order to track programme implementation and to assess whether activities are on course to achieve results. Tracking coverage and measuring the impact of the scale up of malaria interventions and making effective use of this information for continued planning and advocacy requires considerable capacity building across the country. M&E is also vital in the current performance-based financing environment in which progress towards agreed targets determines continuity of funding.

9.2 Policy Goal

To facilitate better planning, advocacy, resource mobilization and allocation for efficient implementation of malaria prevention and control interventions.

9.3 Policy Objectives

- (i) To provide quality and timely evidence on programme interventions to ensure that activities are implemented based on informed decisions.
- (ii) To demonstrate progress or lack thereof in malaria control and prevention activities.

9.4 Policy Statement

All malaria interventions shall be guided by one monitoring and evaluation plan.

9.5 Strategies

- (i) Maintain and strengthen the M&E Technical Subcommittee to coordinate M&E activities within the partnership forum

- (ii) Implement a malaria action framework that provides a basis for coordinating the work of all partners.
- (iii) Develop and strengthen M&E capacity at all levels in data collection, analysis, interpretation and dissemination
- (iv) Establish and maintain functional linkages with other relevant partners involved in malaria M&E, including HMIS and IDSR in the MoH and Uganda Bureau of Statistics
- (v) Provide feedback and widely disseminate information to all stakeholders to improve programming, implementation, advocacy and resource mobilization.

10.0 Research

10.1 Background

Research is an important aspect in malaria control and prevention as it helps to guide evidence-based policy decisions and programme implementation. Therefore, it is critical that a research agenda relevant to the programme is continuously developed and updated.

10.2 Policy Goal

To generate evidence to guide malaria policy development/review and implementation.

10.3 Policy Objectives

- (i) To set malaria research priorities that are relevant to malaria prevention and control in Uganda
- (ii) To mobilize and coordinate resources for malaria research in the country

10.4 Policy Statement

Research shall be carried out in accordance with the research agenda and shall be in conformity with the ethical standards outlined by the Ugandan National Council of Science and Technology (UNCST).

10.5 Strategies

- (i) Contribute to the health research agenda in collaboration with all stakeholders involved in malaria prevention and control especially the Uganda National Health Research Organisation (UNHRO) and Uganda Malaria Research Centre (UMRC)
- (ii) Collaborate with Uganda Malaria UMRC to develop procedures to improve coordination of research activities
- (iii) Publish and disseminate research findings to inform policy makers and stakeholders
- (iv) Conduct periodic reviews of available research findings to guide policy
- (v) Use results to catalyze innovative programmes for improved service delivery

- (vi) Ensure research proposals and final reports of malaria studies are registered, made available to the NMCP, and evaluated for appropriate action.