

Overview of malaria control activities and programme progress

Malaria is a major public health problem in Namibia and is the leading cause of illness and death among children under five years of age and the third leading cause among adults. Approximately 1 090 000 people live in malarious areas. Annually, an average of 400 000 outpatient cases, 30 000 inpatient cases and 877 deaths are reported as a result of malaria. The incidence of the disease varies from region to region, with a mean of 255/1000 for the country from 1995 to 2001. The annual malaria mortality rate varied between 30/100 000 to 45/100 000 per year between 1996 and 2000. Adults over 18 years of age constituted about half of reported malaria cases in 2001, and peak malaria transmission coincides with peak agricultural activities. The predominantly seasonal nature of malaria transmission confers little or no immunity against malaria and malaria epidemics have occurred periodically—in 1990, 1996, 1997, 2000 and 2001—when environmental conditions, such as high rainfall, are optimal. These epidemics can cause high levels of morbidity and mortality among all age groups.

Malaria control is coordinated by the MoH and social service's National Vector Disease Control Programme, with local activities implemented by the health directorates. The government allocates the bulk of finances available for malaria control. Key strategies of the National Vector Disease Control Programme are: (i) case management; (ii) vector control—largely through indoor residual spraying; (iii) personal protection with ITNs; and (iv) surveillance and epidemic preparedness, detection and response.

Despite current efforts, a number of challenges need to be overcome if the country is to attain the RBM targets of halving malaria mortality and morbidity by 2010. For example, poor performance in indoor residual spraying operations is thought to be partly responsible for the 2001 epidemics. In the last 4 years, indoor residual spraying has improved significantly as a result of substantial government input and WHO technical support. Better integration of malaria case management with Integrated Management of Childhood Illnesses also pose an important challenge for improving access to prompt and effective treatment. In addition, despite many projects to increase availability and use of ITNs, including rural women's net manufacturing groups, the coverage remains below 10%. As the preferred prevention strategy protect pregnant women and children under 5 years of age, alternative approaches for ITN distribution is needed. Increasing ITN coverage among these two target groups by the end of 2005 is one of the primary objectives and uses of GFATM funding.

The level of drug resistance and subsequent treatment failures with CQ as the first-line antimalarial drug increased steadily over the past few years, resulting in a policy change in 2004 to ATM+LUM. First reported in 1984, this declining drug efficacy is thought to have contributed to increasing malaria transmission in some areas, resulting in higher malaria mortality and morbidity. The NMCP has a high need for human resource development at national, regional and district levels. Inadequacy of trained staff is a major problem and greatly impedes the implementation of effective malaria control interventions.

National malaria policy and strategy environment

National malaria strategy overview for 2003

	Strategy
Treatment and Diagnosis Guidelines	Yes
Published/updated in	1995
Monitoring antimalarial drug resistance	Yes
Number of sites currently active	3
Home management of malaria	NA
Vector control using insecticides	Yes
Monitoring insecticide resistance	Yes
Number of sites currently active	4
Insecticide-treated mosquito nets (ITNs)	Yes
Intermittent preventive treatment (IPT)	No
Epidemic preparedness	Yes

Current antimalarial drug policy

	Current policy
Uncomplicated malaria	
<i>P. falciparum</i> (unconfirmed)	ATM-LUM*
<i>P. falciparum</i> (lab confirmed)	ATM-LUM*
<i>P. vivax</i>	CQ
Treatment failure	Q(7d)
Severe malaria	Q(7d)
Pregnancy	
Prevention	SP (IPT)
Treatment	Q

EPIDEMIOLOGICAL DATA

Following WHO recommendations, malaria case reporting is carried out in most countries. The data presented below reflect aggregated malaria cases at the national level and are presented by gender, age and subnational level as submitted to WHO. Malaria reporting from national surveillance systems varies in quality and reporting completeness and may have limited value in understanding the actual malaria burden, but may be useful for understanding trends in the relative burden of malaria in the public health sector.

Reported malaria cases (annual)

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
			380 530	401 519	275 442	345 177	390 601	353 110	429 571
2000	2001	2002	2003	Date of last report: 20 December 2004					
519 113	537 115	442 527	444 081						

Reported malaria by type and quality

For most recent year

Reported malaria cases	444 081
Reported malaria deaths	1 095

Probable or clinically diagnosed

Malaria cases	444 081
Severe (inpatient or hospitalized) cases	20 968
Malaria deaths	1 095

Slides taken
Rapid diagnostic tests (RDTs) taken

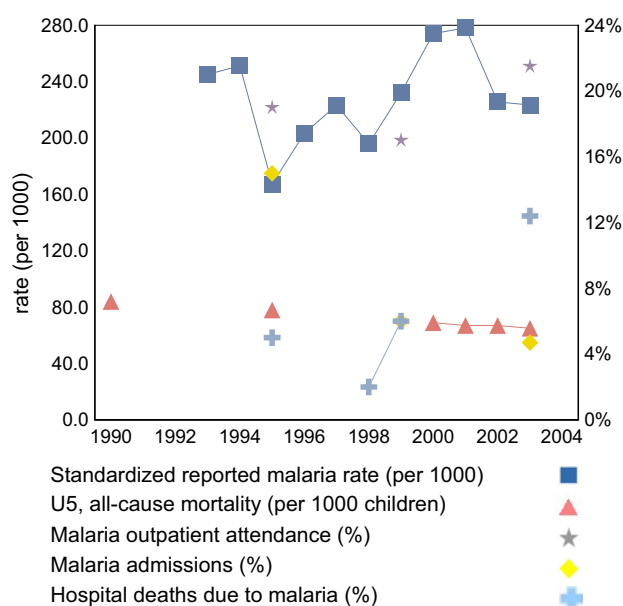
Laboratory confirmed

Malaria cases	
<i>P. falciparum</i> or mixed	
<i>P. vivax</i>	
Severe (inpatient or hospitalized) cases	
Malaria deaths	

Investigations

Imported cases

Estimated reporting completeness (%) 90



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	519 113	537 115	442 527	444 081	100
Age	<5 years	132 007	127 109	109 184	121 808	27
	5> years	387 106	410 006	333 343	322 273	73

Reported malaria cases by selected subnational area

13 areas	2000	2001	2002	2003	%
Kavango	162 201	127 140	102 991	111 165	25
Omusati	86 424	116 840	94 417	95 518	22
Ohangwena	95 659	93 423	105 118	92 707	21
Caprivi	52 326	42 863	33 470	40 680	9
Oshikoto	57 721	66 346	33 319	37 828	9
Oshana	38 376	54 150	38 785	37 620	8
Kunene	8 705	10 841	13 843	9 981	2
Khomas	1 474	7 431	8 812	8 289	2
Otjozondjupa	14 196	15 342	9 752	8 272	2
Erongo	477	853	606	1 128	<1
Omaheke	1 540	1 140	828	386	<1
Karas	9	414	305	364	<1
Hardap	5	332	281	143	<1

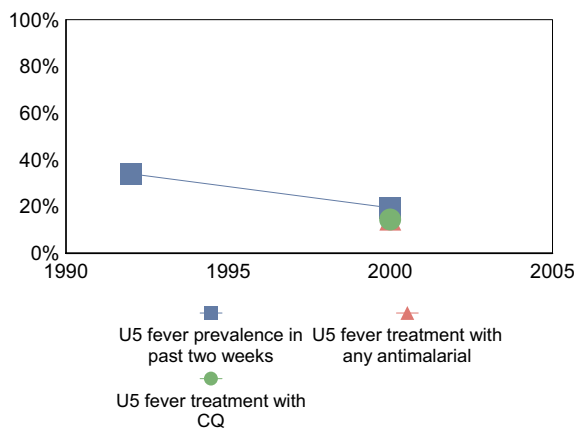
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

Information related to the coverage of RBM key interventions is presented here. This includes coverage of antimalarial treatment, possession and use of insecticide-treated nets (ITNs), and use of intermittent preventive treatment (IPT) among pregnant women (PW) where national policy indicates.

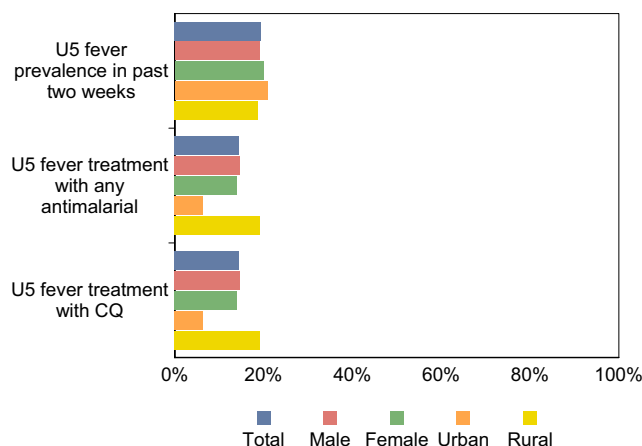
Fever prevalence and treatment with antimalarials

Prompt access to effective treatment is one of the key interventions promoted by RBM. Information presented below is from household surveys on fever prevalence and reported treatment of fever with antimalarials among children under 5 years of age (U5) within the previous 2 weeks.

Trend in fever prevalence and antimalarial coverage estimates from national surveys



Estimate of fever prevalence and treatment with antimalarials from most recent national survey



Available national surveys

DHS 2000

Sample size (U5s): 3 785

Field work: Sep-Dec 2000

Scale: national

Supporting organization: Macro DHS

DHS 1992

Sample size (U5s): 3 601

Field work: Jul-Nov 1992

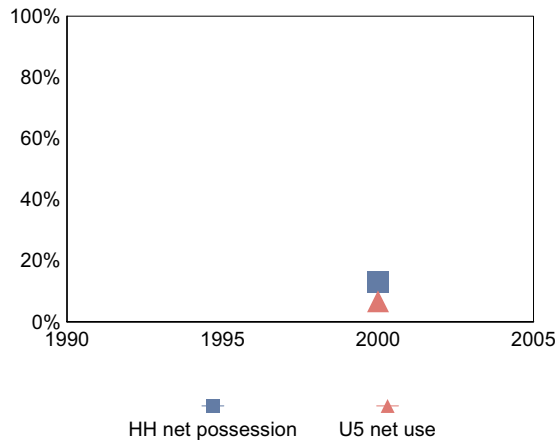
Scale: national

Supporting organization: Macro DHS

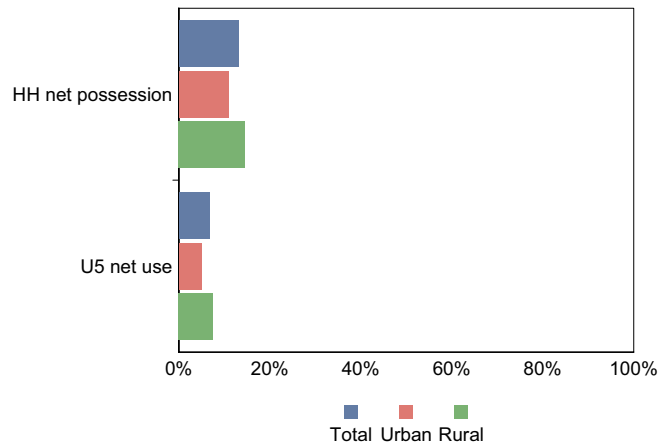
Insecticide-treated nets

ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data below represent available household survey results in which household possession and use of nets and ITNs have been assessed.

Trend in mosquito net coverage estimates from national surveys



Estimates of ITN coverage from most recent national survey



Available national surveys

DHS 2000

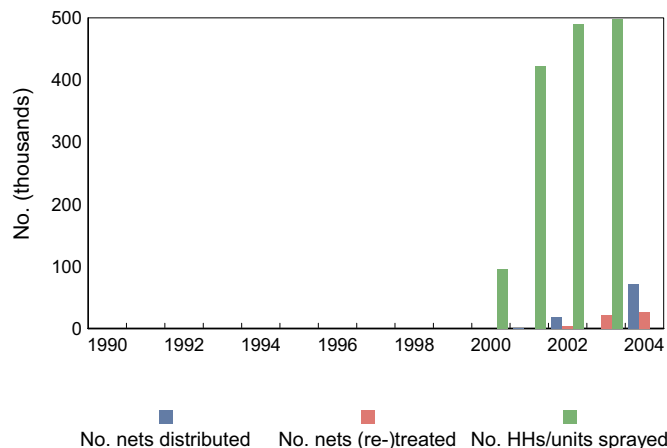
Sample size (HHs or U5s): 6 159
 Field work: Sep-Dec 2000
 Scale: national

Supporting Organization: Macro DHS

SERVICE DELIVERY AND MALARIA-RELATED COMMODITIES

General malaria-related services delivered

Services delivered for malaria control include numbers of nets and insecticides delivered or sold, numbers of nets (re-)treated with insecticide and numbers of households (HHs)/units sprayed during IRS campaigns. These services and service-related commodities mostly reflect core malaria control activities of national malaria control programmes. The information reflects annual, country-reported data.



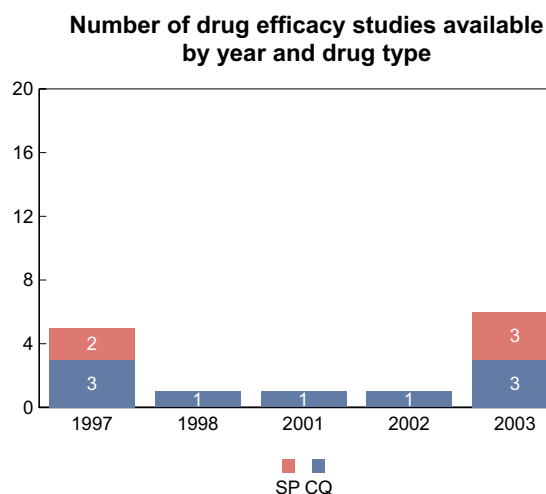
	No. HHs/units sprayed	No. nets (re-) treated	No. nets sold or distributed
2000	95 775	-	-
2001	422 498	-	1 000
2002	490 491	3 600	18 000
2003	498 132	22 000	-
2004	-	27 000	71 000

Data on net (re-) treatments in 2004 represent long-lasting ITNs.

MONITORING ANTIMALARIAL DRUG EFFICACY

Monitoring antimalarial drug efficacy is important for understanding the impact of antimalarial treatment being delivered and the need for drug policy change, essential for ensuring prompt access to effective treatment. Median, range and quartiles are based on percentage clinical failure for uncomplicated *P. falciparum* malaria for countries in Africa south of the Sahara, and percentage total failure for all other areas. Included are studies that used WHO protocol among selected drugs.

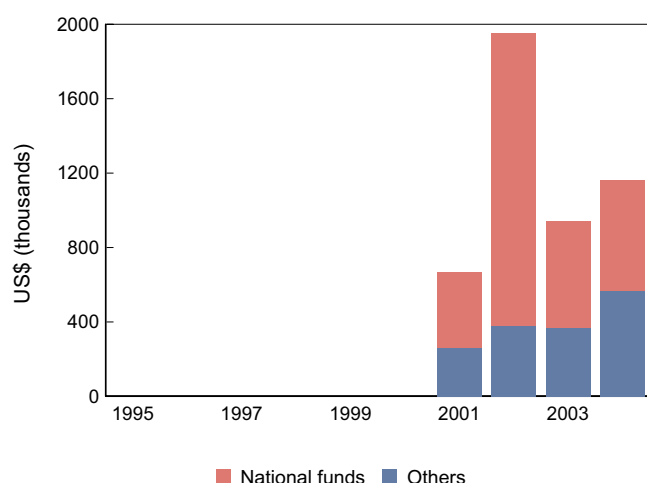
Study years	Number of studies	Median	Range		Percentile	
			Low	High	25th	75th
CQ						
1997-2003	9	19.0	4.0	66.7	6.5	35.1
SP						
1997-2003	5	8.8	0.0	22.8	0.0	18.6



FINANCING FOR MALARIA

Annual funding for malaria control

This information represents country-reported national and other resources budgeted or spent for national malaria control programme efforts. If information was reported in a different currency than US\$, the annual average of the official exchange rate from the World Development Index was used for conversion. Currency is presented in US\$ (thousands).



	National funds	Others
1995	-	-
1996	-	-
1997	-	-
1998	-	-
1999	-	-
2000	-	-
2001	407	260
2002	1 570	382
2003	573	366
2004	593	566

Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US\$. These data are maintained and updated by GFATM.

Approved proposals			Grant agreements and disbursements (as of 13 January 2005)						
Source	Round	Total year 1-2 budgets	Principal recipient	Signed	Signature date	Grant amount	No. of disbursements	Total disbursed	% disbursed
CCM	2	3 719 354	MoH	Yes	23-Nov-04	3 719 354	1	349 654	9.4%

General notes and remarks

* policy adopted, not presently being deployed, implementation process ongoing.

See explanatory notes at the beginning of the section.

Data on malaria is generated routinely through HIS. Usually, there is a lag period of 2 to 3 months in reporting. However, for the purpose of monitoring the malaria situation during the transmission period, the programme uses a weekly reporting system.

Data on net (re-)treatments in 2004 represent LLINs.