

CHAD

Malaria transmission is more intense in the south, occurring seasonally between May and December. Almost all cases are caused by *P. falciparum*. Less than 13% of suspected cases are parasitologically tested. The numbers of reported cases remained nearly the same and deaths have increased in recent years, but it is not known if this reflects a real increase in malaria burden or improved reporting. The national malaria programme did not implement major vector control, except for the distribution of 83 000 ITNs in 2007 and 120 000 in 2008, many fewer than are needed to protect the 10 million people at risk. IRS is not a national policy. The number of treatment courses of ACT used in 2006 was far fewer than the estimated number of cases. Malaria control has been funded mainly by the Government, United Nations agencies and bilateral agencies, with no active Global Fund grant.

I. EPIDEMIOLOGICAL PROFILE

Population, endemicity and malaria burden

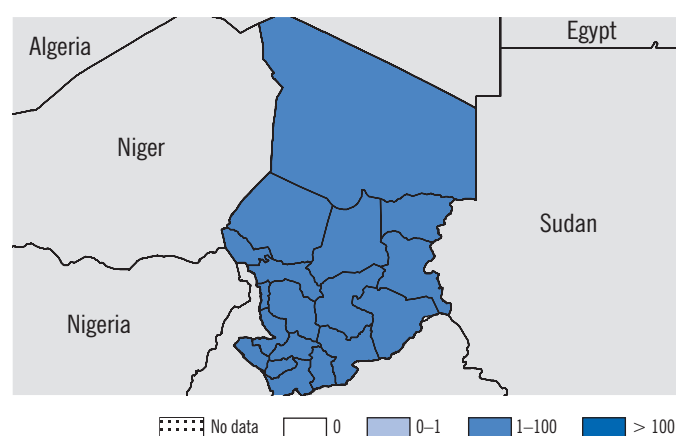
Population (in thousands)	2008	%
All age groups	10 914	
< 5 years	1 985	18
≥ 5 years	8 928	82

Population by malaria endemicity (in thousands)	2008	%
High transmission ≥ 1/1000	8 731	80
Low transmission (0–1/1000)	2 073	19
Malaria-free (0 cases)	110	1
Rural population	8 009	73

Vector and parasite profiles

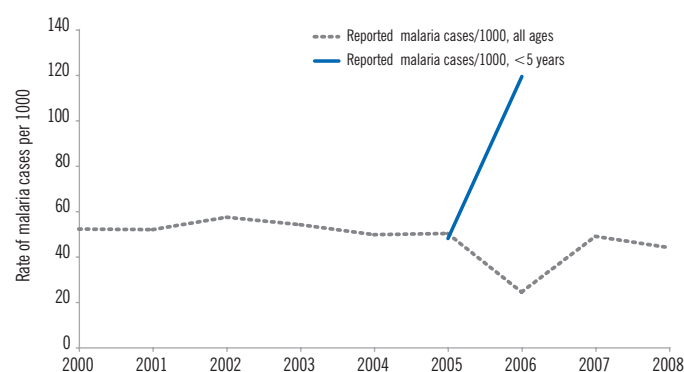
Major <i>Anopheles</i> species	<i>arabiensis</i> , <i>funestus</i> , <i>arabiensis</i> , <i>coustani</i> , <i>coustani</i> , <i>funestus</i> , <i>nili</i> , <i>pharoensis</i> , <i>pharoensis</i>
<i>Plasmodium</i> species	<i>falciparum</i> , <i>vivax</i>

Stratification of burden (reported cases, per 1000)

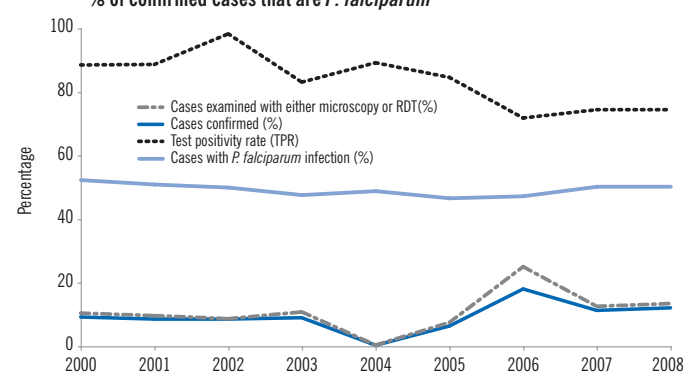


Trends in malaria morbidity and mortality

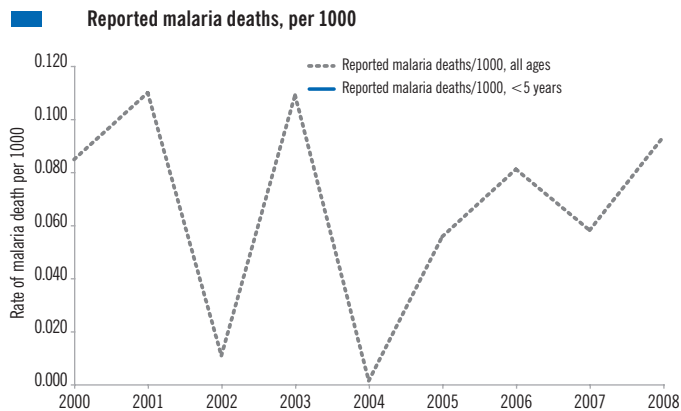
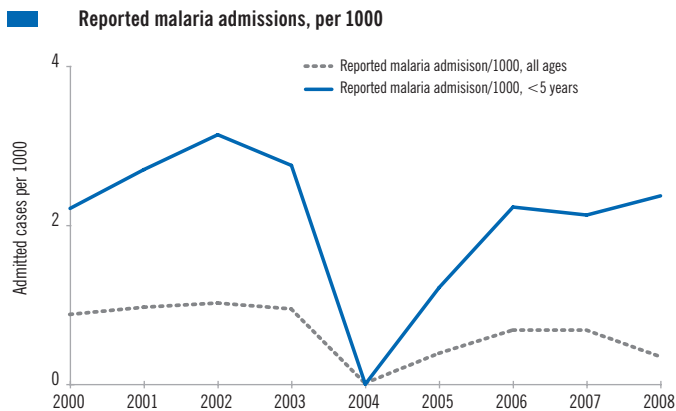
Reported malaria cases, per 1000



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	437 041		2 040 156		45 283	40 078	20 977		52
2001	451 182		1 980 009		43 180	38 287	19 520		80
2002	517 004		2 084 846		44 689	43 933	21 959		62
2003	505 732		1 953 940		54 381	45 195	21 532		94
2004	481 122		2 002 670		1 525	1 360	665		100
2005	501 846	89 041	1 968 565	197 771	37 439	31 668	14 770		54
2006	251 354	227 284	1 938 177	462 140	62 895	45 155	21 354		83
2007	518 832		2 196 462		64 884	58 288	24 282		83
2008	478 987		2 159 832		64 171	57 644	24 015		90



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	7 345	3 451	15 057	15 057	712		68 266			
2001	8 409	4 369	18 787	18 787	957		68 978			
2002	9 194	5 271	19 891	19 891	98		77 491			
2003	8 839	4 790	20 309	20 309	1 021		78 276			
2004	91	2	306	306	13		2 358			
2005	3 867	2 256	10 105	10 105	558		41 798			
2006	6 996	4 241	19 276	19 276	837		5 893			
2007	7 209	4 141	97 962	56 418	617		5 259			
2008	3 757	4 705	111 324	64 113	1 018		4 734			

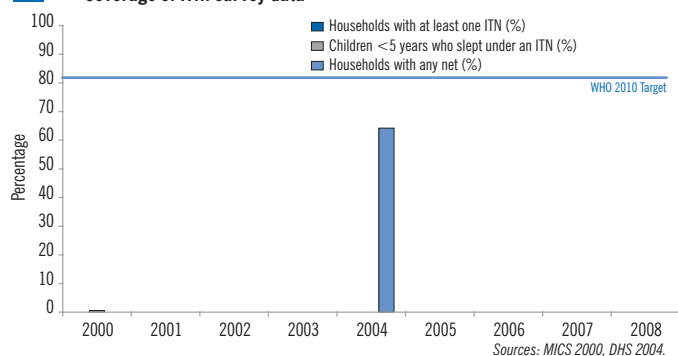
II. INTERVENTION POLICIES AND STRATEGIES

Intervention	WHO-RECOMMENDED POLICIES / STRATEGIES	WHO-RECOMMENDED POLICIES / STRATEGIES		OPTIONAL 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	2003	Distribution – Antenatal care	Yes	2003
	Targeting all age groups	No	–	Distribution – EPI routine and campaign	Yes	2006
				Targeting children < 5 years and pregnant women	Yes	2003
				ITN distribution is subsidized	–	–
Indoor residual spraying (IRS)	IRS is a primary vector control intervention	No	–	Insecticide-resistance management implemented	Yes	2005
	DDT is used for IRS (public health) only	No	–	Where IRS is conducted, other options are also implemented, e.g. ITN	No	–
				IRS is used for prevention and control of epidemics	No	–
Intermittent preventive treatment (IPT)	IPT used to prevent malaria during pregnancy	Yes	2004			
Case management	Oral artemisinin monotherapies banned (prohibited from registration or removed from the system)	Yes	2007	Parasitological confirmation for patients ≥ 5 years only	–	–
	Parasitological confirmation for patients of all ages	Yes	–	Malaria diagnosis is free of charge in the public sector	Yes	–
	ACT is free of charge for < 5 years old in the public sector	Yes	–	ACT is free of charge for patients ≥ 5 years in the public sector	–	–
	Diagnosis of malaria of inpatients is based on parasitological confirmation	Yes	–	ACT is delivered at community level through community agents (beyond the health facilities)	Yes	–
	Pre-referral treatment with quinine or artemether IM or artesunate suppositories	No	–	Uncomplicated malaria cases are admitted	No	–
	Oversight regulation of case management in the private sectors	–	–			
	RDTs used at community level	Yes	–			

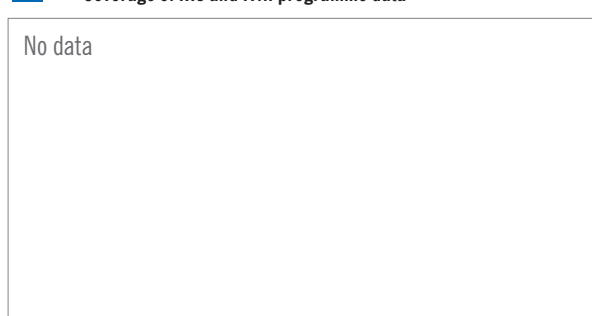
Antimalarial policy	Type of medicine	Year adopted	Results of therapeutic efficacy tests					
			Study year	No. of studies	Median	Minimum	Maximum	Percentiles: 25% 75%
First-line treatment of <i>P. falciparum</i> (unconfirmed)	AL, AS+AQ	–						
First-line treatment of <i>P. falciparum</i> (confirmed)	AL, AS+AQ	–						
Treatment failure of <i>P. falciparum</i>	QN(7d)	–						
Treatment of severe malaria	QN(7d)	–						
Treatment of <i>P. vivax</i>	–	–						

III. IMPLEMENTING MALARIA CONTROL

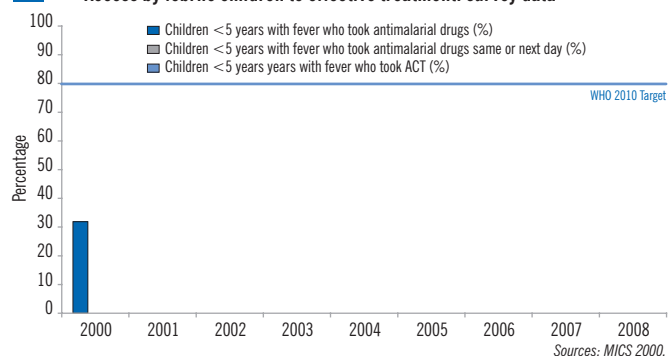
Coverage of ITN: survey data



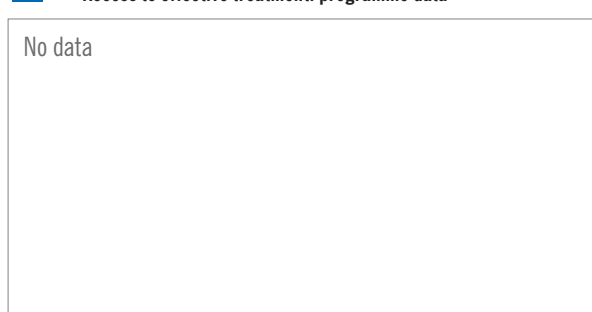
Coverage of IRS and ITN: programme data



Access by febrile children to effective treatment: survey data



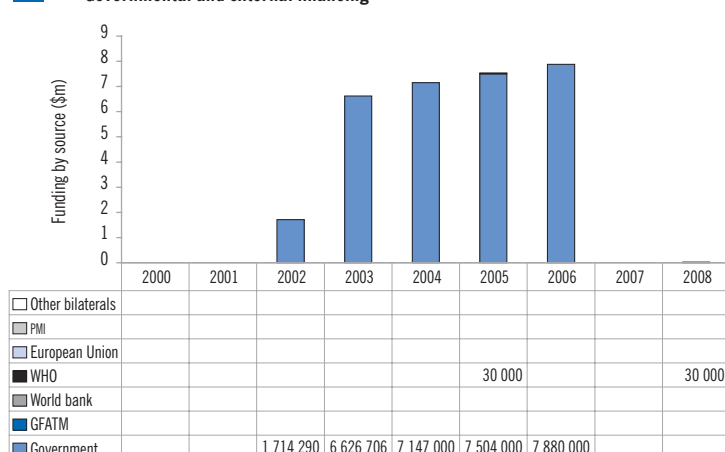
Access to effective treatment: programme data



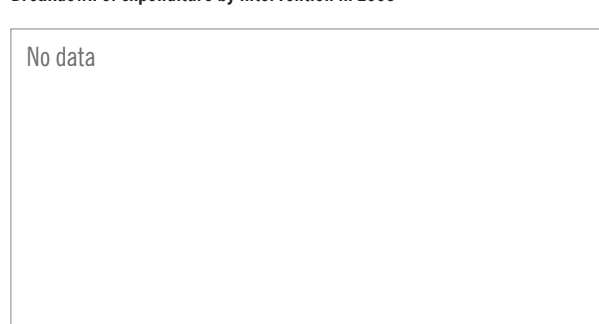
Year	Pregnant women who slept under any net (%)	Pregnant women who slept under an ITN (%)	Children < 5 years with fever (%)	Febrile children < 5 years who sought treatment in HF (%)	Number of households protected by IRS	Number of people protected by IRS	Number of ITNs and/or LLINs	Number of 1st-line treatment courses received	Number of ACT treatment courses received
2000			-	-					
2001									
2002									
2003							104 118		
2004			-	-			10 000		
2005							128 293		
2006							267 000		
2007							83 000		
2008							126 000		

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)	MICS 2000, DHS 2004
Treatment	MICS 2000
Use of health services	DHS 2004