ANNEX 1.
SELECTED COUNTRY PROFILES

Overview of country profiles

Profiles are presented for 24 selected high-malaria burden countries relative to the region to which they belong—Africa, Asia and the Americas. Profiles for these countries and all other countries reporting malaria are available on the Internet.[7] The profiles are continually updated as part of the global RBM reporting process.

Country profiles are organized in six sections, based on data availability and national policy.

1. Key issues related to programme progress and activities: a brief summary of key strategies and policies used by the NMCP, including: (i) the existence of a national malaria control manual or treatment guidelines and the year of latest publication or update; (ii) the number of sentinel sites currently monitoring antimalarial drug efficacy and insecticide resistance; and (iii) the antimalarial drug policy in 2004.

The antimalarial drug policy as at the end of 2004 is presented separately for treatment of falciparum malaria and vivax malaria. For falciparum malaria, separate policies are defined for: (i) the treatment of uncomplicated (confirmed and unconfirmed) cases; (ii) the treatment of cases that failed first-line treatment (treatment failure); (iii) the treatment of severe malaria; and (iv) the prevention and/or treatment of malaria in pregnant women.

Source of data: WHO annual reporting forms and country presentations, reports and publications.

2. Reported cases and deaths include the number of annual malaria cases and deaths recorded in HIS and reported to WHO—separately for laboratory-confirmed, clinically diagnosed and imported cases as well as by age, gender and subnational division. This section also lists the total number of slides and rapid diagnostic tests taken, a proportion of which would have resulted in a confirmed case, as recorded and reported by countries.

Probable or clinically diagnosed cases: for countries where access to laboratory confirmation of cases is severely limited—such as in most of Africa south of the Sahara—this term denotes patients who are suspected to have malaria based on clinical signs and symptoms and who receive treatment for malaria. For countries where routine laboratory confirmation is widely available and where cases are reported as having been confirmed or not, this term applies to patients clinically diagnosed and treated for malaria but who were not diagnosed by a laboratory test. One exception is Pakistan, where the term refers to all patients with fever. For countries in the Western Pacific and selected countries in eastern Asia, this denotes the number of suspected malaria cases minus the subset of those patients who were laboratory tested and found to be infected with malaria.

[7] http://www.rbm.who.int/

Probable or clinically diagnosed severe cases denotes, for areas reporting only clinically diagnosed cases, patients who were clinically diagnosed and required hospitalization for signs and/or symptoms of severe malaria and who received antimalarial treatment.

Probable or clinically diagnosed malaria deaths denotes, for areas reporting only clinically diagnosed malaria cases, deaths among patients diagnosed with probable severe malaria.

Laboratory-confirmed malaria cases denotes, for areas performing laboratory confirmation of malaria diagnoses, all patients with signs and/or symptoms of malaria and laboratory-confirmed diagnosis who received antimalarial treatment. Laboratory diagnosis consists of either slide microscopy or a rapid diagnostic test. Of these:

P. falciparum or mixed denotes those cases laboratory-diagnosed as caused by infection with *P. falciparum* or a mix of *Plasmodia* species including *P. falciparum*.

P. vivax denotes those cases confirmed by laboratory diagnosis as caused by infection with *P. vivax*.

Laboratory-confirmed severe cases denotes, among patients whose malarial illness was confirmed by a laboratory test, the number who required hospitalization for signs and/or symptoms of severe malaria and who received antimalarial treatment.

Laboratory-confirmed malaria deaths denotes deaths among patients with laboratory-confirmed diagnosis of severe malaria.

Imported cases denotes malaria episodes in which the infection was acquired outside the country where it was diagnosed, implying that the origin could be traced to a known malarious area.

Estimated reporting completeness denotes the completeness of HIS data in malaria case reporting, estimated by the country.

Where available, reported cases are also provided by age, gender and subnational area. The percentages of cases in each of these subgroups are based on the number of total annual reported cases in the corresponding year, which is not necessarily the most recent year for which the total number of cases was available. Subnational reported cases are displayed for areas whose reported burden represents at least 2% of the national total, up to a maximum of 15 areas.

The *standardized reported malaria* rate plotted in the time-trend graph is a standardized rate, per 1000 people per year, calculated against national population sizes in each calendar year estimated by the United Nations Population Division (*52*). The numerator of the standardized rates was based on the number of reported cases and the proportion of these cases that were laboratory-confirmed. For countries where none of the reported cases were confirmed, as in most of Africa south of the Sahara, the rate was based on probable or clinically diagnosed cases. For countries where all cases are laboratory-confirmed, the rate was based on laboratory-confirmed cases minus imported cases. For the few countries where some cases were laboratory-confirmed ("Some" in column 6 of Table A.21 for Afghanistan, Somalia, Sudan and Yemen), the standardized rate was based on the sum of the reported categories "probable/clinically diagnosed" and "laboratory-confirmed", which were mutually exclusive for these countries.

All cause under-5 mortality is the number of children who died before the age of exactly 5 years per 1000 live births. This information is from the UNICEF report on the State of the World's Children 2005 (*36*) and included for African countries only.

Source of data: WHO annual reporting forms and country presentations, reports and publications.

3. Estimated coverage of the key RBM interventions according to the core indicators recommended by the RBM MERG:[8]

- the percentage of households possessing at least one mosquito net and possessing at least one ITN;
- the percentage of children under 5 years of age and pregnant women who slept under a net or an ITN during the night before a survey;
- for African countries, the percentage of febrile children under 5 years of age who received treatment with any antimalarial, with chloroquine or with sulfadoxine–pyrimethamine.

Each outcome is reported as the national estimate and where applicable and available, disaggregated by the background characteristics urban/rural, male/female and by wealth quintile.

The treatment of febrile children with antimalarials is reported only for African countries; the period-prevalence of fevers in African children under 5 years of age in the 2 weeks preceding a survey is reported as the denominator against which use of antimalarials is evaluated.

Source of data: reports from household surveys, including DHS and MICS (*10*) or, if no nationally representative surveys were available, cluster-sampled subnational surveys were used. Only surveys with appropriate documentation of dates of field work, sampling design and sample sizes were included. For countries with multiple national surveys available, the most recent survey was used.

4. Drug efficacy rates for relevant antimalarial drugs: each profile includes the number of relevant drug efficacy studies, the range of years in which they were conducted and the minimum, maximum, median and 25th and 75th percentile efficacy rates, where applicable.

Efficacy studies included in this report are those that used one of the protocols recommended by WHO in 1996 or later (*9*). The WHO protocol recommends the assessment of in vivo efficacy against *P. falciparum* in patients under 5 years of age presenting with uncomplicated falciparum malaria (*9*). For countries where such studies have not been conducted, this report included other studies that were judged to be of high quality. Both published and unpublished studies were considered for inclusion.

For countries in Africa, study results are expressed as proportions of clinical failure, which is defined as the proportion of patients who present either with fever in the presence of parasitaemia on day 3 after onset of treatment (early treatment failure) or with recurrent fever 14 days after onset of treatment (late clinical failure). For Asia, the Americas, Southern Africa and moderate-to-low transmission areas in Sudan, the presented results are proportions of total treatment failure, which is the sum of clinical failure and late parasitological failure. Late parasitological failure in these countries is defined as asymptomatic parasitaemia at 28 days after onset of treatment.

All studies are weighted equally irrespective of their differing sample sizes. Percentile calculations are based on N = P/100* (k + 1), where: k = total numbers of values in the dataset; P = percentile (25th or 75th); and N = index number in the dataset that corresponds to the percentile chosen. If N equals an index number, the formula will bring back the failure rate observed in the study with that index number. If N is not equal to an index number, the formula returns the average of the two failure rates associated with the two studies with indexes that N lies between. If N is greater than the highest index number, the failure rate observed in the study with the highest index number (i.e. the maximum failure rate across all studies) is returned.

Source of data: WHO annual reporting forms and country presentations, reports and publications, published studies.

[8] http://www.rbm.who.int/merg

5. Services delivered by the NMCPs, specifically the annual:

- number of nets and/or insecticide kits sold or distributed;
- number of nets (re-)treated with insecticides;
- number of insecticide treatment kits for mosquito nets sold or distributed;
- quantities of insecticides used for malaria vector control activities;
- number of households or units sprayed during IRS campaigns.

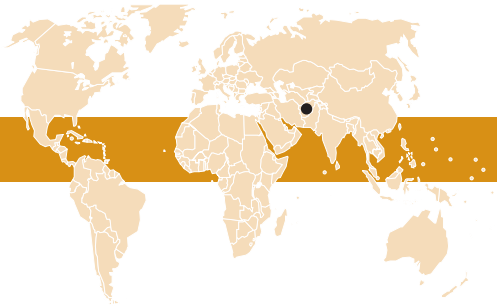
Quantities of insecticides used for malaria vector control activities were based on annual reporting to WHOPES (*63*). All figures are reported by the NMCPs and do not necessarily include services delivered to countries by other RBM partners. Numbers of households or units sprayed for IRS are not fully standardized between countries, as some countries consider units to be rooms rather than houses, and not all countries specify their definition of unit.

Source of data: WHO annual reporting forms and country presentations, reports and publications.

6. Finances available for malaria control: represents reported national resources—such as annual fiscal year budget allocations from the Ministry of Health (MoH)—and other resources budgeted and allocated for NMCP efforts. Some countries separately report budgeted and allocated malaria resources. For figures reported in currencies other than US$, a standard annual exchange rate conversion based on the World Development Index published by the World Bank was used.

For GFATM financing, data on malaria funds committed for approved proposals and disbursed from rounds 1–4 of proposal submission and review are presented, with specification of the dates when grant agreements were signed and the amounts of disbursements to date.

Source of data: WHO annual reporting forms (malaria and WHOPES), country presentations, reports and publications, and the GFATM.



AFGHANISTAN

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2003
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	4
• Home-based management of malaria:	No
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	No
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ+SP
– *P. falciparum* (laboratory confirmed):	ASU+SP*
– *P. vivax*	CQ
• Treatment failure:	Q(7d)
• Severe malaria:	Q/ATM(7d)/(3d)+SP
• Pregnancy:	
– prevention	
– treatment	Q or ASU+SP (Pf) - CQ (Pv)

Malaria situation

Malaria accounts for approximately 10% of all reported febrile illnesses. Anaemia is widespread in Afghanistan—12% of the population and nearly 30% of children under 5 years of age have haemoglobin levels less than 11 g/dl—and malaria is a contributing factor in many areas. A national malaria prevalence survey conducted by the MoH and the Institute of Malaria and Parasitic Diseases between October and November 2002—the peak period for *P. falciparum* transmission—revealed that 10% of the population living at an altitude below 1500 m is infected with *Plasmodium* parasites. In 2003, 591 441 suspected and confirmed cases were reported, for an annual national incidence of 197/10 000. Incidence ranged from less than 7/10 000 to 1955/10 000 population per year. *P. vivax* accounted for 93% of all confirmed malaria cases, and *P. falciparum* accounted for 7% of all confirmed malaria cases, ranging from 0.002% in Wardak Province to 31% in Takhar Province.

National policy and planning

Since the beginning of 2002, the MoH has taken steps towards building an integrated control programme against malaria and leishmaniasis as part of the evolving health-care delivery structure. A Basic Package of Health Services was initiated and is delivered by contracted NGOs at four levels of health service delivery. Coupled with the installation of the Integrated Management of Childhood Illness programme in 2003, opportunities for effective malaria control are progressively expanding.

Progress in malaria control activities

Malaria/leishmania directorates were established in 14 priority malaria provinces, including appropriate malaria staffing. The national malaria institute was reinforced with eight medical doctors. The needed investment for this new cadre was obtained through intensive capacity building programmes both within the country and from abroad.

Financial support

With funds from donors and other partners—for example, USAID and the Government of Kuwait—the RBM control programme was expanded and significant activities were planned and/or conducted to complement developments in the primary health sector of the country. The GFATM committed a grant for the control of HIV/AIDS, tuberculosis and malaria totalling US$ 3.1 million.

AFGHANISTAN

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)

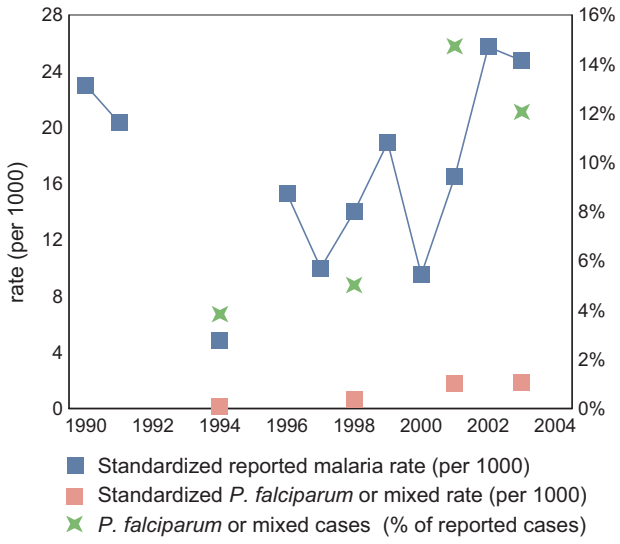
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
317 479	297 605			88 302		303 955	202 767	288 070	395 581

2000	2001	2002	2003	
203 911	364 243	590 176	591 441	Date of last report: 25 May 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	591 441
Reported malaria deaths	
Probable or clinically diagnosed	
Malaria cases	224 662
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	366 779
P. falciparum or mixed	44 243
P. vivax	322 536
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	203 911	364 243	590 176	591 441	100

Reported malaria cases by selected subnational area

15 of 25 areas	2000	2001	2002	2003	%
Takhar				135 237	23
Kundoz				75 798	13
Baghlan				72 787	12
Nangarhar				45 418	8
Badghis				40 464	7
Faryab				37 894	6
Kabul				32 029	5
Badakhshan				30 252	5
Gazni				27 409	5
Laghman				21 175	4
Kunar				18 187	3
Khost				15 904	3
Herat				10 982	2
Balkh				6 331	1
Paktia				5 272	1

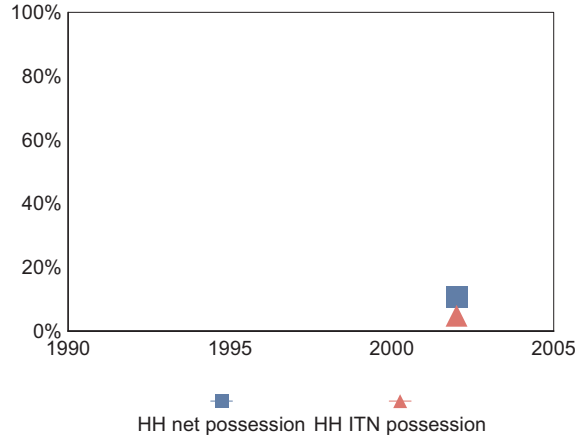
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

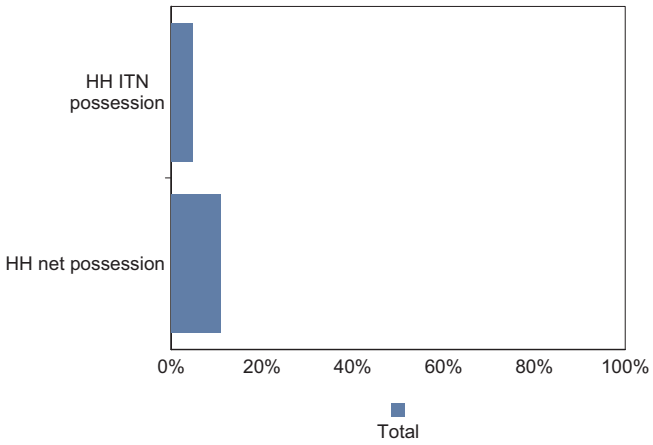
Insecticide-treated nets

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



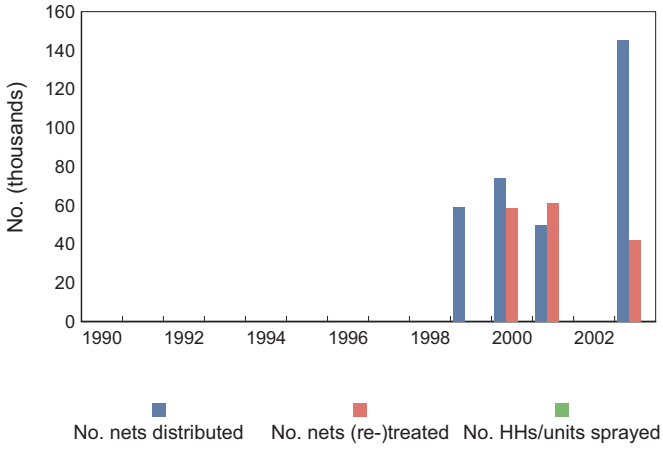
Estimates of ITN coverage from most recent national survey



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.



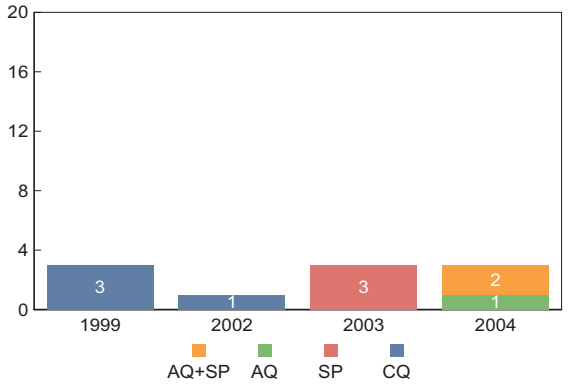
	No. nets (re-) treated	No. nets sold or distributed
1999	-	59 324
2000	58 374	74 218
2001	61 190	49 735
2003	42 154	145 375

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						
1999-2002	4	67.7	60.0	89.5	61.7	80.8
SP						
2002-2003	3	8.7	4.0	22.7	4.0	22.7
AQ						
2004	1	37.7				
AQ+SP						
2003-2004	2	2.0	1.0	3.0	1.0	3.0

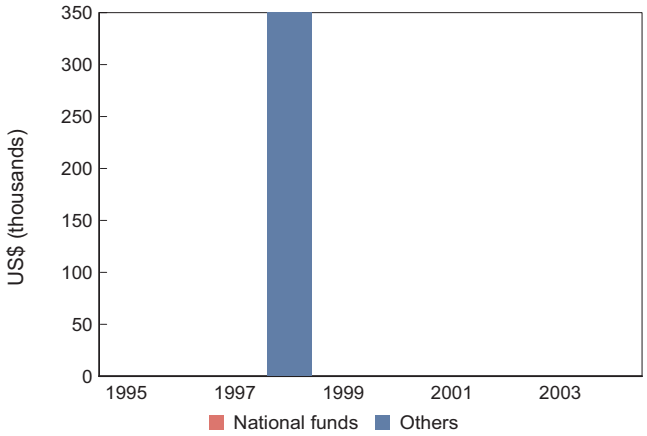
Number of drug efficacy studies available by year and drug type



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		350
1999		
2000		
2001		
2002		
2003		
2004		

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	3 125 605	**MoH**	Yes	25-Oct-04	3 125 605	1	1 687 514	54.0%

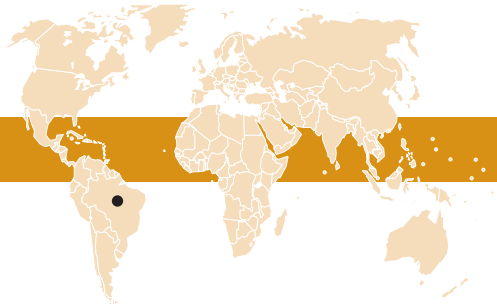
Integrated proposal includes HIV and tuberculosis committed funds.

General notes and remarks

See explanatory notes at the beginning of the report.

The antimalarial drug policy for treatment of malaria in pregnant women includes Q in the first trimester and ASU+SP in the 2nd and 3rd trimesters for suspected or confirmed uncomplicated falciparum malaria. For vivax malaria, CQ is used for treatment of uncomplicated cases in pregnant women.

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



BRAZIL

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2001
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	7
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	
– *P. falciparum* (laboratory confirmed):	Q(3d)+D(5d)+PQ(day6) Q(3d)+D(5d)+PQ (Amazon)
– *P. vivax*	CQ+PQ(7d)
• Treatment failure:	MQ15/20+PQ(day2) MQ15/20+PQ (Amazon)
• Severe malaria:	ASU vs ART or Q
• Pregnancy:	
– prevention	
– treatment	Q (Pf) or CQ (Pv)

Malaria situation

In 2002, Brazil reported approximately 40% of the total number of the malaria cases in the Americas. Almost 99% of cases occur in the Legal Amazon Region, where no more than 12% of the country's population resides. An increase in the number of cases began in the 1980s. In 1992, 572 000 cases were reported and a peak of 610 878 cases was reported in 2000. By 2002, the number of cases was reduced to 349 873 among 2.12 million slides examined, giving a 16.5% smear positivity rate. A slight rebound to 379 500 cases in 2003 was reportedly associated with population movement to the periphery of large cities as well as to the Legal Amazon Region.

National policy and planning

The NMCP promotes prompt diagnosis and appropriate treatment of malaria and is implementing other aspects of the Global Malaria Control Strategy. A lack of human and other resources, as well as technical and managerial weakness at local level and little information to guide activities, limit the coverage of effective interventions in controlling the disease.

Progress in malaria control activities

The improvement in the epidemiological situation between 2000 and 2002 was related to a new action plan called the Plan for Intensification of Control Measures in the Amazon (PICAM) that was initiated in June 2000. The number of municipalities at risk of malaria declined from 160 in 1999 to 76 in 2002, with a 69% reduction in the number of hospitalized cases and a 36% reduction in hospital deaths caused by malaria. Malaria studies were initiated in Acre, Amapa, Amazonas, Maranhão, Mato Grosso, Pará and Rondônia to measure drug efficacy, anopheline mosquitoes' resistance to insectides, risk factors for transmission including in urban areas, and piloting rapid diagnostic testing. Drug efficacy studies involve MQ, Q+D for *P. falciparum* and CQ for *P. vivax* in multiple sites.

Financial support

The MoH provides the vast majority of financial support for malaria control. The total budget for 2003 was just over US$ 40 million, although part of the funding was made available from external sources in the context of the PICAM.

BRAZIL

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)

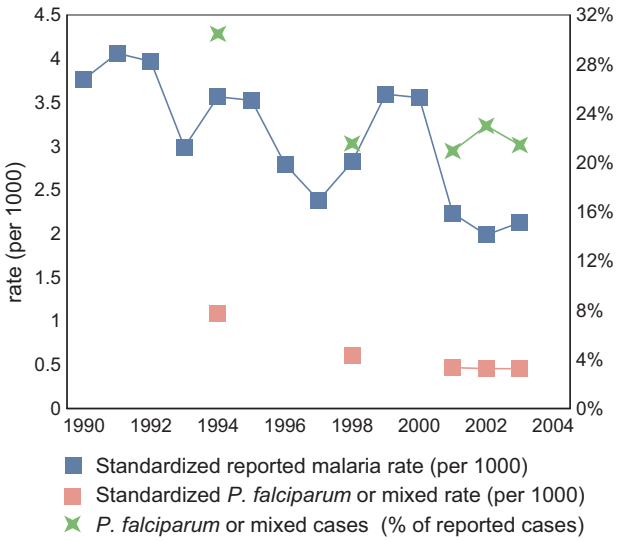
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
560 396	614 431	609 860	466 190	564 406	565 727	455 194	392 976	471 892	609 594
2000	**2001**	**2002**	**2003**						
610 878	388 658	349 873	379 551						

Date of last report: 7 December 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	379 551
Reported malaria deaths	30
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	1 474 656
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	379 551
P. falciparum or mixed	81 343
P. vivax	297 962
Severe (inpatient or hospitalized) cases	10 719
Malaria deaths	30
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	610 878	388 658	349 873	379 551	100
Age	<1 year				6 635	2
	1-4 years				36 191	10
	5-14 years				79 583	21
	15+ years				232 834	61

Reported malaria cases by selected subnational area

9 areas	2000	2001	2002	2003	%
Amazonas		43 716	68 621	133 299	35
Para		181 181	137 339	101 560	27
Rondonia		55 356	68 634	92 925	24
Amapa		22 586	15 839	14 565	4
Acre		4 590	6 300	9 881	3
Maranhao		33 247	9 164	8 990	2
Roraima		14 936	6 508	8 538	2
Mato Gros		6 200	4 556	4 173	1
Tocantins		448	215	4 013	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.

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.

A survey to evaluate effectiveness of ITNs in three different populations of the Amazon region is currently being planned.

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.

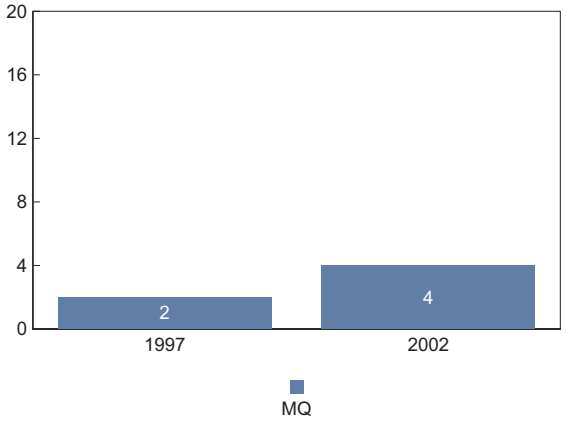
No data are currently available.

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 Low	Range High	Percentile 25th	Percentile 75th
MQ						
1996-2002	6	5.2	0.0	9.7	0.5	7.9

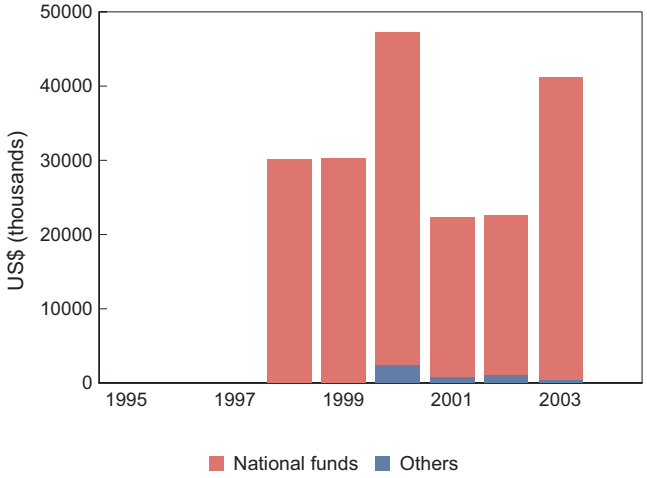
Number of drug efficacy studies available by year and drug type



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	30 189	
1999	30 308	
2000	44 767	2 478
2001	21 517	805
2002	21 412	1 138
2003	40 696	524
2004		

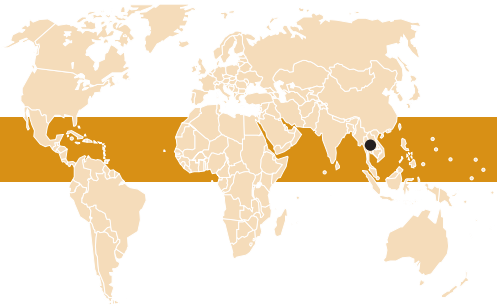
Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

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.

No funding was approved for malaria control by the GFATM.

General notes and remarks

See explanatory notes at the beginning of the report.



CAMBODIA

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	8
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* et non - *P. falciparum* (unconfirmed):	ASU(3d)+MQ
– *P. falciparum* (laboratory confirmed):	ASU(3d)+MQ
– Non - *P. falciparum*	CQ
• Treatment failure:	Q(7d)+T(7d)
• Severe malaria:	ATM(IM)+MQ
• Pregnancy:	
– prevention	
– treatment	Q(7d)or ASU+MQ

Malaria situation

Malaria is a major concern for people living in Cambodia's hilly forests and forest fringes. The number of reported malaria cases has decreased gradually between 1993 and 2003. However, in 2003 the report of treated cases, severe cases and deaths as well as the case-fatality rate started to increase again. This apparent increase is in part attributed to improving access to public health facilities in remote areas because of improved infrastructure, improved referral systems and more regular and reliable reporting. Of particular concern is the high level of multidrug resistance.

Strains of P. falciparum are resistant to most antimalarial drugs, and the quality and usage pattern of antimalarial drugs are suboptimal. Recent studies show that counterfeit and substandard drugs are frequent in Cambodia, especially Q and ASU. Furthermore, a survey of antimalarial drug use in 2002 showed problems of delayed treatment-seeking behaviour, widespread use of many antimalarial drugs for one malaria episode and non-adherence to treatment.

National policy and planning

The main focus of the NMCP is to strengthen clinical management of malaria cases, provide surveillance and health education, and promote the use of ITNs. Good-quality drugs and improvement in treatment access and patient compliance also are essential to combat the emergence and spread of resistant strains of *P. falciparum*. The NMCP attempts to increase access to early diagnosis and treatment through the adoption of a three-pronged approach: (i) standardized malaria diagnosis and treatment based on RDTs or microscopy and prepackaged ASU+MQ combination treatment in the public health system; (ii) provision of RDTs and ACT in remote hyperendemic communities through local village malaria workers; and (iii) social marketing of RDTs and ACT through the private sector. ITNs are the mainstay of malaria prevention in Cambodia. Currently, the programme is shifting implementation responsibilities to the provincial level. The NMCP targets people living within 200 m of forest areas where malaria generally occurs.

Progress in malaria control activities

In 2003, the ITN coverage was estimated to be 49% in areas at risk of malaria, and efforts are under way to conduct more reliable survey-based estimates. Over the past several years, the NMCP has built strong partnerships with USAID, the World Bank, DFID, the GFATM and WHO. The GFATM partners are planning to introduce LLINs through free distribution in remote rural areas and social marketing in towns. In addition, socially marketed hammock nets and tablets for insecticide impregnation are sold at strategic points through the private sector targeted at mobile poplulations of forest workers. Community awareness will be strengthened through community-based and school-based health activities with support from the GFATM.

Financial support

Delays in financial support to control efforts in 2003 might have contributed to the increase in malaria reports that year. Two grants from the GFATM that began in December 2003 will provide over US$ 10 million in additional funding, of which US$ 2.3 million had been disbursed as of July 2004.

CAMBODIA

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)

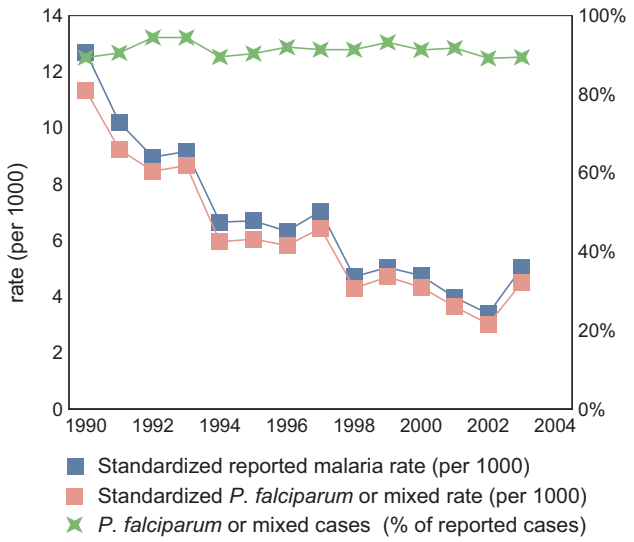
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
123 796	102 930	93 595	98 956	74 190	76 923	74 883	85 661	58 874	64 679

2000	2001	2002	2003	
62 439	53 601	46 902	71 258	Date of last report: 31 August 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	71 258
Reported malaria deaths	492
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	4 936
Malaria deaths	
Slides taken	106 302
Rapid diagnostic tests (RDTs) taken	54 024
Laboratory confirmed	
Malaria cases	71 258
P. falciparum or mixed	63 739
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	492
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	62 439	53 601	46 902	71 258	100
*Gender	Male				38 310	54
	Female				16 679	23
Age	<5 years				4 650	7
	5-14 years				12 019	17
	15-49 years				49 075	69
	>49 years				5 514	8

Reported malaria cases by selected subnational area

15 of 24 areas	2000	2001	2002	2003	%
Baat Dambang	3 860	4 253	5 221	10 227	14
Kampong Speue	4 892	4 353	3 321	7 898	11
Pousaat	4 455	5 152	4 748	7 032	10
Preah Vihear	4 807	4 664	5 270	6 865	10
Siem Reab	6 355	4 790	3 701	6 256	9
Kampot	4 010	2 603	2 624	4 640	7
Oddar Mean Chey	1 488	2 014	2 391	4 029	6
Pailin	3 642	3 678	2 432	3 762	5
Kampong Thum	2 440	1 774	1 930	3 435	5
Kampong Chaam	3 774	4 537	3 119	2 956	4
Stueng Traeng	4 835	3 306	2 179	2 935	4
Rotana Kiri	2 739	2 078	3 011	2 793	4
Kracheh	4 133	3 304	2 311	2 340	3
Mondol Kiri	2 779	1 925	1 320	1 807	3
Kampong Chhnang	1 828	1 452	690	1 181	2

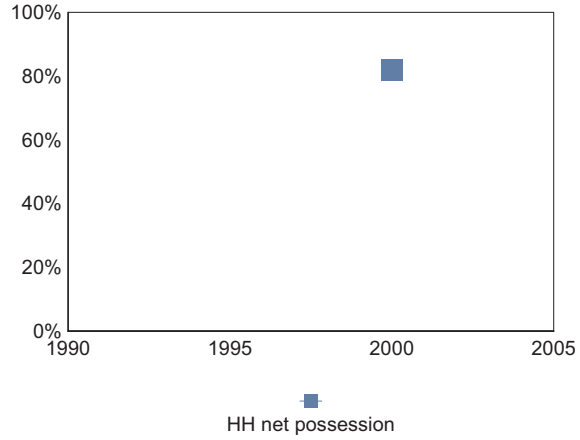
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

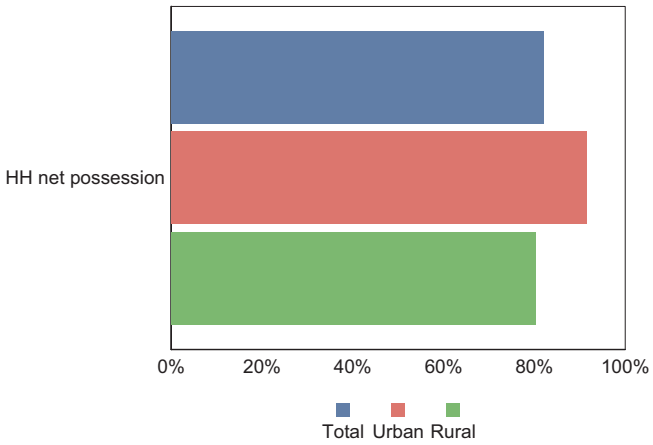
Insecticide-treated nets

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



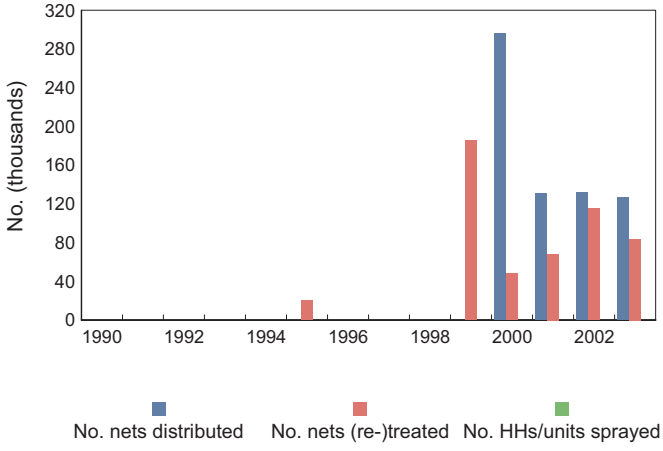
Estimates of ITN coverage from most recent national survey



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. nets (re-) treated	No. nets sold or distributed
1995	20 000	
1999	185 556	
2000	48 013	296 337
2001	68 230	130 726
2002	115 163	131 673
2003	83 688	127 035

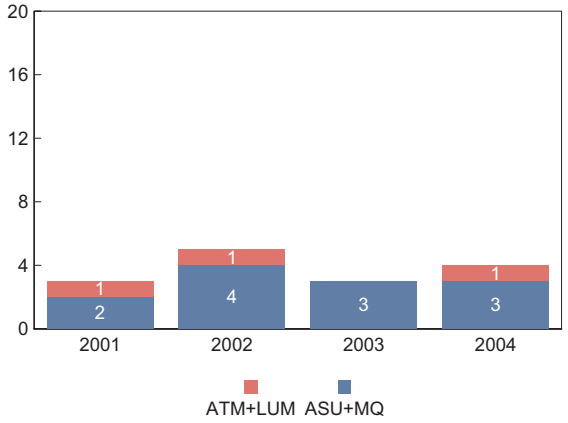
CAMBODIA

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
ATM+LUM						
2001-2004	3	26.9	13.5	30.0	13.5	30.0
ASU+MQ						
2001-2004	12	3.7	0.0	18.8	1.1	8.1

Number of drug efficacy studies available by year and drug type



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).

No data are currently available.

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

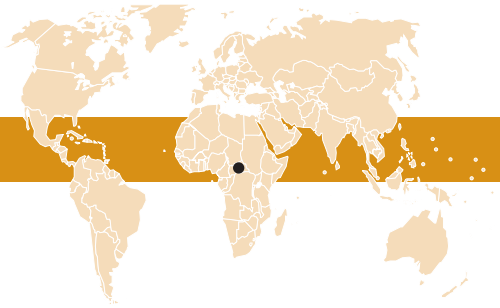
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	5 013 262	**MoH**	Yes	14-Oct-03	5 013 262	4	2 779 989	55.5%
CCM	4	5 221 242		No					

General notes and remarks

See explanatory notes at the beginning of the report.

*Reported malaria cases by gender for 2003 is only provided for patients over 14 years of age.



CENTRAL AFRICAN REPUBLIC

Malaria situation

Malaria is one of the major public health burdens and is endemic throughout the Central African Republic. It is responsible for an estimated 40% of all outpatient visits and 45% of hospital deaths in public health facilities. A situation analysis conducted in 2001 showed that appropriate management of those with malaria symptoms in public facilities and at home was unacceptably low, ranging from 12.8% to 17.3%. In the 1990s, the situation has worsened as a result of increasing resistance to CQ.

National policy and planning

The national control strategy includes: (i) proper management of malaria cases and integrated management of child malaria in the home and in health facilities; (ii) prevention of malaria through improved sanitation, vector control measures—in particular ITN usage—and IPT for pregnant women; (iii) operational research; and (iv) strengthening the HIS and the monitoring and evaluation system. It is recognized that these strategies can only be realized with improved structural and institutional capacities of the MoH and by developing lasting partnerships that involve NGOs, the public and private sectors and development partners.

Progress in malaria control activities

Several important policy steps have been made for changing the first-line antimalarial drug policy from CQ to more effective combination therapy, and for adopting IPT with SP for prevention of malaria during pregnancy. From 2001 to 2004, more than 40 000 ITNs were distributed.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	5
• Home-based management of malaria:	No
• Vector control using insecticides:	No
• Monitoring insecticide resistance	No
– number of sites currently active:	0
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	No
• Epidemic preparedness:	No

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ
– *P. falciparum* (laboratory confirmed):	CQ
– *P. vivax*	
• Treatment failure:	SP
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	CQ weekly
– treatment	Q(7d)

Financial support

In addition to resources made available by the government, several partners support the fight against malaria including WHO, UNICEF and the European Union. The GFATM recently committed over US$ 10 million to support malaria control activities.

CENTRAL AFRICAN REPUBLIC

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)

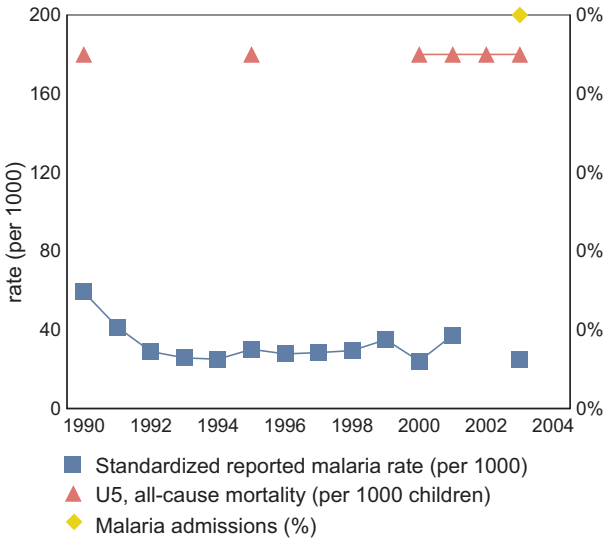
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
174 436	125 038	89 930	82 072	82 057	100 962	95 259	99 718	105 664	127 964

2000	2001	2002	2003	
89 614	140 742		95 644	Date of last report: 22 November 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	95 644
Reported malaria deaths	
Probable or clinically diagnosed	
Malaria cases	95 644
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	
P. falciparum or mixed	
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	89 614	140 742		95 644	100
Age	<5 years	53 665	82 787		53 134	56
	5> years	35 949	57 955		42 510	44

Reported malaria cases by selected subnational area

15 of 17 areas	2000	2001	2002	2003	%
Ville de Bangui	25 225	27 472		36 601	38
Mbomou	5 344	2 514		10 339	11
Mambéré Kadéï	9 446	17 635		8 583	9
Ouham Pendé	7 804	12 365			9
Ouham	5 404	10 716			8
Ombella Mpoko	3 374	5 612		7 124	7
Ouaka	10 978	16 710		6 860	7
Lobaye	3 467	4 062		4 072	4
Kémo	3 255	5 446		3 916	4
Nana Mambéré	2 808	9 434		3 807	4
Sangha Mbaéré	3 044	5 457		3 133	3
Haute Kotto	1 392	5 466		2 880	3
Haut Mbomou	1 093	4 781		2 696	3
Basse Botto	1 387	2 514		2 201	2
Bamingui Bangoran	702			1 885	2

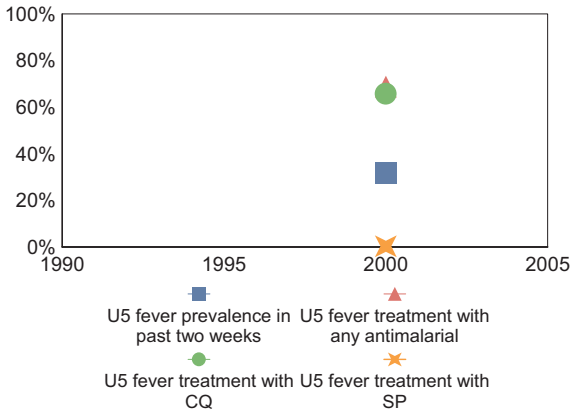
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

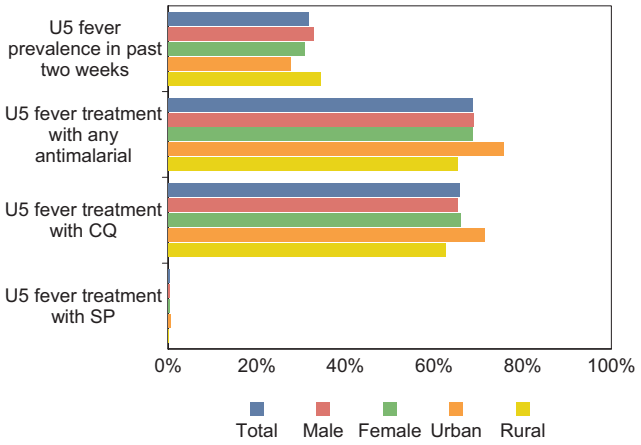
Fever prevalence and treatment with antimalarials

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



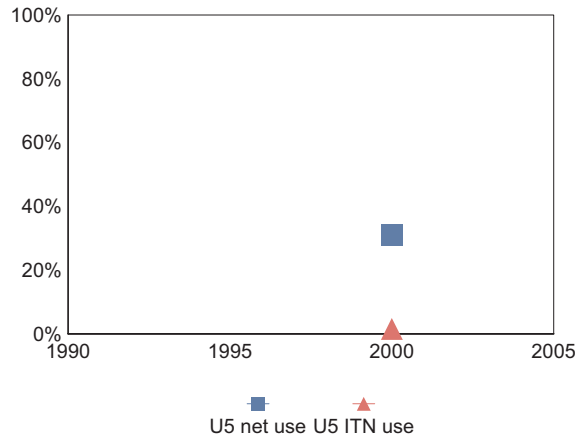
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



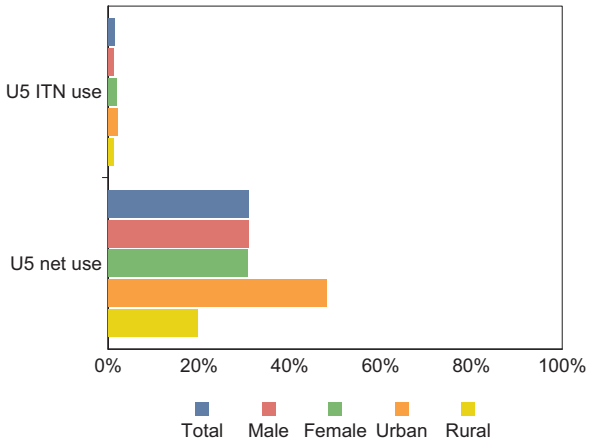
Insecticide-treated nets

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

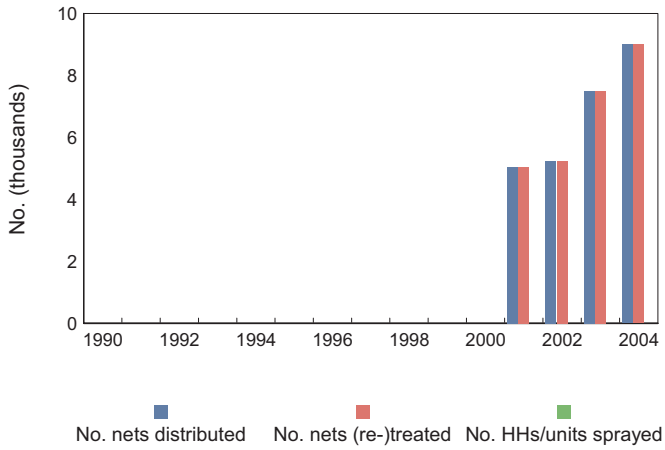


CENTRAL AFRICAN REPUBLIC

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.



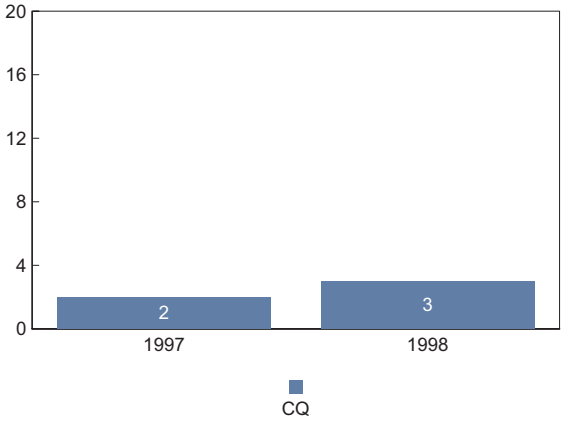
	No. nets (re-) treated	No. nets sold or distributed
2001	5 050	5 050
2002	5 250	5 250
2003	7 500	7 500
2004	9 000	9 000

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						
1997-1998	5	20.8	19.0	57.1	19.3	39.6

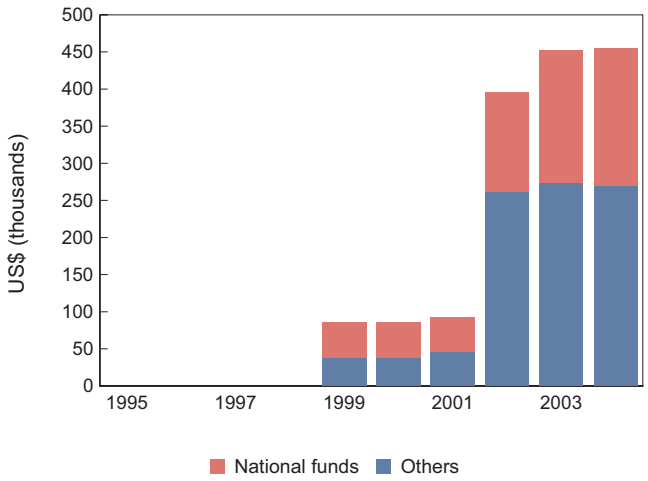
Number of drug efficacy studies available by year and drug type



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	48	38
2000	48	38
2001	46	46
2002	134	261
2003	179	274
2004	185	270

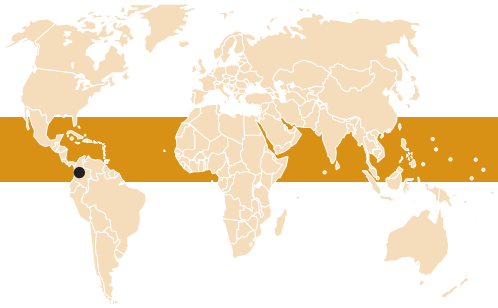
Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

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	4	10 592 816		No					

General notes and remarks

See explanatory notes at the beginning of the report.



COLOMBIA

Malaria situation

Colombia ranks among the higher-incidence countries of the Americas with a relatively high proportion of *P. falciparum* cases. Given security concerns, the NMCP does not cover many areas of the country. Areas particularly at risk of malaria include the low Cauca River Region, tropical areas of the Pacific Coast, the high Sinú River Region and the Urabá Region. More than 160 000 cases were reported in 2003.

National policy and planning

In accordance with the Global Malaria Control Strategy and the principles of RBM Partnership, the MoH launched an NMCP in 1998. Its elements include: (i) improved diagnosis and treatment; (ii) selective vector control including use of ITNs or mosquito-repellant chemicals; (iii) mosquito breeding control and targeted IRS; (iv) strengthening of public health surveillance including entomological and vector resistance surveillance; and (v) intersectoral and social participation.

Progress in malaria control activities

Institutional strengthening for the sustainable prevention and control of malaria has occurred at all levels: (i) expansion of diagnostic and treatment services in high-risk areas; (ii) mobilization and social communication; and (iii) community participation, particularly in municipalities with high-transmission rates. Multiple studies have recently been conducted to assess treatment efficacy of AQ, CQ and SP. Results of drug trials for AQ and ASU+SP are expected to become available soon.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	
– *P. falciparum* (laboratory confirmed):	AQ(3d)+SP+PQ
– *P. vivax*	CQ+PQ
• Treatment failure:	Q(3d)+C20(5d) MQ(3rd line)
• Severe malaria:	
• Pregnancy:	
– prevention	
– treatment	AQ (Pf)

Financial support

Financial supprt for malaria control activities comes almost exclusively from the MoH, which contributed over US$ 13 million to malaria control in 2003.

COLOMBIA

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)

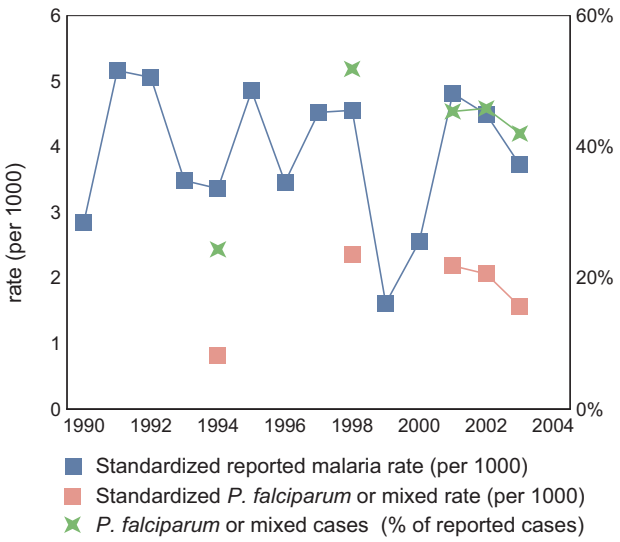
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
99 489	184 156	184 023	129 377	127 218	187 082	135 923	180 898	185 455	66 845

2000	2001	2002	2003	
107 616	206 195	195 719	164 722	Date of last report: 13 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	164 722
Reported malaria deaths	24
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	520 980
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	164 722
P. falciparum or mixed	69 238
P. vivax	95 484
Severe (inpatient or hospitalized) cases	
Malaria deaths	24
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	107 616	206 195	195 719	164 722	100
Gender	Male				104 783	64
	Female				59 939	36
Age	<1 year				165	0
	1-4 years				13 771	8
	5-14 years				32 944	20
	15-44 years				108 618	66
	>44 years				9 224	6

Reported malaria cases by selected subnational area

4 areas	2000	2001	2002	2003	%
Uraba – Bajo Cauca			85 437	77 373	47
Pacific			70 008	54 787	33
Amazon			12 527	3 713	2
Orinoco – East plains			24 141	981	1

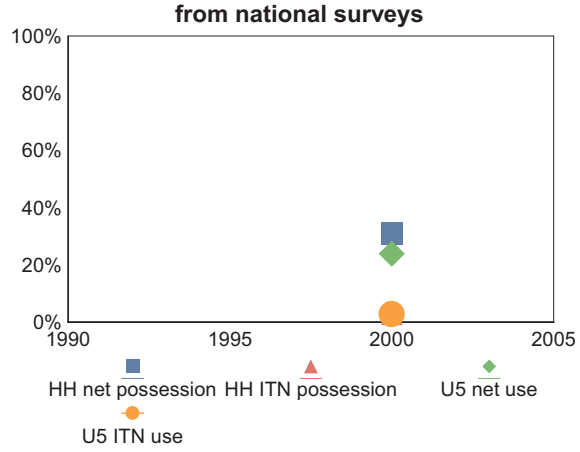
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

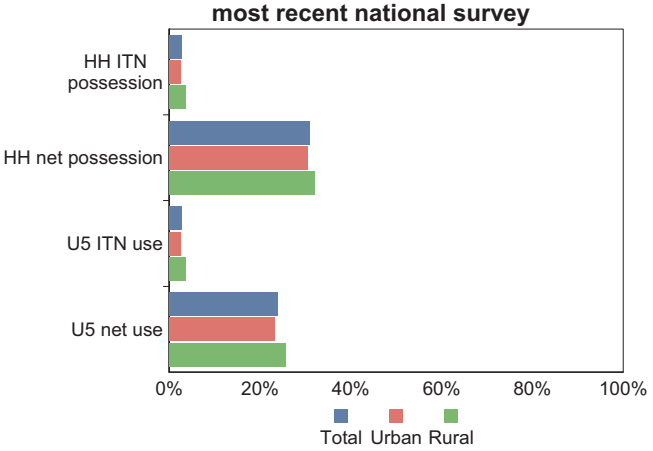
Insecticide-treated nets

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



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.

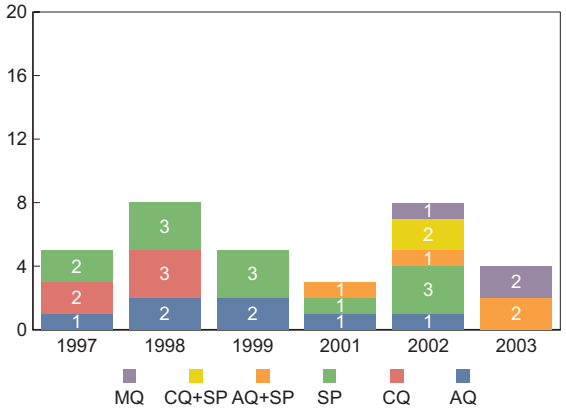
No data are currently available.

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						
1997-1998	5	66.6	44.5	96.6	47.3	83.7
SP						
1997-2002	12	10.8	0.0	26.5	1.9	15.8
AQ						
1997-2002	7	11.5	0.0	50.0	3.2	27.3
MQ						
2002-2003	3	2.2	0.0	6.4	0.0	6.4
CQ+SP						
2002	2	17.4	12.1	22.6	12.1	22.6
AQ+SP						
2001-2003	4	2.3	0.0	10.8	1.1	6.6

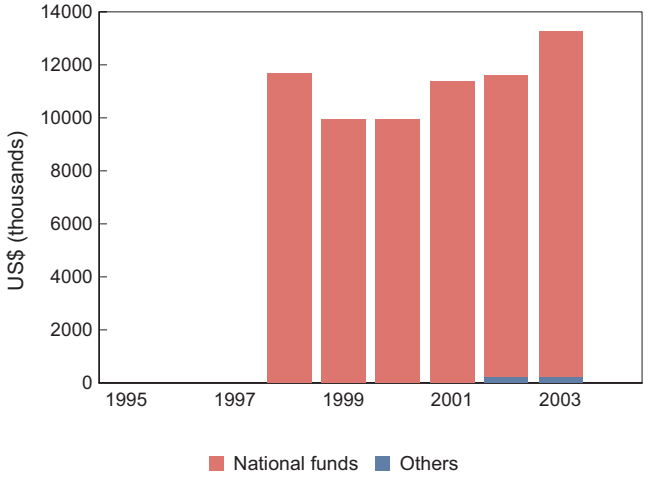
Number of drug efficacy studies available by year and drug type



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	11 661	
1999	9 930	
2000	9 950	
2001	11 364	
2002	11 364	225
2003	13 050	225
2004		

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

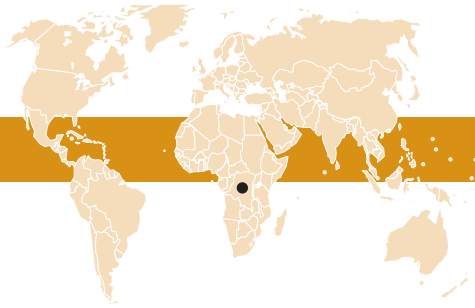
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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
Reg.Org.	3	15 909 000		No			-		

Multicountry proposal which includes Colombia, Ecuador, Peru, and Venezuela

General notes and remarks

See explanatory notes at the beginning of the report.



DEMOCRATIC REPUBLIC OF THE CONGO

Malaria situation

Stable endemic transmission of malaria occurs all year round throughout the Democratic Republic of the Congo. Seasonal fluctuations in transmission intensity occur in the east and south of the country where the rainy season lasts from September/October to May, with a short dry season in February/March. Malaria remains one of the primary causes of mortality and morbidity, especially among pregnant women and young children. Furthermore, malaria is thought to contribute indirectly to HIV transmission through transfusions with unscreened blood for patients with severe malarial anaemia. The complex emergency circumstances in certain areas of the country have worsened the malaria situation. The disease accounts for an estimated 25–30% of child mortality, and is responsible for 68% of outpatient visits and 30% of hospital admissions averaged over the country. In 2003, sentinel sites reported 4 386 638 cases of malaria, which resulted in 16 498 reported malaria deaths.

National policy and planning

In 1998, an NMCP was created with six administrative divisions. The primary control strategies are: (i) appropriate case management in both community and health infrastructures; (ii) scaling up the use of ITNs; (iii) providing IPT for pregnant women; and (iv) epidemic prevention and control. Efforts to strengthen malaria surveillance, operational research, community involvement and health education are also promoted through the RBM Partnership. Additional activities carried out by other RBM partners include strengthening human resources in health care through training, improving the supply of drugs and medical equipment, ITN distribution, supervision and monitoring and evaluation.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	8
• Home-based management of malaria:	
• Vector control using insecticides:	
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	SP
– *P. falciparum* (laboratory confirmed):	SP
– *P. vivax*	
• Treatment failure:	Q(7d)
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	SP (IPT)
– treatment	

Progress in malaria control activities

Based on demonstrated high treatment failure rates for SP, the first-line antimalarial until 2004, the country is in the process of replacing it with an ACT as the first-line antimalarial treatment. Scaling up the delivery of ITNs to target populations has accelerated since 2000, with more than 360 000 ITNs distributed in 2003 alone.

Financial support

The total needed budget estimated in the RBM 5-year strategic plan 2002–2006 exceeds US$ 143 million. The GFATM will supply almost US$ 54 million from a grant commissioned in its third round. It is anticipated that the remaining gap will be met by the government, multilateral and bilateral cooperation, the World Bank and the GFATM in future rounds.

DEMOCRATIC REPUBLIC OF THE CONGO

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
						198 064		141 353	1 508 042

2000	2001	2002	2003
964 623	2 199 247	2 640 168	4 386 638

Date of last report: 15 December 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	4 386 638
Reported malaria deaths	16 498

Probable or clinically diagnosed

Malaria cases	4 386 638
Severe (inpatient or hospitalized) cases	
Malaria deaths	16 498
Slides taken	
Rapid diagnostic tests (RDTs) taken	

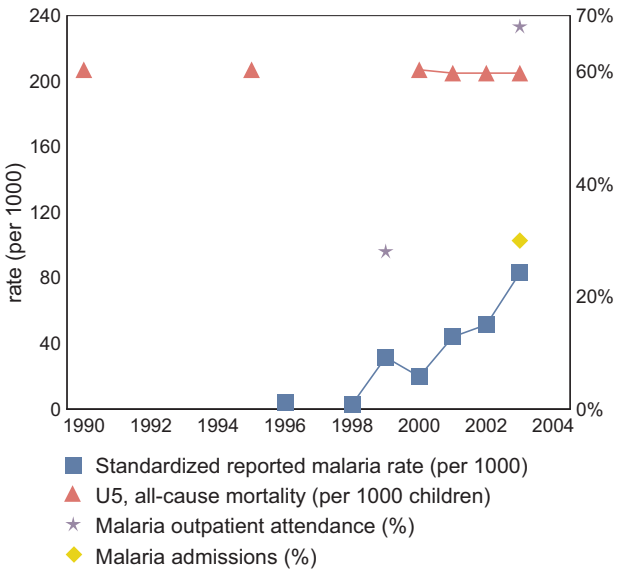
Laboratory confirmed

- Malaria cases
  - *P. falciparum* or mixed
  - *P. vivax*
- Severe (inpatient or hospitalized) cases
- Malaria deaths

Investigations

- Imported cases

Estimated reporting completeness (%)



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	964 623	2 199 247	2 640 168	4 386 638	100

Reported malaria cases by selected subnational area

11 areas	2000	2001	2002	2003	%
Katanga	26 293	394 761	53 592	640 191	15
Nord Kivu	74 246	321 779	345 077	626 616	14
Kinshasa	359 544	506 716	1 034 822	537 378	12
Sud Kivu	241	54 086	252 791	468 325	11
Equateur	54 818	93 624	130 208	465 636	11
Bas-Congo	462	314 967	135 952	453 860	10
Bandundu	35 822	207 330	208 047	323 603	7
Kasaï Oriental	9 393	86 873	157 019	255 195	6
Orientale		33 224	101 947	235 180	5
Maniema	117 373	79 999	69 421	212 200	5
Kasaï Occident	45 387	105 888	151 292	168 458	4

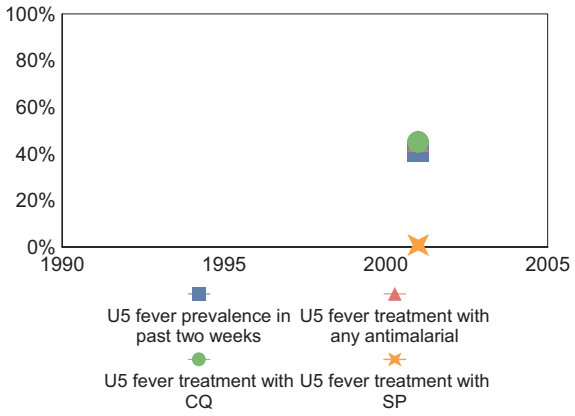
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

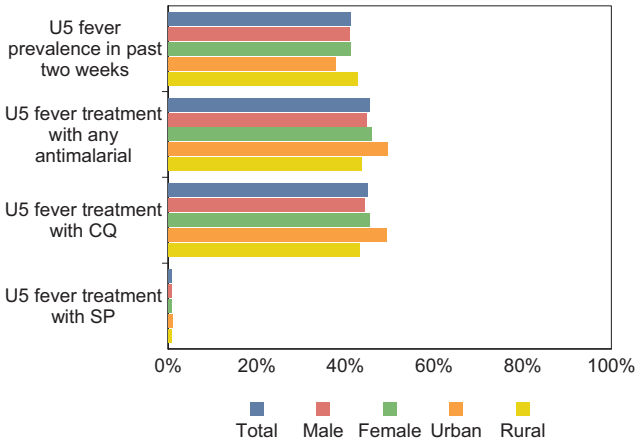
Fever prevalence and treatment with antimalarials

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



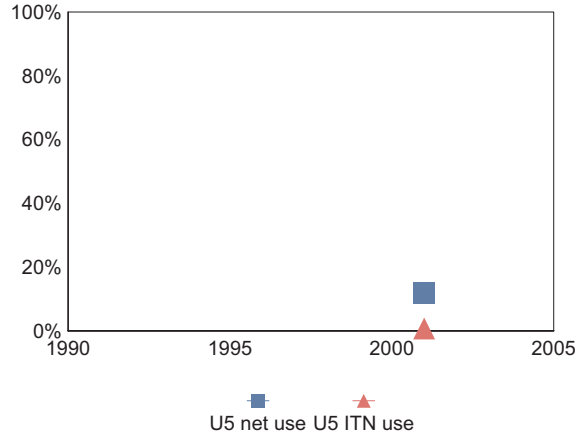
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



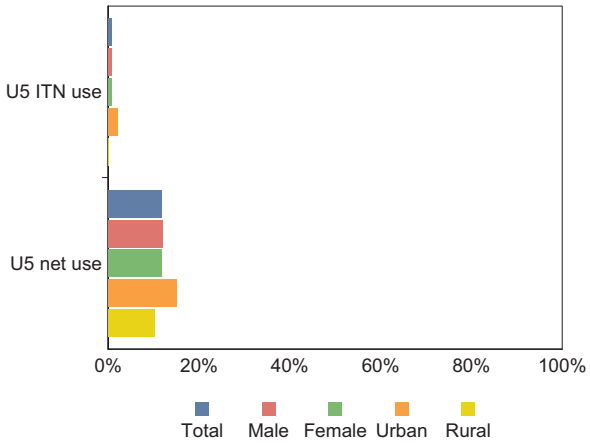
Insecticide-treated nets

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



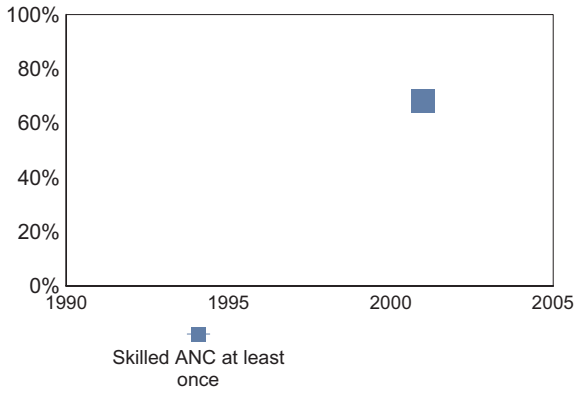
Estimates of ITN coverage from most recent national survey



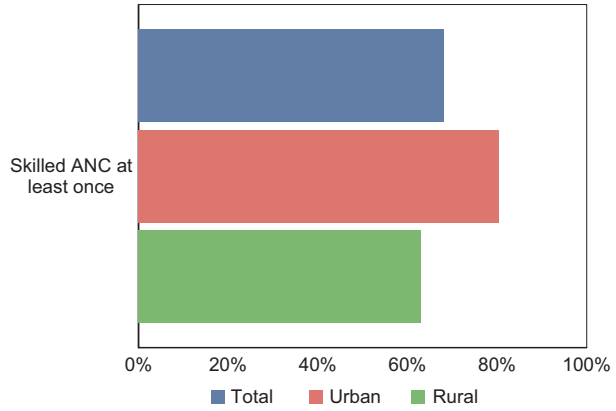
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



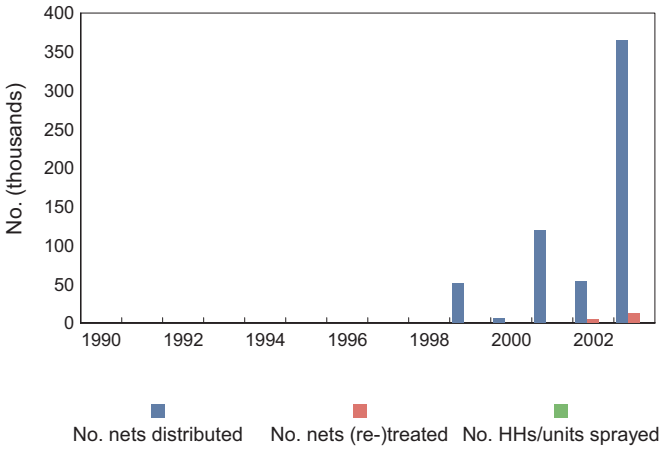
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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.



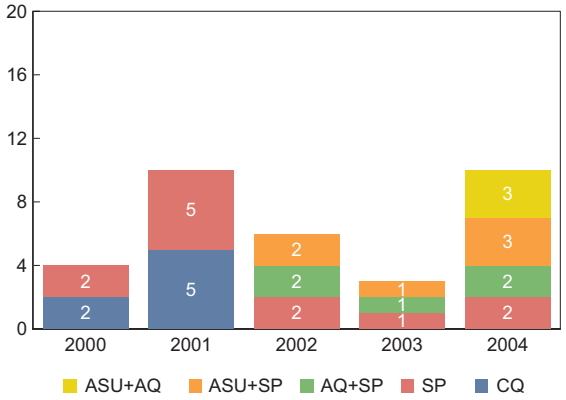
	No. nets (re-) treated	No. nets sold or distributed
1999		50 600
2000		6 000
2001		119 186
2002	4 092	53 000
2003	12 223	365 100

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						
2000-2001	7	48.0	29.4	80.0	34.0	50.0
SP						
2000-2004	12	9.3	0.0	30.2	4.4	18.3
AQ+SP						
2002-2004	5	1.7	0.0	6.0	0.7	4.4
ASU+AQ						
2003-2004	3	0.0	0.0	1.4	0.0	1.4
ASU+SP						
2002-2004	6	0.0	0.0	5.6	0.0	3.4

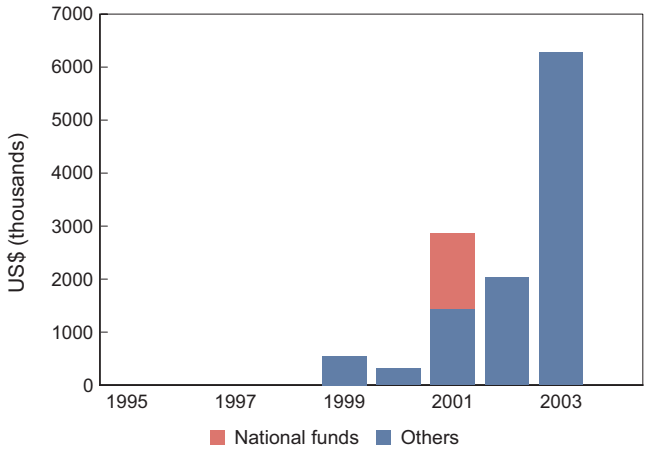
Number of drug efficacy studies available by year and drug type



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		552
2000		315
2001	1 431	1 431
2002		2 035
2003		6 269
2004		

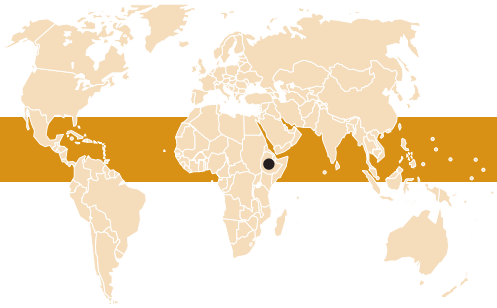
Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

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	3	24 966 676	**UNDP**	Yes	7-Sep-04	24 966 676	1	1 441 186	5.8%

General notes and remarks

See explanatory notes at the beginning of the report.



ETHIOPIA

National malaria policy & strategy environment

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:	
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	No
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ATM-LUM
– *P. falciparum* (laboratory confirmed):	ATM-LUM
– *P. vivax*	CQ
• Treatment failure:	Q(7d)
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	
– treatment	

Malaria situation

Malaria is a leading public health problem in Ethiopia, where an estimated 48 million people (68% of the population) live in areas at risk of malaria. In 2002–2003, the disease was the primary cause of reported morbidity and mortality, accounting for 16% of outpatient visits, 20% of hospital admissions and 27% of hospital deaths. Malaria transmission in Ethiopia is unstable and characterized by frequent and often large-scale epidemics. In 2003, large-scale malaria epidemics occurred from April to December resulting in 2 million clinical and confirmed cases and 3000 deaths, affecting 3368 localities in 211 districts. However, as a large majority of cases and deaths that occur at community level are not included in health facility reports, the actual number of cases and deaths that occur during epidemics is likely to be much higher.

National policy and planning

Prevention and control activities are guided by the national strategic plan (2001–2005) developed in cooperation with the Health Sector Development Programme and in accordance with the objectives of RBM partners. The commitment of the government, participation of communities and donors and other partners' support have created a conducive environment. A Health Extension Package was launched in 2004 to expand basic health services to the rural population at large, where most malaria transmission occurs. RBM partners provide technical and financial support to scale up implementation of malaria prevention and control activities. Strategies include: (i) early diagnosis and prompt treatment with safe and effective drugs; (ii) vector control in selected areas mainly through the use of ITNs and IRS; (iii) epidemic monitoring; (iv) preparedness and response; and (v) cross-cutting strategies that include information, communication and education materials, human resource development and monitoring and evaluation.

Progress in malaria control activities

Major recent achievements include: (i) an evidence-based change in antimalarial drug policy from SP to ACTs; (ii) development of new malaria treatment guidelines and associated training materials for regional-, district- and health facility-level implementation; (iii) development of a national strategic plan for scaling up the distribution and use of ITNs; and (iv) revision of guidelines on prevention and control of malaria epidemics. Procurement of ACTs and ITNs has been greatly enhanced with funding from the GFATM. Resource limitations for employing and training skilled staff and lack of capital for commodities and operational costs—especially in peripheral health facilities—present ongoing challenges that require coordinated support from partners and donors.

Financial support

In 2003, Ethiopia reported that almost US$ 5 million in national funds was available for malaria control efforts. The GAFTM committed US$ 37.9 million for malaria control in 2003, of which almost half was disbursed by the end of 2003.

ETHIOPIA

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)*

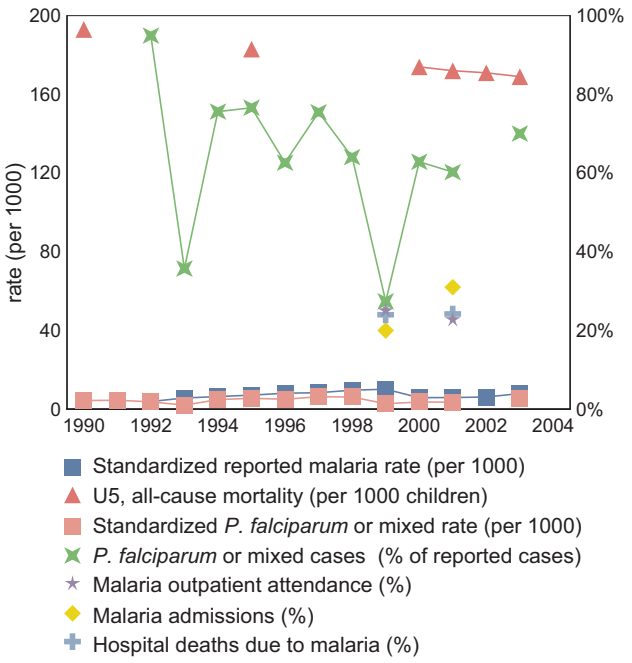
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
		206 262	305 616	358 469	412 609	478 411	509 804	604 960	647 919

2000	2001	2002	2003	
383 382	400 371	427 831	565 273	Date of last report: 15 December 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	565 273
Reported malaria deaths	
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	1 210 868
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	565 273
P. falciparum or mixed	395 964
P. vivax	158 115
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	383 382	400 371	427 831	565 273	100

Reported malaria cases by selected subnational area

	2000	2001	2002	2003	%

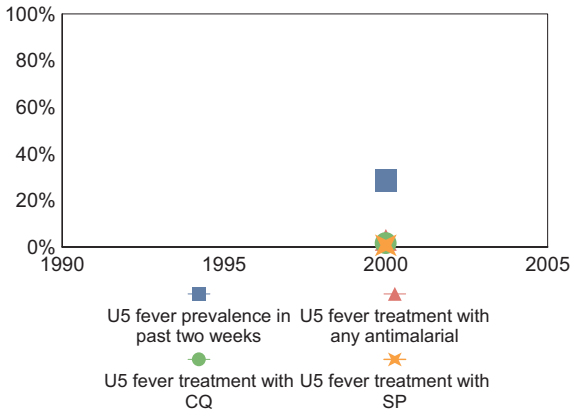
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

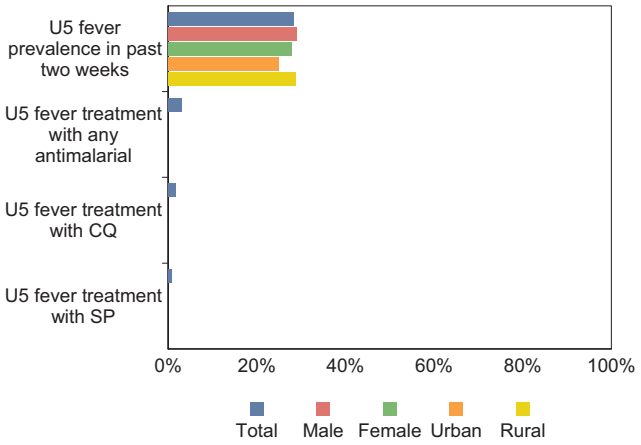
Fever prevalence and treatment with antimalarials

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



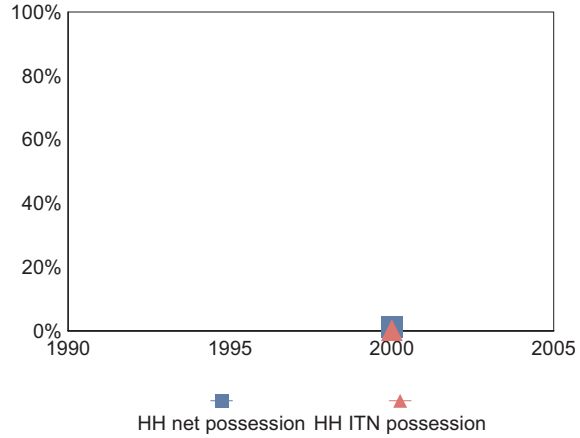
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



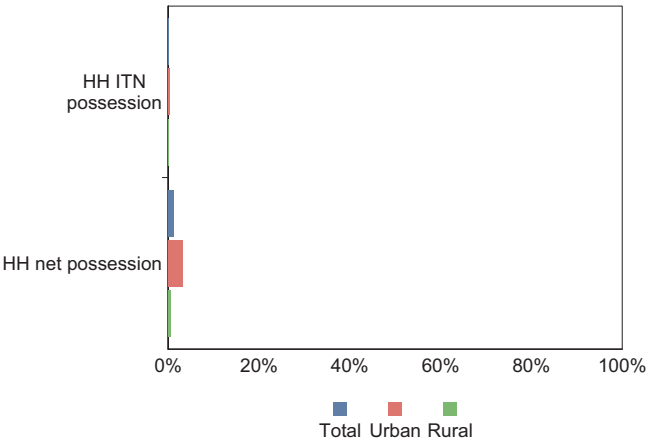
Insecticide-treated nets

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



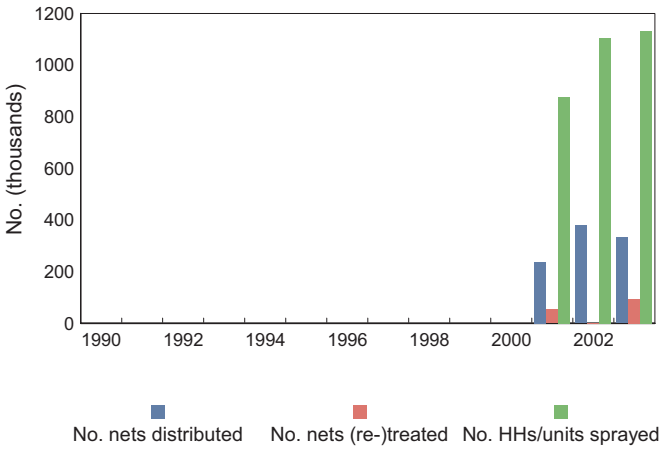
Estimates of ITN coverage from most recent national survey



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.



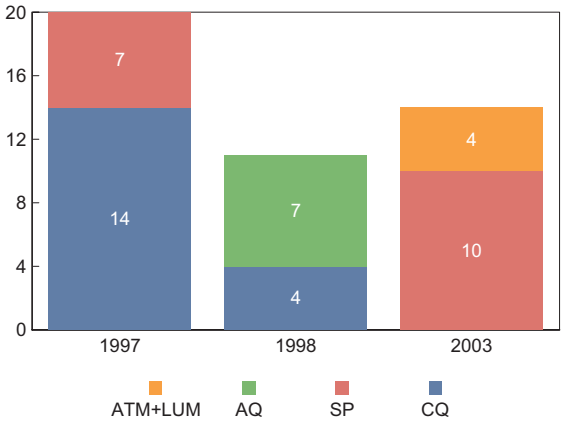
	No. HHs/units sprayed	No. nets (re-) treated	No. nets sold or distributed
2001	877 761	52 800	237 000
2002	1 105 833	2 300	378 900
2003	1 131 950	93 200	331 900

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						
1996-1998	18	70.0	5.0	97.8	55.8	85.2
SP						
1997-2003	17	10.3	0.0	44.9	2.0	26.1
AQ						
1998	7	18.9	6.2	66.7	6.5	45.8
ATM+LUM						
2003	4	0.0	0.0	0.0	0.0	0.0

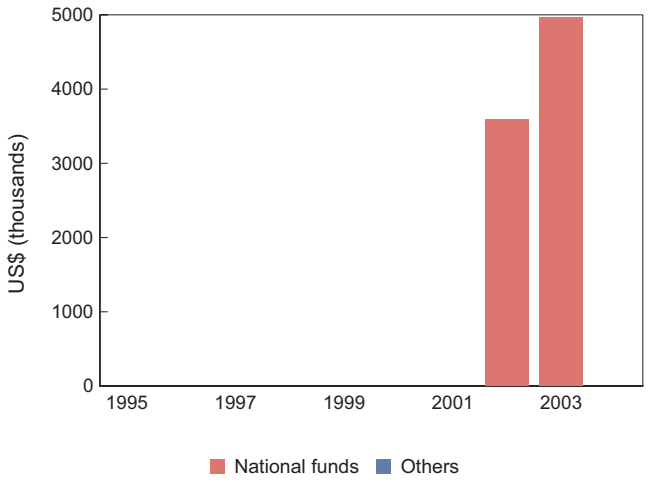
Number of drug efficacy studies available by year and drug type



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		
2002	3 597	
2003	4 971	
2004		

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

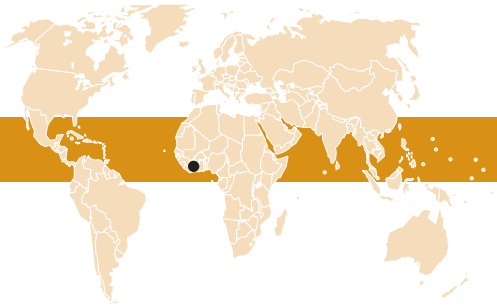
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	37 915 011	**MoH**	Yes	01-Aug-03	37 915 011	1	17 891 589	47.2%

General notes and remarks

See explanatory notes at the beginning of the report.

*Reporting in Ethiopia is based on roughly a July to June annual cycle. Reported malaria cases for 2003 presented here are for the July 2003–June 2004 cycle, and so on.



GHANA

Malaria situation

Malaria, one of the major causes of poverty and low productivity, is hyperendemic and accounts for over 44% of reported outpatient visits and an estimated 22% of under-5 mortality in Ghana. Of infections detected by blood slide examination, *P. falciparum* accounts for about 90%, *P. malariae* for 9.9% and *P. ovale* for 0.1%. Of malaria cases reported at outpatient visits in public health facilities, 36–40% are typically in children under 5 years of age. Reported malaria cases represent only a small fraction of the actual number of malaria episodes in the population because the majority of people with symptomatic infections are treated at home and are not reported.

National policy and planning

The Ghanaian RBM Partnership emphasizes strengthening health services in general and making effective prevention and treatment strategies more widely available. Ghana's malaria control strategy, which has been adopted by the RBM Partnership, involves multisectoral and intersectoral partnerships working together on an agreed plan with the goal of reducing death and illness caused by malaria by 50% by 2010.

Progress in malaria control activities

Progress was recently made in improving access to prompt and effective treatment, supply of ITNs and using IPT with SP. Based on evidence from drug efficacy studies, Ghana has recently changed from CQ to ASU+AQ for treatment of uncomplicated malaria. Several collaborative ITN campaigns were conducted with RBM partners including WHO, UNICEF, NetMark and bilateral agencies. In collaboration with ExxonMobil Ghana Ltd, an ITN voucher programme was launched in 2004 targeting pregnant women in the Greater Accra and Kumasi metropolitan areas.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	6
• Home-based management of malaria:	Yes
• Vector control using insecticides:	
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ASU+AQ*
– *P. falciparum* (laboratory confirmed):	ASU+AQ*
– *P. vivax*	
• Treatment failure:	Q(7d)
• Severe malaria:	Q(7d)
• Pregnancy:	SP (IPT)
– prevention	
– treatment	Q or ASU+AQ (2nd & 3rd trim.)

This project resulted in over 76 000 vouchers redeemed for ITNs in ExxonMobil fueling shops. IPT for pregnant women was initiated in 20 districts, including training for health staff, with funds from the GFATM. On Africa Malaria Day 25 April 2005, Ghana will launch a wide-scale ITN voucher programme and will use high-impact media and advocacy pieces to raise awareness about malaria at community level.

Financial support

Financial support to implement all of the activities of the strategic plan is not currently in place. The GFATM has committed over US$ 23 million in two grants and started disbursement in 2003. The NMCP did not provide information on routine programme finances.

GHANA

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
1 438 713	1 372 771	1 446 947	1 697 109	1 672 709	1 928 316	2 189 860	2 227 762	1 745 214	2 895 079

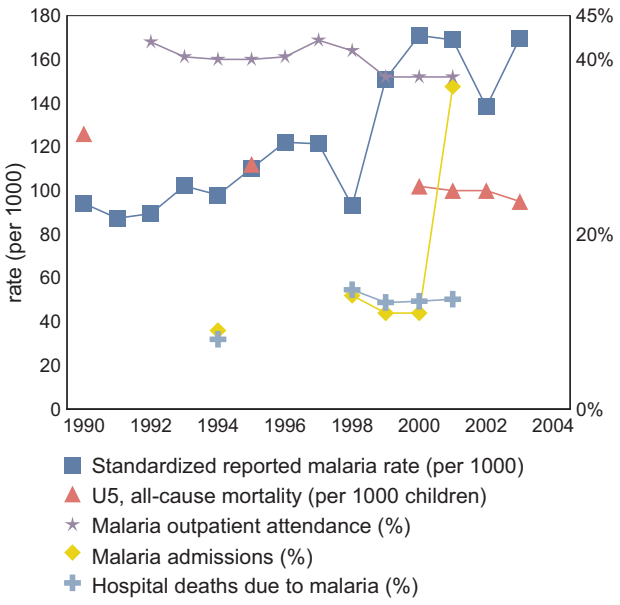
2000	2001	2002	2003
3 349 528	3 383 025	2 830 784	3 552 869

Date of last report: 30 November 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	3 552 869
Reported malaria deaths	3 245
Probable or clinically diagnosed	
Malaria cases	3 552 869
Severe (inpatient or hospitalized) cases	478 960
Malaria deaths	3 245
Slides taken	
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	478 960
P. falciparum or mixed	
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	3 349 528	3 383 025	2 830 784	3 552 869	100
Age	<5 years	1 303 685	1 316 724	966 923	1 421 148	40
	5> years	2 045 845	2 066 303	1 863 861	2 131 721	60

Reported malaria cases by selected subnational area

10 areas	2000	2001	2002	2003	%
Ashanti				774 641	22
Brong Ahafo				575 480	16
Greater Accra				414 881	12
Volta				332 875	9
Eastern				298 056	8
Northern				291 496	8
Central				257 533	7
Upper East				250 888	7
Western				226 623	6
Upper West				130 396	4

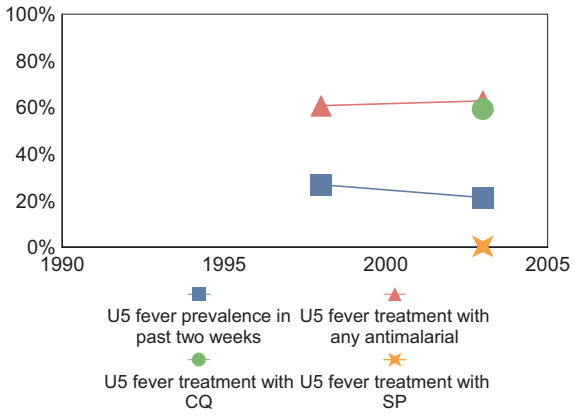
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

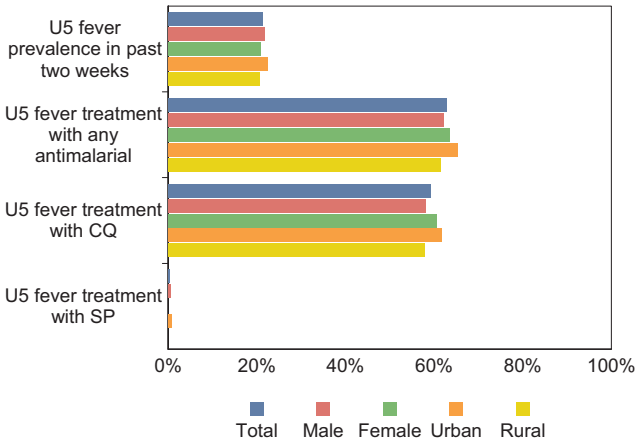
Fever prevalence and treatment with antimalarials

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



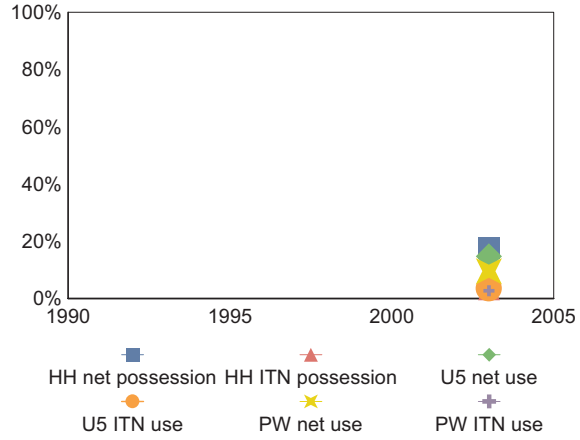
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



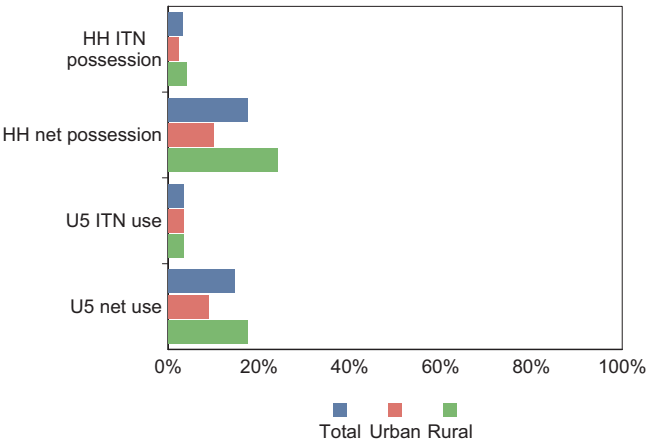
Insecticide-treated nets

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



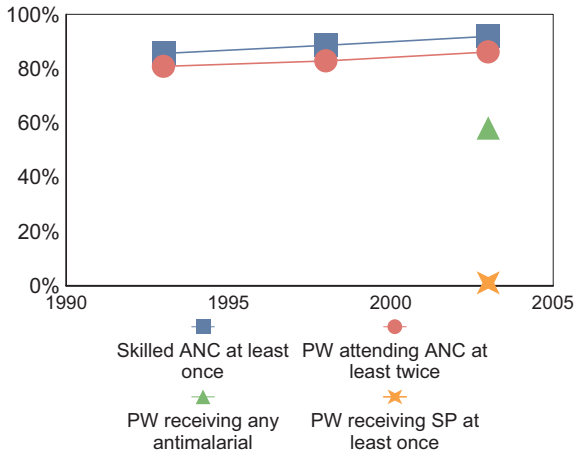
Estimates of ITN coverage from most recent national survey



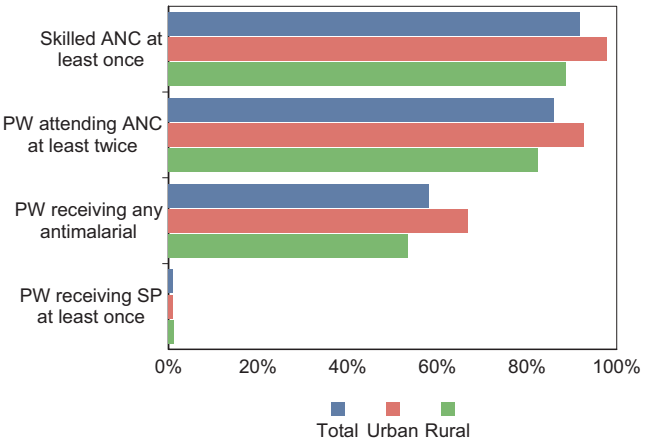
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



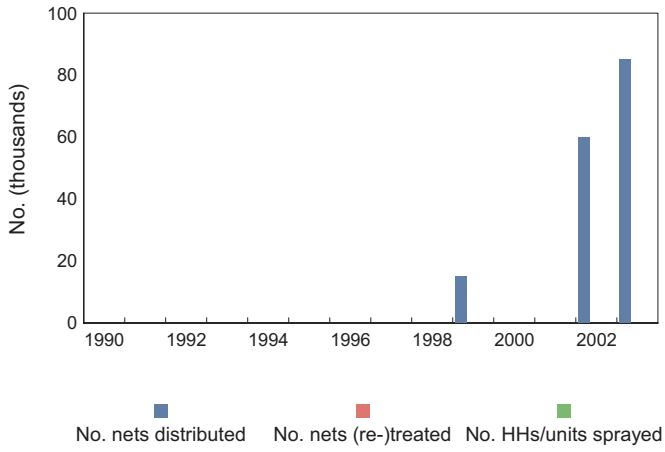
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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.



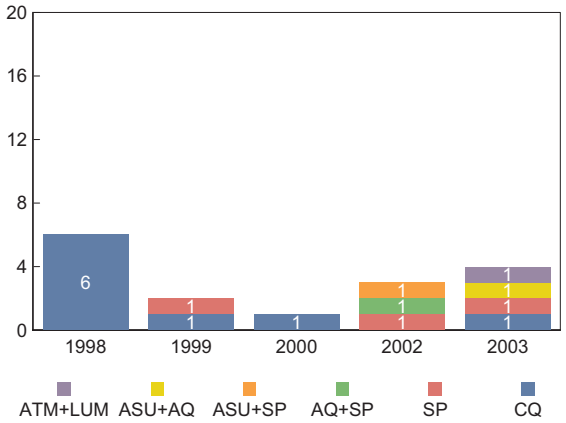
	No. nets sold or distributed
1999	15 000
2002	60 000
2003	85 030

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						
1998-2003	9	23.2	9.0	31.3	15.8	29.7
SP						
1998-2003	3	3.0	0.0	5.2	0.0	5.2
AQ+SP						
2002	1	1.4				
ATM+LUM						
2003	1	0.0				
ASU+AQ						
2003	1	0.0				
ASU+SP						
2002	1	0.8				

Number of drug efficacy studies available by year and drug type



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).

No data are currently available.

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

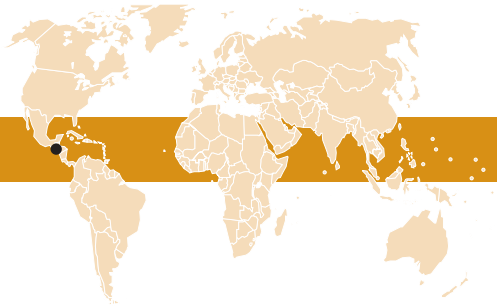
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	4 596 111	**MoH**	Yes	03-Jul-03	4 596 111	3	2 921 110	63.6%
CCM	4	18 561 367		No			-		

General notes and remarks

See explanatory notes at the beginning of the report.

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



GUATEMALA

Malaria situation

The 31 127 cases registered in Guatemala in 2003 were similar to the number reported the previous year, but represent a reduction in comparison with the number of cases reported in 2000. Alta Verapaz, Baja Verapaz, Costa Sur, Ixcán, Izabal and Petén Sur Occidental are the areas with the greatest incidence of malaria. The majority of cases occurred among those older than 15 years of age. Factors associated with malaria transmission in the country include poor environmental conditions, migration, favourable climatic conditions, insufficient human and financial resources and limited community participation and health promotion.

National policy and planning

Funding for malaria control in Guatemala is decentralized; the national malaria control office provides technical assistance, and district officials are responsible for implementing activities from budgeted funds. Control activities endorse the Global Malaria Control Strategy and the RBM initiative and include strengthening of the health system in general, selective vector control, access to prompt, effective treatment and community participation through information, education and communication materials.

Progress in malaria control activities

Since July 2004, a project promoting sustainable vector control with alternative insecticides to DDT or other persistent organic pollutants has been piloted in seven health areas in Alta Verapaz, Ixcán and Petén Sur Occidental. Recently revised guidelines for epidemiological surveillance of malaria were disseminated among affected areas. A number of operational studies were undertaken in 2002, including in the Aldea El Zapote and Aldea El Jícaro, El Progreso, where it was found that deltamethrin was not highly efficacious against local malaria vectors.

Financial support

The MoH finances the majority of the NMCP activities. In 2004, Guatemala was granted an additional US$ 9.7 million by the GFATM for malaria, which will be disbursed in 2005 and 2006.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	No
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	
– *P. falciparum* (laboratory confirmed):	
– *P. vivax*	CQ+PQ
• Treatment failure:	
• Severe malaria:	
• Pregnancy:	
– prevention	
– treatment	

GUATEMALA

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)

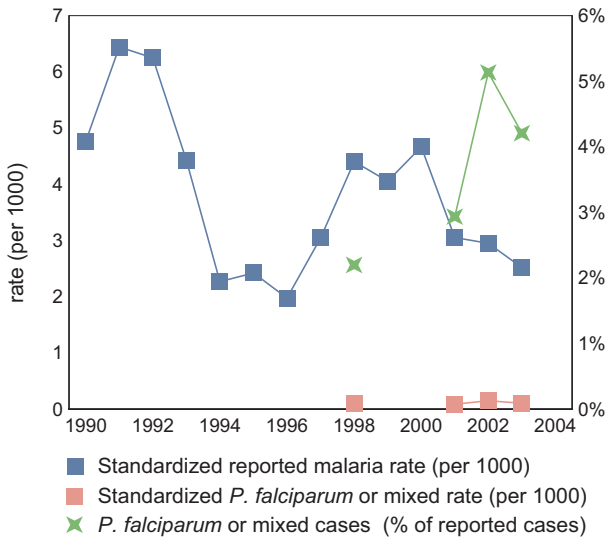
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
41 711	57 829	57 560	41 868	22 057	24 178	20 268	32 099	47 689	45 098

2000	2001	2002	2003	
53 311	35 824	35 540	31 127	Date of last report: 13 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	31 127
Reported malaria deaths	0
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	156 227
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	31 127
P. falciparum or mixed	1 310
P. vivax	29 817
Severe (inpatient or hospitalized) cases	5
Malaria deaths	0
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	53 311	35 824	35 540	31 127	100
Gender	Male				16 450	53
	Female				14 548	47
Age	<1 year				724	2
	1-4 years				5 264	17
	5-14 years				10 383	33
	15-49 years				13 019	42
	>49 years				1 608	5

Reported malaria cases by selected subnational area

7 areas	2000	2001	2002	2003	%
Alta Verapaz				12 388	40
Peten				9 826	32
Ixcan				1 932	6
Baja Verapaz				1 423	5
Huehuetenango				1 160	4
Escuintla				1 116	4
Izabal				1 058	3

SERVICE DELIVERY AND MALARIA-RELATED COMMODITIES

General malaria-related services delivered

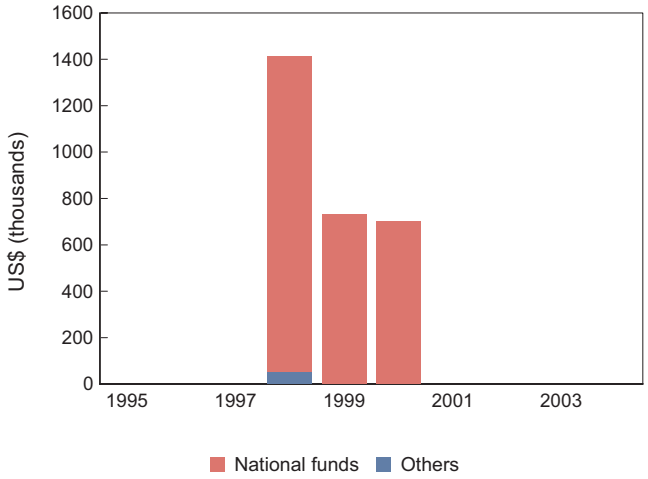
Services delivered for malaria control include numbers of nets and insecticides delivered or sold, numbers of nets (re-)treated with insecticide and numbers of households (HHs)/units sprayed during IRS campaigns. These services and service-related commodities mostly reflect core malaria control activities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

No data are currently available.

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	1 360	53
1999	730	
2000	703	
2001		
2002		
2003		
2004		

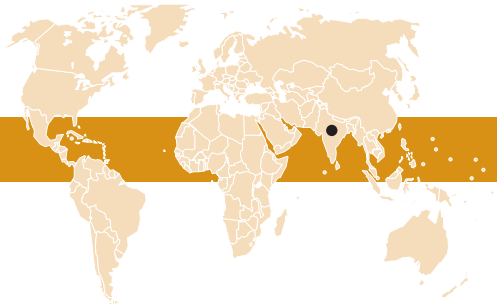
Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

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	4	9 713 853		No					

General notes and remarks

See explanatory notes at the beginning of the report.



INDIA

Malaria situation

Areas of India that are highly endemic for malaria include the north-eastern region and tribal forested and hilly areas of several states including Maharashtra, and selected non-tribal districts. Nearly one quarter of all reported cases are from Orissa State, and 80% of reported cases originate from 20% of the population. During 1995–1996, malaria outbreaks and deaths caused by malaria were reported from tribal parts of Maharashtra State. Nationwide, the reported incidence of laboratory-confirmed cases has declined from 3.0 million in 1996 to 2.1 million in 2001 to 1.78 million in 2003 during a time when there were no changes in laboratory diagnostic or reporting procedures. Around 47% of cases are caused by *P. falciparum*, with some fluctuation but no consistent trend over time. About 1000 deaths are reported annually, but these figures do not include cases treated in private and not-for-profit health facilities. CQ-resistant *P. falciparum* and insecticide-resistant malaria vectors are prevalent in some areas.

National policy and planning

The NMCP operates under the National Vector-Borne Disease Control Programme in 5-year strategic plans (current plan 2002–2007) and coordinates strategic decisions with the National Technical Advisory Committee on Malaria and with state health authorities. The National Health Policy of 2002 reinforced the commitment to malaria control and set as goals the reduction of malaria mortality by 50% by 2010 and the efficient control of malaria morbidity. Malaria control in India relies heavily on active case detection: every year nearly 100 million blood smears are taken from fever cases identified in the home, and patients are treated promptly if a diagnosis of malaria is confirmed. Access to prompt diagnosis and treatment and education is further provided through village health workers, drug distribution depots and fever treatment depots. In selected areas, there is targeted vector control through IRS, larviciding and ITNs.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2001
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	13
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	72
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ ASU(3d)+SP (5 provinces)
– *P. falciparum* (laboratory confirmed):	CQ+PQ ASU(3d)+SP (5 provinces)
– *P. vivax*	CQ+PQ
• Treatment failure:	SP
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	CQ
– treatment	CQ

Progress in malaria control activities

Malaria is currently under control in vast areas of India, covering almost 80% of the population despite increasing population density and aggregation, rapid and unplanned urbanization and increased migration. However, developmental activities, expansion of agriculture and deforestation have the potential for increasing anopheline mosquitoes' breeding sites. A survey in Orissa State in 2003 demonstrated coverage with the drug distribution depots and fever treatment depots of 98.7% of villages. About half of fever cases sought treatment at the drug distribution depots and fever treatment depots, about 36% from a health worker or primary health centre, and only about 13% from other sources such as private medical practitioners. This represents a considerable increase in the proportion of people with fever seeking treatment from government sources compared

with observations in the National Sample Survey in 1995–1996. Following the 1995–1996 malaria outbreak, Maharashtra State introduced intensified active surveillance, prompt radical treatment, selective IRS with pyrethroids and larviciding in high-risk areas. ITNs were distributed in areas of medium transmission.

Under the MoH's Enhanced Malaria Control Project, which aims to control malaria in eight states including Andhra Pradesh, Gujarat and Maharashtra, malaria morbidity dropped in the project's districts by 46% compared with 1997. Before 2004, approximately 1.8 million ITNs had been distributed and an additional 3.8 million ITNs are being procured. Over the same period, the population covered by IRS decreased by more than 50%.

Financial support

The Ministry of Finance allocates funds to the Ministry of Health and Family Welfare for the various national health programmes, including malaria, a portion of which is released to state governments. Over US$ 49 million was allocated to malaria control from the MoH in 2003. In addition, many states allocate significant budgets for malaria control activities from state resources. The World Bank has supported the Enhanced Malaria Control Project since 1997, disbursing approximately US$ 140 million to date; however, the project is expected to close in October 2005. Starting in 2005, the GFATM will provide an additional US$ 30 million for malaria control activities for 2 years in states that are not covered by the Enhanced Malaria Control Project, primarily those in the north-eastern part of the country. In addition, the Government of India has recently requested funding from the World Bank for a Vector Borne Disease Control Project that is due to begin mid-2006 and is expected to significantly expand the number of states covered.

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)

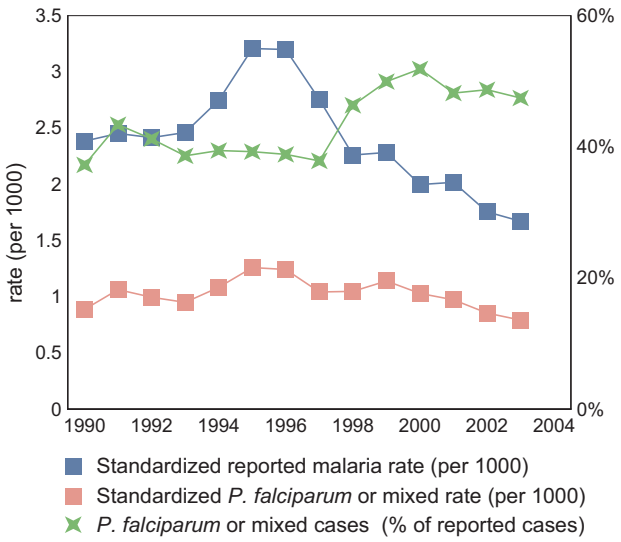
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
2 018 783	2 117 460	2 125 826	2 207 431	2 511 453	2 988 231	3 035 588	2 660 057	2 222 748	2 284 713

2000	2001	2002	2003	
2 031 790	2 085 484	1 842 019	1 781 336	Date of last report: 4 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	1 781 336
Reported malaria deaths	990
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	97 874 977
Rapid diagnostic tests (RDTs) taken	280 000
Laboratory confirmed	
Malaria cases	1 781 336
P. falciparum or mixed	845 173
P. vivax	936 163
Severe (inpatient or hospitalized) cases	
Malaria deaths	990
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	2 031 790	2 085 484	1 842 019	1 781 336	100
Gender	Male	1 125 591		1 081 849		59
	Female	825 174		760 170		41
Age	1-4 years	130 896				6
	<5 years			150 605		8
	5-14 years			462 062		25
	10-14 years	468 379				23
	15+ years			1 229 352		67
	15-19 years	1 351 490				67

Reported malaria cases by selected subnational area

15 of 35 areas	2000	2001	2002	2003	%
Orissa		454 541	468 046	417 276	23
Chhattisgarh		290 666	245 365	194 419	11
West Bengal		345 053	181 272	175 739	10
Rajasthan		129 233	68 627	142 738	8
Gujarat		81 347	80 983	130 744	7
Jharkhand		130 784	126 539	112 740	6
Karantaka		197 625	132 584	100 220	6
Madhya Pradesh		183 118	108 818	99 708	6
Uttar Pradesh		94 524	90 188	81 853	5
Assam		95 142	89 601	76 570	4
Maharashtra		56 043	45 568	62 947	4
Tamil Nadu		31 551	27 337	43 604	2
Andhra Pradesh		57 735	38 053	35 995	2
Arunachal Pradesh		56 030	46 431	34 810	2
Meghalaya		20 630	17 918	18 366	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.

Insecticide-treated nets

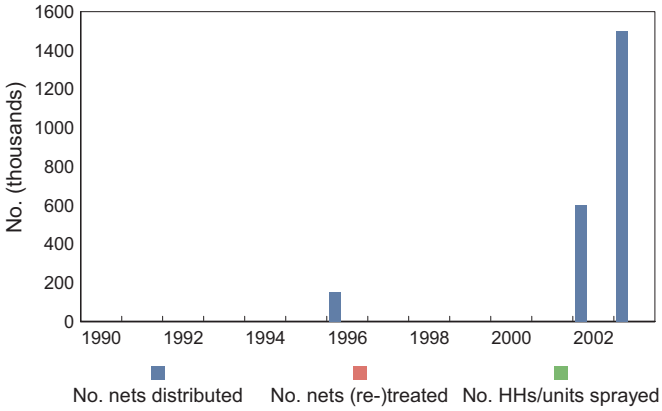
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data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

No survey-based estimates of mosquito net or ITN coverage are currently available.

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.



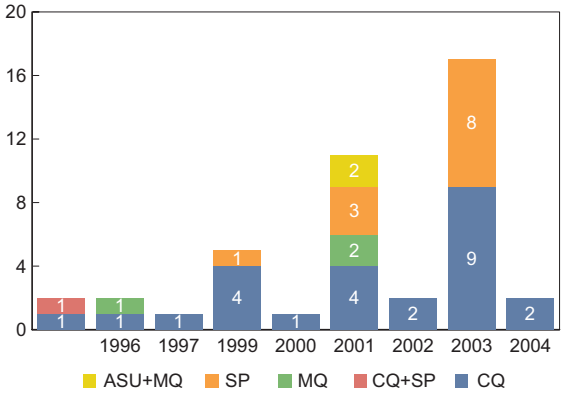
	No. nets sold or distributed
1996	150 000
2002	600 000
2003	1 500 000

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 Low	Range High	Percentile 25th	Percentile 75th
CQ						
1996-2004	25	34.0	0.0	95.9	23.6	65.4
SP						
1999-2003	12	17.9	0.0	68.2	3.0	45.4
MQ						
1996-2001	3	4.5	0.0	7.8	0.0	7.8
CQ+SP						
	1	6.5				
ASU+MQ						
2001	2	6.4	1.9	10.9	1.9	10.9

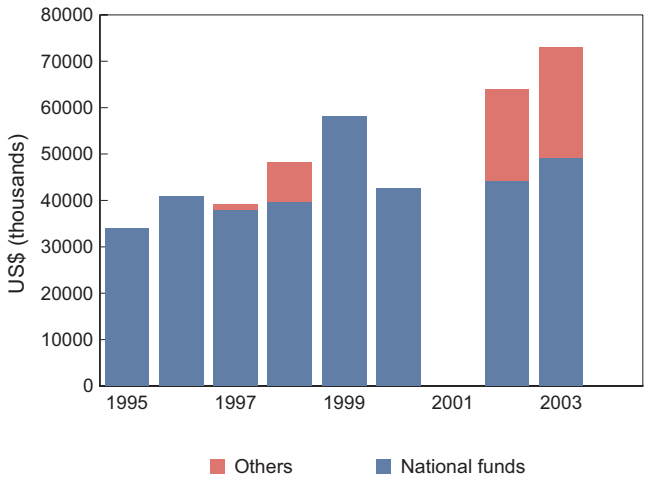
Number of drug efficacy studies available by year and drug type



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	33 922	-
1996	40 922	-
1997	38 107	1 140
1998	39 749	8 483
1999	58 065	
2000	42 690	
2001		
2002	44 160	19 820
2003	49 100	23 910
2004		

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

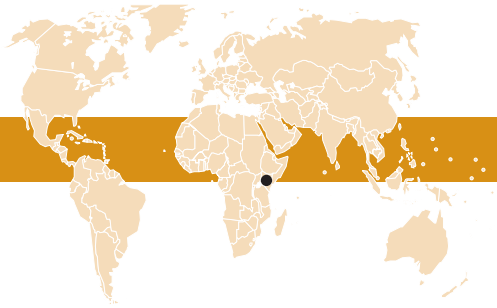
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	4	30 167 781		No					

General notes and remarks

See explanatory notes at the beginning of the report.

Reported malaria cases for 2003 and all subnational reported malaria data are provisional. Preventive treatment during pregnancy is only recommended in high-risk areas. The number of nets distributed for 2002 and 2003 reflect fiscal years April–March 2002–2003 and 2003–2004, respectively.



KENYA

Malaria situation

Malaria is a major public health problem in Kenya, with malaria burden and transmission patterns varying across the country. Four malaria epidemiological zones have been identified: (i) perennial high transmission near Lake Victoria and the south coast; (ii) high transmission with seasonal fluctuations adjacent to the areas with perennial transmission; (iii) stable transmission with seasonal peaks in most of the semi-arid and western highland regions; and (iv) low transmission risk in the arid and mountain regions.

National policy and planning

A national malaria strategy was launched in 2001 and the malaria control programme was upgraded to a full division with its own budget line. The national malaria control strategy adopted a bottom-up approach for mobilizing districts; 50 out of 70 malaria-endemic districts have developed business plans with malaria components that reflect four strategic approaches: (i) access to prompt and effective treatment; (ii) management and prevention of malaria during pregnancy; (iii) use of ITNs and other vector control methods; and (iv) epidemic preparedness and response in 16 epidemic-prone districts. Monitoring and evaluation and information, education and communication materials are used to support implementation across these strategic approaches. The district plans were consolidated into a single national business plan from 2003 to 2007, which identified the following key interventions: (i) Integrated Management of Childhood Illness to implement case management at health facilities and through home management of fever; (ii) focused antenatal care for IPT delivery; (iii) targeted ITN distribution to pregnant women and children under 5 years of age; and (iv) IRS for selective vector control in the 16 epidemic-prone districts.

Progress in malaria control activities

Districts are at different stages of implementation of the national malaria control strategy, depending on local capacity and degree of organization and coordination in planning and implementation. Six sentinel districts received priority support for scaling up most interventions, so as to provide the necessary feedback for monitoring and evaluation of RBM control impact. Drug efficacy testing for first-line and second-line drugs is conducted in eight sentinel sites, two for each of the four epidemiological zones. Advocacy campaigns and information, education and communication messages are disseminated through electronic and print media, performances and sporting activities.

Financial support

Funding for malaria control efforts is improving with increased contributions from various RBM partners and two grants from the GFATM totalling over US$ 91 million, of which close to US$ 1 million was disbursed in 2003.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	6
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	No
– number of sites currently active:	0
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ATM-LUM*
– *P. falciparum* (laboratory confirmed):	ATM-LUM*
– *P. vivax*	
• Treatment failure:	Q(7d)
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	SP (IPT)
– treatment	Q(7d)

KENYA

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
				6 103 447	4 343 190	3 777 022		80 718	122 792

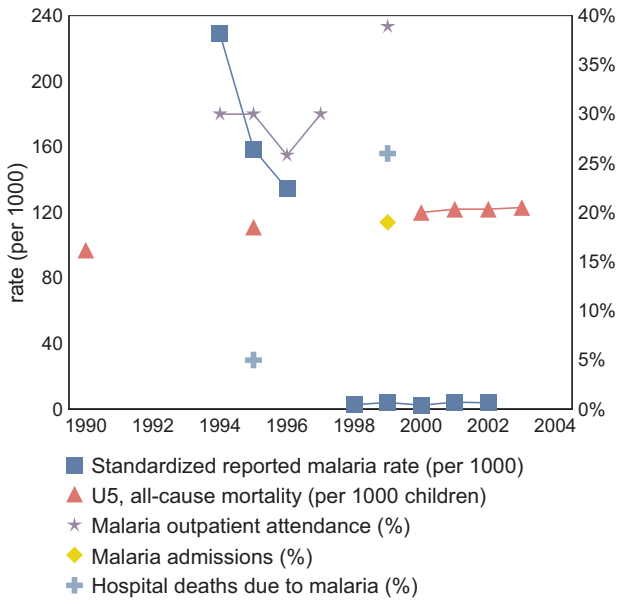
2000	2001	2002	2003
74 194	132 590	124 197	

Date of last report: 1 November 2004

Reported malaria by type and quality

For most recent year: 2002

Reported malaria cases	124 197
Reported malaria deaths	135
Probable or clinically diagnosed	
Malaria cases	124 197
Severe (inpatient or hospitalized) cases	9 584
Malaria deaths	135
Slides taken	6 211
Rapid diagnostic tests (RDTs) taken	6 280
Laboratory confirmed	
Malaria cases	
P. falciparum or mixed	
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	40



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	74 194	132 590	124 197		100
	PW	1 364	5 061	3 620		3
Age	<5 years	29 541	50 839	38 426		31
	5> years	51 990	76 690	82 151		66

Reported malaria cases by selected subnational area

9 areas	2000	2001	2002	2003	%
Kitale district hospital	22 108	20 166	32 911		26
Kericho district hosp.	9 679	11 011	19 054		15
Kapsara HC	5 847	4 184	5 859		5
Chempkemel HC	5 106	4 951	5 761		5
Kipsitet dispensary	2 446	2 868	3 369		3
Londiani sub-dist. hosp.	1 534	1 072	3 014		2
Chepchoina dispensary	2 458	2 440	1 939		2
Kiminini cottage hosp.	1 075	1 226	1 150		1
Kipchimchim mis. hosp.	448	445	515		<1

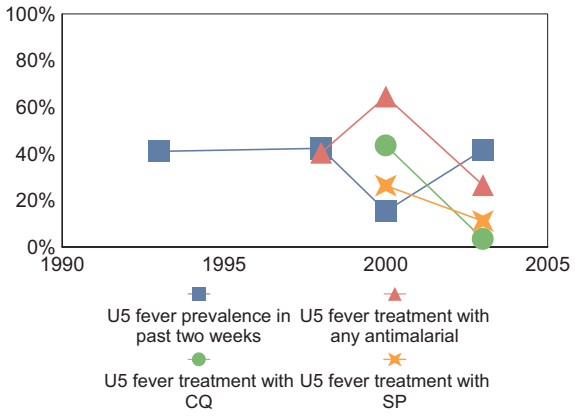
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

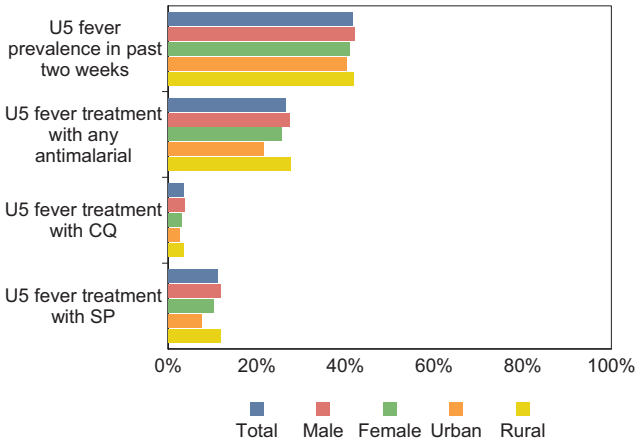
Fever prevalence and treatment with antimalarials

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



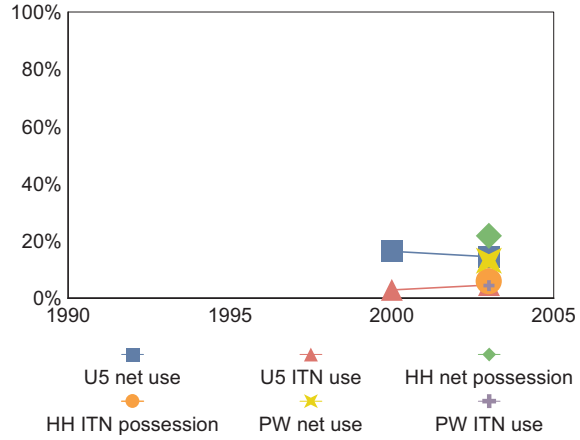
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



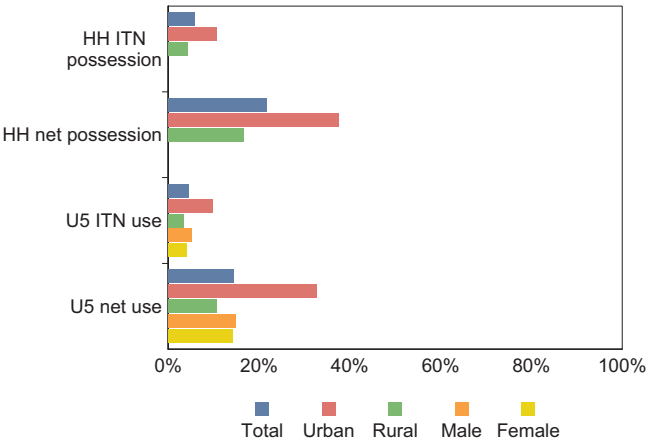
Insecticide-treated nets

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



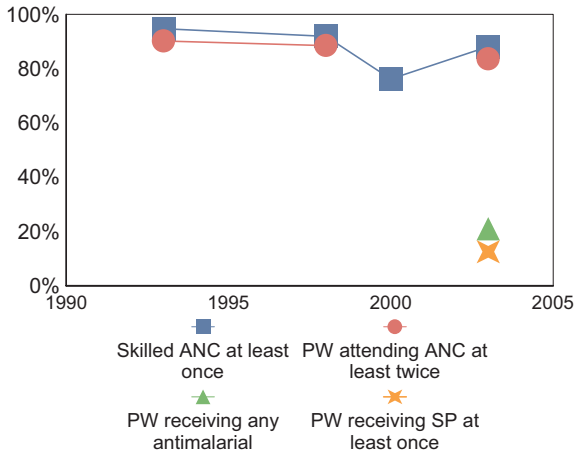
Estimates of ITN coverage from most recent national survey



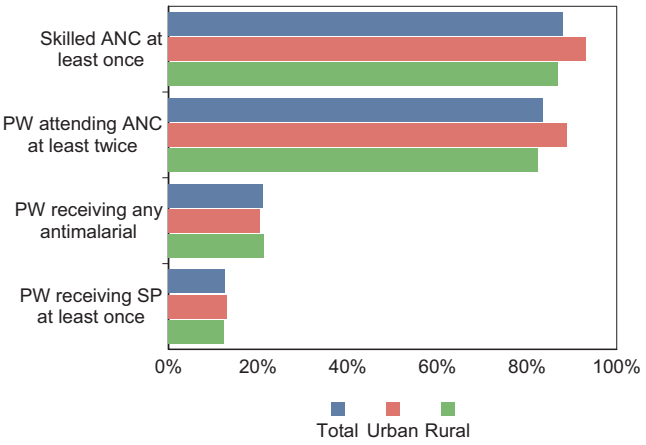
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



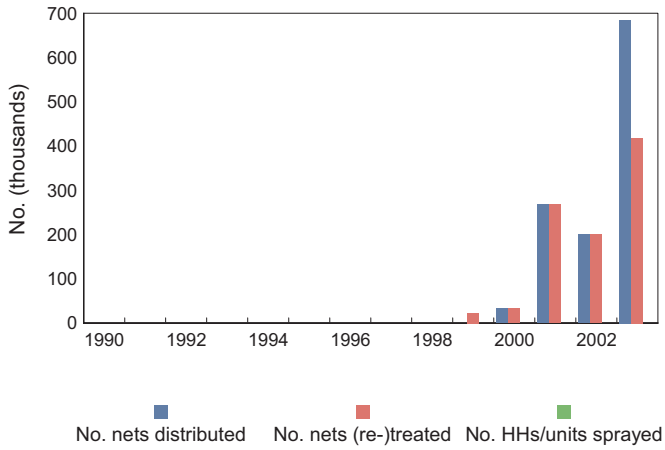
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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.



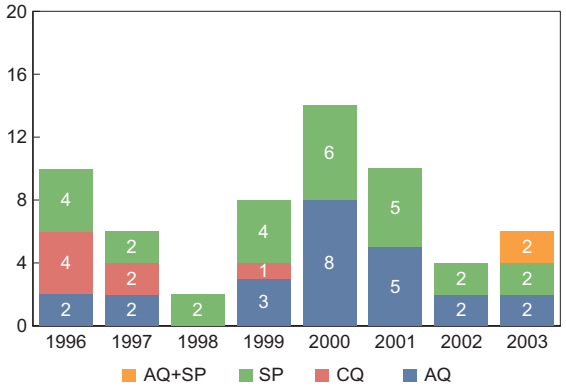
	No. nets (re-) treated	No. nets sold or distributed
1999	23 000	
2000	32 300	32 300
2001	267 200	267 200
2002	200 000	200 000
2003	418 500	684 850

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						
1996-1999	7	65.8	15.2	84.8	31.7	80.4
SP						
1996-2003	27	8.4	0.0	51.6	3.4	17.9
AQ						
1996-2003	24	2.4	0.0	23.1	0.0	8.3
AQ+SP						
2003	2	2.0	1.6	2.4	1.6	2.4

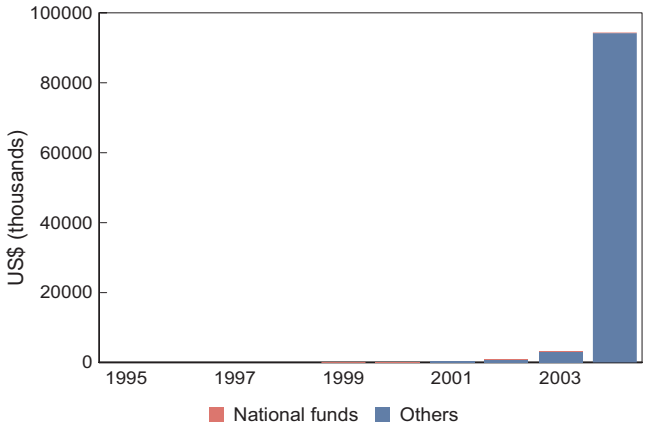
Number of drug efficacy studies available by year and drug type



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	39	
2000	83	
2001		418
2002	128	917
2003	82	3 130
2004	192	94 175

KENYA

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.

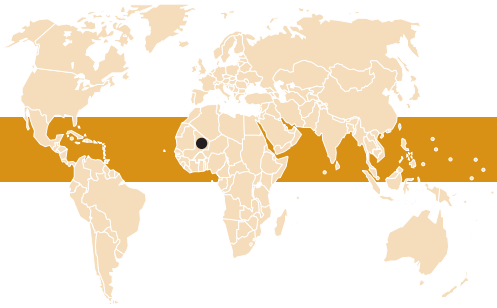
Approved proposals			Grant agreements and disbursements (as of 13 January 2005)						
Source	Round	Total year 1-2 budgets	Principal recipient	Signed	Signature date	Grant amount	No. of disbursements	Total disbursed	% disbursed
CCM	2	10 526 880	**MoF**	Yes	23-Jun-03	10 526 880	2	4 640 447	44.1%
CCM	4	31 972 711		No					

General notes and remarks

See explanatory notes at the beginning of the report.

Malaria reporting for slides and RDTs taken, probable inpatient cases, probable malaria deaths and parasitological confirmations refer to information received from Kitale district hospital. Subnational area data for Kitale and Kericho district hospitals reflect outpatient attendance and inpatient admissions, whereas all other areas are outpatient attendance only.

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



MALI

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	4
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ATM-LUM*
– *P. falciparum* (laboratory confirmed):	ATM-LUM*
– *P. vivax*	
• Treatment failure:	ASU+SP
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	SP (IPT)
– treatment	Q(7d)

Malaria situation

Malaria is one of the principal causes of morbidity and mortality in Mali and is responsible for over 30% of outpatient visits. Mali experiences three types of malaria transmission each year: (i) 6 months of seasonal transmission in the south; (ii) 3 months of transmission in the Sahelian area; and (iii) irregular transmission with epidemics in the north.

National policy and planning

The national 5-year strategic plan for malaria control from 2001 to 2005 aims to reduce malaria burden by 30% by 2005 and by 50% by 2010. Strategies include: (i) access to prompt and effective treatment; (ii) prevention especially among pregnant women and children under 5 years of age; (iii) epidemic control; (iv) operational research; (v) information, education and communication materials; and (vi) intersectoral collaboration. Many partners are involved, including WHO, UNICEF and several bilateral agencies and NGOs.

Progress in malaria control activities

Many activities related to the prevention of malaria were recently undertaken. A massive ITN campaign was conducted that included a promotional campaign in health facilities and the participation of NGOs such as NetMark. A national network for the prevention of malaria among pregnant women was created. Educational materials regarding the use of IPT with SP for pregnant women were developed and distributed in 2004.

In 2003–2004, five collaborative workshops were organized in order to revise the national malaria control strategy profile to include new approaches for the distribution of ITNs, a reformulation of the national treatment policy including the introduction of ACTs and a restructuring of the policy for malaria prevention in pregnant women through IPT. ATM+LUM and ASU+SP are the ACTs adopted in the new treatment policy. The NMCP recently established two oversight committees to address availability, forecasting, production and pharmacovigilance for the planned deployment of ACTs. Data for monitoring and evaluation are provided by the national HIS, weekly epidemic surveillance, sentinel sites and research studies by various organizations.

Financial support

The annual budget for 2003 for the NMCP of US$ 1.1 million was supplied by the MoH and RBM partners. The GFATM granted an additional US$ 2.5 million for malaria for 2 years, almost half of which was disbursed in 2004.

MALI

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
248 904	282 256	280 562	295 737	263 100	95 357	29 818	384 907	12 234	530 197

2000	2001	2002	2003	
546 634	612 895	723 077	809 428	Date of last report: 25 November 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	809 428
Reported malaria deaths	1 309

Probable or clinically diagnosed

Malaria cases	809 428
Severe (inpatient or hospitalized) cases	
Malaria deaths	1 309
Slides taken	
Rapid diagnostic tests (RDTs) taken	

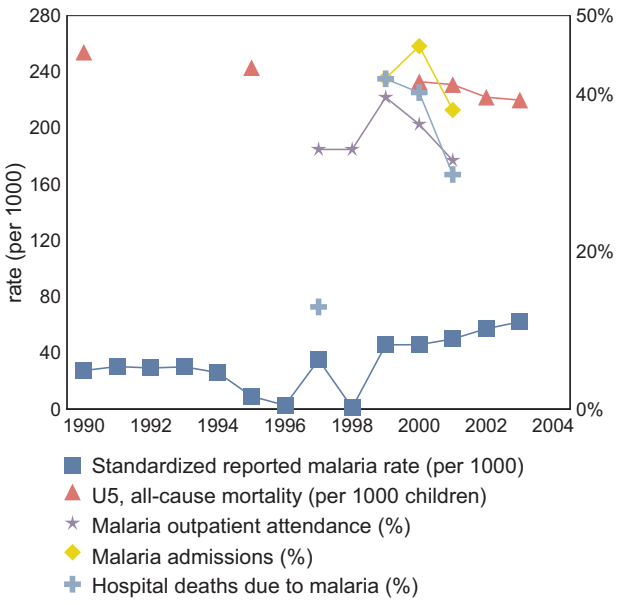
Laboratory confirmed

- Malaria cases
  - *P. falciparum* or mixed
  - *P. vivax*
- Severe (inpatient or hospitalized) cases
- Malaria deaths

Investigations

- Imported cases

Estimated reporting completeness (%)



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	546 634	612 895	723 077	809 428	100
Age	<5 years	177 969	211 018	243 390	266 833	33

Reported malaria cases by selected subnational area

	2000	2001	2002	2003	%

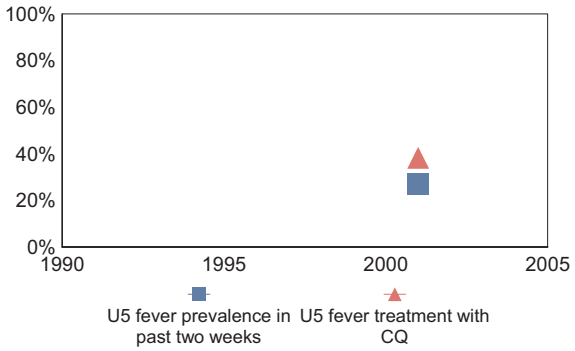
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

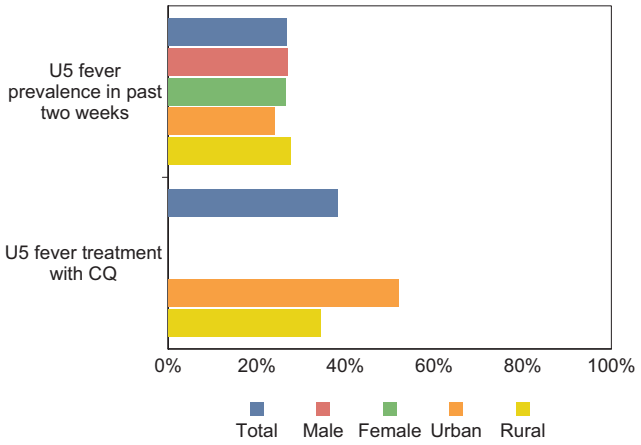
Fever prevalence and treatment with antimalarials

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



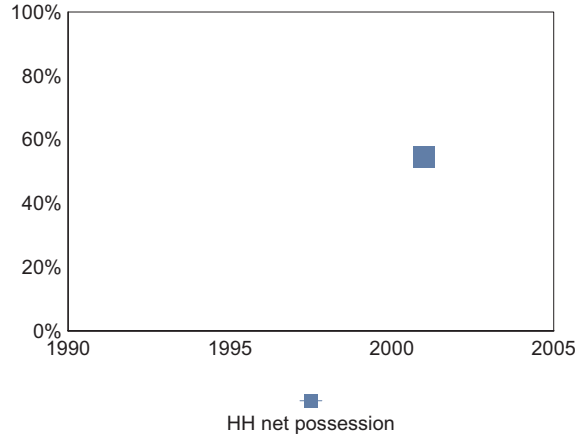
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



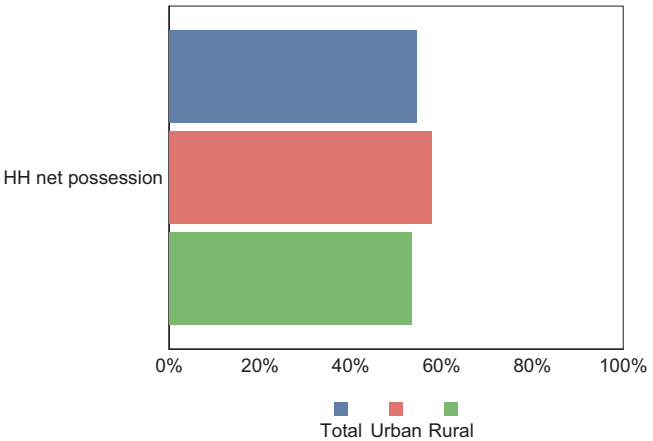
Insecticide-treated nets

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



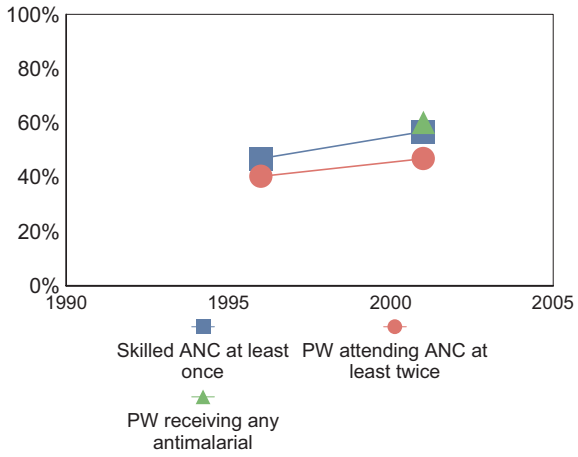
Estimates of ITN coverage from most recent national survey



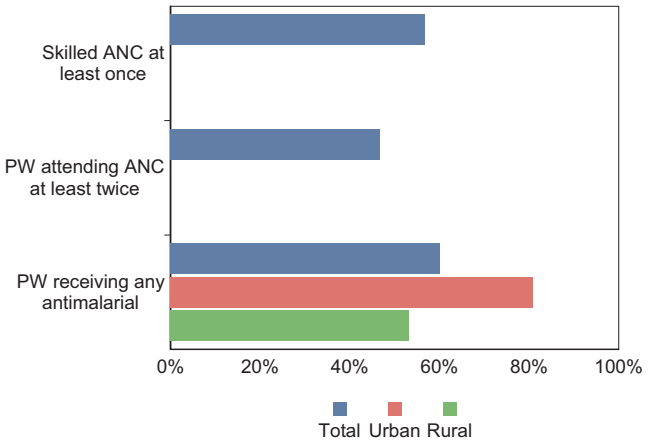
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



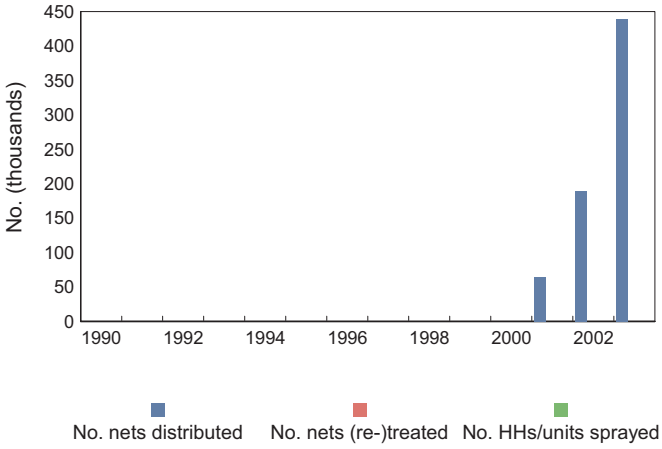
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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.



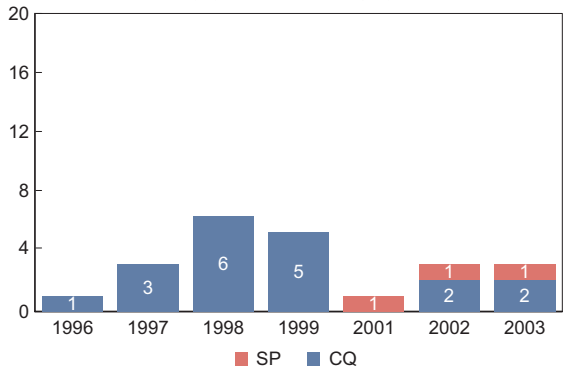
	No. nets sold or distributed
2001	64 000
2002	189 000
2003	439 897

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						
1996-2003	19	11.0	2.0	24.3	4.2	13.0
SP						
2001-2003	3	0.6	0.0	2.0	0.0	2.0

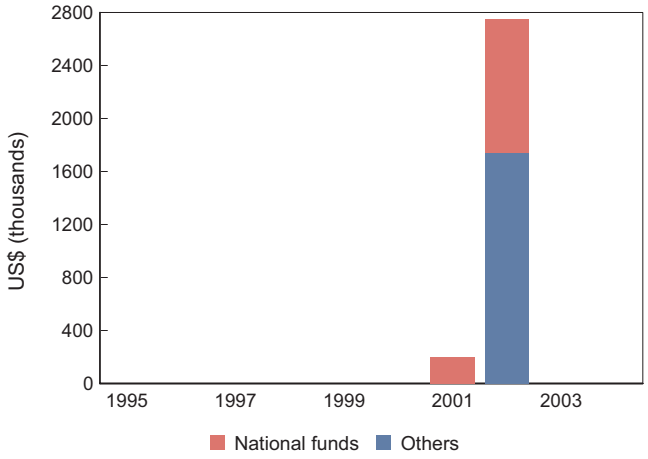
Number of drug efficacy studies available by year and drug type



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	202	
2002	1 007	1 744
2003		
2004		

MALI

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

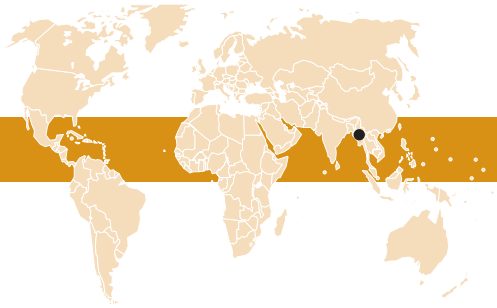
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	1	2 023 424	**MoH**	Yes	25-Aug-03	2 023 424	2	945 120	46.7%

General notes and remarks

See explanatory notes at the beginning of the report.

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



MYANMAR

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2002
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	6
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	1
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ+SP or ASU(3d)+MQ
– *P. falciparum* (laboratory confirmed):	ATM-LUM or ASU+MQ
– *P. vivax*	CQ+PQ
• Treatment failure:	Q(7d)+Doxy(7) or ASU(7d)+Doxy(7)
• Severe malaria:	Q(7d)+Doxy(7) or ASU(7d)+Doxy(7)
• Pregnancy:	
– prevention	not recommended
– treatment	Q(1st trim.)+CD; ASU+CD (2nd & 3rd trim.)+CD

Malaria situation

Malaria is one of the major public health problems in Myanmar and is reported as the leading cause of morbidity and mortality. A major risk group is non-immune adult migrants in forests who work in gem mining, logging, agriculture, plantations and construction. In addition to their lack of immunity against clinical malaria, poor access to laboratory and treatment services and language barriers contribute to the vulnerability of migrant workers. As a result, about 70% of reported malaria cases in Myanmar are older than 15 years of age, and about 60% of cases are related to forestry work. Myanmar experienced 56 malaria outbreaks between 1991 and 2000, with international migration being the most important factor of those outbreaks. Given poor access to health care in remote areas where most cases originate, the total malaria burden is likely to be much higher than reported. Moreover, self-treatment is common, and malaria reporting does not include cases treated in the private sector or through traditional medicine practices.

National policy and planning

Malaria control is integrated into the general health services and is part of the National Health Plan. At national level, malaria control is part of the Vector Borne Disease Control Programme, which is responsible for technical guidance planning and monitoring and evaluation. The national strategies are in accordance with the Global Malaria Control Strategy.

Progress in malaria control activities

The focus in improving malaria control is on increasing access to diagnostic and treatment services in remote rural areas, improving the use of effective drugs as the result of the increasing prevalence of multidrug-resistant *P. falciparum* malaria and the availability of counterfeit drugs, and vector control using effective insecticides. Drug and insecticide efficacy monitoring occurs in selected sentinel sites.

The changing behaviour of mosquitoes threatens the effectiveness of vector control measures. *A. dirus* has adapted to certain village environments by breeding in village domestic wells. Although *A. minimus* does bite humans outdoors and early in the evening, indoor biting remains more frequent; thus, IRS and ITNs should continue to be effective in preventing malaria. The local vectors *A. annularis* and *A. culicifacies* are resistant to DDT.

Since 1999, reported malaria mortality has declined, but the number of reported cases has increased. The latter is probably explained by improved availability and use of malaria treatment services, although most increases in malaria case rates are seen in some development project areas relating to the movement of non-immune migrant workers.

Financial support

Myanmar reported over US$ 23 million of government financing for malaria control in 2003; an additional US$ 0.6 million was supplied by external sources, which represents an increase since the mid-1990s. The GFATM will provide an additional US$ 9.4 million for malaria control activities.

MYANMAR

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)

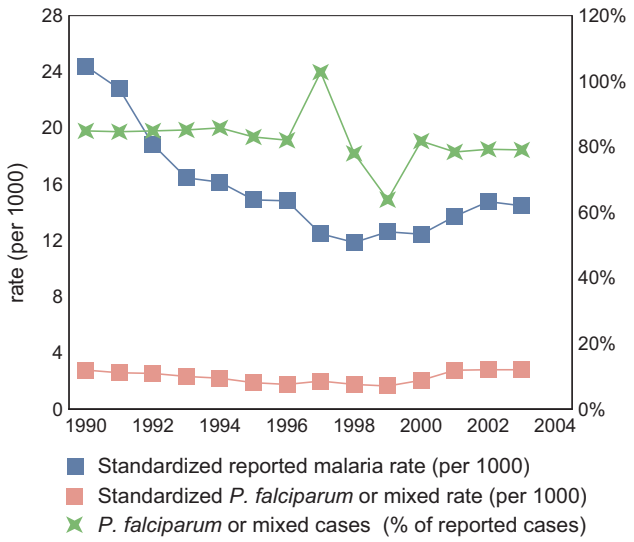
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
989 042	939 257	789 672	702 239	701 043	656 547	664 507	568 262	548 066	591 826

2000	2001	2002	2003	
592 354	661 463	721 739	716 100	Date of last report: 7 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	716 100
Reported malaria deaths	2 476
Probable or clinically diagnosed	
Malaria cases	539 929
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	473 267
Rapid diagnostic tests (RDTs) taken	376 250
Laboratory confirmed	
Malaria cases	176 171
P. falciparum or mixed	139 315
P. vivax	74 833
Severe (inpatient or hospitalized) cases	12 962
Malaria deaths	2 476
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	592 354	661 463	721 739	716 100	100
	PW	5 580	5 075	5 558		1
Age	<1 year	2 152	20 262	18 086		3
	1-4 years	7 094	3 820	4 026		1
	5-9 years	10 943	24 750	21 696		3
	10-14 years	16 508	25 132	22 522		3
	15+ years	83 332	96 538	106 767		15

Reported malaria cases by selected subnational area

14 areas	2000	2001	2002	2003	%
Rakhine	26 096	62 611	77 315	91 754	13
Sagaing	19 308	20 077	19 921	13 681	2
Kachin	6 550	9 256	13 299	12 981	2
Shan	21 478	16 821	16 363	11 302	2
Chin	7 392	10 813	11 874	9 951	1
Mandalay	8 273	8 328	7 877	7 392	1
Magway	3 365	4 675	2 863	6 240	1
Tanintharyi	7 058	19 327	5 950	6 009	1
Mon	5 346	4 586	5 573	5 674	1
Ayeyarwaddy	4 123	3 798	3 877	3 577	<1
Bago	4 948	4 999	3 852	3 575	<1
Kayin	3 015	2 664	2 693	2 046	<1
Kayah	1 912	1 318	799	1 574	<1
Yangon	1 165	1 229	840	415	<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.

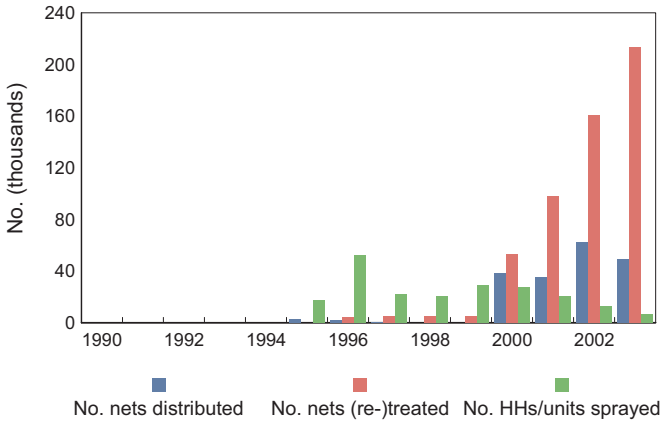
Insecticide-treated nets

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.

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.



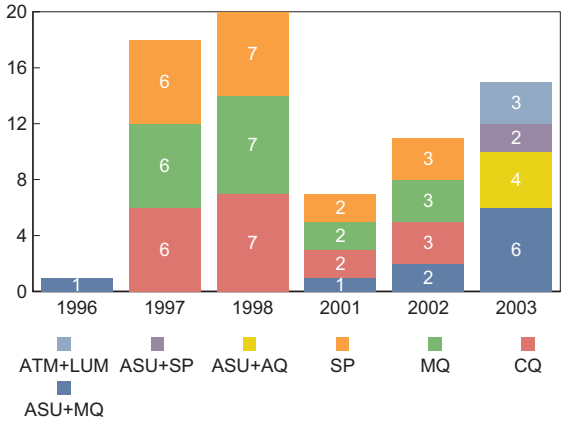
	No. HHs/units sprayed	No. nets (re-) treated	No. nets sold or distributed
1995	17 617		2 442
1996	52 255	4 300	1 558
1997	22 008	4 750	500
1998	20 443	4 800	
1999	29 256	4 800	
2000	27 803	53 335	38 535
2001	20 417	98 299	34 964
2002	12 439	160 799	62 500
2003	6 454	213 683	49 000

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 Low	Range High	Percentile 25th	Percentile 75th
CQ						
1997-2002	18	24.7	6.0	76.0	12.5	34.7
SP						
1997-2002	18	27.8	0.0	100.0	7.9	37.7
MQ						
1997-2002	18	6.0	0.0	44.4	0.0	16.4
ATM+LUM						
2003	3	2.0	0.0	2.0	0.0	2.0
ASU+AQ						
2003	4	4.0	3.0	7.0	3.5	5.5
ASU+SP						
2003	2	0.0	0.0	0.0	0.0	0.0
ASU+MQ						
1996-2003	10	1.5	0.0	8.0	0.0	5.1

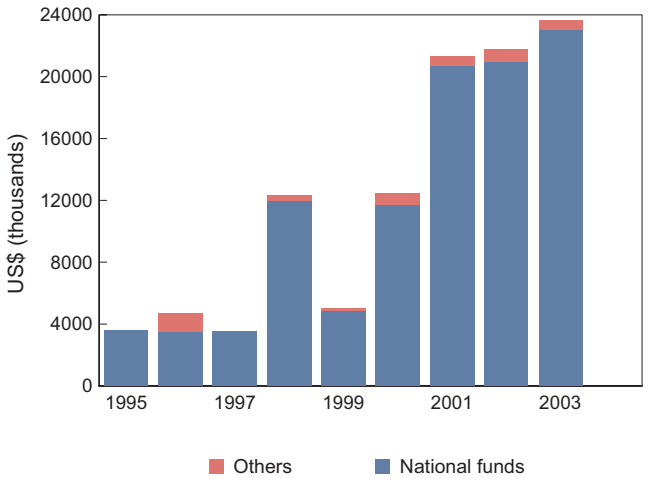
Number of drug efficacy studies available by year and drug type



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	3 577	
1996	3 551	1 159
1997	3 561	
1998	11 986	371
1999	4 837	163
2000	11 703	753
2001	20 698	585
2002	20 945	800
2003	23 041	622
2004		

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.

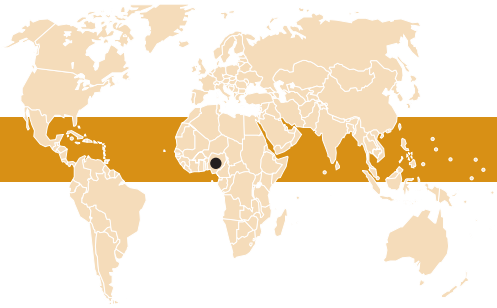
Approved proposals			Grant agreements and disbursements (as of 13 January 2005)						
Source	Round	Total year 1-2 budgets	Principal recipient	Signed	Signature date	Grant amount	No. of disbursements	Total disbursed	% disbursed
CCM	3	9 462 062		No			-		

General notes and remarks

See explanatory notes at the beginning of the report.

Confirmed severe malaria cases and deaths for 2003 include those from probable and confirmed malaria cases.

Age and subnational reported malaria for 2002–2003 are for confirmed malaria cases only. The number of cases presented for pregnant women is estimated.



NIGERIA

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2001
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	6
• Home-based management of malaria:	Yes
• Vector control using insecticides:	No
• Monitoring insecticide resistance	Yes
– number of sites currently active:	1
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	No

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ATM-LUM*
– *P. falciparum* (laboratory confirmed):	ATM-LUM*
– *P. vivax*	NA
• Treatment failure:	Q(7d)
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	SP (IPT)
– treatment	ACT (2nd & 3rd trim.)

Malaria situation

Malaria is a major public health problem in Nigeria, with stable transmission throughout much of the country and with the largest population at risk in Africa. Coverage of the key RBM interventions remains unacceptably low.

National policy and planning

Malaria control and finances are decentralized in Nigeria. At national level, with the collaboration of RBM partners, the emphasis is placed on development of key control policies and guidelines, allocation of resources and resource mobilization, and monitoring and supervision. State-level efforts are concerned with interpreting policy, resource mobilization, support and supervision for implementation, and establishing links between local government agencies and the NMCP. Local-level activities focus on resource mobilization and implementing community-based activities. All levels are involved in monitoring and evaluation. A country strategic plan of action for 2001–2005 was developed that outlines six priority areas for malaria control: (i) case management; (ii) prevention; (iii) information, education and communication materials and community mobilization; (iv) partnerships and overall health system development; (v) operational research; and (vi) monitoring and evaluation.

Progress in malaria control activities

Activities since 2003 include coordination with many RBM partners, procurement of ACTs using funds from the GFATM and efficacy testing of ASU, AQ and ATM+LUM. An advocacy tool for sharing information on malaria progress and control was developed for influencing state policy-makers and for communicating current strategies and activities. Collaboration on an epidemic preparedness project is planned for the regions of the country on the fringes of the Sahel. The NMCP is still faced with limited capacity—for example, in personnel and logistics—for implementing planned activities and for assisting state and local officials. A further challenge is promoting the collection and use of high-quality data and to promote evidence-based decision-making. Often cumbersome bureaucratic processes hamper the programme's efforts for improving collaboration.

Financial support

Nigeria reported US$ 3.5 million in government funding for malaria control in 2003, with an additional US$ 2.3 million from other sources. The GFATM will contribute a further US$ 40 million under two grants.

NIGERIA

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.

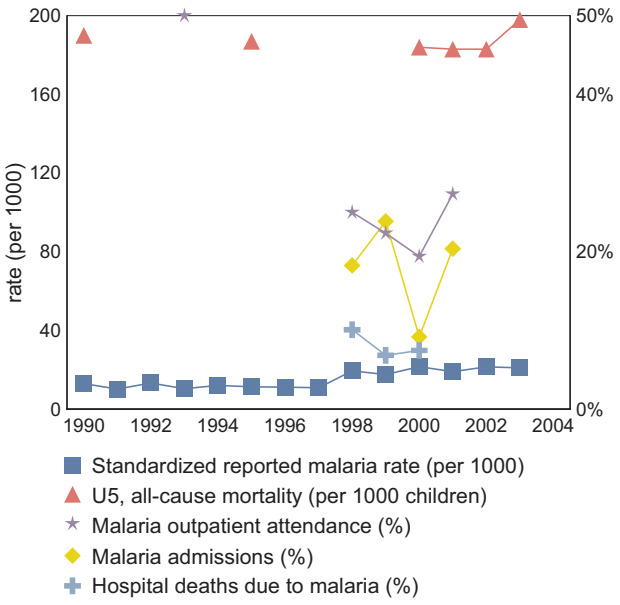
Reported malaria cases (annual)

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1 116 992	909 656	1 219 348	981 943	1 175 004	1 133 926	1 149 435	1 148 542	2 122 663	1 965 486

2000	2001	2002	2003	
2 476 608	2 253 519	2 605 381	2 608 479	Date of last report: 10 November 2004

Reported malaria by type and quality

For most recent year	2003
Reported malaria cases	2 608 479
Reported malaria deaths	5 343
Probable or clinically diagnosed	
Malaria cases	2 608 479
Severe (inpatient or hospitalized) cases	
Malaria deaths	5 343
Slides taken	
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	
P. falciparum or mixed	
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	73



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	2 476 608	2 253 519	2 605 381	2 608 479	100
	PW	956				0
Age	<5 years	1 128 435	996 938	1 118 598		43
	5> years	1 348 178	1 256 580	1 486 783		57

Reported malaria cases by selected subnational area

	2000	2001	2002	2003	%

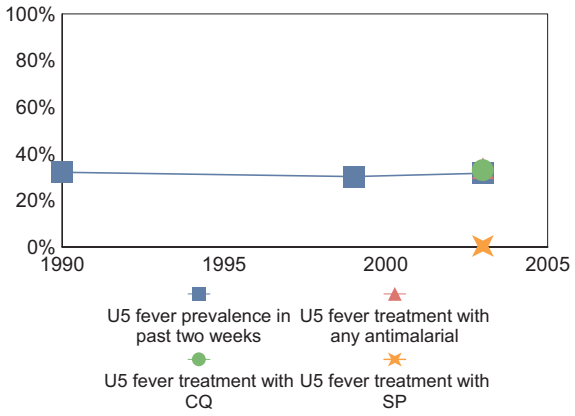
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

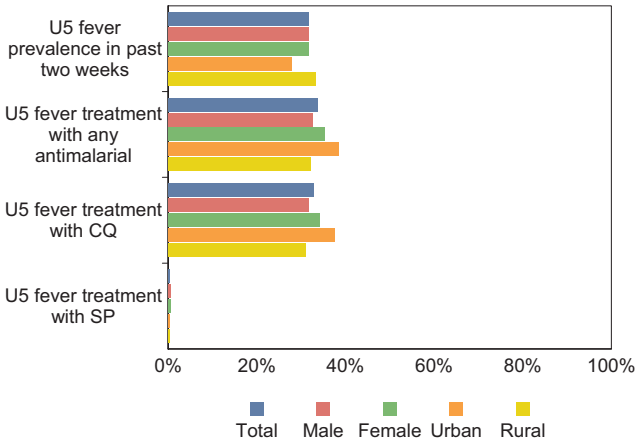
Fever prevalence and treatment with antimalarials

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



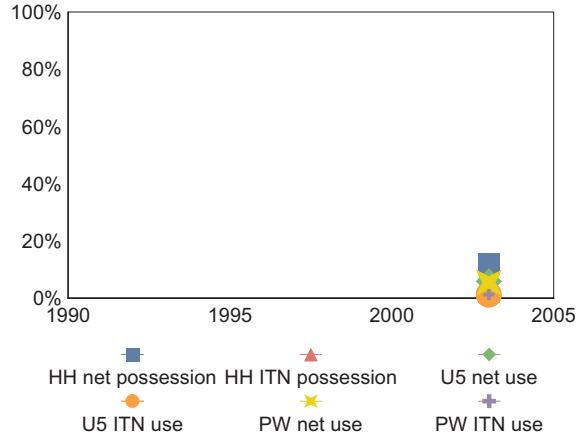
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



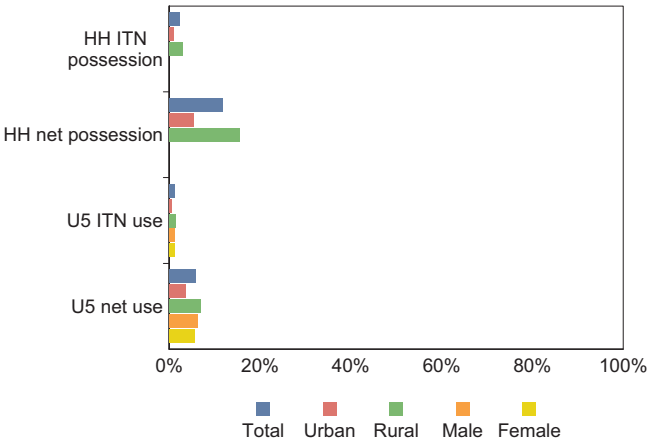
Insecticide-treated nets

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



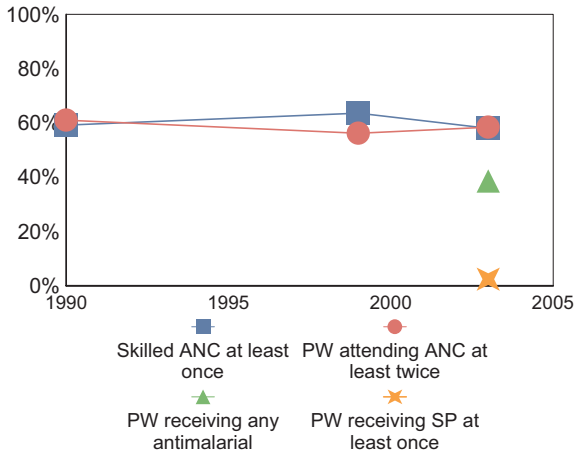
Estimates of ITN coverage from most recent national survey



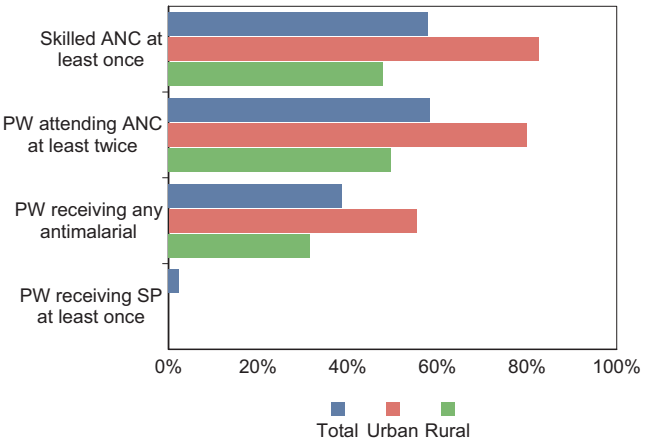
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



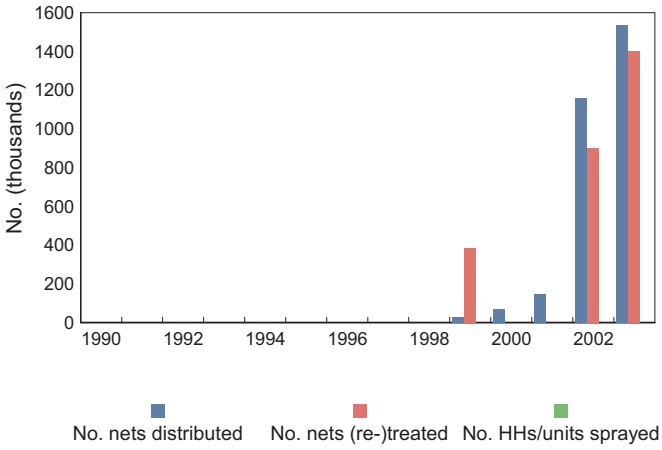
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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.



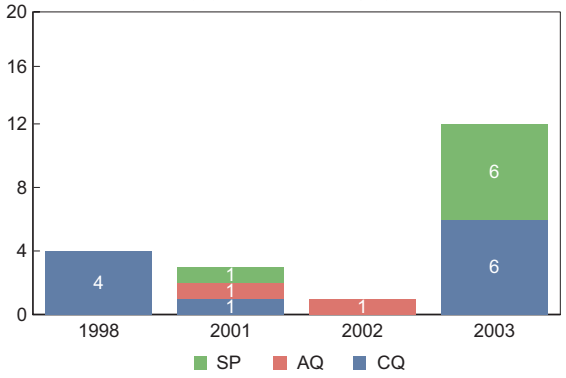
	No. nets (re-) treated	No. nets sold or distributed
1999	384 286	30 000
2000		70 000
2001		145 000
2002	900 000	1 161 925
2003	1 400 000	1 535 718

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 Low	Range High	Percentile 25th	Percentile 75th
CQ						
1998-2003	11	25.8	2.0	53.7	13.6	38.7
SP						
2001-2003	7	9.3	5.7	43.5	7.7	40.5
AQ						
2001-2002	2	1.5	0.0	2.9	0.0	2.9

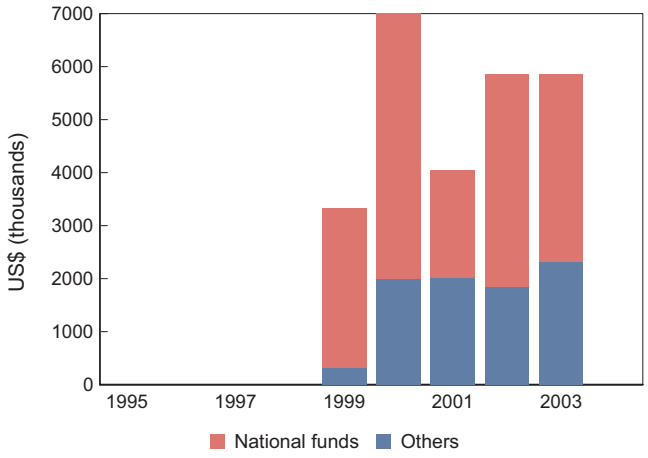
Number of drug efficacy studies available by year and drug type



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	3 000	320
2000	5 000	2 000
2001	2 020	2 020
2002	4 000	1 850
2003	3 530	2 330
2004		

NIGERIA

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

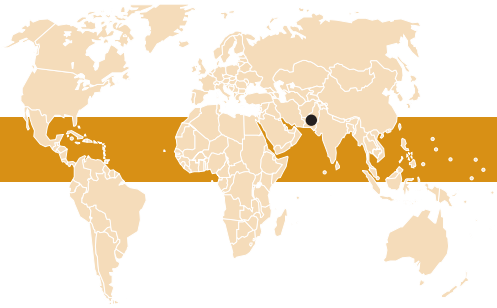
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	20 994 149	**Yakubu Gowon Center**	Yes	22-Oct-04	20 994 149	1	4 582 319	21.8%
CCM	4	20 467 000	**Yakubu Gowon Center**	Yes	03-Dec-04	20 467 000	1	4 268 800	20.9%

General notes and remarks

See explanatory notes at the beginning of the report.

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



PAKISTAN

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	4
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ
– *P. falciparum* (laboratory confirmed):	CQ+PQ(3d)
– *P. vivax*	CQ+PQ(5d)
• Treatment failure:	SP
• Severe malaria:	Q
• Pregnancy:	
– prevention	
– treatment	CQ

Malaria situation

Malaria continues to be a major public health problem in Pakistan. Extensive agricultural practices, a vast irrigation network and monsoon rains contribute to the malariogenic potential in many areas. Both *P. falciparum* and *P. vivax* are widely prevalent. The primary vector species are *A. culicifacies* and *A. stephensi*. In most parts of the country, the transmission occurs post-monsoon, between July and November. The quality of malaria control varies greatly across the largely decentralized regions of the country, with notable challenges in implementing control efforts in Balochistan and North-West Frontier Province. Resistance of *P. falciparum* to CQ and of vectors to insecticides is common.

National policy and planning

Since its adoption of the RBM control strategy in 1999, Pakistan has prioritized malaria control with increased federal spending, the development of a 5-year strategic action plan for the malaria control programme (2002–2006) and increased attention at the provincial level. A phased implementation of RBM activities began in 19 districts in 2002–2003 and is now extended to 28 districts. Notable achievements include the development of district implementation plans and the development and distribution of national treatment guidelines in 2002. Steps are also being taken to establish a malaria early detection system.

Progress in malaria control activities

Challenges that the control programme continues to face include: (i) adherence to and awareness of available guidelines; (ii) weak technical leadership at both federal and provincial levels; and (iii) staffing contraints. Despite an overall increase in the number of malaria control staff, a number of key posts remain vacant and the National Institute of Malaria Research and Training urgently requires strengthening. Provincial-level control programmes still struggle with phasing out old "eradication" strategies such as active case detection, while access to rapid diagnosis and prompt treatment in health facilities remains inadequate. Monitoring and evaluation must be improved, especially in districts where RBM activities have been initiated. This includes establishing a system for quality assurance of laboratory diagnosis and strengthening the existing surveillance system in collaboration with the HIS. ASU+SP is being adopted for antimalarial treatment policy in 26 high-risk districts, with the support of the GFATM.

Financial support

The national government contributes the majority of funding for malaria control efforts, although reporting on financing is inconsistent. The GFATM committed almost US$ 6 million for malaria control in 2003–2004, of which over US$ 650 000 had been disbursed by December 2003.

PAKISTAN

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)

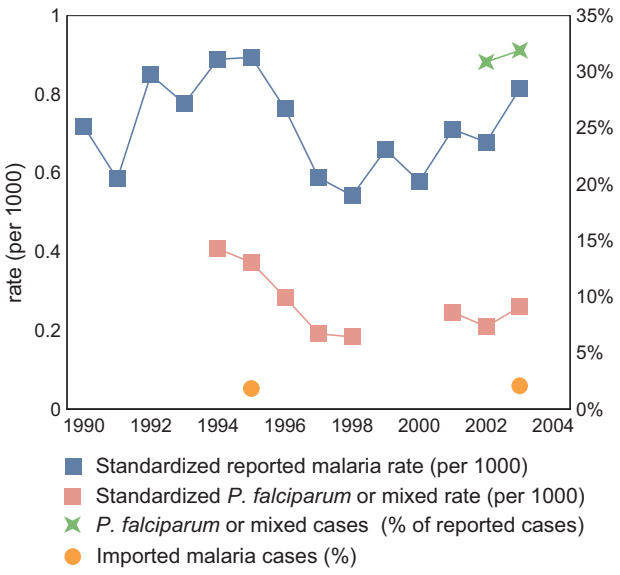
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
79 689	66 586	99 015	92 634	108 586	111 836	98 035	77 480	73 516	91 774

2000	2001	2002	2003	
82 526	104 003	101 761	125 152	Date of last report: 15 December 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	125 152
Reported malaria deaths	29
Probable or clinically diagnosed	
Malaria cases	3 985 915
Severe (inpatient or hospitalized) cases	
Malaria deaths	29
Slides taken	4 145 290
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	125 152
P. falciparum or mixed	39 944
P. vivax	85 240
Severe (inpatient or hospitalized) cases	
Malaria deaths	14
Investigations	
Imported cases	2 592
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	82 526	104 003	101 761	125 152	100

Reported malaria cases by selected subnational area

5 areas	2000	2001	2002	2003	%
Sind			22 458	37 612	30
Baluchistan			33 994	36 794	29
NWFP			20 774	26 791	21
Fata			14 681	13 996	11
Punjab			9 854	9 959	8

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.

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.

No survey-based estimates of mosquito net or ITN coverage are currently available.

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.

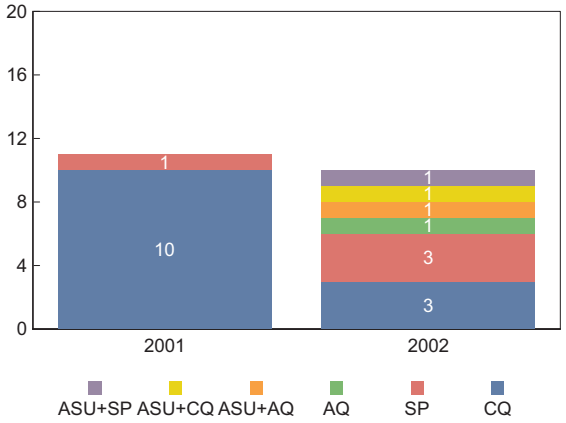
No data are currently available.

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 Low	Range High	Percentile 25th	Percentile 75th
CQ						
2001-2002	13	28.9	18.2	79.0	25.9	66.6
SP						
2001-2002	4	13.0	8.7	18.7	9.8	16.9
AQ						
2002	1	83.3				
ASU+AQ						
2002	1	18.0				
ASU+CQ						
2002	1	28.8				
ASU+SP						
2002	1	0.0				

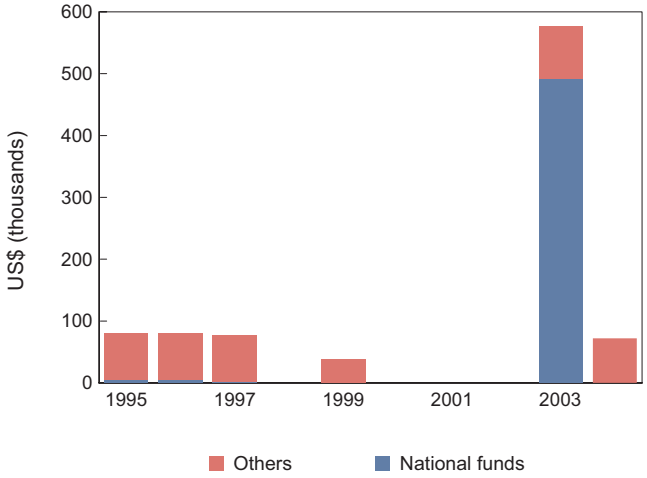
Number of drug efficacy studies available by year and drug type



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	6	75
1996	5	75
1997	3	75
1998		
1999		38
2000		
2001		
2002		
2003	492	84
2004		72

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

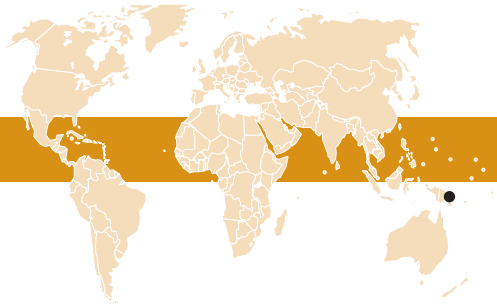
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	4 407 000	**MoH**	Yes	06-Aug-03	4 407 000	2	1 464 162	33.2%
CCM	3	1 548 636	**MoH**	Yes	12-Oct-04	1 548 636	1	454 800	29.4%

General notes and remarks

See explanatory notes at the beginning of the report.

ASU+SP is being adopted as the first-line treatment in 23 high-risk districts with support from GFATM. Malaria cases clinically diagnosed are reported as patients with fever only. The increase in malaria incidence in 2003 as compared with 2002 was mainly because of the high incidence in a few of the districts in Balochistan and Sindh provinces in Pakistan, where heavy floods after prolonged draught resulted in intense transmission. The NMCP in collaboration with provincial malaria control programmes succeeded in controlling the outbreaks through advanced prediction and implementation of control measures.



PAPUA NEW GUINEA

Malaria situation

Malaria is the leading cause of illness and death in Papua New Guinea. Areas of perennial, very high intensity transmission of *P. falciparum* malaria, such as are common in tropical Africa, are found throughout the country.

National policy and planning

Papua New Guinea is dedicated to halving the number of deaths and illness caused by malaria between 2001 and 2010. The NMCP has implemented strategies to: (i) improve diagnosis and treatment; (ii) implement vector control through ITNs, IRS and (where feasible) environmental modification; and (iii) information, education and communication materials about malaria. Targets set for these strategies include ensuring that 80% of the population in endemic areas are sleeping under an ITN by 2010 and conducting annual spraying in the highland regions prone to epidemics.

Progress in malaria control activities

Before 2003, little progress was made because of financial constraints. With funds from the GFATM granted in that year, the NMCP adjusted its targets for 2008: (i) more than 80% of the population in malaria-endemic areas should be consistently using LLINs; (ii) over 70% of suspected malaria cases should be laboratory-confirmed by rapid diagnostic tests or microscopy; (iii) the case rate should be reduced from 504/100 000 in 2001 to 300/100 000; and (iv) the mortality rate should be reduced from 12.8/100 000 in 2001 to 7/100 000.

The GFATM grant will finance the free distribution of LLINs in all malarious areas of Papua New Guinea, covering at-risk populations in endemic as well as epidemic-prone areas. The GFATM malaria control programme will also strengthen malaria diagnosis through the expansion of microscopy services and rapid diagnostic tests in health centres, subcentres and urban clinics in peripheral areas. Malaria treatment will be based on ACT.

Financial support

The GFATM granted just over US$ 6 million for 2 years; implementation of the GFATM malaria control programme began in August 2004.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	4
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ / AQ+SP
– *P. falciparum* (laboratory confirmed):	CQ / AQ+SP
– *P. vivax*	CQ+PQ(14d)* or CQ+SP+PQ
• Treatment failure:	ASU(7d)+SP
• Severe malaria:	ATM(7d)+SP
• Pregnancy:	
– prevention	CQ
– treatment	CQ or Q

PAPUA NEW GUINEA

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)

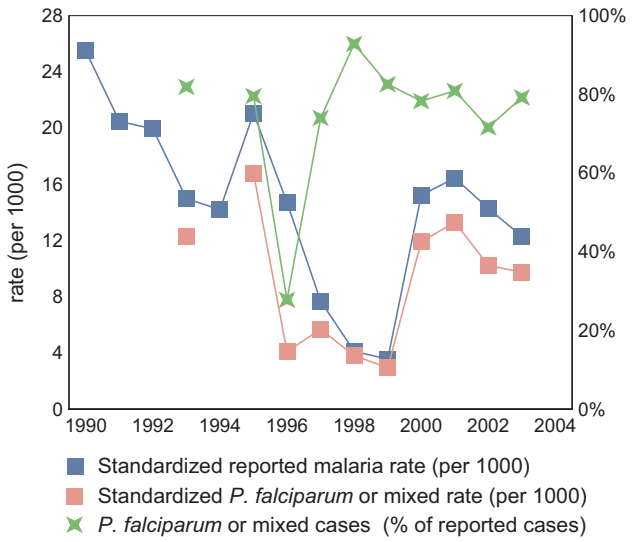
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
104 900	86 500	86 500	66 797	65 000	99 000	71 013	38 105	20 900	18 564

2000	2001	2002	2003	
81 192	89 819	79 822	70 226	Date of last report: 18 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	70 226
Reported malaria deaths	537
Probable or clinically diagnosed	
Malaria cases	1 729 697
Severe (inpatient or hospitalized) cases	17 590
Malaria deaths	537
Slides taken	
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	70 226
P. falciparum or mixed	55 638
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	81 192	89 819	79 822	70 226	100

Reported malaria cases by selected subnational area

15 of 20 areas	2000	2001	2002	2003	%
Morobe	11 431	11 804	10 719	13 898	20
New Ireland	10 788	10 511	10 129	8 150	12
East New Britain	7 207	6 163	8 587	7 738	11
National Capital District	13 511	11 826	11 943	6 853	10
Western Highlands	638	942	4 175	4 986	7
Sanduan (West Sepik)	3 272	2 520	7 186	4 542	6
Madang	5 376	5 383	4 641	4 097	6
Milne Bay	3 732	3 751	2 609	4 057	6
West New Britain	3 470	4 492	4 248	3 222	5
Oro (Northern)	1 853	2 121	1 891	2 160	3
North Solomon	2 700	2 432	2 510	1 699	2
Chimbu	6 471	6 652	2 157	1 610	2
Eastern Highlands	1 264	1 371	1 617	1 569	2
Central	663	479	924	1 356	2
Western	2 606	4 714	2 281	1 224	2

COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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Insecticide-treated nets

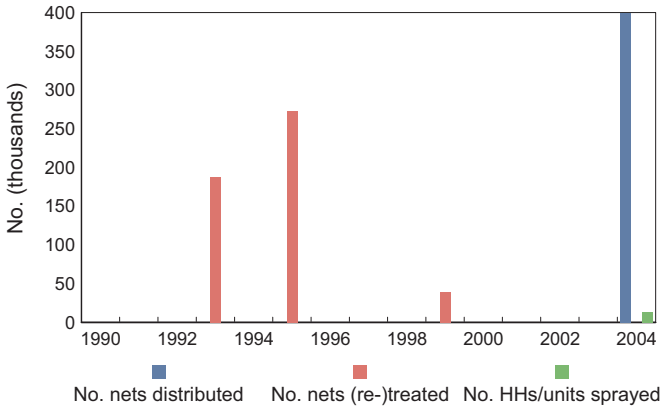
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data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

No survey-based estimates of mosquito net or ITN coverage are currently available.

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.



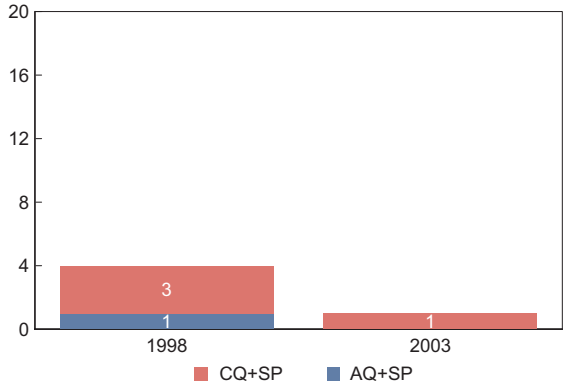
	No. HHs/units sprayed	No. nets (re-) treated	No. nets sold or distributed
1993		187 750	
1995		272 765	
1999		38 800	
2004	14 000		400 000

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 Low	Range High	Percentile 25th	Percentile 75th
CQ+SP						
1998-2003	4	0.0	0.0	27.0	0.0	13.5
AQ+SP						
1998	1	0.0				

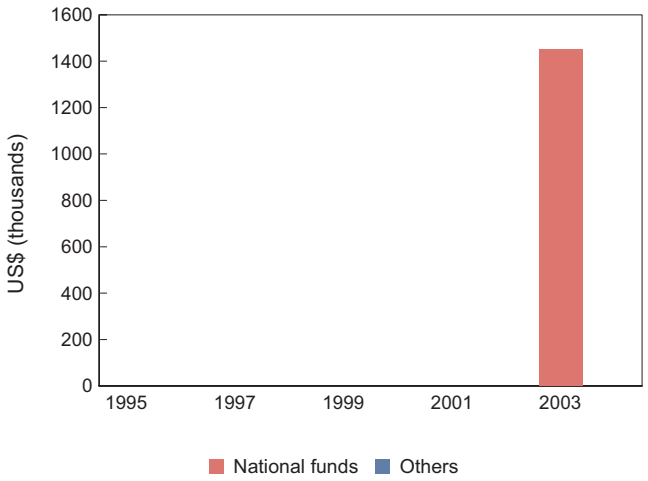
Number of drug efficacy studies available by year and drug type



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		
2002		
2003	1 450	
2004		

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.

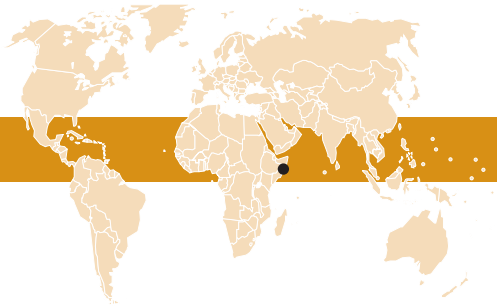
Approved proposals			Grant agreements and disbursements (as of 13 January 2005)						
Source	Round	Total year 1-2 budgets	Principal recipient	Signed	Signature date	Grant amount	No. of disbursements	Total disbursed	% disbursed
CCM	3	6 106 557	**MoH**	Yes	07-Jul-04	6 106 557	1	2 185 723	35.8%

General notes and remarks

See explanatory notes at the beginning of the report.

The information on ITNs reflects nets that have been distributed since 1997, including 320 000 distributed by Rotary Against Malaria, and the rest among other agencies including AusAID, Mines, Unicef, WHO and various NGOs.

* for areas of stable transmission



SOMALIA

Malaria situation

Malaria transmission ranges from unstable and epidemic in Puntland and Somaliland to moderate in central Somalia to high in the south. The groups most severely affected are young children, pregnant women and nomadic populations. Accounting for 95% of reported cases, *P. falciparum* is overwhelmingly the predominant parasite species. The major malaria vectors are *A. arabiensis* and *A. funestus*; while both vectors are found in the south, only *A. arabiensis* is found in the north.

National policy and planning

The conflict in Somalia has destroyed the entire public health infrastructure, except in Somaliland in the north-west zone of the country and in Puntland in the north-east zone. Priorities for malaria control vary across the country, according to variations in endemicity. In the north, the priorities are to reduce transmission through vector control and to ensure epidemic preparedness; in the more endemic south and central areas, the priorities are to reduce malaria morbidity and to prevent mortality in high-risk groups through early diagnosis and prompt treatment and personal protection through ITNs.

Progress in malaria control activities

Control activities have continued to develop since the inception of the RBM Partnership, with strong partnerships with WHO, UNICEF and international NGOs. An international staff and national officers were recruited by WHO to implement RBM activities, and an RBM strategic framework was developed. Functional sites for monitoring antimalarial drug efficacy have been established, and studies were conducted in Jamane, Janale and Jowhar for AQ and ASU+SP. The antimalarial drug policy is being updated to include ACTs. Malaria outbreaks in 2003 were promptly responded to as a result of pre-positioning of antimalarial drugs in epidemic zones. Several capacity-building and training courses were conducted. Other achievements include the recruitment of an RBM control programme coordinator and operational research on the use of larvivorous fish in selected areas in the north-west zone.

Financial support

Funding of malaria control activities is supported by international and donor agencies such as WHO and UNICEF. The GFATM funds totalling US$ 8.9 million have been committed, of which over half were disbursed in 2004.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	4
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	No
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ
– *P. falciparum* (laboratory confirmed):	CQ
– *P. vivax*	
• Treatment failure:	SP
• Severe malaria:	Q
• Pregnancy:	
– prevention	SP (IPT)*
– treatment	

SOMALIA

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
			3 049						9 055

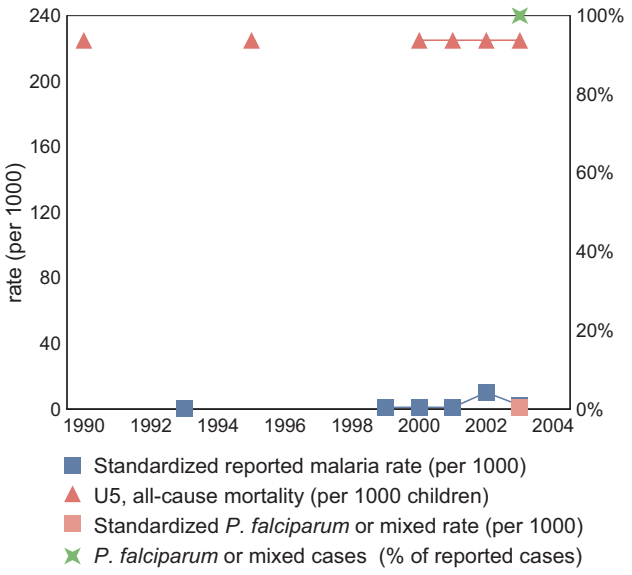
2000	2001	2002	2003
10 364	10 364	96 922	23 349

Date of last report: 25 May 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	23 349
Reported malaria deaths	10
Probable or clinically diagnosed	
Malaria cases	15 778
Severe (inpatient or hospitalized) cases	
Malaria deaths	44
Slides taken	12 578
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	7 571
P. falciparum or mixed	7 571
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	10
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	10 364	10 364	96 922	23 349	100

Reported malaria cases by selected subnational area

15 of 15 areas	2000	2001	2002	2003	%
Mogadishu				7 280	31
Las-anod				2 404	10
Berbera				990	4
Hargeisa				766	3
Gabilay				627	3
Burao				492	2
Bossaso				405	2
Borama				358	2
Allay baday				285	1
Baki				213	1
Qardho				203	1
Garowe				157	1
Galkayo				129	1
Ergavo				116	<1
Zeila				50	<1

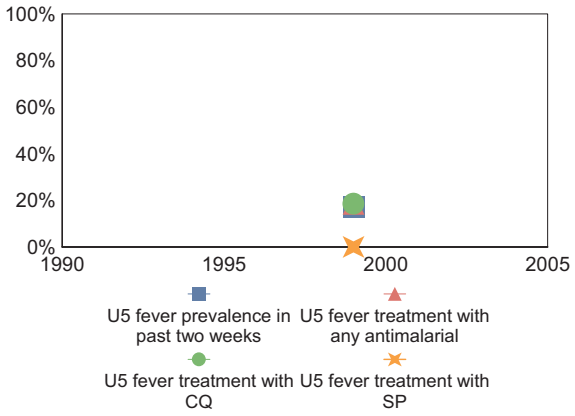
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

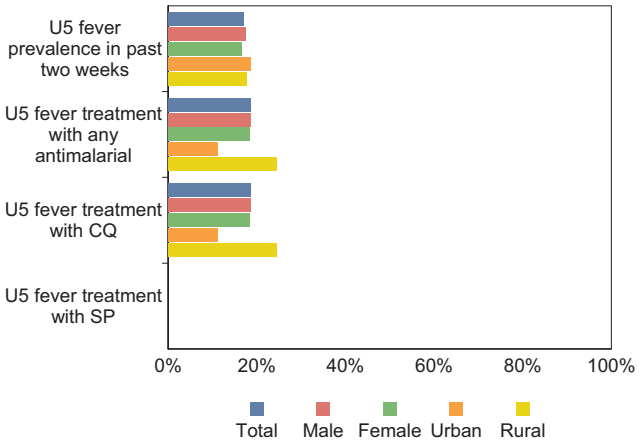
Fever prevalence and treatment with antimalarials

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



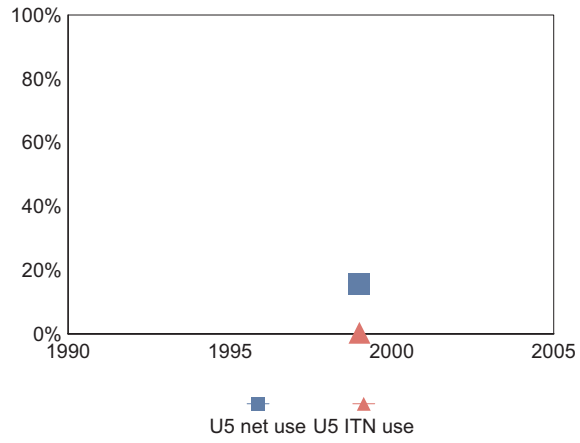
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



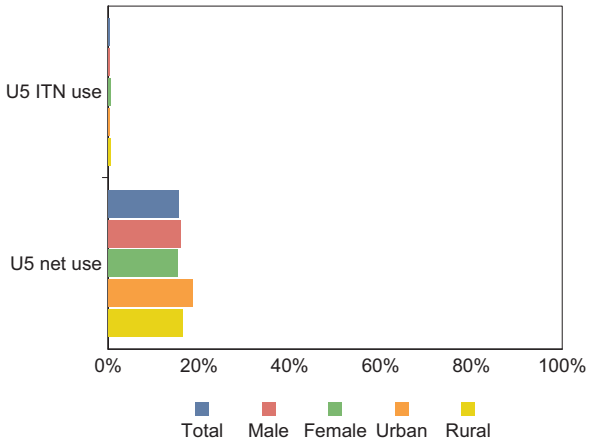
Insecticide-treated nets

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



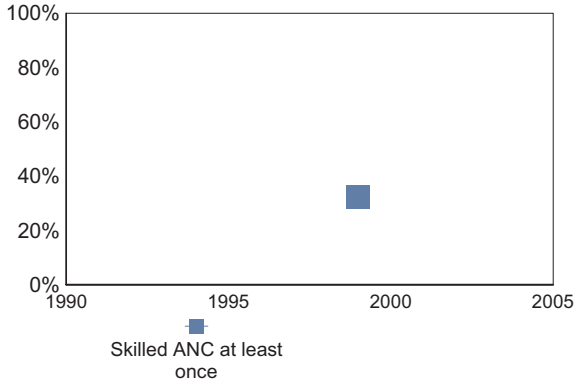
Estimates of ITN coverage from most recent national survey



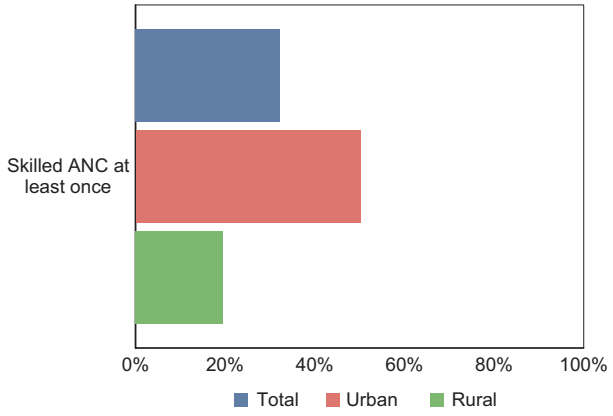
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



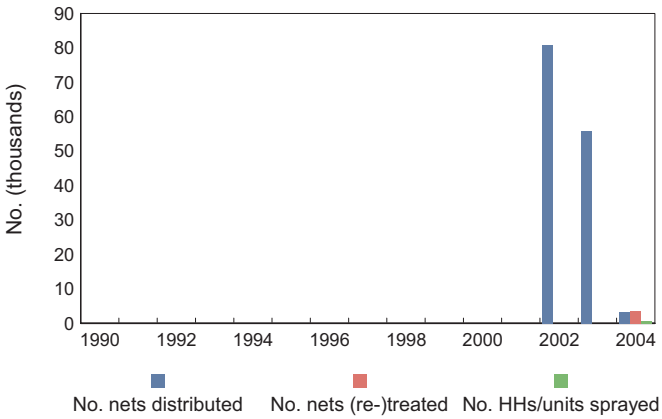
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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.



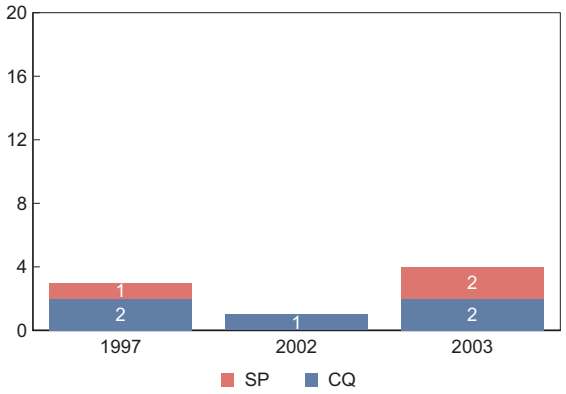
	No. HHs/units sprayed	No. nets (re-) treated	No. nets sold or distributed
2002			80 839
2003			55 839
2004	567	3 500	3 338

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 Low	Range High	Percentile 25th	Percentile 75th
CQ						
1997-2003	5	51.0	27.5	78.0	30.4	74.0
SP						
1997-2003	3	4.0	2.0	5.9	2.0	5.9

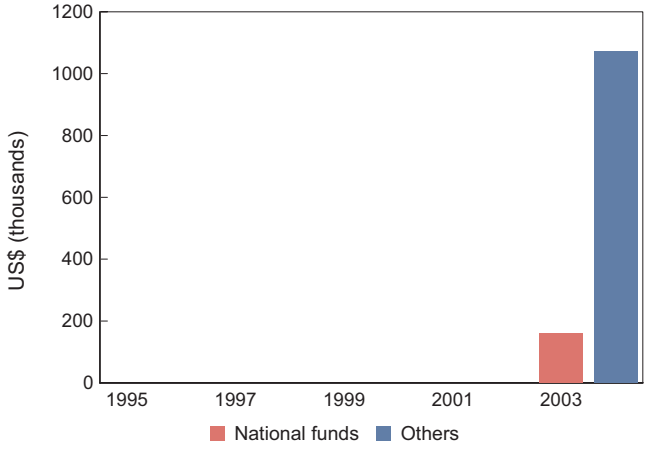
Number of drug efficacy studies available by year and drug type



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		
2002		
2003	160	
2004		1 072

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

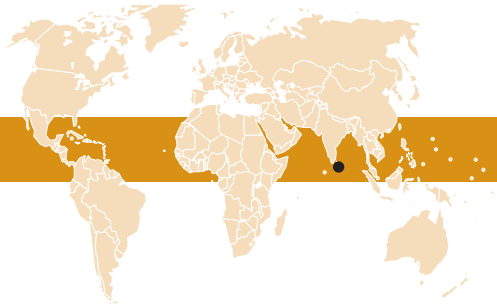
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	8 890 497	**UNICEF**	Yes	23-Jun-04	8 890 497	1	4 682 032	52.7%

General notes and remarks

See explanatory notes at the beginning of the report.

* IPT is for hyperendemic areas only



SRI LANKA

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ+PQ
– *P. falciparum* (laboratory confirmed):	CQ+PQ
– *P. vivax*	CQ+PQ
• Treatment failure:	SP+PQ
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	
– treatment	CQ or Q

Malaria situation

Since 1999, reported rates of confirmed malaria cases and deaths have fallen more than 10-fold; the rate of reported *P. falciparum* cases decreased in parallel. Approximately 70% of reported cases in 2003 were from the North-East Province, mainly from the districts of Ampara, Batticaloa, Kilinochchi, Mullativu and Trincomalee. There were two reported deaths caused by *P. falciparum* malaria in 2003 in Batticaloa and Kalmunai. *P. falciparum* resistance to CQ is increasing. The NMCP reports only microscopically confirmed malaria cases. Because many fever patients in Sri Lanka seek treatment through private sector health facilities and a number of patients in public sector facilities are treated for malaria without laboratory diagnosis, the actual number of malaria cases is likely to be much higher than reported. The tsunami of 26 December 2004 raised concern about an increased risk of epidemics in some coastal areas of Sri Lanka. Initial actions of larviciding appear to have prevented immediate outbreaks. Active surveillance is ongoing in order to asses the full impact on malaria transmission and disease burden.

National policy and planning

Malaria control efforts in Sri Lanka are decentralized and, with the overall reductions in disease burden in recent years, control efforts made by regional managers are not intensively monitored. Early detection and prompt treatment is the mainstay of disease control. IRS is the major vector control measure, but ITN promotion has recently also become a national strategy. Larviciding is practised in selected areas.

Progress in malaria control activities

In 2003, malaria was effectively controlled in the North-East Province and neighbouring districts, with close monitoring of the interventions. Monitoring and evaluation have been greatly hampered in recent years in Sri Lanka because of the civil war. With the ongoing peace initiatives and the reintroduction of malaria monitoring and surveillance activities, the NMCP is able to monitor the trend in malaria burden in areas where communication was previously hampered. A constraint for the NMCP is that the existing epidemiological and entomological surveillance systems are not adequate for early warning of malaria outbreaks and do not cover patients diagnosed and treated outside the public sector. Training of staff, quality control of diagnosis and treatment practices, and better access for the population to laboratory facilities are needed for case management and malaria diagnosis. Malaria control activities should become more evidence-based and planning should be better linked with agendas for research. Improved management skills are also needed.

Financial support

National funds for malaria control in 2003 were a reported US$ 2.5 million, a reduction from the previous year. The GFATM has disbursed over US$ 3.6 million for two proposals from early applications. An additional GFATM grant has been approved that will contribute US$ 2.2 million over 2 years.

SRI LANKA

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)

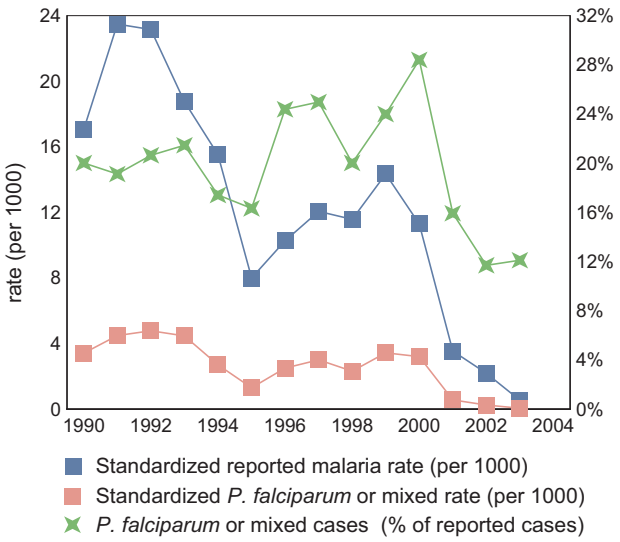
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
287 384	400 263	399 349	327 020	273 434	142 294	184 319	218 550	211 691	264 549

2000	2001	2002	2003	
210 039	66 522	41 411	10 510	Date of last report: 1 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	10 510
Reported malaria deaths	2
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	1 192 259
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	10 510
P. falciparum or mixed	1 273
P. vivax	9 237
Severe (inpatient or hospitalized) cases	
Malaria deaths	2
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	210 039	66 522	41 411	10 510	100
Gender	Male	112 783	35 864	22 400	6 143	58
	Female	97 256	30 688	19 011	4 367	42
Age	<1 year	5 107	2 371	1 589		4
	1-4 years	29 646	10 973	6 944		17
	<5 years				1 750	17
	5-9 years	29 012	7 999	5 630	1 344	13
	10-14 years	27 273	7 297	4 870	1 311	12
	15+ years	119 001	37 882	22 738	6 105	58

Reported malaria cases by selected subnational area

15 of 26 areas	2000	2001	2002	2003	%
Batticaloa	6 639	4 057	6 486	1 467	14
Killinochchi	47 326	21 989	11 447	1 404	13
Anuradhapura	13 218	3 210	2 866	1 213	12
Trincomalee	6 608	1 390	522	1 028	10
Polonnaruwa	4 052	1 657	1 040	935	9
Kalmune				650	6
Mullaitivu	25 099	11 768	6 285	633	6
Kurunegala	11 863	5 648	2 943	632	6
Ampara	3 843	979	1 673	441	4
Jaffna	7 253	1 365	1 891	413	4
Moneragala	40 885	3 705	805	392	4
Vavuniya	8 844	2 345	798	294	3
Ratnapura	6 982	2 821	1 836	248	2
Hambantota	5 319	665	1 084	193	2
Badulla	5 757	1 005	296	132	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.

Insecticide-treated nets

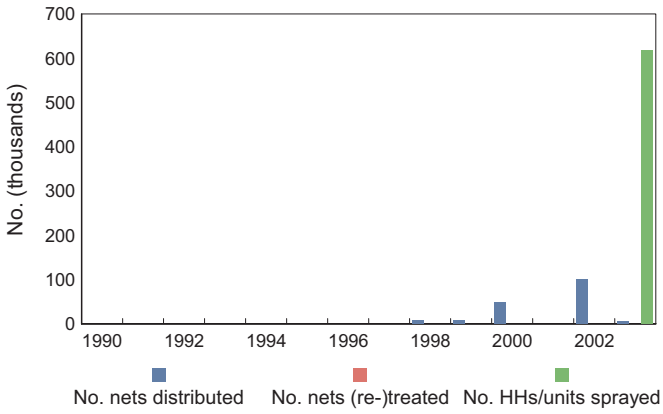
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data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

No survey-based estimates of mosquito net or ITN coverage are currently available.

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.



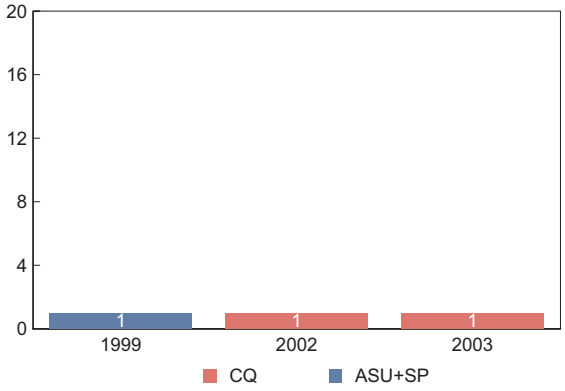
	No. HHs/units sprayed	No. nets sold or distributed
1998		9 000
1999		8 532
2000		49 150
2002		100 000
2003	618 865	5 000

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						
2002-2003	2	31.8	10.0	53.5	10.0	53.5
ASU+SP						
1999	1	0.0				

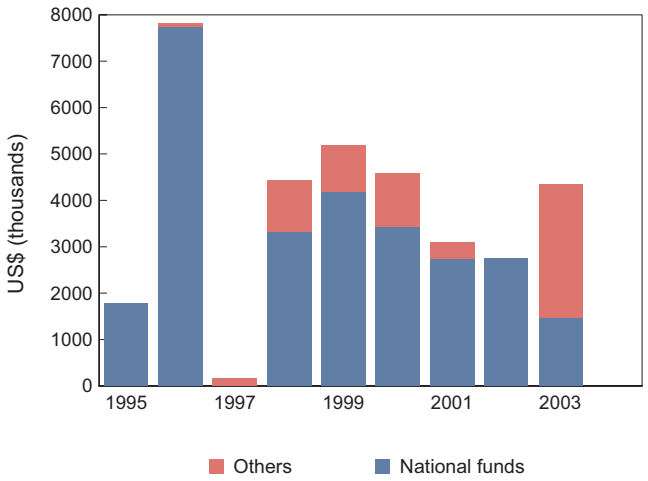
Number of drug efficacy studies available by year and drug type



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	1 775	
1996	7 742	82
1997		164
1998	3 328	1 104
1999	4 187	1 007
2000	3 430	1 155
2001	2 750	358
2002	2 750	
2003	1 481	2 874
2004		

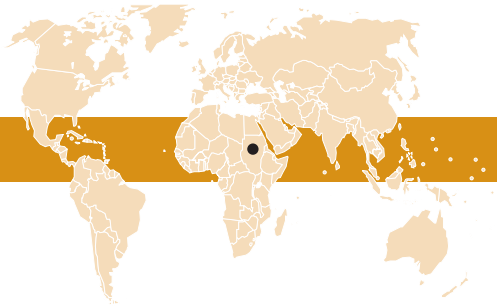
Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

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	1	5 197 620	**LJSS**	Yes	19-Dec-02	4 467 480	4	3 680 162	82.4%
			MoH	Yes	19-Dec-02	730 140	2	425 559	58.3%
CCM	4	2 203 520		No					

General notes and remarks

See explanatory notes at the beginning of the report.



SUDAN

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	10
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	12
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ASU+SP (North) ASU+AQ (South)
– *P. falciparum* (laboratory confirmed):	ASU+SP (North) ASU+AQ (South)
– *P. vivax*	CQ+PQ(14d) (South)
• Treatment failure:	ATM-LUM (North) Q(7d) (South)
• Severe malaria:	Q(7d) or ATM(6d) or ATM(3d) +ASU+SP (North)
• Pregnancy:	
– prevention	SP (IPT)
– treatment	Q(7d) or ASU+SP(from 13 weeks)

Malaria situation

Malaria is the leading cause of morbidity and mortality in Sudan. Symptomatic malaria accounts for 20–40% of outpatient clinic visits and approximately 30% of hospital admissions. The entire population of Sudan is at risk of malaria, although to different degrees. In the northern, eastern and western states malaria is mainly low to moderate with predominantly seasonal transmission and epidemic outbreaks. In southern Sudan, malaria is moderate to high or highly intense, generally with perennial transmission. *P. falciparum* is by far the predominant parasite species.

Between the 1970s and the mid-1990s, malaria control efforts suffered major disruptions. Khartoum State, formerly a nearly malaria-free area, increasingly suffered from malaria epidemics, with more than 700 000 cases annually between 1998 and 2001.

National policy and planning

In 1998, with the support of WHO, the government initiated a plan to revitalize malaria control. In 2001, a national 10-year strategic plan was developed; in 2002, the Malaria Free Initiative was launched; in 2003, a plan was developed for scaling up the use of ITNs including using communication for behavioural impact; and in 2004 a national policy for control of malaria in pregnancy was initiated. Also in 2004, the national drug policy was updated to use the ACT ASU+SP for first-line treatment.

Progress in malaria control activities

The infrastructure of the programme continues to be strengthened. The federal malaria control office and malaria control units in the priority states of Gezira, Khartoum and White Nile were established with full operations by the end of 2001. Training was extended to a large part of the curative health care and environmental health structures, which are an integral part of the malaria control efforts in these states. A network of sentinel sites for epidemic early warning and monitoring of drug and insecticide resistance were also established. In Gezira, ITN coverage has reached 30% of the target population, and large-scale distribution of subsidized ITNs to pregnant women and children continues. Community mobilization and participation have resulted in a high degree of public awareness of malaria and its control in the priority states. In nine more states, malaria control units were strengthened in 2000–2001. This development was accompanied by a major effort in staff training. Partnerships with numerous NGOs have been instrumental and are expected to be central to scaling up interventions.

Financial support

Limited financial resources and delay in the release of a GFATM grant have hindered the implementation of the new drug policy and the plan for scaling up the use of ITNs. Malaria diagnosis and treatment in public sector health facilities are payable by the patient, which follows the principle of cost sharing; there is some evidence that this limits the use of public sector facilities and promotes haphazard self-treatment.

SUDAN

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)

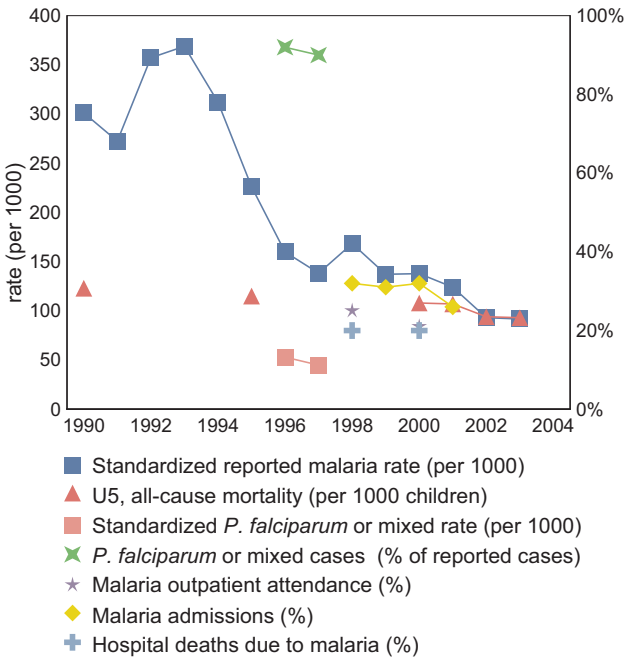
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
7 508 704	6 947 787	9 326 944	9 867 778	8 562 205	6 347 143	4 595 092	4 065 460	5 062 000	4 215 308

2000	2001	2002	2003	
4 332 827	3 985 702	3 056 400	3 084 320	Date of last report: 25 November 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	3 084 320
Reported malaria deaths	2 479
Probable or clinically diagnosed	
Malaria cases	1 998 367
Severe (inpatient or hospitalized) cases	105 813
Malaria deaths	2 479
Slides taken	
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	1 085 853
P. falciparum or mixed	
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	4 332 827	3 985 702	3 056 400	3 084 320	100
Gender	Male		1 994 132	1 507 629	1 739 351	56
	Female		1 991 570	1 548 771	1 344 969	44
Age	<5 years		868 893	760 572	676 525	22
	5> years		3 116 809	2 295 828	2 407 795	78

Reported malaria cases by selected subnational area

7 areas	2000	2001	2002	2003	%
Khartoum				397 658	13
Central				272 759	9
Eastern				197 014	6
Kordofan				149 751	5
Southern				106 299	3
Northern				43 775	1
Darfur				29 701	1

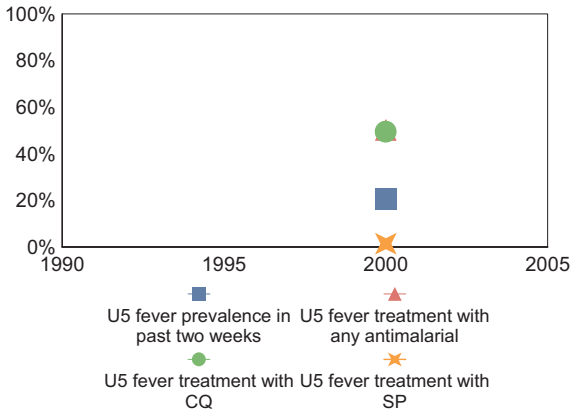
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

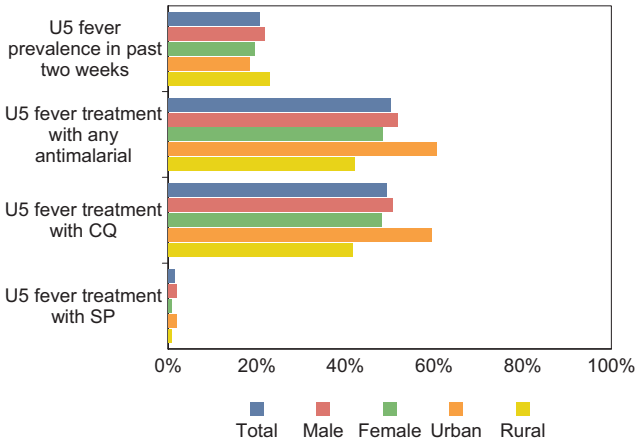
Fever prevalence and treatment with antimalarials

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



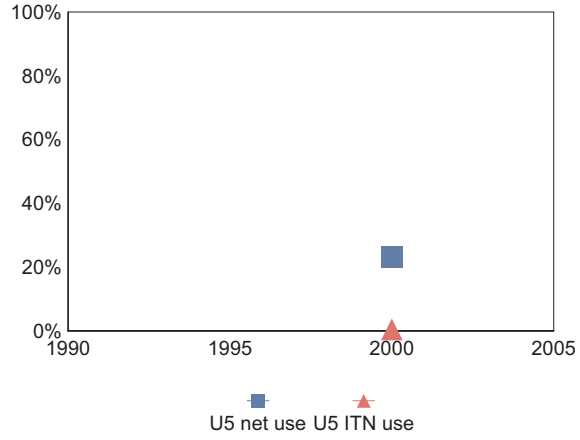
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



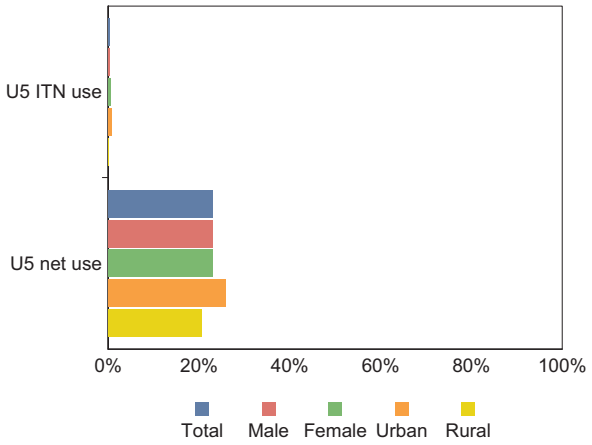
Insecticide-treated nets

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



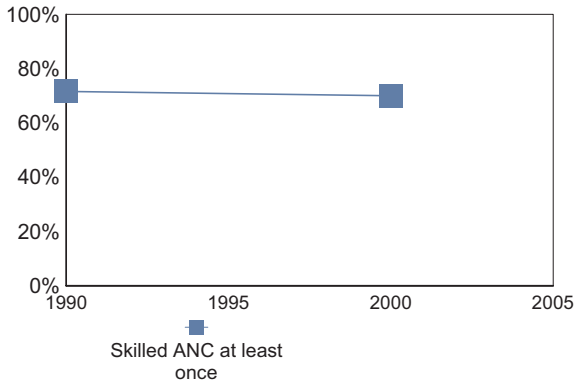
Estimates of ITN coverage from most recent national survey



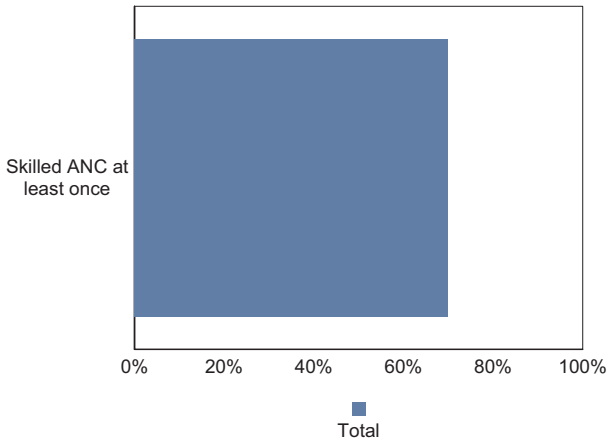
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



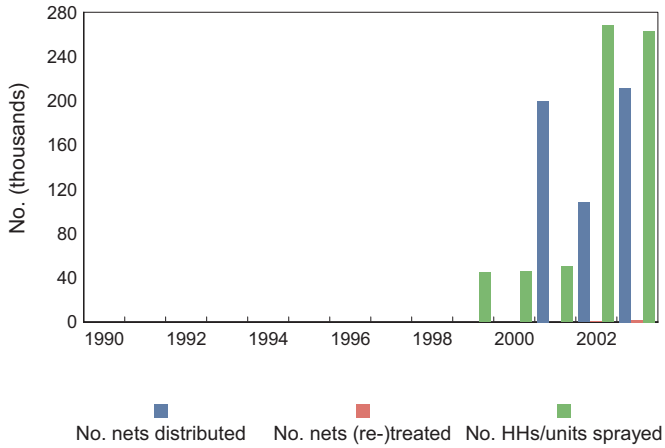
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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.



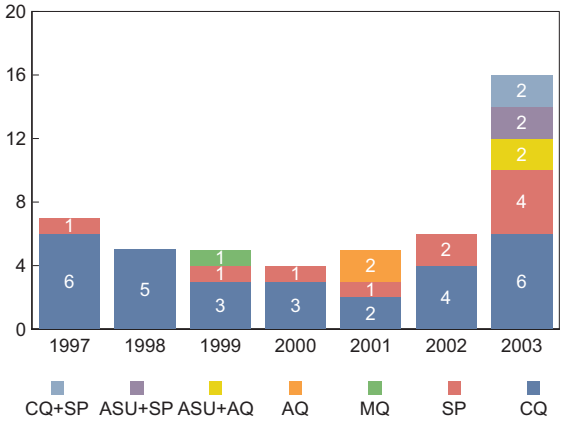
	No. HHs/units sprayed	No. nets (re-) treated	No. nets sold or distributed
1999	45 000		
2000	46 000		
2001	50 000		200 000
2002	268 000	800	108 090
2003	263 000	2 000	211 520

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 Low	Range High	Percentile 25th	Percentile 75th
High transmission area						
CQ						
2001-2003	5	53.1	16.6	60.7	32.4	59.4
SP						
2001-2002	3	6.0	0.0	12.0	0.0	12.0
AQ						
2001	2	6.5	6.0	7.0	6.0	7.0
ASU+AQ						
2003	2	0.4	0.0	0.8	0.0	0.8
ASU+SP						
2003	2	1.7	0.8	2.5	0.8	2.5
Moderate/low transmission area						
CQ						
1996-2003	24	47.6	0.0	76.9	33.8	57.4
SP						
1996-2003	7	4.2	0.0	11.7	2.0	8.1
MQ						
1999	1	2.5				
CQ+SP						
2003	2	10.2	5.9	14.4	5.9	14.4

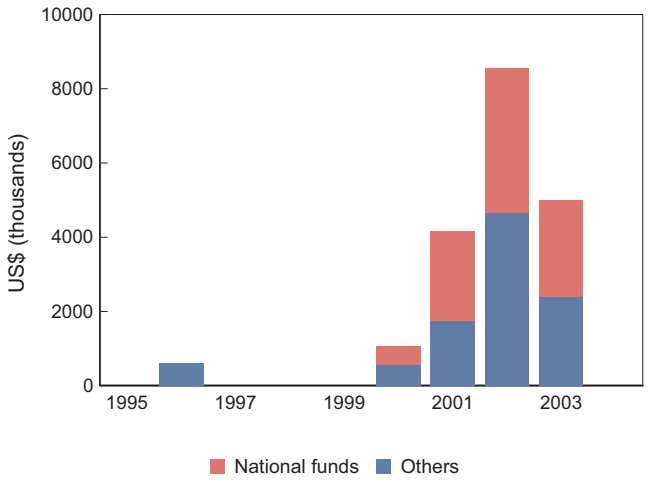
Number of drug efficacy studies available by year and drug type



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		600
1997		
1998		
1999		
2000	500	574
2001	2 400	1 744
2002	3 887	4 670
2003	2 600	2 406
2004		

SUDAN

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.

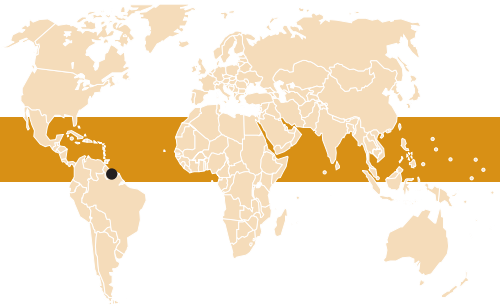
Approved proposals			Grant agreements and disbursements (as of 13 January 2005)						
Source	Round	Total year 1-2 budgets	Principal recipient	Signed	Signature date	Grant amount	No. of disbursements	Total disbursed	% disbursed
CCM	2	14 237 853		No			-		
			UNDP	Yes	24-Aug-04	12 855 490	1	4 903 414	38.1%

General notes and remarks

See explanatory notes at the beginning of the report.

For antimalarial drug efficacy results, data for high transmission areas reflect clinical failure and data for moderate/low transmission areas reflect total failure.

For more information, please refer to the Federal Ministry of Health web site at: www.fmoh.gov.sd and the RBM Progress in Sudan 2003.



SURINAME

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	3
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	
– *P. falciparum* (laboratory confirmed):	ATM-LUM
– *P. vivax*	CQ+PQ
• Treatment failure:	Q(7d)
• Severe malaria:	
• Pregnancy:	
– prevention	
– treatment	

Malaria situation

In Suriname, malaria risk is greatest along the Marowijne River, which borders French Guiana, as well as in areas close to Brokopondo Lake in the northern-central region where *A. darlingi* is present. Malaria caused by *P. falciparum* is the most prominent infectious disease in remote areas. The total of 14 657 malaria cases reported in 2003 was similar to that reported in previous years. The outbreaks in 2003 occurred in the south of the country near the Brazilian border as well as in the eastern Marowijne region, which were associated with increased movement of people into gold-mining areas.

National policy and planning

Malaria control is carried out mostly by the Medical Mission, an NGO primarily financed by the government. The country collaborates with Brazil, French Guiana and Guyana because of overlapping areas of transmission and cross-border migration of the labour force for the mining industry in remote areas. ITNs are being used and local ITN production is promoted.

Progress in malaria control activities

In the first months of 2003, the National Malaria Board changed the first-line treatment policy from Q to the combination treatment ASU+MQ, resulting in increased patient adherence to treatment. Based on drug efficacy trials undertaken for the Amazon Network for Monitoring Antimalarial Drug Resistance, in 2004 the National Malaria Board adopted the use of ATM+LUM (Coartem®) as a first-line treatment. Human and material resources within the entomology unit of the MoH were strengthened. Operational research was undertaken for determining the most efficient vector control strategies.

Financial support

The majority of funding for malaria control comes from nongovernmental sources. Following a successful proposal by the Medical Mission, the GFATM granted over US$ 3 million over 2 years to start in 2005.

SURINAME

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
1 608	1 490	1 404		4 704	6 606	16 649	11 323	12 412	13 939

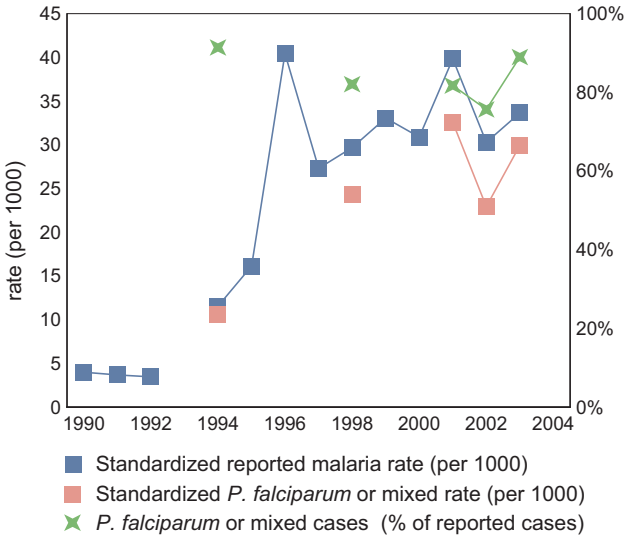
2000	2001	2002	2003
13 132	17 074	13 091	14 657

Date of last report: 13 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	14 657
Reported malaria deaths	
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	70 670
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	14 657
P. falciparum or mixed	13 043
P. vivax	1 614
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	13 132	17 074	13 091	14 657	100

Reported malaria cases by selected subnational area

	2000	2001	2002	2003	%

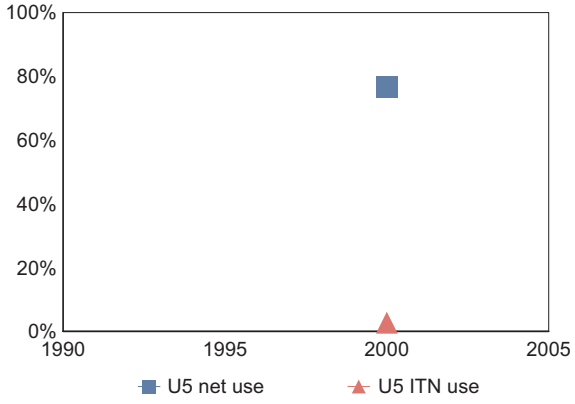
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

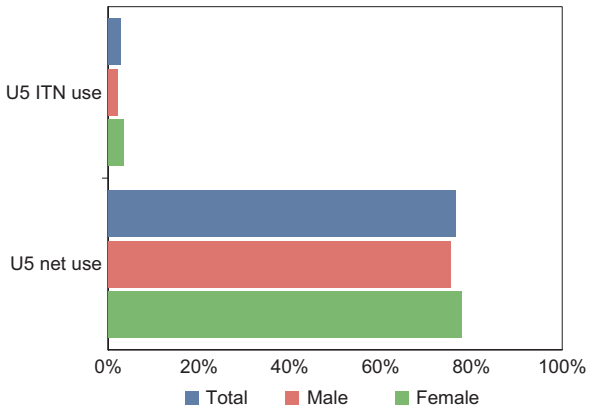
Insecticide-treated nets

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



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.

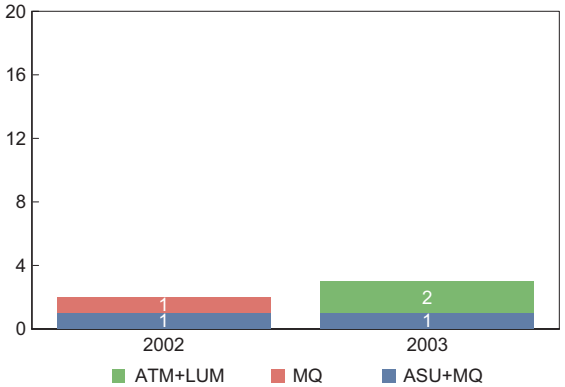
No data are currently available.

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
MQ						
2002	1	7.3				
ATM+LUM						
2003	2	2.0	1.9	2.0	1.9	2.0
ASU+MQ						
2002-2003	2	4.1	2.4	5.8	2.4	5.8

Number of drug efficacy studies available by year and drug type

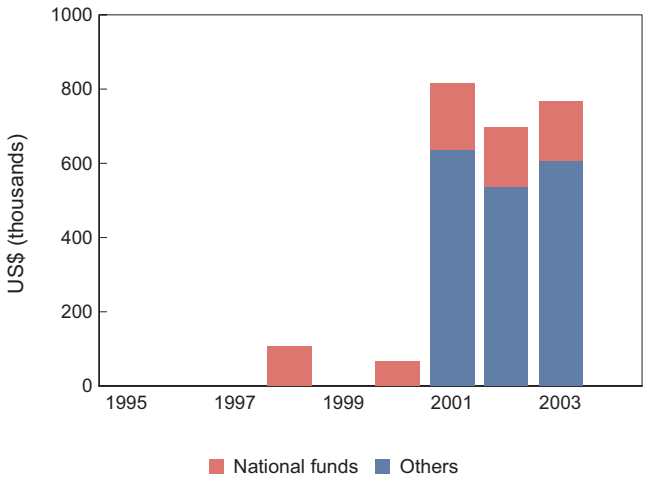


SURINAME

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	106	
1999		
2000	66	
2001	178	636
2002	161	536
2003	161	606
2004		

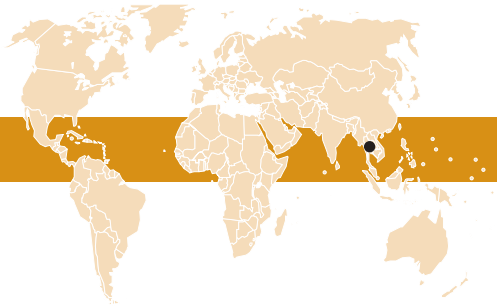
Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

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	4	3 043 500	**Medische Zending**	Yes	14-Dec-04	2 963 950	1	1 084 850	36.6%

General notes and remarks

See explanatory notes at the beginning of the report.



THAILAND

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	9
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	2
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	NA
– *P. falciparum* (laboratory confirmed):	MQ (alone) or MQ + ASU(2d)
– *P. vivax*	CQ+PQ
• Treatment failure:	Q(7d)+T(7d)
• Severe malaria:	ASU or Q
• Pregnancy:	
– prevention	NA
– treatment	Q(7d)

Malaria situation

Malaria in Thailand is forest-related and most prevalent along the international borders, especially on the Thai–Myanmar border. In the central plain areas, transmission has been eliminated for more than 2 decades. Malaria transmission in forested areas is intense because of highly efficient vectors, enhanced vector longevity and extensive population movement into and out of these same areas. At national level, malaria cases and deaths have fallen gradually since 1999, but the disease remains an important public health problem along the international borders. Young adult males who work in or near forests are a special group at risk in these areas.

National policy and planning

The NMCP was a specialized, vertical programme from its inception in 1949 until 1996, when it was partially merged with the control programme for other vector-borne diseases—dengue and filariasis—and is now known as the Bureau of Vector-Borne Diseases of the Department of Communicable Disease Control within the Ministry of Public Health. At regional level, the control programme structure comprises 12 disease prevention and control offices, each directed by a medical officer. Throughout Thailand, there are 39 vector-borne disease control centres at provincial level and 302 vector-borne disease control units at district level that are responsible for the control of malaria as well as other vector-borne diseases. During the past decade, downsizing, decentralization and intregration of the control programme have resulted in a 30–40% reduction in the number of malaria staff throughout the country.

Progress in malaria control activities

The major problems and constraints faced by the malaria control programme are: (i) transmission at the international borders among foreign workers; (ii) drug resistance along the Thai–Cambodian and Thai–Myanmar borders; (iii) acceptance of and willingness to use IRS; (iv) challenges in educating at-risk populations about unsafe behaviours; (v) emergence of epidemics as a result of migration of non-immune labour force following development projects into high-risk areas, and (vi) high case-fatality rates among non-immune groups such as tourists and migrants.

Financial support

National funds available for malaria control activities totalled over US$ 18 million in 2003. Funding from the GFATM will provide an additional US$ 2.3 million over 2 years.

THAILAND

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)

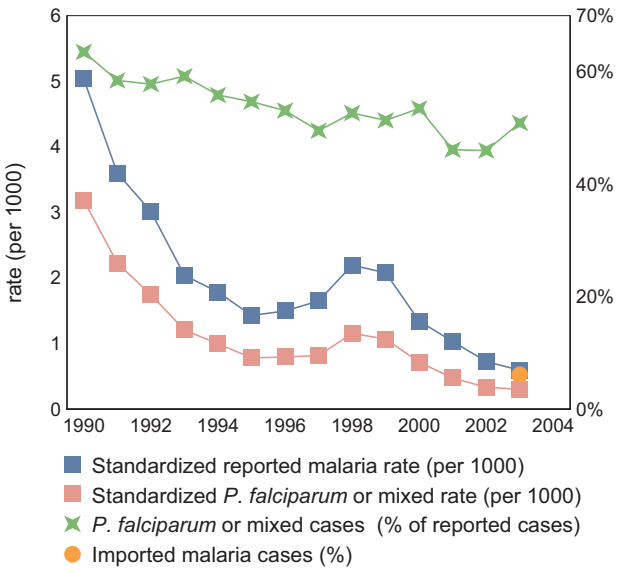
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
273 880	198 383	168 370	115 220	102 119	82 743	87 622	97 540	131 055	125 379

2000	2001	2002	2003	
81 692	63 528	45 240	37 355	Date of last report: 1 October 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	37 355
Reported malaria deaths	325
Probable or clinically diagnosed	
Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	3 256 939
Rapid diagnostic tests (RDTs) taken	2 668
Laboratory confirmed	
Malaria cases	37 355
P. falciparum or mixed	19 024
P. vivax	18 295
Severe (inpatient or hospitalized) cases	
Malaria deaths	325
Investigations	
Imported cases	2 279
Estimated reporting completeness (%)	80



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	81 692	63 528	45 240	37 355	100
Gender	Male				24 879	67
	Female				12 476	33
Age	1-4 years	4 898	3 812			6
	<5 years				2 129	6
	5-9 years				3 100	8
	10-14 years				4 145	11
	15+ years				27 981	75
	15-19 years	15 524	15 882			25
	>19 years	61 269	43 834			69

Reported malaria cases by selected subnational area

10 areas	2000	2001	2002	2003	%
Tak				10 278	28
Yala				3 051	8
Kanchanaburi				2 659	7
Chanthaburi				2 628	7
Mae Hong Son				1 929	5
Chiangmai				1 732	5
Prachuap Kiri Khan				1 437	4
Ubon Ratchathani				1 186	3
Nakhon Sri Thammarat				1 166	3
Chumporn				1 080	3

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.

Insecticide-treated nets

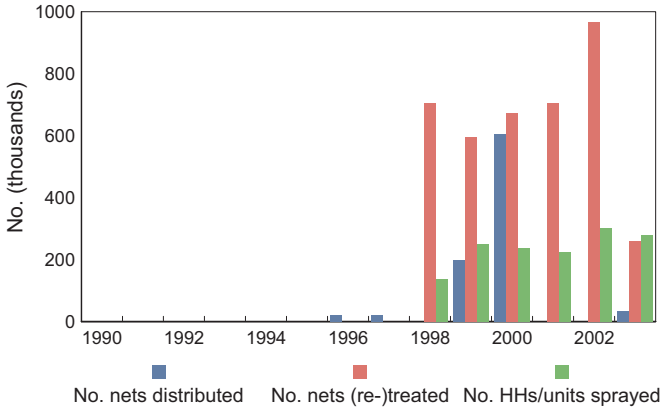
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data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

No survey-based estimates of mosquito net or ITN coverage are currently available.

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
1996			20 000
1997			20 000
1998	135 865	705 242	-
1999	250 270	594 723	200 000
2000	238 323	671 771	603 943
2001	224 704	706 545	
2002	300 668	966 542	
2003	277 602	258 724	32 780

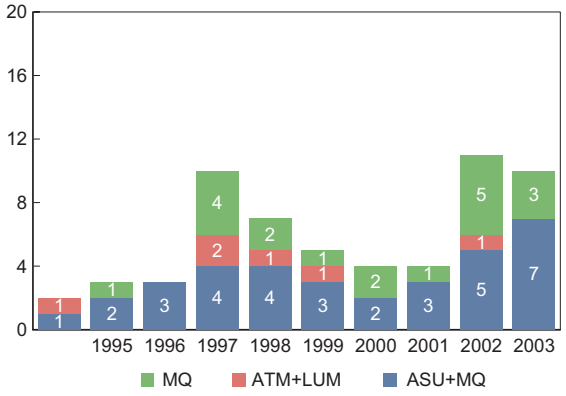
Among the over 250,000 nets retreated in Thailand in 2003, over 111,000 (or 45%) were retreated in the provinces of Tak, Yala, Kanchanaburi, Chanthaburi, Maehong Son, Chiangmai.

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 Low	Range High	Percentile 25th	Percentile 75th
MQ						
1995-2003	19	13.8	2.0	68.4	7.5	28.0
ATM+LUM						
1996-2002	6	2.6	0.0	3.9	0.5	3.5
ASU+MQ						
1995-2003	34	3.6	0.0	21.4	1.2	8.1

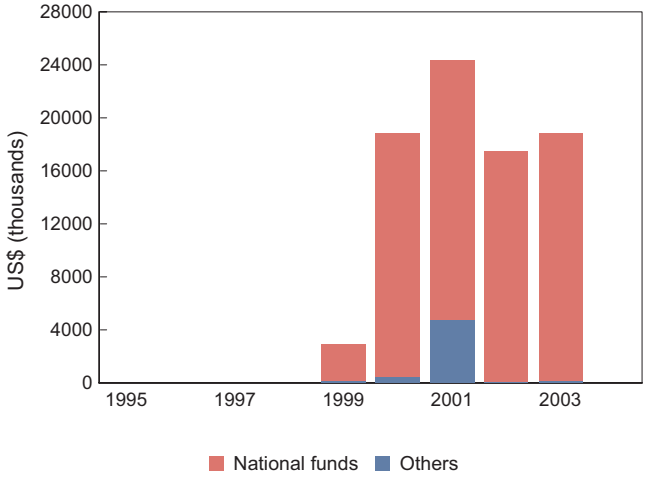
Number of drug efficacy studies available by year and drug type



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	2 717	155
2000	18 354	458
2001	19 578	4 797
2002	17 396	71
2003	18 700	117
2004		

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

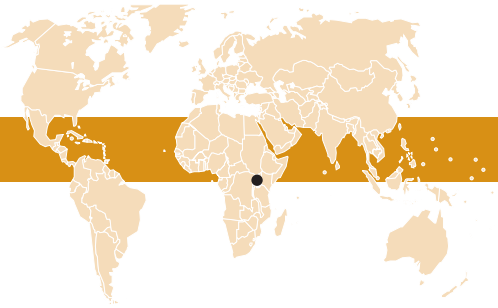
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	2 280 000	**MoH**	Yes	15-Oct-03	2 280 000	1	660 000	28.9%

General notes and remarks

See explanatory notes at the beginning of the report.

Reported malaria cases for 2003 are for Thai nationals only. An additional 408 699 blood sites were examined in 2003 with 32 395 positive slides, of which 18 120 were *P. falciparum* for foreign nationals residing in Thailand. The vast majority of these foreign nationals are reported as being from Myanmar.



UGANDA

Malaria situation

Malaria is the leading cause of morbidity and mortality in Uganda and is responsible for up to 40% of outpatient visits, 25% of hospital admissions and 14% of hospital deaths. The burden of malaria is greatest among children under 5 years of age and pregnant women.

National policy and planning

A national RBM strategic plan (2001/2002–2004/2005) guides malaria control activities in Uganda. The main strategies are: (i) prompt and effective treatment, including home management; (ii) vector control, including ITNs and IRS; (iii) IPT during pregnancy; and (iv) and epidemic preparedness.

Progress in malaria control activities

In the past 5 years, positive developments have included: (i) increasing the capacity of the NMCP; (ii) developing an ITN policy and strategy; (iii) enhancing monitoring of antimalarial drug efficacy; (iv) updating the antimalarial drug policy in 2002 and 2004; and (v) in April 2002, developing and implementing a strategy of home management of fever using prepackaged CQ and SP. Remaining challenges for increasing ITN coverage include how to distribute appropriately to vulnerable groups and how to raise awareness of the importance of ITNs for these target populations. Challenges to implementing the new IPT policy include: (i) increasing the use of antenatal clinics by vulnerable women; (ii) reducing drug stock-outs; and (iii) countering erroneous beliefs about the harmful effects of SP through increased education among populations of pregnant women at risk of malaria.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2004
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	9
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	7
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	Yes
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ATM-LUM*
– *P. falciparum* (laboratory confirmed):	ATM-LUM*
– *P. vivax*	
• Treatment failure:	Q(7d)
• Severe malaria:	Q(7d)
• Pregnancy:	
– prevention	SP (IPT)
– treatment	Q(7d)

Financial support

Malaria funding from the NMCP is merged with funding for other health services at district and subdistrict levels, which share human resources, infrastructure and supplies. At national level, the NMCP has a very small budget for operating expenses compared with what is allocated for malaria control at district level. National NGOs cover their own operating costs and support districts in cash or in kind directly or through the NMCP. In 2000, funds for malaria control included US$ 385 000 from the government and US$ 376 000 from other sources. Uganda also received over US$ 9 million of committed funds of US$ 89 million from the GFATM.

UGANDA

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
		2 446 659	1 470 662	2 191 277	1 431 068		2 317 840	2 845 811	3 070 800

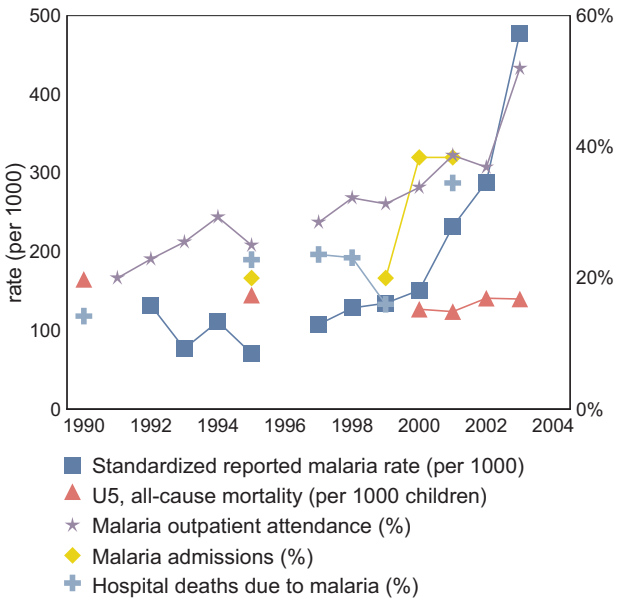
2000	2001	2002	2003
3 552 859	5 622 934	7 216 411	12 343 411

Date of last report: 30 November 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	12 343 411
Reported malaria deaths	8 450
Probable or clinically diagnosed	
Malaria cases	12 343 411
Severe (inpatient or hospitalized) cases	
Malaria deaths	8 450
Slides taken	
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	
P. falciparum or mixed	
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Investigations	
Imported cases	
Estimated reporting completeness (%)	97



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	3 552 859	5 622 934	7 216 411	12 343 411	100
Age	<5 years	1 628 314	2 234 275	2 791 753	3 748 520	30
	5> years	1 924 545	3 388 659	4 424 658	8 594 891	70

Reported malaria cases by selected subnational area

15 of 15 areas	2000	2001	2002	2003	%
Mbarara	173 793	323 909	197 985	487 926	4
Bushenyi	122 055	220 432	359 201	378 173	3
Tororo		149 155	149 155	324 548	3
Wakiso		151 895	151 895	323 958	3
Arua	150 834	146 617	274 784	322 632	3
Masaka	116 548	222 381	273 305	320 897	3
Mbale	160 596	166 413	320 678	304 132	2
Kasese				287 132	2
Rakai	62 435	263 162	263 162	280 733	2
Kabale	99 346	251 635	251 635	256 256	2
Jinja	102 327	118 971	226 028	249 254	2
Pallisa	116 193	168 417	210 914	238 547	2
Ntungamo	75 549	192 010	221 981	234 692	2
Kumi	117 669	141 562	141 562	195 299	2
Kampala	39 927	32 360	32 360	159 089	1

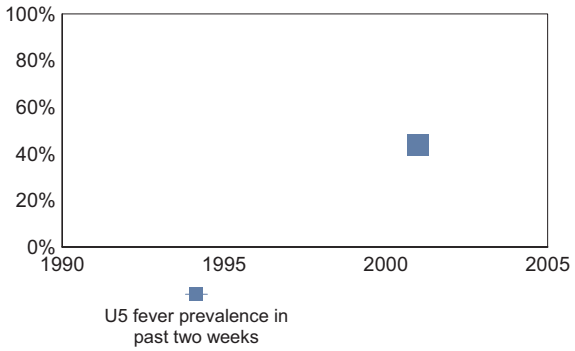
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

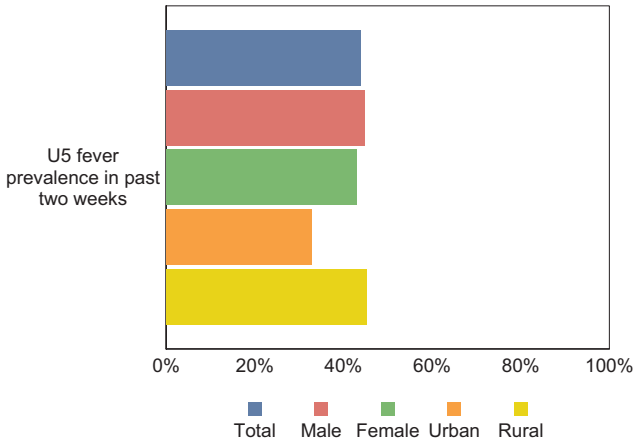
Fever prevalence and treatment with antimalarials

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



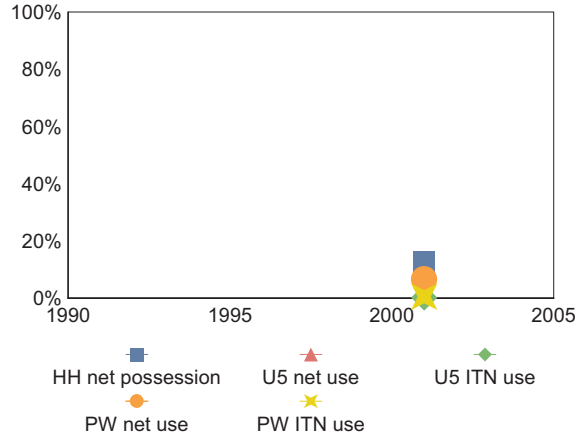
Estimate of fever prevalence and treatment with antimalarials from most recent national survey



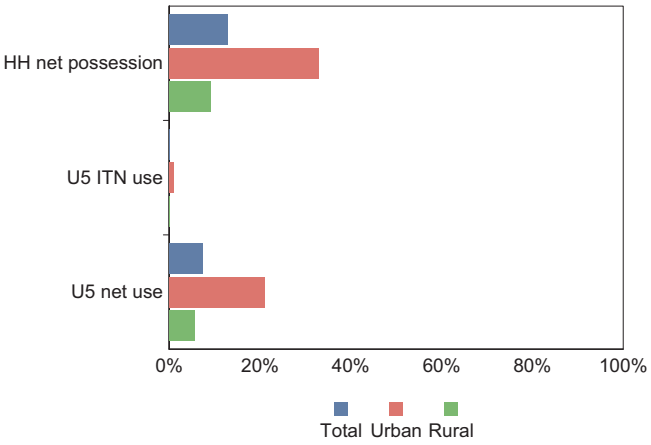
Insecticide-treated nets

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



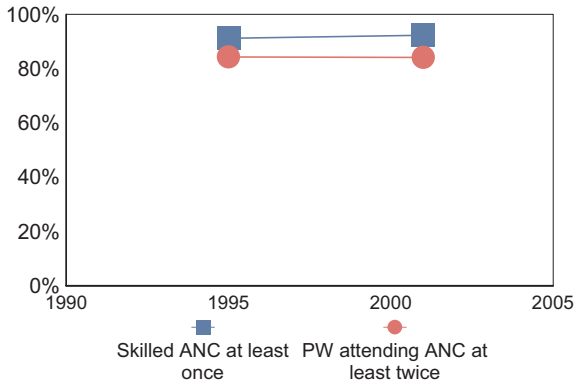
Estimates of ITN coverage from most recent national survey



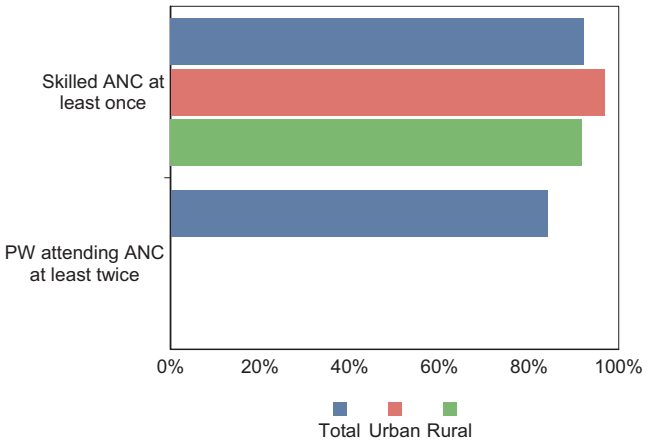
Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.

Antenatal clinic attendance and use of antimalarials for prevention from national surveys



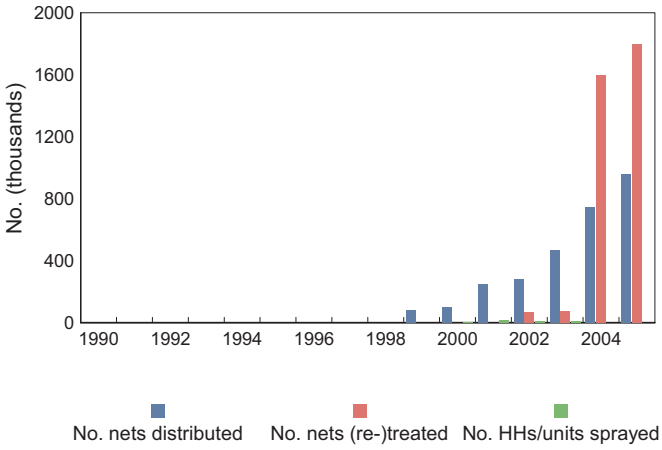
Antenatal clinic attendance and use of antimalarials for prevention from most recent national surveys



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	No. retreatme kits distribute
1999			80 000	35 00
2000	6 105		100 000	58 00
2001	17 642		250 000	130 00
2002	12 533	65 315	280 295	130 41
2003	9 619	74 079	467 081	158 99
2004		1 600 000	745 000	
2005		1 800 000	960 000	

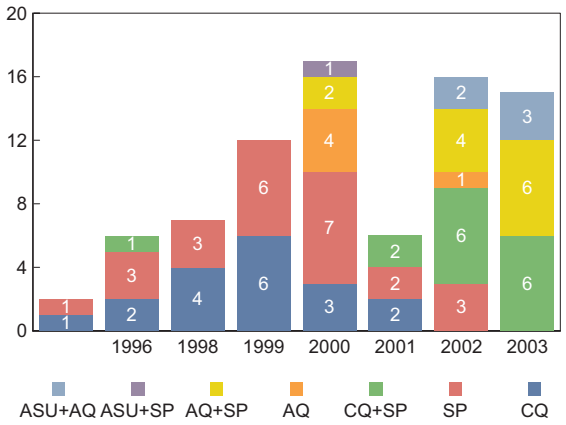
Figures for 2004 and 2005 are projected estimates.

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 Low	Range High	Percentile 25th	Percentile 75th
CQ						
1996-2001	18	29.3	7.5	81.2	16.4	58.7
SP						
1996-2002	25	11.4	0.0	25.0	5.0	16.8
AQ						
1999-2002	5	8.8	0.0	14.5	1.6	12.3
CQ+SP						
1996-2003	15	12.0	0.0	37.0	7.0	19.0
AQ+SP						
1999-2003	12	1.6	0.0	13.0	0.5	3.5
ASU+AQ						
2002-2003	5	1.0	0.0	4.0	0.5	3.7
ASU+SP						
2000	1	0.5				

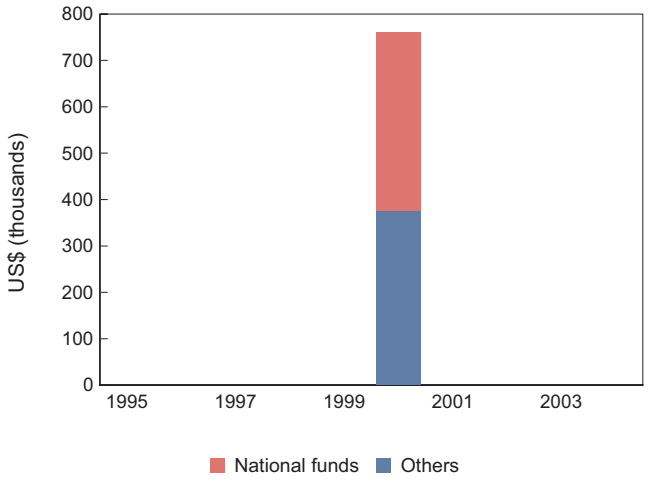
Number of drug efficacy studies available by year and drug type



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	385	376
2001		
2002		
2003		
2004		

Malaria funding from the national malaria control programme is included in funding for other health services at the district level. Human resources, infrastructure and supplies are funded together with other health services at district and subdistrict level. The funds for the districts are sent directly from the Ministry of Finance. At national level the malaria control programme receives funding for running expenses, but this is very small compared to what is spent on malaria control at district level. National nongovernmental organizations have their own running costs and they support districts in cash or in kind directly or through the Malaria Control Programme.

UGANDA

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	23 211 300	**MoF**	Yes	27-Feb-04	23 211 300	3	9 749 358	42.0%
CCM	4	36 432 148		No					

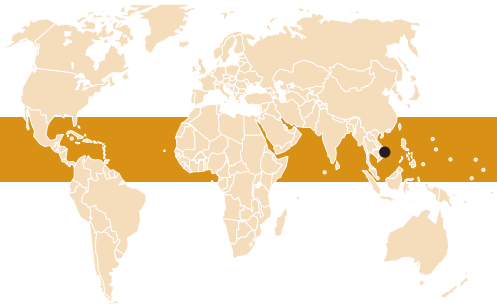
General notes and remarks

See explanatory notes at the beginning of the report.

Information on reported malaria cases comes from the Uganda Health Management Information System (HMIS). Uganda is also implementing the WHO-promoted integrated Disease Surveillance and Response System (IDSR), but the national programme felt the information received from IDSR was less complete than HMIS. For example, in 2003 IDSR reported 7 147 152 malaria cases while HMIS reported 12 343 411 malaria cases.

Information on hospitalized or inpatient malaria cases and malaria deaths from HMIS is not reliable. The information included in the profile for inpatient malaria cases and deaths is from IDSR, despite known problems with completeness of reporting and compatibility with HMIS records.

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



VIET NAM

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	2003
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	5
• Home-based management of malaria:	NA
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	ASU(5d) or CQ
– *P. falciparum* (laboratory confirmed):	DHA/PPQ/TMP+PQ or ASU(5d)+PQ
– *P. vivax*	CQ+PQ(5d)
• Treatment failure:	DHA/PPQ/TMP+PQ ASU(3d)+MQ25
• Severe malaria:	ASU/ATM or Q
• Pregnancy:	
– prevention	CQ (weekly)
– treatment	Q(7d) or CQ or ASU

Malaria situation

Since 1975, the worst year for malaria was 1991 when close to 2 million cases and 4646 deaths were reported; in 2003 these numbers had decreased to 37 416 and 50, respectively. Several explanations were given for this severe situation, including insufficient funding for malaria control resulting in low coverage of ITNs and insecticides, scarcity of antimalarial drugs, large population movements, lack of international support and poor access to health facilities, particularly in the remote mountain areas.

National policy and planning

Since 1991, the Vietnamese Government has recognized the socioeconomic impact of malaria and given top priority to activities for the control of malaria. Today, political commitment for malaria control is provided at all levels. The NMCP has focused on: (i) strengthening the malaria control network from central to village level; (ii) increasing the number of village health workers; (iii) producing new, effective antimalarial drugs; (iv) ensuring free treatment; (v) regular spraying of houses; (vi) distributing ITNs with the participation of the community; (vii) regular training for personnel at all levels; and (viii) providing health education for malaria prevention, in particular to vulnerable groups such as migrants and ethnic minorities.

Progress in malaria control activities

The MoH focuses on sustaining the success of the 1990s and improving control activities in areas and population groups where mortality and morbidity are still high, particularly in remote areas where village health workers are scarce and among migrants, who have an increased exposure to vectors and reduced access to health services. Cooperation and partnerships between the MoH and the Medical Department of the Ministry of Defence in remote and border areas, Women's Union, Youth Union, Ministry of Transportation, Ministry of Construction and Ministry of Education have contributed to strengthening malaria control activities.

Financial support

The country reported just over US$ 4 million for malaria control in 2003 from national sources. Financial support from WHO, the European Commission and the governments of Australia, Belgium, Germany and others contributed to successful control in the 1990s.

VIET NAM

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)

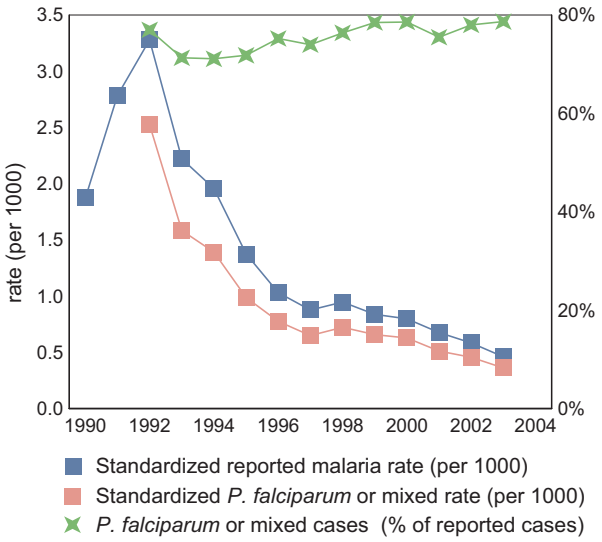
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
123 796	187 994	225 928	156 069	140 120	100 116	76 356	65 859	72 091	64 679

2000	2001	2002	2003	
62 442	53 601	46 902	37 416	Date of last report: 16 December 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	37 416
Reported malaria deaths	50
Probable or clinically diagnosed	
Malaria cases	12 694
Severe (inpatient or hospitalized) cases	423
Malaria deaths	4
Slides taken	2 738 600
Rapid diagnostic tests (RDTs) taken	
Laboratory confirmed	
Malaria cases	37 416
P. falciparum or mixed	29 435
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	46
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	62 442	53 601	46 902	37 416	100

Reported malaria cases by selected subnational area

15 of 63 areas	2000	2001	2002	2003	%
Dak Lak	8 977	9 450	8 008	6 715	18
Gia Lai	7 605	5 424	5 526	4 771	13
Binh Phuoc	8 285	5 667	5 278	3 953	11
Binh Thuan	8 739	8 773	4 183	3 197	9
Quang Nam	931	3 739	2 898	3 035	8
Khanh Hoa	3 936	4 596	2 952	2 179	6
Quang Tri	2 281	3 279	1 793	1 951	5
Lam Dong	3 441	3 532	2 661	1 673	4
Ninh Thuan	2 844	3 304	2 319	1 585	4
Kon Tum	2 070	1 904	1 752	1 172	3
Quang Binh	2 358	1 473	1 148	1 108	3
Phu Yen	3 627	2 962	1 677	979	3
Binh Dinh	3 974	2 581	1 295	817	2
Dong Nai	3 321	1 862	897	720	2
Lai Chau	887	1 366	714	549	1

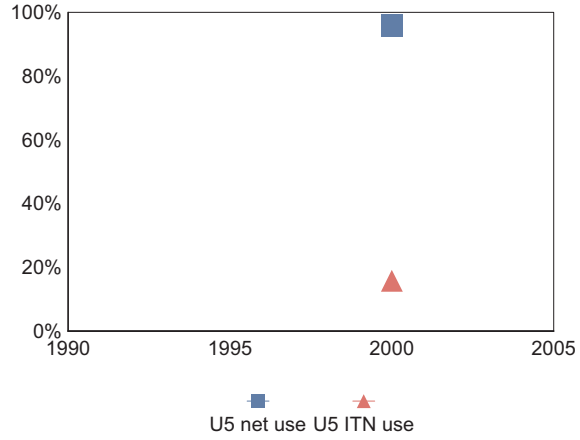
COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

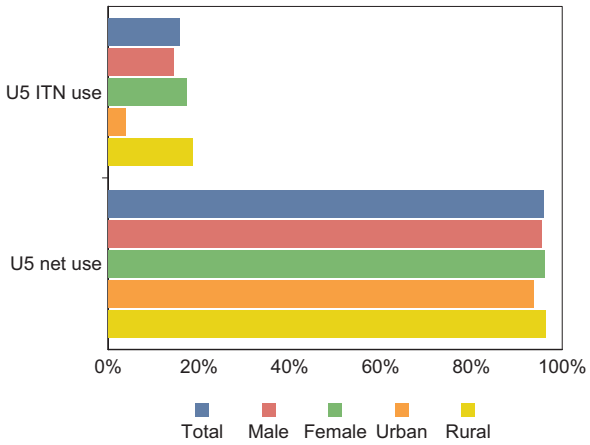
Insecticide-treated nets

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



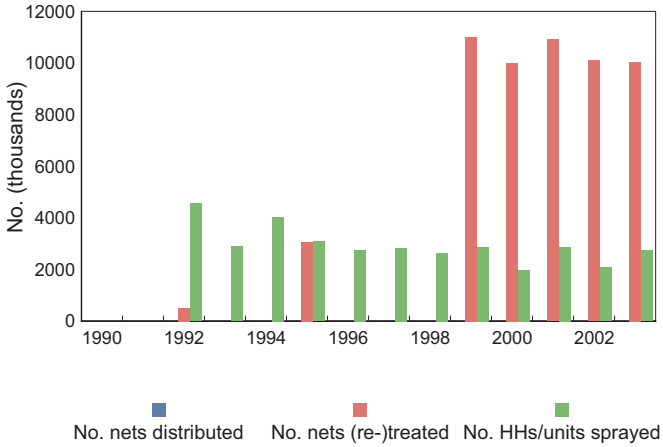
Estimates of ITN coverage from most recent national survey



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
1992	4 552 188	506 025
1993	2 893 886	
1994	4 043 216	
1995	3 081 218	3 068 709
1996	2 747 631	
1997	2 830 974	
1998	2 637 915	
1999	2 873 831	11 007 770
2000	1 984 018	10 007 707
2001	2 883 297	10 920 217
2002	2 080 180	10 101 814
2003	2 746 657	10 047 593

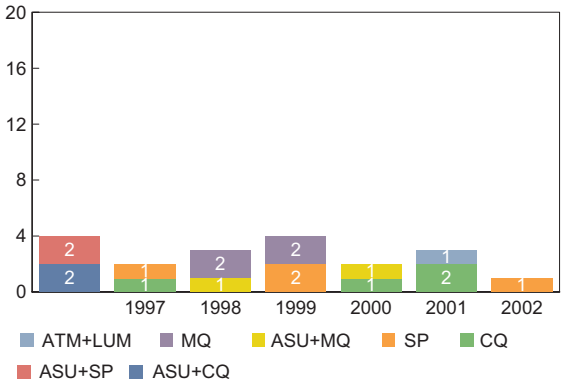
VIET NAM

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 Low	Range High	Percentile 25th	Percentile 75th
CQ 1997-2001	4	52.3	6.2	71.9	27.0	64.3
SP 1997-2002	4	16.6	12.2	70.6	13.0	41.9
MQ 1998-1999	4	11.7	0.0	42.3	0.0	32.8
ATM+LUM 2001	1	2.2				
ASU+CQ	2	37.4	28.0	46.8	28.0	46.8
ASU+SP	2	33.2	8.3	58.1	8.3	58.1
ASU+MQ 1998-2000	2	5.6	0.0	11.1	0.0	11.1

Number of drug efficacy studies available by year and drug type



FINANCING FOR MALARIA

Annual funding for malaria control

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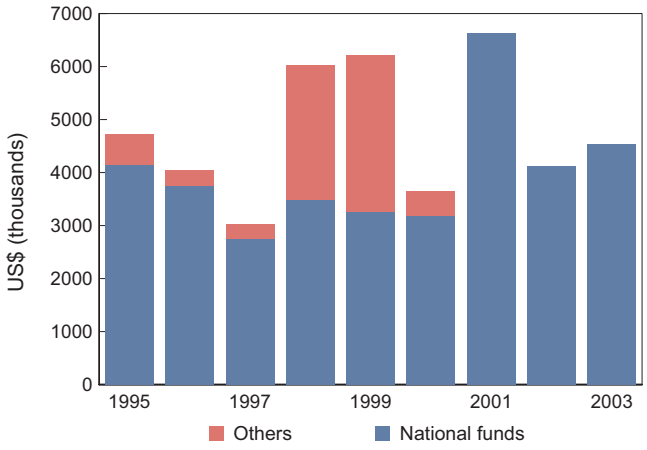


	National funds	Others
1995	4 145	577
1996	3 756	284
1997	2 749	273
1998	3 494	2 528
1999	3 271	2 944
2000	3 178	462
2001	6 632	
2002	4 129	
2003	4 537	

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

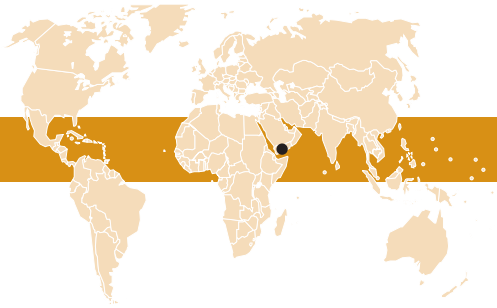
Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US$. 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	3	13 388 402	**MoH**	Yes	24-Aug-04	13 388 402	1	3 218 217	24.0%

General notes and remarks

See explanatory notes at the beginning of the report.

A total of 2 738 600 slides taken in 2003 include information from patients tested with rapid diagnostic tests. Reported malaria cases by age and gender are not available.



YEMEN

Malaria situation

Malaria is one of the most serious health problems in Yemen. Approximately 60% of the population live in areas with malaria transmission. *P. falciparum* accounts for more than 90% of malaria cases. Social unrest during the 1990s brought about almost a complete halt to malaria control activities in the country, resulting in a serious deterioration of the malaria situation. The instability, in addition to climatic changes and heavy rainfalls, contributed to malaria epidemics in 1996 and 1998.

National policy and planning

In 2001, the WHO Regional Office for the Eastern Mediterranean assisted the Government of Yemen to establish the NMCP with a 5-year plan of action for malaria control with the broader RBM Partnership. The plan of action consists of: (i) strategic directions aimed at human resource development; (ii) early diagnosis and prompt treatment of cases; (iii) selective vector control by larviciding and IRS; (iv) prevention of malaria in pregnancy; (v) epidemic preparedness and response; (vi) strengthening malaria surveillance; and (vii) community involvement in operational research. The RBM Partnership in Yemen includes many stakeholders. WHO is a major partner of the government and provides a long-term medical officer and a short-term entomologist. There is also a strong partnership with Saudi Arabia, with periodic border coordination meetings and joint vector control compaigns conducted at the Yemeni–Saudi border. Other partners include the GFATM, the governments of Italy, Japan and Oman, various NGOs, the private sector, local health offices and the Supreme National Malaria Control Committee. Intersectoral collaboration involves various ministries and departments, including the Ministry of Finance and the Ministry of Agriculture and Irrigation.

Progress in malaria control activities

The RBM control programme initially focused on high-risk areas including the Tihama coastal belt, selected districts in foothill and mountainous areas and Socotra Island. Key strategies are training in case management, improving laboratory diagnostic capacity and ensuring the availability of antimalarial drugs in all health institutions, particularly at the peripheral centres. Monitoring of insecticide and drug resistance has begun in selected areas, and malaria surveillance benefits from a newly introduced reporting system. As a result of these activities, the number of reported malaria cases has fallen considerably in areas under RBM support, notably in Socotra Island where elimination might now be possible. However, challenges remain: (i) the capacity of the NMCP is still limited; (ii) the diagnosis of malaria is still based primarily on clinical signs; and (iii) surveillance needs to be strengthened. National treatment guidelines are available, but need updating in view of resistance to CQ, and should be actively promoted to improve compliance by physicians.

Financial support

The Government of Yemen has provided around US$ 2 million for the past few years for malaria control efforts. Funding from the GFATM will provide over US$ 4 million over 2 years.

National malaria policy & strategy environment

Malaria strategy overview for 2003	*Strategy*
• Treatment and diagnosis guidelines	Yes
– published/updated in:	
• Monitoring antimalarial drug resistance:	Yes
– number of sites currently active:	4
• Home-based management of malaria:	Yes
• Vector control using insecticides:	Yes
• Monitoring insecticide resistance	Yes
– number of sites currently active:	2
• Insecticide-treated mosquito nets:	Yes
• Intermittent preventive treatment:	NA
• Epidemic preparedness:	Yes

Antimalarial drug policy, end 2004	*Current policy*
• Uncomplicated malaria	
– *P. falciparum* (unconfirmed):	CQ
– *P. falciparum* (laboratory confirmed):	CQ
– *P. vivax*	CQ+PQ(14d)
• Treatment failure:	SP+PQ(1d)
• Severe malaria:	Q+PQ(1d)
• Pregnancy:	
– prevention	
– treatment	CQ

YEMEN

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)

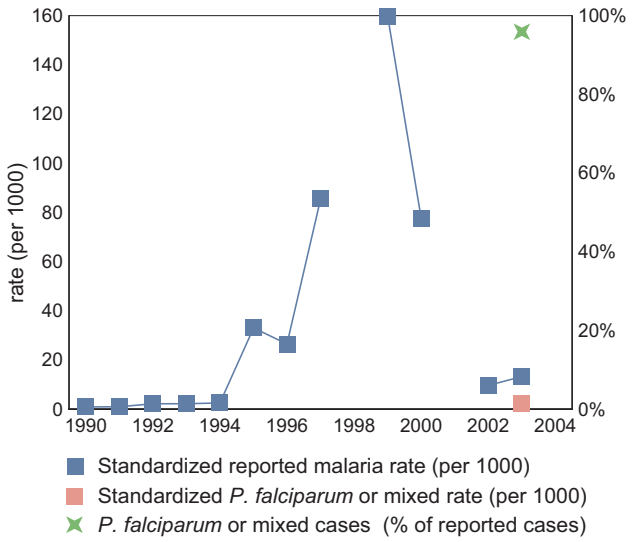
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
11 384	12 717	29 320	31 262	37 201	500 000	416 246	1 394 495		2 781 640

2000	2001	2002	2003	
1 394 495		187 159	265 023	Date of last report: 15 December 2004

Reported malaria by type and quality

For most recent year: 2003

Reported malaria cases	265 023
Reported malaria deaths	29
Probable or clinically diagnosed	
Malaria cases	214 212
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	414 919
Rapid diagnostic tests (RDTs) taken	0
Laboratory confirmed	
Malaria cases	50 811
P. falciparum or mixed	48 741
P. vivax	
Severe (inpatient or hospitalized) cases	
Malaria deaths	29
Investigations	
Imported cases	
Estimated reporting completeness (%)	



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	1 394 495		187 159	265 023	100

Reported malaria cases by selected subnational area

15 of 22 areas	2000	2001	2002	2003	%
Taiz			35 439		19
Sanaa			31 985		17
Dhamar			19 861		11
Hejja			16 875		9
Omran			14 406		8
Ebb			12 658		7
Al Hodieda			8 282		4
M'arib			7 231		4
El mehwit			6 730		4
Shebwa			4 636		2
Aden			3 178		2
Al Amana			2 531		1
Al dalea			2 512		1
El makla			2 314		1
Lahj			2 018		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.

Insecticide-treated nets

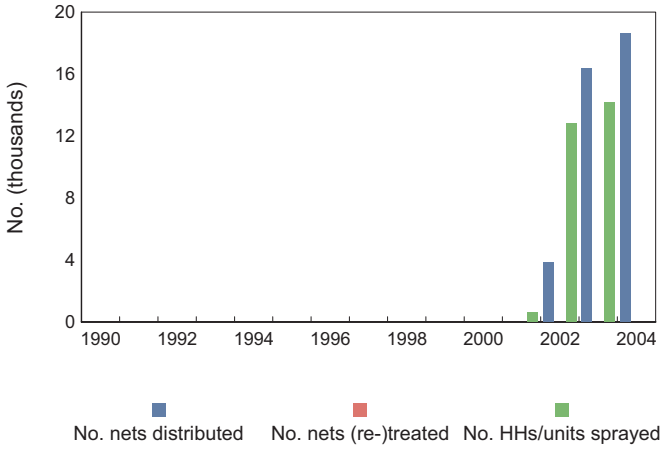
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data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

No survey-based estimates of mosquito net or ITN coverage are currently available.

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 sold or distributed
2001	600	
2002	12 835	3 850
2003	14 152	16 369
2004		18 634

The programme also noted that the planned number of households to be sprayed in 2003 was 36 766, but this was not achieved due to a delay in the local purchase of insecticides.
The number of staff for spraying in the programme went from 397 in 2002 to 426 in 2004 in addition to 91 field supervisors. Larviciding operations in wells, tanks and stagnant water collections was estimated to cover about 2 130 kilometers weekly.

YEMEN

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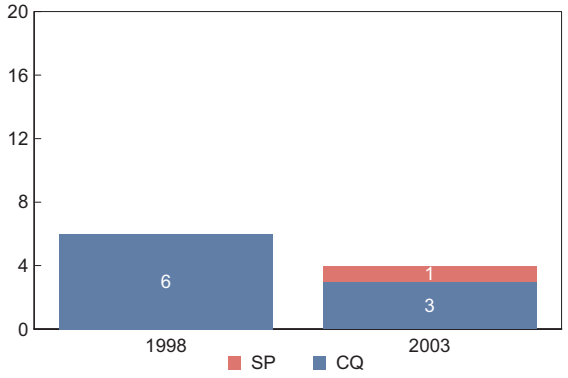
Study years	Number of studies	Median	Range		Percentile	
			Low	High	25th	75th
CQ						
1998-2003	9	42.4	9.0	57.0	23.3	44.9
SP						
2003	1	0.0				

Number of drug efficacy studies available by year and drug type



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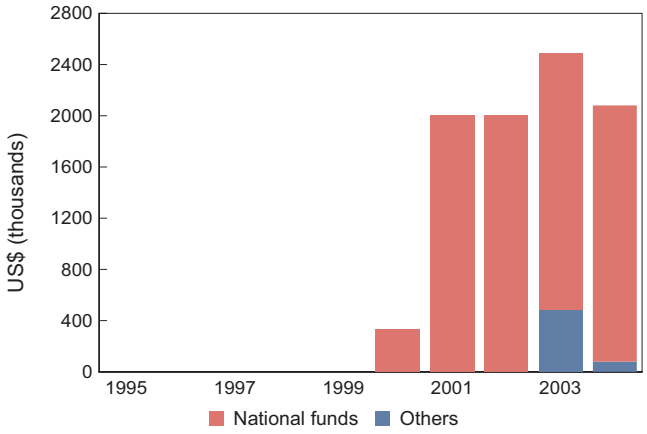

	National funds	Others
1995		
1996		
1997		
1998		
1999		
2000	333	
2001	2 000	
2002	2 000	
2003	2 000	490
2004	2 000	80

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CCM	2	4 159 632	**MoH**	Yes	30-Sep-03	4 159 632	2	1 661 532	39.9%

General notes and remarks

See explanatory notes at the beginning of the report.

Home management of malaria cases is conducted in Socotra Island. A change in antimalarial drug policy based on the results of 9 efficacy studies is planned for the second quarter of 2005. SP during pregnancy is used for special populations with limited access to health care. Reported malaria cases at the national level do not include age or gender.