

Overview of malaria control activities and programme progress

A malaria eradication programme began in Iran in 1949 and changed to malaria control in 1985 as a result of constraints and challenges. Since 1988, malaria control activities have been integrated in primary health centres. Malaria is still the most important parasitic and vector-borne disease in the country. It is one of the main health problems in the south-east provinces. A total of 23 562 malaria cases were reported in 2003, among which only 70% were Iranian, with the remaining coming from abroad. According to current reports, 90% of cases have been reported from three provinces in the southeast: Hormozgan, Kerman and Sistan and Baluchistan. In these three provinces, the major peak of malaria transmission occurs between September and November, with 21% of malaria cases in this region caused by *P. falciparum*.

Several key activities were accomplished in 2003 including the preparation of a National Strategic Plan for Malaria Control 2004–2008 in concordance with the global initiative for RBM. The first malaria border meeting was held in July 2003 in Chabahar with Afghanistan and Pakistan to facilitate cooperation and selection of the best antimalarial measures. Steps were taken to ensure prompt and effective treatment including monitoring of therapeutic efficacy of CQ in uncomplicated *P. falciparum* and the integration of monitoring of therapeutic efficacy of antimalarial drugs in *P. falciparum* cases into malaria surveillance activities. These have also led to the revision of malaria treatment protocol. Planning and control activities were also undertaken in response to the earthquake in the Bam District.

Vector control activities include residual house spraying, larviciding, biological control and ITN distribution. Considering the experience of many countries, ITNs have been incorporated into the malaria control efforts of the NMCP. Field trials were conducted with K. Othrine SC- and KO tab-treated ITNs in Sistan and Baluchistan with the help of the School of Public Health, Tehran University of Medical Sciences, with good results. ITNs have been welcomed by people at local level and will continue to be a part of malaria control efforts. In 2003, various NGOs provided 15 000 ITNs in response to the earthquake-affected areas near Bam, which were used for malaria and leishmaniasis control. In the last border meeting, WHO pledged to continue to efforts for ITNs and to support field-trials for LLINs.

National malaria policy and strategy environment

National 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 management of malaria	No
Vector control using insecticides	Yes
Monitoring insecticide resistance	Yes
Number of sites currently active	4
Insecticide-treated mosquito nets (ITNs)	Yes
Intermittent preventive treatment (IPT)	NA
Epidemic preparedness	Yes

Current antimalarial drug policy

	Current policy
Uncomplicated malaria	
<i>P. falciparum</i> (unconfirmed)	all confirmed
<i>P. falciparum</i> (lab confirmed)	ASU+SP*
<i>P. vivax</i>	CQ+PQ(14d)
Treatment failure	ATM-LUM
Severe malaria	Q(7d) or ATM
Pregnancy	
Prevention	
Treatment	

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
77 470	96 340	76 971	64 581	51 089	67 532	56 362	38 684	32 951	23 110
2000	2001	2002	2003	Date of last report: 25 May 2004					
19 716	19 274	15 558	23 562						

Reported malaria by type and quality

For most recent year

Reported malaria cases	23 562
Reported malaria deaths	

Probable or clinically diagnosed

Malaria cases	0
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	1 358 262
Rapid diagnostic tests (RDTs) taken	

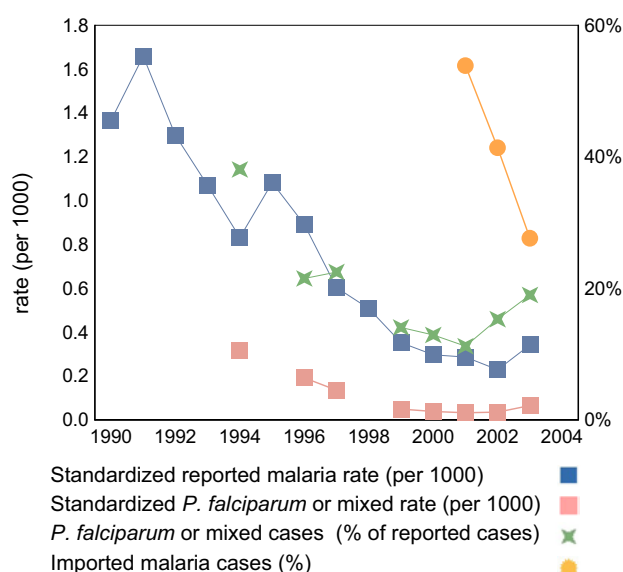
Laboratory confirmed

Malaria cases	23 562
<i>P. falciparum</i> or mixed	4 475
<i>P. vivax</i>	18 818
Severe (inpatient or hospitalized) cases	131
Malaria deaths	

Investigations

Imported cases	6 502
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Estimated reporting completeness (%)



Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	19 716	19 274	15 558	23 562	100

Reported malaria cases by selected subnational area

15 of 28 areas	2000	2001	2002	2003	%
Sistan & Baluchestan				15 019	64
Hormozgan				4 165	18
Kerman				1 100	5
Fars				982	4
Tehran				961	4
Esfahan				382	2
Bushehr				165	1
Mazandaran				128	1
Khuzestan				105	<1
Khorasan				97	<1
Qazvin				90	<1
Ardebil				61	<1
Yazd				58	<1
Qom				52	<1
Markazi				46	<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

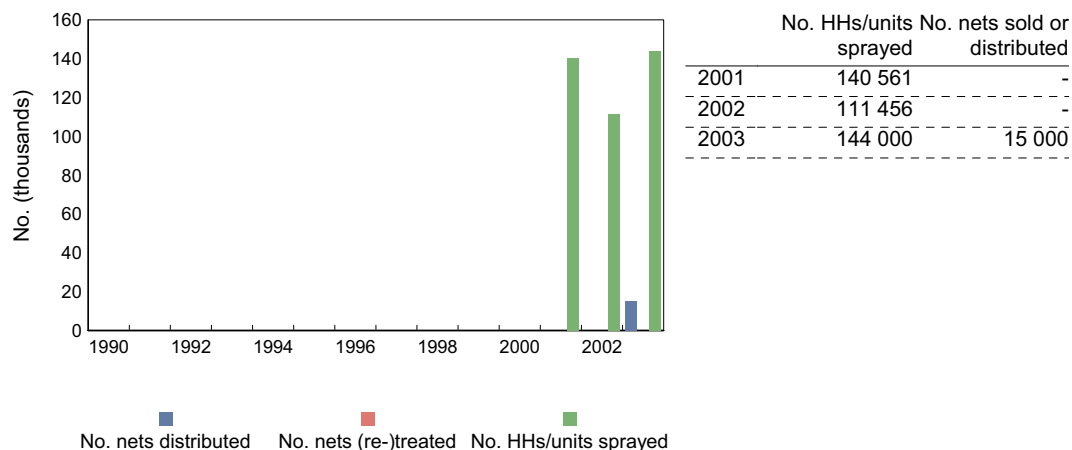
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data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

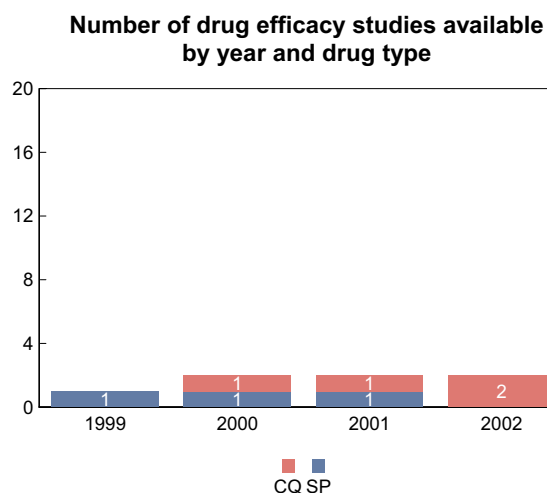
Services delivered for malaria control include numbers of nets and insecticides delivered or sold, numbers of nets (re-)treated with insecticide and numbers of households (HHs)/units sprayed during IRS campaigns. These services and service-related commodities mostly reflect core malaria control activities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



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.

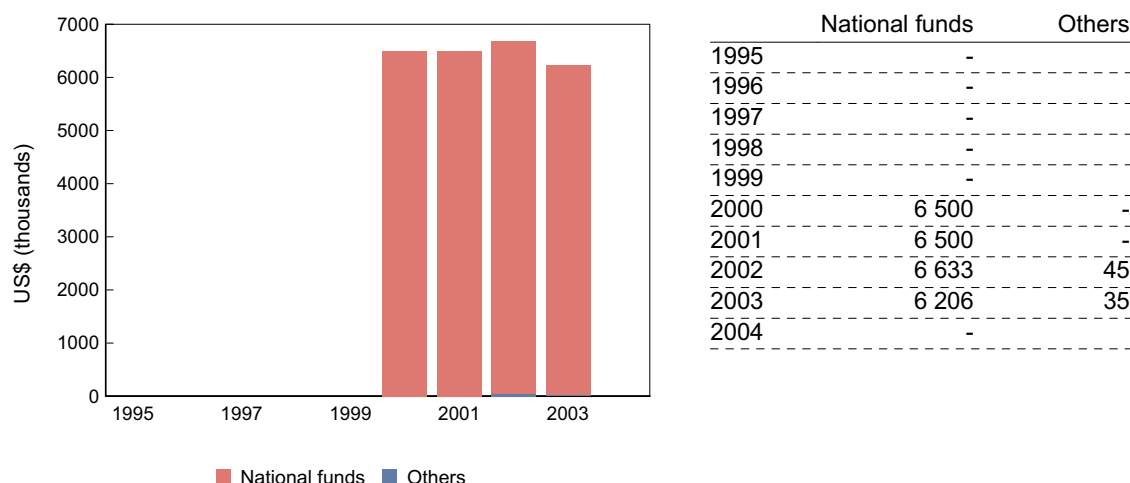
Study years	Number of studies	Median	Range		Percentile	
			Low	High	25th	75th
CQ						
2000-2002	4	72.5	61.0	75.0	66.4	74.2
SP						
1999-2001	3	0.0	0.0	5.7	0.0	5.7



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).



The reported financial information for national funds includes temporary staff salaries, repair of malaria vehicles, indoor residual spraying and larviciding activities (except chemicals), malaria operational research and other new activities/initiatives to expand the current programme.

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 section.

For 2003, of the 133 hospitalized malaria cases, only 33 were considered severe.