

## Overview of malaria control activities and programme progress

Saudi Arabia is situated in the area of transition between the Palaearctic and Afrotropical co-epidemiological types of malaria. The former, which infected the eastern, central and northern parts of the country, was eliminated at the beginning of the 1970s. Afrotropical malaria, with *P. falciparum* as the prevailing parasite and *A. arabiensis* as the main vector, was prevalent in the south-west part of the country at altitudes below 2000m. Malaria is still endemic in parts of this area, especially in its southern part (Jazan). Its existence is perpetuated by continuous importation from Yemen. The population living in relatively hyperendemic areas is 1.04 million—about 5% of the population.

In 2003, a total of 1724 confirmed cases were reported, of which 582 were locally transmitted. In the malarious free areas only imported cases were reported. The country has a competent and adequately financed central malaria unit and an efficient information system on malaria. The MoH has taken the initiative for strengthening malaria control activities in the country, which is timely and concordant with the global initiative of RBM. A clear system to overcome the constraints and ensure rapid and timely implementation of the activities was developed. More support and strength have been provided to those working in areas with Afrotropical malaria. The joint Saudi–Yemeni coordination committee on malaria control at the border areas, at the last meeting held 2–3 August 2004 in Jazan, agreed with the following objectives: (i) updating GR for the villages at border areas; (ii) appreciating the role of WHO on supporting the malaria control programme and requesting more support for malaria control at border areas, which would serve as an example for RBM; (iii) regular exchange of epidemiological information concerning confirmed malaria cases on a monthly basis, while during outbreaks on weekly basis; (iv) training of Yemeni public health personnel at the Jazan national training centre; (v) standardizing malaria drug policy and establishing sentinel sites in both countries for assessment and monitoring antimalarial drug efficacy.

Future activities include the development of an early warning system for malaria, strengthening cooperation with Yemen elimination of malaria in the country. Priority areas for support to eliminate malaria and prevention of introduction include: (i) extending facilities for early diagnosis and prompt and effective treatment of malaria in endemic and border areas; (ii) assuring correct management of severe cases, early detection and management of outbreaks; (iii) selective vector control; and (iv) improved surveillance in malaria-free zones. Applied research in epidemiology and control methods is needed to adapt the control strategies to the new epidemiological realities.

### National malaria policy and strategy environment

#### National malaria strategy overview for 2003

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

#### Current antimalarial drug policy

	Current policy
<b>Uncomplicated malaria</b>	
<i>P. falciparum</i> (unconfirmed)	all confirmed
<i>P. falciparum</i> (lab confirmed)	CQ
<i>P. vivax</i>	CQ+PQ(14d)
<b>Treatment failure</b>	SP
<b>Severe malaria</b>	Q
<b>Pregnancy</b>	
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
15 666	9 962	19 623	18 380	10 032	18 751	21 007	20 631	40 796	13 166
2000	2001	2002	2003	Date of last report: 25 May 2004					
6 608	3 074	2 612	1 724						

### Reported malaria by type and quality

For most recent year

Reported malaria cases	1 724
Reported malaria deaths	0

#### Probable or clinically diagnosed

Malaria cases	
Severe (inpatient or hospitalized) cases	
Malaria deaths	
Slides taken	819 869
Rapid diagnostic tests (RDTs) taken	

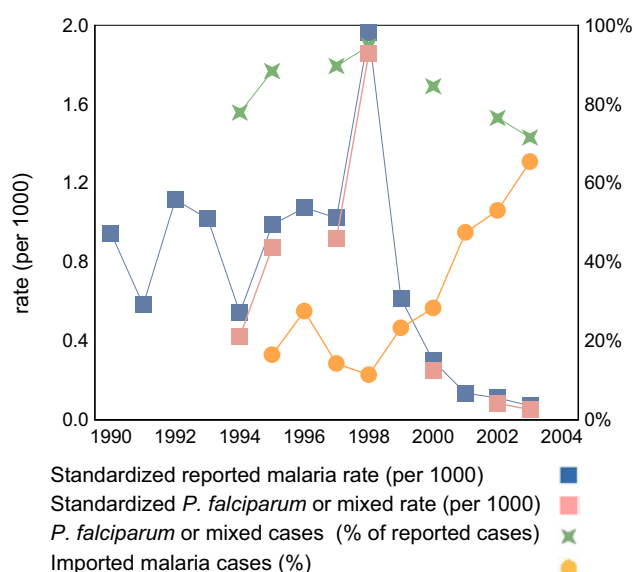
#### Laboratory confirmed

Malaria cases	1 724
<i>P. falciparum</i> or mixed	1 234
<i>P. vivax</i>	462
Severe (inpatient or hospitalized) cases	
Malaria deaths	0

#### Investigations

Imported cases	1 128
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Estimated reporting completeness (%) 100



### Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	6 608	3 074	2 612	1 724	100

### Reported malaria cases by selected subnational area

15 of 21 areas	2000	2001	2002	2003	%
Jazan	3 528	1 407	1 157	629	36
Makkah	417	252	314	266	15
Damam	241	187	175	150	9
Jeddah	236	221	161	122	7
Al-Madinah	218	225	174	106	6
Al-Riyadh	241	203	151	93	5
Assir	606	202	172	93	5
Ihssa	70	68	44	48	3
Hayel	53	59	30	40	2
Taief	139	65	54	35	2
Qassim	57	44	33	35	2
Qunfudha & Thraiban	167	22	23	31	2
Najran	59	47	43	30	2
Beesha	19	10	24	9	1
Al-Baha	187	14	9	8	<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

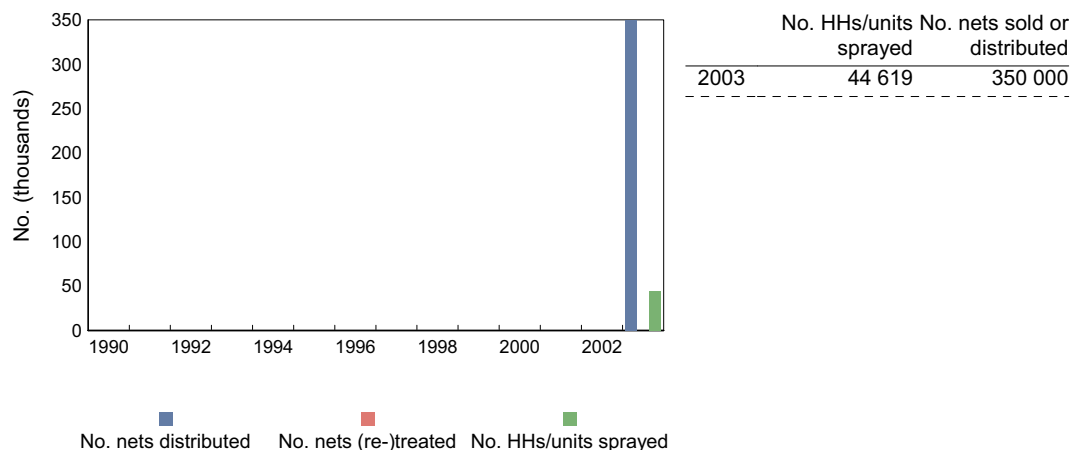
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data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

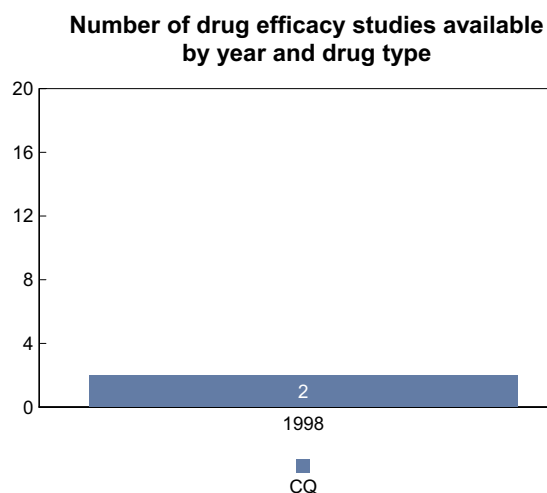
Services delivered for malaria control include numbers of nets and insecticides delivered or sold, numbers of nets (re-)treated with insecticide and numbers of households (HHs)/units sprayed during IRS campaigns. These services and service-related commodities mostly reflect core malaria control activities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

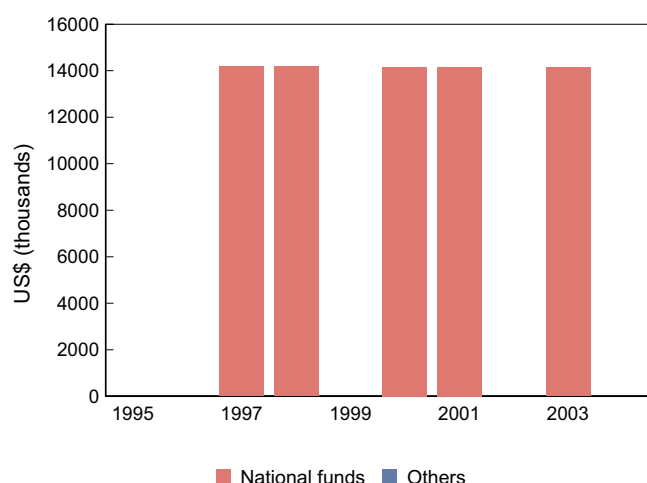
Study years	Number of studies	Median	Range		Percentile	
			Low	High	25th	75th
<b>CQ</b>						
1997-1998	2	15.4	12.4	18.4	12.4	18.4



## 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	14 152	45
1998	14 152	45
1999	-	-
2000	14 152	-
2001	14 152	-
2002	-	-
2003	14 133	-
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 section.