



Aide Mémoire

NAMIBIA MALARIA PROGRAM PERFORMANCE REVIEW

1. PURPOSE

The National Vector-borne Diseases Control Programme (NDVCP) within the Directorate of Special Programmes (DSP) in the Ministry of Health and Social Services (MoHSS), in collaboration with key partners, conducted a Malaria Programme performance Review (MPR) between May and July 2010. The aim of the MPR was to review the programme and redefine its strategic direction to ensure further reduction of malaria in Namibia, particularly in light of the national goal of malaria elimination. The major findings and key actions arising from the MPR are summarized in this aide memoire. The aide memoire is not a memorandum of understanding and it is not legally binding. Rather, it is a statement of the commitment of the Government of Namibia and its health development partners, to work together for the implementation and follow up of the key recommendations of the malaria programme review.

2. BACKGROUND

Given the observed decline in malaria incidence and deaths in all malaria risk areas of Namibia and improving coverage of interventions, DSP in collaboration with the Ministry of Defense, World Health Organization (WHO), United Nations Children's Fund (UNICEF), Southern Africa Malaria Elimination Support Team (SAMEST), Society For Family Health (SFH), and Anglican Diocese/Nets for Life, Namibia Institute of Pathology (NIP) and Development Aid from People to People (DAPP) supported the NDVCP in conducting this comprehensive review of the National Malaria Control Program.

The specific objectives of the MPR were to:

- Review the epidemiology of malaria
- Review the program interventions by thematic service area
- Measure progress towards 2010 Roll Back Malaria (RBM) and 2015 Millennium Development Goals goals and targets.
- Review program delivery systems, performance and challenges within the context of the health system and the national development agenda.
- Define the next steps and program targets in the context of malaria elimination.

3. OBJECTIVES AND ACHIEVEMENTS OF THE 2003-2007 MALARIA STRATEGIC PLAN

The expired Malaria Strategic Plan 2003-2007 established the goal of reducing malaria morbidity and mortality to such an extent that it would no longer be a major public health problem by 2007; specifically, it aimed to reduce malaria morbidity and mortality by 35 percent respectively by the year 2007 as compared to the year 2000. The strategy's activities were organized according to eight service delivery areas:

- Improved malaria disease management
- Epidemic preparedness and response
- Vector control
- Surveillance monitoring and evaluation
- Operational research; advocacy and community education
- Programme management.

4. KEY FINDINGS AND RECOMMENDATIONS

4.1 Malaria Epidemiology

Malaria transmission occurs in nine regions (22 districts) of Namibia. 1.2 million people (65 percent of the population) lives in malaria transmission areas. However, the intensity of malaria transmission is generally low (except in Caprivi and Kavango regions); endemicity is highest in the north-eastern part of the country (along the borders with Angola and Zambia), and decreases towards the west, south west and east.

A total of 97% of malaria cases are due to infection with *Plasmodium falciparum*, while the remaining 3% are attributable to the remaining 3 species (*P. Vivax*, *P. Ovale* and *P. Malariae*). The principal malaria vector is *An. arabiensis*. Recent studies at vector sentinel sites confirm that the previous primary vectors *A. gambiae* and *A. funestus* have been eliminated.

According to data collected through the weekly malaria surveillance systems and the monthly Health and Management Information System (HMIS), there has been a sustained impact on malaria disease burden, demonstrated through the reduction in the incidence of malaria cases. In 2008, there were:

- A total of 128,531 (62/1,000) reported outpatient malaria cases compared to 583,267 (318.7/1000) cases in 2001
- A total of 5,233 (0.9/1000) inpatient cases were reported in 2008, down from 41,117 (22.95/1000) inpatient cases in 2001 and
- A total of 199 deaths were reported in 2008, compared to 1,681 in 2001.

Trends in outpatient cases, inpatient cases, and deaths exhibit a decline of 78 percent, 87 percent, and 88 percent respectively between 2001 and 2008; however, these trends need to be interpreted in the context of changes in case definitions since the introduction of parasitological confirmation of cases, as well as incompleteness of the HIS and weekly surveillance systems.

Since 2002, a climate-based malaria risk stratification has been in use; this is now outdated and is currently being updated with a transmission risk mapping at constituency level, based on epidemiological modelling, combining the distribution of human population, malaria infection prevalence, malaria case incidence data and remotely sensed climate data.

ACTION POINTS
Strengthen trend monitoring and malaria case mapping to track temporal and geographical variations to inform action for both local and imported cases
In areas with zero deaths, implement strategies/interventions to sustain zero death
In areas with more than 1 death, implement strategies/interventions to reduce mortality to zero by 2011.
In areas currently classified as malaria free, implement strategies/interventions to sustain zero transmission.
Co-relate malaria data with meteorological data for the past decades to identify association and forecast epidemics and disease trends

4.2 Malaria Communication: Advocacy, Information Education Communication/ Behavior Change Communication (IEC/BCC) and Community Mobilization

Although malaria is a priority public health program in the MoHSS, high level advocacy has not been adequate to influence national, regional and district leadership to sustain the scale up of malaria control. World Malaria Days and SADC Malaria Awareness Days have been commemorated since 2007; national awareness days have also been established.

There is extensive movement of people between the northern endemic areas and the malaria free southern regions, and these increases significantly during the holiday seasons. Namibia shares long, porous borders with Angola, Zambia and Botswana, where ethnic population are divided on either side of the border and also attracts tourists from Europe and neighboring endemic countries on the northern and eastern borders, resulting in heavy movement across the border for trade and social reasons, as well as for health services in Namibia. This further contributes to the risk for importation of malaria cases between areas of varying transmission potential.

IEC/BCC appears to be the weakest programmatic area with insufficient messaging and IEC materials. The NDVCP does not have an IEC/BCC focal point to ensure coordination of malaria IEC activities. However, a national Malaria Communication and Advocacy Strategy was developed in 2009. Moreover, there is an existing communication task force on malaria IEC and community-based organizations such as SFH, Nets for Life and Development aid for People to People (DAPP) who contributed to malaria BCC in both urban and rural areas. Although knowledge about malaria is high, Insecticides treated nets (ITNs) use and treatment seeking behavior remains low. In addition, there is no community based malaria programming, and community health workers' involvement in malaria programming is weak.

ACTION POINTS
Conduct/commission studies on community perceptions towards different interventions and orient the production of needed IEC materials.
Involve community liaison officers at regional and constituency levels in community mobilization for malaria activities.
Train malaria community health workers to cover hard to reach areas and support active surveillance for malaria pre-elimination.

4.3 Entomology and Vector control

Namibia combines indoor residual spraying (IRS), the use of long-lasting insecticide treated nets (LLINs), and larviciding as key vector control strategies. Entomological surveillance is conducted in all 13 regions at 16 vector sentinel sites. *Anopheles arabiensis* – which still bites both indoors and outdoors - has a wide variety of breeding sites in all malaria transmission areas. Vector susceptibility studies using WHO standard methods showed that DDT (the main insecticide) and Deltamethrine have 100% mortality at 24 hours post exposure.

District pharmacies and all health facilities are well supplied with RDTs, ACTs and pre-referral Quinine with stock outs reported in very few facilities. Namibia Institute of Pathology (NIP) laboratories provide access to microscopy diagnosis and other investigations in all hospitals. Since 2009, the policy on Integrated Management of Childhood Illnesses (IMCI) has recommended testing for malaria in cases of fever in under fives, before treating. There is also a well- established national pharmacovigilance system for notification and investigation of drug adverse reactions.

The malaria policy is not up to date. About 50 percent of the suspected malaria cases are treated despite a negative test result, or based on clinical assessment. The quality of malaria diagnosis with RDT and microscopy is not monitored. There is still inadequate training and supervision on malaria case management due to rapid staff turnover and rotation, lack of funds for the annual cascade training, as well as the fact that some health facilities are managed entirely by one health worker (especially at clinic level) who is not able to abandon the facility for extended periods of time to attend trainings. There are no job aids, clinical algorithms and wall charts to support health workers diagnosis and treatment. In addition, there is lack of access to diagnosis and treatment services in hard-to reach areas. There is no malaria mortality notification for investigation and improving the timely referral and management of severe malaria.

ACTION POINTS
Update malaria policy guidelines to reflect new recommendations on diagnosis and the new developments guiding malaria treatments.
Establish malaria laboratory reference centers through NIP; develop and implement an internal quality assurance system for malaria diagnosis and provide malaria PCR support.
Increase access to early diagnosis and treatment at community level, especially in the hard to reach areas, through community health workers which may require deregulation of use of ACTs and RDTs.
Build capacity on malaria case management at all levels and provide additional support to supportive supervision.

4.6 Malaria in Pregnancy

The national malaria policy does not specifically recommend routine screening for malaria amongst pregnant females attending ANC. However, all patients attending ANC have full blood counts routinely done, which could be an opportunity for malaria screening. In addition, in areas previously highly endemic, two doses of Intermittent Preventive Treatment are currently recommended.

ACTION POINTS
Develop/update a malaria in pregnancy policy and guidelines
Strengthen collaboration with Safe Motherhood and Reproductive Health programs on scaling up malaria in pregnancy interventions.

4.7 Surveillance, Monitoring and Evaluation and Operational Research

There are three information systems to capture malaria surveillance data in Namibia. Health Information System (HIS) is the overall standardized health monitoring system; it records and reports on clinical malaria in outpatients and inpatient malaria departments, including inpatient deaths, disaggregating by age group and gender. A malaria weekly surveillance system is in place in the 9 malaria endemic regions. This system reports malaria cases on a weekly basis for seven months each year (November to June) and is mainly used to detect unusual trends and initiate appropriate action. Namibia also collects malaria data through the Integrated Disease Surveillance System (IDSR) which includes malaria as one of the notifiable diseases, although this system is at an early stage of development.

The malaria weekly surveillance system is able to generate the core malaria morbidity indicators required by the programme, while the HIS system suffers from lack of timeliness and completeness. The data collection tools for the weekly surveillance system are not standardized across regions and this data is not analyzed at the concerned facilities using the threshold charts. The NDVCP also collects information on other activities in health facilities through separate forms for LLIN and IPT delivery.

As Namibia reduces the malaria burden, more robust surveillance systems are required to allow mapping and location of malaria infections and case tracking. The NVDCP has identified annual bio-assay studies, biennial vector susceptibility studies, and biennial therapeutic efficacy studies as priority areas for operational research. There are no known local research teams that focus on malaria and collaboration with local and international partners in the area of research is quite limited. The University of Namibia (UNAM) laboratory has a fully equipped malaria research laboratory and is able to conduct molecular research work. The NVDCP has involved the National Institute of Pathology in antimalarial medicines resistance studies. Currently, Namibia does not have a national monitoring and evaluation plan.

ACTION POINTS
Develop a national monitoring and evaluation plan including standardized malaria case definitions and indicators and standardized malaria weekly and monthly data collection tools with linkage to HIS.
Develop guidelines for case based notification and follow up investigation of each confirmed malaria case, and for contact tracing to eliminate the parasite for malaria free areas.
Prioritize operational research areas and strengthen the partnership for research with University of Namibia and other international partners in the area of research.

4.8 Policies, Guidelines, Organization and Management

The NVDCP is under the Directorate of Special Programmes (DSP), along with HIV/AIDS and Tuberculosis; its role has expanded to include formulating policies and guidelines, building capacity and supporting implementation from national level to regions, districts and health facilities.

- At regional level, malaria is managed by different departments of the Primary Health Care Directorate supported by a part time malaria focal point.
- At district level, malaria programme is managed by PHC nurses and environmental health officers.
- At health centre and clinic level, there are nurses providing malaria diagnosis and case management as well as other routine health services delivery. However, health workers in health facilities are unable to devote enough time to malaria prevention education, and surveillance.
- At community level, where there are currently limited malaria services, some NGOs reach households with community mobilization activities and LLIN distribution and hang-up their nets.

As the malaria burden continues to decline, a larger, capacitated programme is necessary to sustain the gains made and move further to pre-elimination.

The NVDCP has an integrated, comprehensive Malaria Policy which is accompanied by a Malaria Epidemic Preparedness and Response Plan, as well as an Integrated Vector Control Policy. Annual operational planning and activities have been guided by the National Malaria Strategic Plan 2003-2007. Annual malaria review and planning meetings are held with regions, districts and partners. However, no quarterly review and planning meetings are held to track implementation.

The MoHSS, through the regional health departments, provides the bulk of the financing for the malaria programme, especially for IRS. The national malaria budget is integrated within other budget votes at the MoHSS, therefore

it is difficult to separate the malaria control costs and plan for sustainability; it is proposed that a special malaria sub-vote and budget be created in DSP and in the regions. The programme has been further supported in the last five years by funding from the Global Fund. Despite this support, significant shortfalls in the programme's needs over the coming years remain.

There is a strong inter-sectoral partnership with Ministries of Defense Health Services, Education, Tourism and Environment, as well as with NGOs (Society for Family Health, Development Aid from People to People (DAPP) and Anglican Church/Nets for Life). Strong partnerships exist with WHO, UNICEF and the Southern Africa Malaria Elimination Support Team which provide technical and planning support. Namibia has also prioritized the establishment of cross-border malaria control initiatives, cognizant of the need to collaborate with neighboring countries in controlling the transmission and importation of malaria in the border regions. Trans-Kunene Malaria Initiative is under development and further collaboration along the Caprivi and Kazungula border with Zambia, Botswana, Angola and Zimbabwe is in the exploratory stages.

ACTION POINTS
Develop/update the 2010-2016 Malaria Strategic Plan in the context of the Millennium Development Goals, National Development Plans III and Namibia Vision 2030.
Restructure the programme to respond to the new malaria programme needs with personnel
Develop/update a comprehensive malaria policy document and guidelines
Establish a national high level intersectoral malaria elimination task force and relevant technical subcommittees to advise and support the programme
Secure additional financial resources to support universal coverage of malaria interventions including cross border initiatives from the government of Namibia including establishment of a malaria budget and vote.
Lobby support and resources from NGOs , development partners and private sector to support universal coverage and cross border activities
Implement border malaria programme with Angola, Zambia, Zimbabwe and Botswana

5 CONCLUSION

The Namibia malaria control programme is performing well and has achieved a remarkable impact since 2005, as evidenced by low levels of transmission in many constituencies and villages. In the short term, the programme needs to move towards and sustain universal coverage in the 6 low to moderate transmission districts, and has potential to move towards pre elimination in low transmission districts of Omaheke, Kunene and Otjozondjupa in the long term. The four regions which are currently free of indigenous transmission still need robust surveillance to detect and effectively manage imported cases and outbreaks. The review urges the MoHSS and its key partners to consolidate this remarkable progress and success with strengthening of and restructuring of the programme to enable focus on reducing deaths by 2011 and local transmission to zero by 2020.

This review concludes that with some reorientation and changes in policies, strategies, and program re-organization and additional financing, a move towards pre-elimination by 2012 and towards a vision of malaria free Namibia by 2020 is feasible.

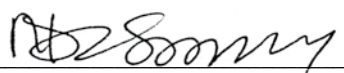
6. COMMITMENT

We, the Ministry of Health and Social Services of the Government of the Republic of Namibia, and health partners of the Malaria Programme in Namibia, re-commit ourselves to the implementation of the key action points recommended by this review towards acceleration and scaling up malaria interventions and cross-border implementation towards the ultimate goal of a malaria free Namibia by 2020.

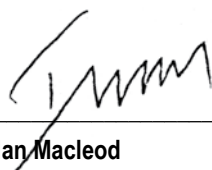
Signed on behalf of the Ministry of Health and Social Services, Government of Namibia and health development partners:



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In Windhoek on Monday the 17th of January 2011