

NATIONAL MALARIA STRATEGIC
VISION 2007-2016

VANUATU

Overall Objectives

Key Deliverables

The National Malaria Strategic Vision 2007-2016 will be to:

- Reduce the national annual parasite incidence rate from 23.3 / 1,000 (2007) to 7 / 1,000 by 2016
- Reduce annual malaria related deaths from 3/100,000 (2007) to 0 by 2016
- Eliminate malaria in one province by 2016

Background

Epidemiology of malaria in Vanuatu

The main malaria vector is *Anopheles farauti*. Its peak biting time is early in the evening before most people are inside their mosquito nets.

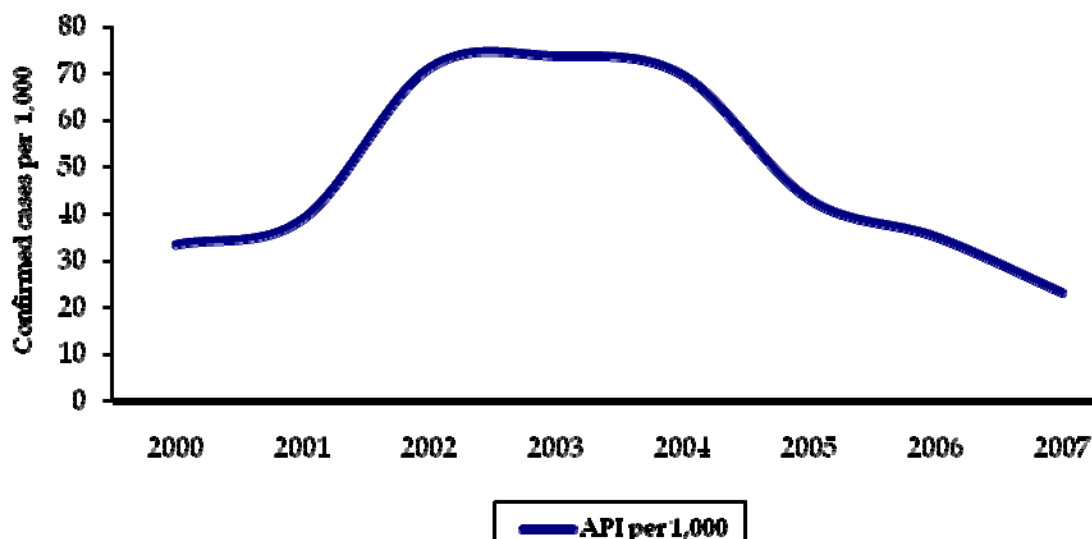
Malaria in Vanuatu is endemic in all except the islands of Aneityum and Futuna. Transmission is seasonal with a peak in the rainy season, between December and April.

The overall ratio of *P. falciparum* to *P. vivax* is approximately 50:50 with an increasing trend of *P. vivax* especially in the southern islands. A few cases of *P. malariae* are seen but these are very rare. The overall incidence of malaria is low in the south and higher in the north.

The risk of malaria transmission varies from place to place but the entire population except on the malaria-free islands are considered at risk of malaria. This includes the urban areas in and around Port Vila and Santo that are generally considered malaria free but where transmission may still occur due to the constant movement of population between the urban areas and other endemic islands.

Since 2000 the number of malaria cases had increased gradually but following the availability of funding from the Global Fund that trend has been reversed and the number of reported cases is steadily decreasing.

Annual Parasite Incidence in Vanuatu (2000-2007)



Although we know that burden of malaria in Vanuatu is lower than in Solomon Islands or Papua New Guinea we can only estimate the actual incidence rate because of the poor surveillance system that collects data from only a few health facilities. There have been a few prevalence studies done to better understand the burden of disease notably the study done on island in Sanma province by a team from Naval Medical Research Unit -2 (NAMRU-2) that showed an estimated incidence rate of 1.3 cases per person-year. Most of the case were *P. vivax*. The study was conducted during the peak season; February to May 2005. From those results, the incidence for all of Vanuatu was estimated to be between 150 cases to 300 cases per 1,000 person-years. This means that the estimated incidence is probably four times higher than actual reports and points to the urgent need for improving the malaria information system.

How plan has evolved

The current National Malaria plan for Vanuatu covers the period 2007-2012. It aims to achieve and sustain a 90% coverage with ITNs, and to expand parasitological-based diagnoses using either microscopy or rapid diagnostic tests (RDT) to cover all health facilities, and to revise the national malaria drug policy to introduce artemisinin based combination therapy as first line treatment. To enhance implementation and sustain the program human resource development has been identified as the top priority. Key health staff will be trained targeting the provincial level. At the community level, behavioural change intervention

need to be strengthened based on a thorough understanding of the existing social and economical factors in order to optimize the utilization of the available financial resources.

In 2003, Vanuatu together with Solomon Islands and with the support of WHO and other partners successfully applied for and received funding through the Global Fund to fight AIDS, Tuberculosis and Malaria. This was part of a broader multi-country proposal under Round 2 that included HIV and TB. In 2006, Vanuatu received further funding from GFATM through a successful Round 5 proposal that focused on further scaling up interventions with the aim being able to achieve full LLIN coverage by 2010, and increasing diagnostic coverage to 53% with the wide scale implementation of rapid diagnostic tests. The round five proposal was consistent with the objectives and broad activities of the Round 2 grant, thus further consolidating and building on the basic strategies.

By 2007, other partners had increasingly recognized the potential to significantly scale up malaria control activities in Vanuatu, building on the success and early impact that the rounds two and five (consolidated) grant has been able to achieve. In line with this, AusAID committed funding for an initial four years to fill some of the gaps not covered by the GFATM grants, with a particular emphasis on infrastructure development (buildings, major renovations etc.). It also introduced the idea of moving towards elimination through the establishment of a pilot elimination program in Tafea province.

In mid-2007, the Malaria Reference Group and the Pacific Malaria Initiative Support Centre were established under the AusAID funded Pacific Malaria Initiative to work with other partners including WHO and the Secretariat for the Pacific Community (SPC) to provide technical direction and support to both Vanuatu and the Solomon Islands. A significant component of the AusAID initiative has been the move toward malaria elimination that in turn has encouraged Vanuatu to adopt a much more intensive control programme focusing first on Tafea province but with the eventual goal of eliminating malaria from the whole country. In order to obtain that goal, significant changes need to be made to the national program.

Reasons for scaling up

The initial successes attained during Round 2 indicated that the original mix of control strategies were effective in reducing malaria significantly in Vanuatu from 74 per thousand in 2003 to 23 per thousand at the end of 2007. Although the malaria situation has improved over the four years period due to extensive population coverage by long lasting nets which is estimated over 70% at the end of 2007 there are still problems with the quality and coverage of diagnosis and

treatment, marked reduction in the effectiveness of existing treatment regimes and major population movements. This is complicated by the logistical challenges of delivering services to the more geographically scatter and remote areas that have yet to be effectively reached with the full package of interventions. There is of necessity a higher delivery cost associated with reaching all communities in these areas and the program is just moving into the more difficult phase in achieving equitable coverage to all population groups.

Management within the Vector Borne Disease control program has demonstrated good capacity in progressively scaling up activities in response to a consistent and increasing stream of funding, and allowing it to move from ad-hoc interventions to longer term prepared planning. With a consortium approach to the provision of multi-disciplined technical support by a range of technical partners/agencies, the fine-tuning of an aggressive strategy at this stage is appropriate.

The partnership with AusAID has provided a major incentive to take a more aggressive approach to control activities, with AusAID investment in critical infrastructure, expanded surveillance and a revised national treatment policy.

The program has had some success in collaborating with civil society for bednet distribution, community awareness, and education. There are now an increased level of awareness within affected communities concerning the causes and economic impact of malaria, and higher levels of participation.

With the reduction of cases already accomplished, the program is entering into the new phase. This includes the change to fully parasite-based diagnosis, introduction of ACTs, expansion and maintenance of very high population coverage with LLINs, and intensified surveillance. History demonstrates that unless the program moves into this next phase, the gains achieved over the past few years will not be maintained, and the chance to move towards elimination will be lost.

Monitoring and evaluation in this next phase becomes critical and requires significant scaling up of investment to include the selective introduction of global information systems and integrated databases, together with improved capacity to capture, analyze, and modify program plans and interventions down to the household level.

The current proposal is designed to build on those successes and move toward an aggressive intensified control intervention aiming to reduce parasite incidence and eventually towards elimination. At this point, the program has to consolidate the achievement so far in order to move ahead addressing the problem toward the program goal.

Strategies

The new medium term strategic vision builds on the lessons learned over the past few decades of malaria interventions in Vanuatu, and provides linkages to national, regional, and international commitments and priorities including:

- The Master National Health Strategic Plan 2004-2009
- The Pacific Plan
- The Western Pacific Regional Malaria Strategy
- The Global Roll Back Malaria Strategy
- The Millennium Development Goals

The strategy is an evidence-based plan of action derived from Ministry of Health working papers and guidelines for case management, malaria in pregnancy, insecticide treated nets, indoor residual spraying and control of epidemics.

It sets out an enabling environment for:

An Institutional Framework that

Will ensure coordinated, multi-lateral national responses in line with the national priorities on health sector reform and poverty alleviation underpinned with the provision of quality technical assistance;

Key strategic approaches that

Guarantee equitable and ready access for the whole population to reliable diagnosis with quality and effective new generation malaria treatment to reduce morbidity and mortality;

Achieves and maintains close to 100 percent insecticide treated nets coverage / usage nationwide by the end of 2009 through the procurement and campaign based distribution of long lasting insecticide treated nets as a means of providing significant additional protection and to reduce the rate of malaria transmission;

1. Improves the implementation of malaria control strategies by:
 - (a) Establishing the reliable integrated disease surveillance system and network to address early detection, verification, and response,
 - (b) Improving the infrastructure particularly the communication system, and
 - (c) Strengthening the human resource's capacity, knowledge and skills, to operate and maintain the system;

2. Provides additional malaria prevention measures and specific treatment to pregnant women.; and
3. Eliminates malaria in at least one province (Tafea) by 2016
4. Mobilizes the population to take positive action that results in communities embracing the prevention strategies, and seeking earliest diagnosis and treatment in cases of fever;
5. Strengthens monitoring and evaluation systems and practices underpinning operational research that informs and directs future interventions based on sound evidence based approaches
6. Mobilizes resources to achieve the strategies.

The Institutional Framework

Malaria is one of the eight key strategic health areas prioritized in the Master National Health Strategic Plan (NHSP) 2004-2009. Further integration between the Vector Borne Disease Control Program (VBDCP) and health service providers will guarantee the success of this malaria strategy.

Community Level

The engagement of local communities and gender mainstreaming underpins the NHSP by empowering communities to take more responsibility and participation in decision making for their health. At the community level, periodic health awareness talks are given by health workers, who are selected by the community to operate the most peripheral health services (Aid-Post). Planning and implementation involves local community leaders and local authorities, community groups, religious organizations, and other stakeholders.

The National Malaria Strategic Vision will as far as possible be integrated with activities of other health programs, particularly antenatal clinics and pre-school immunization visits to clinics.

Provincial Level

Increasingly, the annual work-plan of the VBDCP will be integrated and harmonized with the provincial health plans, through active participation and joint planning exercises together with the Provincial Health Director. This will improve operational planning and budgeting, which previously has limited the

VBDCP in its ability to achieve the greatest impact at the provincial and sub-provincial level because of under-funded operational budgets.

Over time, health centres, dispensaries, and aid posts will become the focal/distribution points for insecticide treated nets replacement, freeing up the VBDCP unit to focus on other activities such as operational research and monitoring including early outbreak detection, verification, and rapid appropriate responses.

Provincial level work plans will provide the entry point to move away from parallel, vertical operational systems provided by the VBDCP to a strategic integrated approach to peripheral health system.

National Level - VBDCP

The VBDCP will continue to be the operational arm of the Ministry of Health and Public Health Services for vector control in the country and will represent the country's pool of expertise for partners in malaria control. Its role will be to:

- Implement the national strategy in collaborative and integrated approaches,
- Provide appropriate training, in collaboration with relevant units or stakeholders, for the health workforce to enable the quality delivery of the outputs in the strategy,
- Provide national expertise in areas of planning, monitoring and evaluation in support of the national malaria strategic vision,
- Monitor and evaluate program outputs and outcomes.

The VBDCP will realign its structure during 2008 to reflect changes in both the scale and scope of the revised National Malaria Strategy.

Ministry of Health and Public Health Services

The role of the MHPHS will be to;

- Develop, approve and disseminate national policies and strategies and keep them up to date
- Develop, approve and disseminate national guidelines for all components of the strategy
- Monitor and evaluate impact of the strategy
- Finance basic operational (salary) costs of the VBDCP
- Advocate malaria as a priority disease

Coordination and Collaboration

The National Country Coordinating Mechanism (NCCM) will provide a forum for partners, stakeholders, donors, affected communities, civil society and other interested partners to exchange information and coordinate malaria activities and resources. The NCCM is made up of a broad range of stakeholders.

National planning will be coordinated through an annual malaria planning workshop to be held in October each year. This will provide the platform for the submission of the next year's budget as part of the government budget planning cycle.

The design of this national plan and workplan makes a strategic shift from discrete project based workplans (normally based on the source of funding) to one of having a single national plan to which all actors contribute, thus improving coordination.

Underpinning the Pacific malaria initiative are two bodies that will provide the strategic direction (Malaria Reference Group, MRG) and the Pacific Malaria Initiative Support Centre, PacMISC). The MRG is an advisory body for AusAID. The formal arrangement for program support is between AusAID and PacMISC rather than between the MRG and PacMISC. The MRG has no authority over country national malaria programmes but provides technical advice at very senior level and links this program into international picture.

PacMISC will be a highly flexible and responsive body, capable of tackling important operational issues as they arise, as well as supporting training, monitoring, evaluation and surveillance

The planning and coordination of malaria activities in-country will be undertaken through a single management team headed by the NMP Manager (National Malaria Programme) and consisting of the WHO in-country malaria staff (2), the SPC support staff (2) and the PacMISC support staff (1 or 2). The composition and role of the team is essentially a technical/operational one and must integrate into the existing management group. The team will work with the NMP Manager in planning, running, monitoring and evaluating the programme including field activities in the provinces.

Strategy 1: Prevention

Objectives

1.1 Achieve close to 100 percent coverage/use of long lasting insecticide treated nets throughout all provinces by the end of 2009 and maintain this level throughout the remainder of the plan period

Strategies

1.1.1 Long Lasting Insecticide Treated Nets

- A nationwide LLIN mass distribution campaign will be launched in 2009 following a change in the Government social marketing policy to ensure free nets for all. By the end of 2009, all villages throughout Vanuatu will have been visited and distribution effected.
- In 2010, emphasis will shift to establishing focal and access points for the replacement LLIN through peripheral health delivery points (aid posts, dispensaries, health centres).

Financial Cost of Strategy

The total cost (USD) associated with delivering this strategy is estimated as follows:

2008	2009	2010	2011	2012	2013	2014
28,000	58,000	126,000	220,000	22,000	22,000	80,000

Policy Implications

- Government will amend the national policy on Social Marketing of insecticide treated nets to make LLIN available to all sectors of the community during the initial penetration phase, free of charge.

Monitoring Framework

- Revised monitoring systems will be developed and implemented by 2009 to ensure traceability of LLIN through to village level as part of establishing a viable LLIN replacement strategy.
- GIS mapping of LLIN distribution will be progressively rolled out in all provinces commencing 2009 to assist in operational planning.

- Periodic household surveys sub-contracted through the National Statistics Office will feed into the monitoring and evaluation framework to assess LLIN coverage.

1.1.2 Malaria during Pregnancy

- Throughout the intervention period, all antenatal clinics will be provided with supplies of LLIN to be made freely available to first visit pregnant women. Supplies will be maintained at appropriate levels throughout the plan period.

Financial Cost of Strategy

The total cost (USD) associated with delivering this strategy is estimated as follows:

2008	2009	2010	2011	2012	2013	2014
6,000	20,000	8,000	8,000	8,000	10,000	25,000

Policy Implications

- Continued implementing the current policy

Monitoring Framework

- Integrate into the LLIN monitoring system.

Strategy 2: Diagnosis and Treatment

Objectives

- 2.1 Increase access to quality diagnostic coverage to all registered health facilities by 2010; and
- 2.2 Ensure that all confirmed/suspected malaria cases receive prompt treatment and care in accordance with National Treatment Guidelines for malaria using ACTs.

Strategies

2.1 Diagnostic Coverage

Strategies

- Progressive roll out¹ of RDTs to peripheral health centres/nurse aid posts;
- Strengthening of supply channels to improve stock management in order to minimize stock outs of diagnostic consumables and equipment;
- Maintaining quality microscopy services in essential areas through regular quality control checks, refresher training, and implementation of a regular servicing and replacement policy for microscopes;
- Establishing an RDT quality assurance policy including supervision, batch testing and quality assurance training for supervisory staff.
- Upgrading laboratory facilities to meet established minimum standards.
- Developing a media campaign to build awareness amongst communities on new diagnostic tools being introduced;

Financial Cost of Strategy

The total cost (USD) associated with delivering this strategy is estimated as follows:

2008	2009	2010	2011	2012	2013	2014
145,191	229,000	155,000	843,00	121,000	115,000	115,000

Policy Implications

- Government health facilities will offer free diagnosis, for all suspected malaria cases.

Monitoring Framework

- Progressively roll out GIS mapping to identify gaps in diagnostic coverage
- Strengthen reporting from peripheral health centres.

Operational Research in Support of Strategy

- Sensitivity and specificity assessments and field trials of newly launched multi-species RDTs for cost comparison purposes;

2.2 Treatment

Strategies

- Amendment and roll out of the national treatment guidelines to change to ACT as first line treatment;

¹ Roll out includes the training of health staff and others in the use of RDTs

- Strengthening forecasting and supply chain management to improve stock management and minimize stock outs of essential medicines and associated treatment consumables;
- Training of health staff in the treatment of malaria, including severe cases of malaria;
- Expand routine active case detection to all provinces;
- Institutionalize the routine use of artesunate suppositories as pre-referral treatment;

Financial Cost of Strategy

The total cost (USD) associated with delivering this strategy is estimated as follows:

2008	2009	2010	2011	2012	2013	2014
133,000	66,000	49,000	40,000	29,000	26,000	26,000

Policy Implications

- The Government has recently drafted amendments to the national treatment guidelines. Final endorsement is required.

Monitoring Framework

- Progressively roll out GIS mapping to identify gaps in treatment coverage
- Strengthen reporting from peripheral health centres

***Elimination* Strategies**

- Political support and commitment from the national and Tafea provincial government
- Conduct baseline parasitological and entomological surveys. Additional blood spots for parasite genotyping studies. Mapping of all households to facilitate IRS and active case detection, including baseline surveys.
- Procurement of vehicles (4WD, motorbikes), outboard motor engines and canoes, office equipment, radio equipment, GPS-PDAs and computers.
- Active case detection to identify and treat asymptomatic cases (carriers) and treatment conducted twice monthly during the transmission season (November to February), and monthly March to October. Home visits in all foci in the malarious area. Malaria surveys in and around sick persons' homes and among those absent at the time of earlier visits to ensure that transmission in the foci is contained.

- Passive case detection in the form of access to diagnosis and treatment is available daily at all health facilities throughout the Province.
- Screening of passengers at Tanna airport and coastal points of entry. Screening is already done for all flights arriving on Aneityum. Blood samples will be taken for both rapid diagnostic tests and to make blood films from all arrivals. The RDTs will be used for on-the-spot screening. All positives detected by RDTs will be verified by microscopy and treatment given to all positives. The *P. falciparum* positive cases will be followed up monthly for 6 months and *P. vivax* cases for a year.
- Laboratory support – all blood slides taken by active case detection and cases examined at health facilities will be examined by qualified microscopists within 48 hours. Rapid diagnostic tests capable of identifying both and will be available at all health facilities for use when a microscopist is not on duty or in any other situation when a quick diagnosis is required. All slides and RDTs will be subjected to QA.
- Blanket indoor residual spraying (TOCOSURE) using an effective residual insecticide will be carried out in all villages for a period of 4 years after which a decision will be made continue IRS based on the epidemiological situation.
- Case investigations will be done on all confirmed cases in order to determine the source of the infection i.e. imported, secondary to an imported case, or due to purely local transmission. If local transmission is identified or suspected, remedial measures in the form mass screening of all households in the immediate area of the case, focal IRS, and redistribution of LLIN to ensure 100% coverage will be carried out.
- Annual surveys of school children on the larger islands or for the smaller islands or the entire population will be conducted to measure the change of prevalence.
- Adult mosquito collections and larval surveys to be conducted as part of the investigation of any area or small island with demonstrated continued local transmission.
- Community awareness campaigns will be carried out on monthly basis to inform communities about malaria control interventions and to seek their cooperation. This is especially important regarding new arrivals from outside the province. Community members should be encouraged to identify and report new arrivals to ensure that they were screened and any carrying malaria parasites are fully treated. Communities also need to be aware of the need to encourage anyone with fever to quickly seek diagnosis and treatment at the nearest health facility.
- Continuous quality assurance of all aspects of malaria elimination will be a key component of the pilot. This will include rigorous supervision of microscopy, and the use of RDTs. Regular checks will be carried out to ensure that people arriving in Tafea are screened, that positive are

treated, and to verify coverage reports on LLIN and IRS. Entomological collections and mass screening activities will also be carefully supervised.

- Financial records will be rigorously checked and audits will be done by outside parties to ensure that funds are properly used and reports are filed on time. .

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Financial Cost of Strategy

The total cost (USD) associated with delivering this strategy is estimated as follows:

2008	2009	2010	2011	2012	2013	2014
860,054	1,510,314	1,171,191	1,339,394	1,149,237	1,060,997	429,834

Policy Implications

- The Government and technical team will review the pilot elimination – baseline surveys, mid term review and end of pilot assessments, with a view to recommend rollout of elimination to the country. Final endorsement is required.

Monitoring Framework

- Intense monitoring and staff supervision visits to evaluate the elimination programme.
- Baseline surveys, annual prevalence surveys and mid-term reviews will provide critical information for decision-making.
- Strengthen planning, reporting and collaboration with health facilities.

Operational Research in Support of Strategy

- Needs-based research
- Clinical studies to identify appropriate drug regimen for radical cure of vivax malaria.

Monitoring and evaluation

Strategies

- Developing M&E framework in collaboration with malaria partners, NGOs, universities, government ministries, and other stakeholders.
- Upgrade of the Malaria Information System and GIS mapping tool.
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Risks in implementing the strategy

Risk	Likelihood of Risk Occurring	Impact of Risk on Achieving Strategy	Main Impact	Risk Mitigation
Strategy is under-resourced	Low / Medium	High	Existing gains may be lost Inability to provide equitable service delivery in hard to reach areas	Maintain status quo
Lack of ability to implement at the required level / timeframe	Medium	High	Loss or reduction in funding Interventions more likely to favour 'easy to reach' areas	The RCC proposal places a high emphasis on strengthening management of the VBDCP. Multi-partner support unit is being established within the VBDCP
Too much resources being diverted to the elimination pilot project	Medium / high	High	Implementation of the main elements of the national strategy will be at risk	Dedicated 'stand alone' team to be posted in Temotu with clearly identified sub-set of resources Clear delineation of financial resources with strong financial oversight