

INDIA

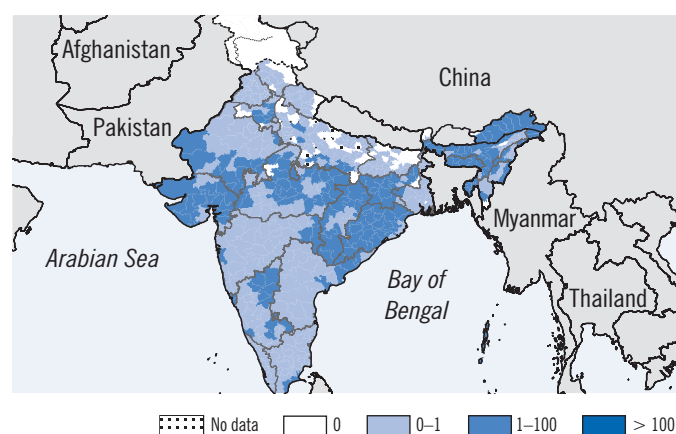
India accounts for approximately two thirds of the confirmed cases reported in the South-East Asia Region. In 2008, 96 million slides were examined, from which 1.5 million cases were confirmed. The number of cases has fallen from more than 2 million confirmed in 2000 to 1.5 million cases in 2008. About half the cases confirmed are due to *P. falciparum*. Five states account for 60% of cases: Orissa, Chhattisgarh, Madhya Pradesh, Jharkhand and West Bengal. Other highly endemic states include Arunachal Pradesh, Assam, Meghalaya and Tripura. A demographic and household survey carried out in 2005–2006 found that 36% of households owned a mosquito net. IRS has been the main method of mosquito control, covering about 54 million people at risk. The programme delivered 7.2 million ITNs, more than 3 million first-line treatments and 600 000 courses of ACT during 2008, enough to treat over two thirds of *P. falciparum* malaria cases. Funding for malaria programmes from domestic and external sources increased from US\$ 54 million in 2001 to US\$ 110 million in 2008, of which 65% was from the Government.

I. EPIDEMIOLOGICAL PROFILE

Population, endemicity and malaria burden

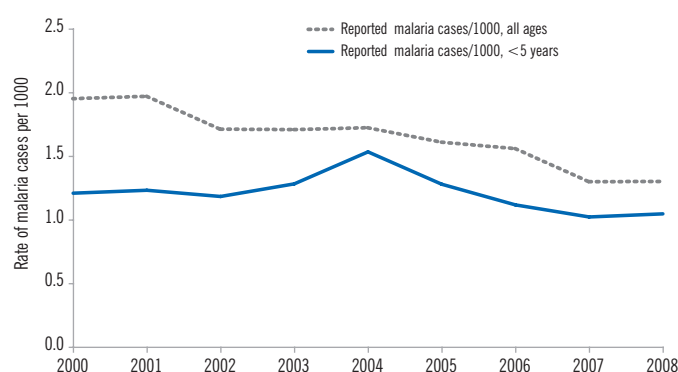
Population (in thousands)	2008	%
All age groups	1 181 412	
< 5 years	126 642	11
≥ 5 years	1 054 770	89
Population by malaria endemicity (in thousands)	2008	%
High transmission ≥ 1/1000	307 189	26
Low transmission (0–1/1000)	755 223	64
Malaria-free (0 cases)	118 999	10
Rural population	833 321	71
Vector and parasite profiles		
Major <i>Anopheles</i> species	<i>stephensi, culicifacies, dirus, fluviatilis, minimus, philippinensis</i>	
<i>Plasmodium</i> species	<i>falciparum, vivax</i>	

Stratification of burden (reported cases, per 1000)

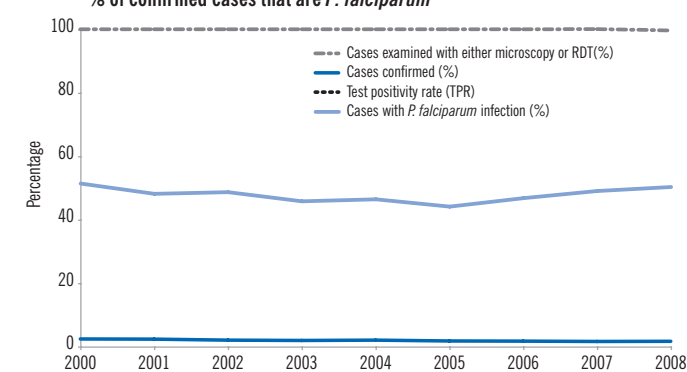


Trends in malaria morbidity and mortality

Reported malaria cases, per 1000

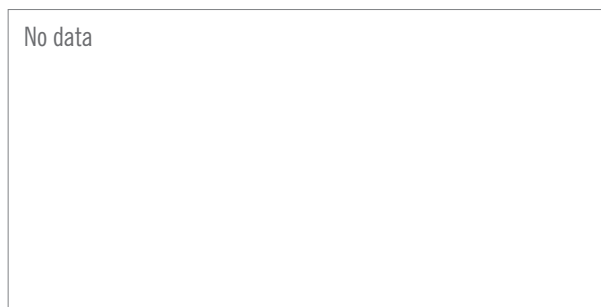


Rate of examination, case confirmation, malaria test positivity, % of confirmed cases that are *P. falciparum*

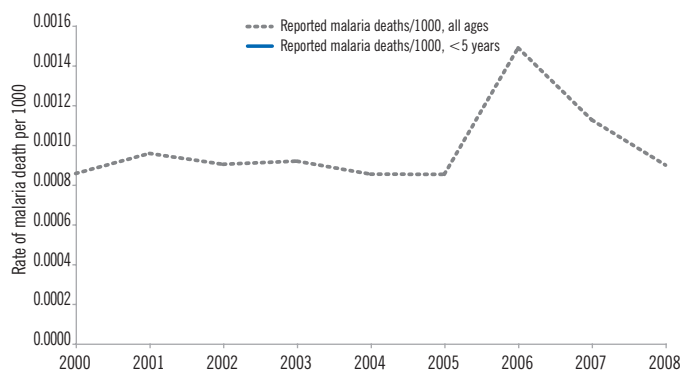


Year	Reported malaria cases, all ages	Reported malaria cases, < 5 years	All-cause outpatient consultations, all ages	All-cause outpatient consultations, < 5 years	Examined	Positive	<i>P. falciparum</i>	Reporting completeness of outpatient health facilities (%)	Reporting completeness of districts (%)
2000	2 031 790	153 500			86 790 375	2 031 790	1 045 170	100	100
2001	2 085 484	156 700			90 389 019	2 085 484	1 005 236	100	100
2002	1 841 227	150 605			91 617 725	1 841 227	897 446	100	100
2003	1 869 403	163 573			99 136 143	1 869 403	857 101	100	100
2004	1 915 363	196 064			97 111 526	1 915 363	890 152	100	100
2005	1 816 569	163 471			104 120 792	1 816 569	805 077	100	100
2006	1 785 109	142 463			106 606 703	1 785 109	838 555	100	100
2007	1 508 927	129 937			94 925 988	1 508 927	725 502	100	100
2008	1 532 467	132 431			95 368 303	1 532 467	771 670	100	100

Reported malaria admissions, per 1000



Reported malaria deaths, per 1000



Year	Reported malaria admissions, all ages	Reported malaria admissions, < 5 years	All-cause admissions, all ages	All-cause admissions, < 5 years	Reported malaria deaths, all ages	Reported malaria deaths, < 5 years	All-cause deaths, all ages	All-cause deaths, < 5 years	Reporting completeness of inpatient health facilities (%)	Reporting completeness of districts (%)
2000					892				100	100
2001					1 015				100	100
2002					973				100	100
2003					1 006				100	100
2004					949				100	100
2005					963				100	100
2006					1 708				100	100
2007					1 311				100	100
2008					1 061				100	100

II. INTERVENTION POLICIES AND STRATEGIES

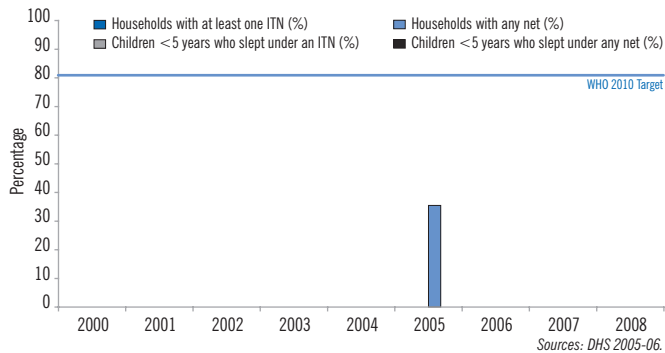
Intervention	WHO-RECOMMENDED POLICIES / STRATEGIES		OPTIONAL POLICIES / STRATEGIES			
	Yes or No	Year adopted	Yes or No	Year adopted		
Insecticide-treated nets (ITN)	Distribution of ITN/LLINs – Free	Yes	2001	Distribution – Antenatal care	Yes	2003
	Targeting all age groups	Yes	2001	Distribution – EPI routine and campaign	No	–
				Targeting children < 5 years and pregnant women	No	–
				ITN distribution is subsidized	No	–
Indoor residual spraying (IRS)	IRS is a primary vector control intervention	Yes	2000	Insecticide-resistance management implemented	Yes	2000
	DDT is used for IRS (public health) only	Yes	2000	Where IRS is conducted, other options are also implemented, e.g. ITN	Yes	2001
				IRS is used for prevention and control of epidemics	Yes	2000
Intermittent preventive treatment (IPT)	IPT used to prevent malaria during pregnancy	No	–			
Case management	Oral artemisinin monotherapies banned (prohibited from registration or removed from the system)	Yes	2009	Parasitological confirmation for patients ≥ 5 years only	No	–
	Parasitological confirmation for patients of all ages	Yes	2000	Malaria diagnosis is free of charge in the public sector	Yes	2000
	ACT is free of charge for < 5 years old in the public sector	Yes	2006	ACT is free of charge for patients ≥ 5 years in the public sector	Yes	2006
	Diagnosis of malaria of inpatients is based on parasitological confirmation	Yes	2000	ACT is delivered at community level through community agents (beyond the health facilities)	Yes	2007
	Pre-referral treatment with quinine or artemether IM or artesunate suppositories	Yes	2000	Uncomplicated malaria cases are admitted	No	–
	Oversight regulation of case management in the private sectors	Yes	2000			
	RDTs used at community level	Yes	2006			

Results of therapeutic efficacy tests

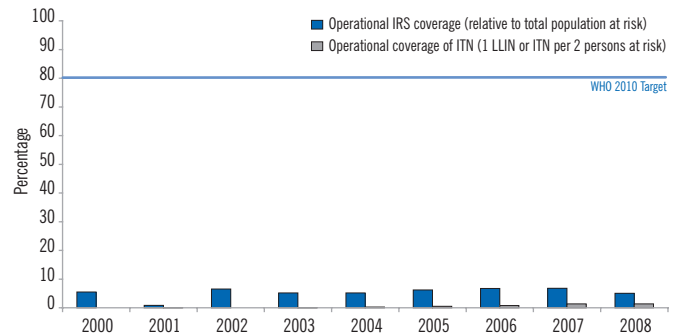
Antimalarial policy	Type of medicine	Year adopted	Study year	No. of studies	Median	Minimum	Maximum	Percentiles: 25%	75%
First-line treatment of <i>P. falciparum</i> (unconfirmed)	CQ + PQ	2007							
First-line treatment of <i>P. falciparum</i> (confirmed)	AS + SP	2007							
Treatment failure of <i>P. falciparum</i>	–	–							
Treatment of severe malaria	AM, QN	2007							
Treatment of <i>P. vivax</i>	CQ + PQ(14d)	2007							

III. IMPLEMENTING MALARIA CONTROL

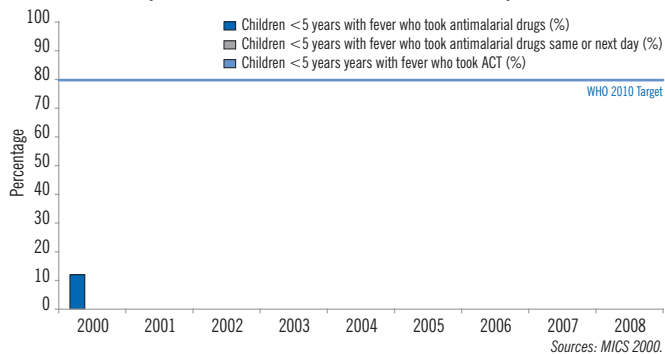
Coverage of ITN: survey data



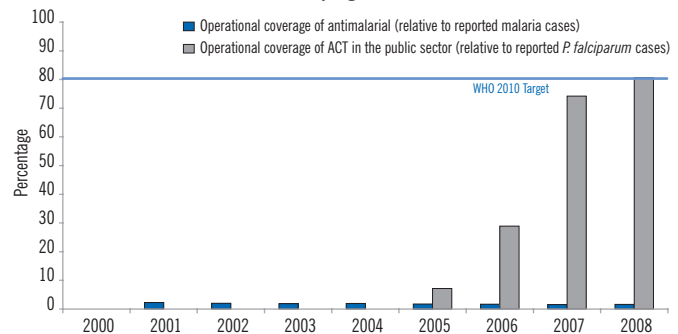
Coverage of IRS and ITN: programme data



Access by febrile children to effective treatment: survey data



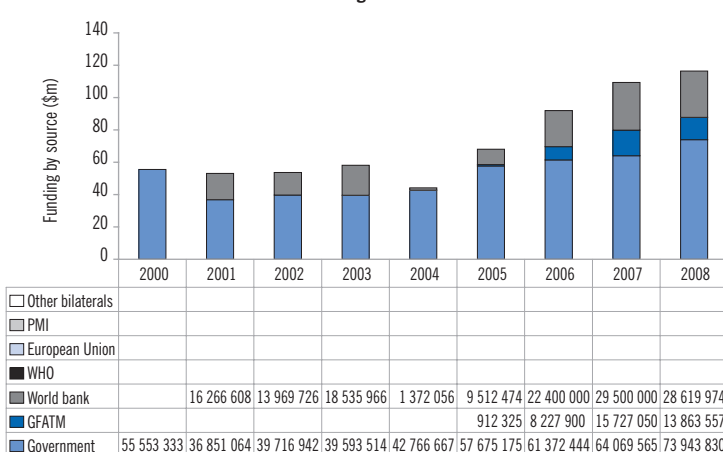
Access to effective treatment: programme data



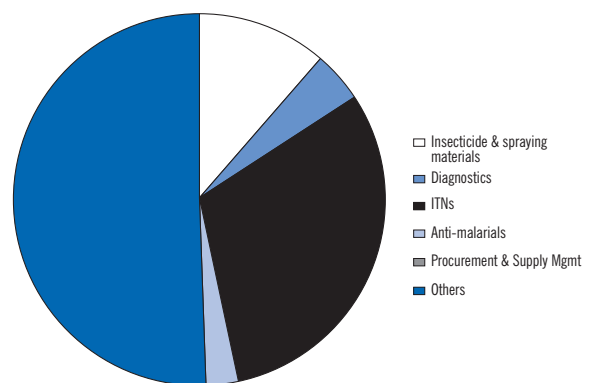
Year	Pregnant women who slept under any net (%)	Pregnant women who slept under an ITN (%)	Children < 5 years with fever (%)	Febrile children < 5 years who sought treatment in HF (%)	Number of households protected by IRS	Number of people protected by IRS	Number of ITNs and/or LLINs	Number of 1st-line treatment courses received	Number of ACT treatment courses received
2000			-	-		51 650 476			
2001						7 787 823	175 000	2 085 484	
2002						63 575 991	90 000	1 842 019	
2003						50 754 459	230 000	1 869 403	
2004						52 118 040	1 200 000	1 915 363	
2005			-	-		62 935 123	2 720 000	1 816 342	57 700
2006						69 457 913	3 950 000	1 780 777	242 300
2007						70 853 795	7 000 000	1 508 927	550 000
2008						53 773 347	7 240 000	1 532 497	622 000

IV. FINANCING MALARIA CONTROL

Governmental and external financing



Breakdown of expenditure by intervention in 2008



V. SOURCE OF INFORMATION

PROGRAMME DATA

Reported cases	Surveillance data
Operational coverage of ITNs, IRS and access to medicines	Programme report
Financial data	Programme report

SURVEY AND OTHER DATA

Insecticide-treated nets (ITN)	DHS 2005-06
Treatment	MICS 2000
Use of health services	DHS 2005