

NIGERIA

Nigeria accounted for one fourth of all estimated malaria cases in the WHO African Region in 2006. Transmission occurs all year round in the south but is more seasonal in the north. Almost all cases are caused by *P. falciparum*, but only a small fraction are parasitologically tested. The surveillance data show neither the true magnitude of the malaria burden nor evidence of a systematic decrease, because of inconsistent and incomplete reporting. IRS was piloted in some project areas in 2008. The national malaria control programme delivered about 11.5 LLINs and 7.3 million ITNs during 2006–2008 (7.7 million LLINs were delivered in 2007 and 2008), covering only 5% of the population at risk. The programme delivered about 8 million ACT treatment courses in 2006 and 12 million in 2008, far fewer (10%) than the estimated treatment needs. Funding for malaria control was reported to have increased from US\$ 17 million in 2005 to over US\$ 82 million in 2008, provided mainly by the Government, the Global Fund and the World Bank. This amount is unlikely to be sufficient to reach the national targets for prevention and cure.

I. EPIDEMIOLOGICAL PROFILE

Population, endemicity and malaria burden

Population (in thousands)	2008	%
All age groups	151 212	
< 5 years	25 020	17
≥ 5 years	126 193	83

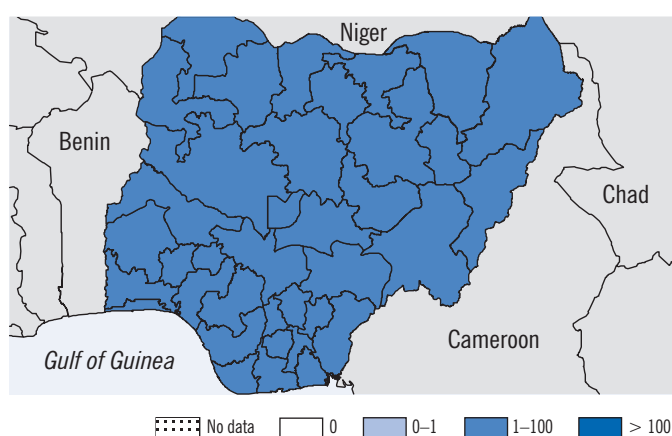
Population by malaria endemicity (in thousands)	2008	%
High transmission ≥ 1/1000	151 212	100
Low transmission (0–1/1000)	0	0
Malaria-free (0 cases)	0	0
Rural population	78 089	52

Vector and parasite profiles

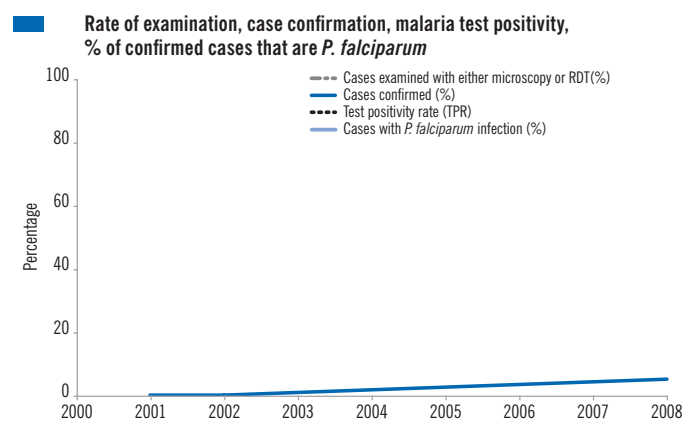
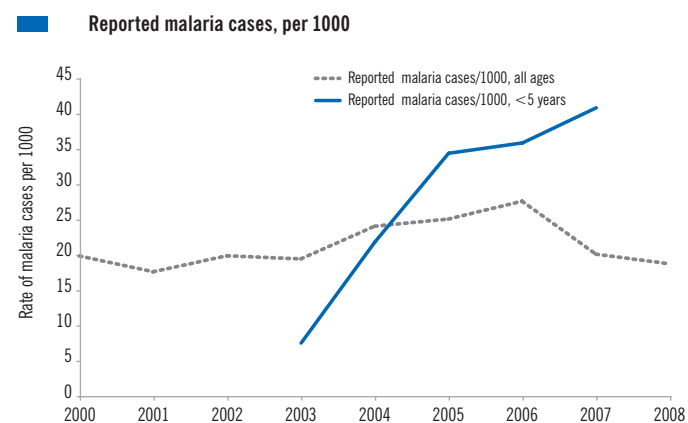
Major *Anopheles* species: *gambiae*, *arabiensis*, *funestus*, *brochieri*, *coustani*, *flavicosta*, *hancocki*, *hargreavesi*, *melas*, *moucheti*, *moucheti*, *nili*, *paludis*, *pharoensis*

Plasmodium species: *falciparum*, *vivax*

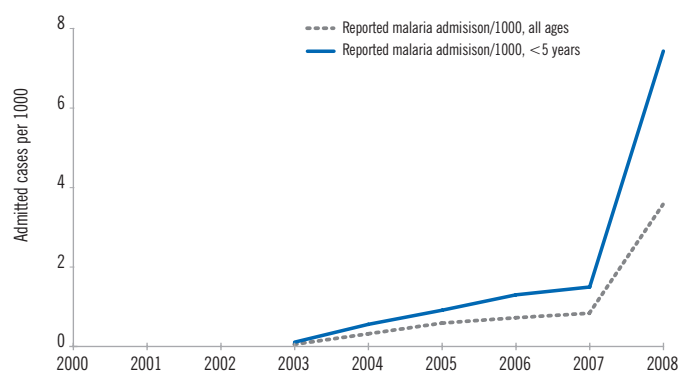
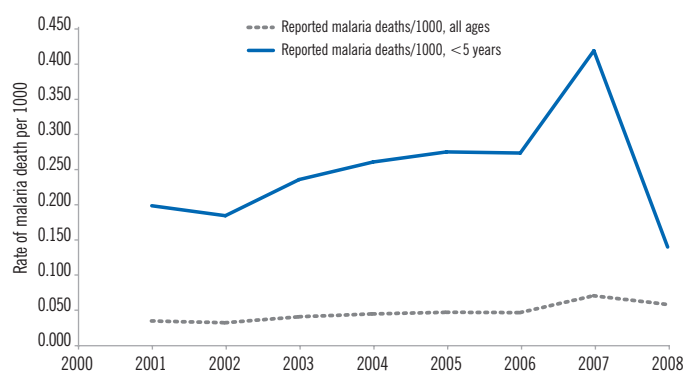
Stratification of burden (reported cases, per 1000)



Trends in malaria morbidity and mortality



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	2 476 608								
2001	2 253 519		3 882 376			150			
2002	2 605 381		4 488 796			380			
2003	2 608 479	171 812	4 237 566						
2004	3 310 229	507 173	4 970 109						
2005	3 532 108	814 274	5 302 576						
2006	3 982 372	865 374	5 633 088						
2007	2 969 950	1 004 392							
2008	2 834 174		6 305 973			143 079		92	

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										
2001					4 317	4 317				
2002					4 092	4 092				
2003	5 935	2 358	96 074	32 101	5 343	5 343				
2004	41 913	12 814	342 748	102 152	6 032	6 032	7 632			
2005	80 825	21 455	614 272	186 861	6 494	6 494	13 504			
2006	102 303	31 151	675 044	212 596	6 586	6 586	8 747			
2007	121 696	36 647	747 193	211 559	10 289	10 289	12 013			
2008	538 487	185 784	1 117 763	368 707	8 677	3 487	20 813	8 846		

II. INTERVENTION POLICIES AND STRATEGIES

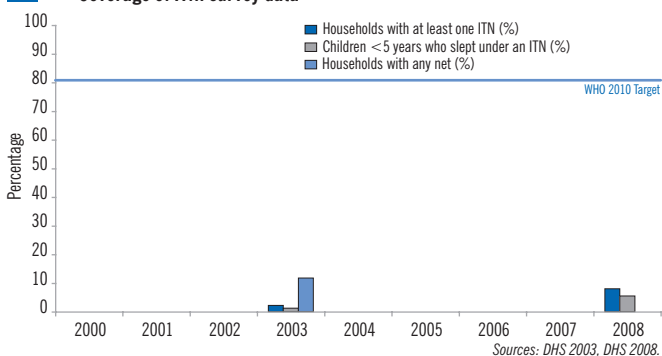
Intervention	WHO-RECOMMENDED POLICIES / STRATEGIES	Yes or No	Year adopted	OPTIONAL POLICIES / STRATEGIES		
				Yes or No	Year adopted	
Insecticide-treated nets (ITN)	Distribution of ITN/LLINs – Free	Yes	2001	Distribution – Antenatal care	Yes	2001
	Targeting all age groups	Yes	2009	Distribution – EPI routine and campaign	Yes	2006
				Targeting children < 5 years and pregnant women	Yes	2001
				ITN distribution is subsidized	Yes	2004
Indoor residual spraying (IRS)	IRS is a primary vector control intervention	No	–	Insecticide-resistance management implemented	No	–
	DDT is used for IRS (public health) only	No	–	Where IRS is conducted, other options are also implemented, e.g. ITN	Yes	2007
				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	2006	Parasitological confirmation for patients ≥ 5 years only	No	–
	Parasitological confirmation for patients of all ages	Yes	2006	Malaria diagnosis is free of charge in the public sector	No	–
	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	2009
	Diagnosis of malaria of inpatients is based on parasitological confirmation	Yes	1997	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	Yes	2006	Uncomplicated malaria cases are admitted	No	–
	Oversight regulation of case management in the private sectors	Yes	1997			
	RDTs used at community level	No	–			

Results of therapeutic efficacy tests

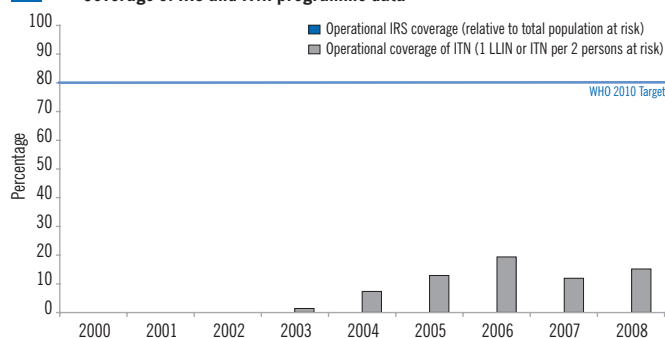
Antimalarial policy	Type of medicine	Year adopted	Study year	No. of studies	Median	Minimum	Maximum	Percentiles: 25%	75%
First-line treatment of <i>P. falciparum</i> (unconfirmed)	AS + AQ, AL	2004							
First-line treatment of <i>P. falciparum</i> (confirmed)	AS + AQ, AL	2004							
Treatment failure of <i>P. falciparum</i>	QN(7d)	2004							
Treatment of severe malaria	QN(7d)	2004							
Treatment of <i>P. vivax</i>	–	–							

III. IMPLEMENTING MALARIA CONTROL

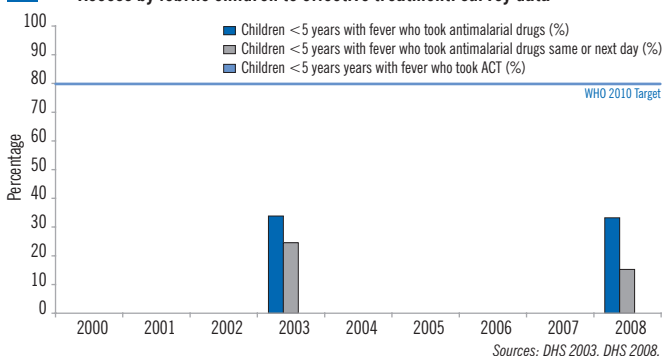
Coverage of ITN: survey data



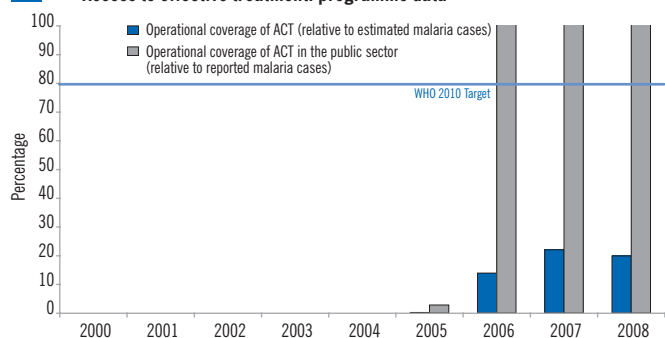
Coverage of IRS and ITN: programme data



Access by febrile children to effective treatment: survey data



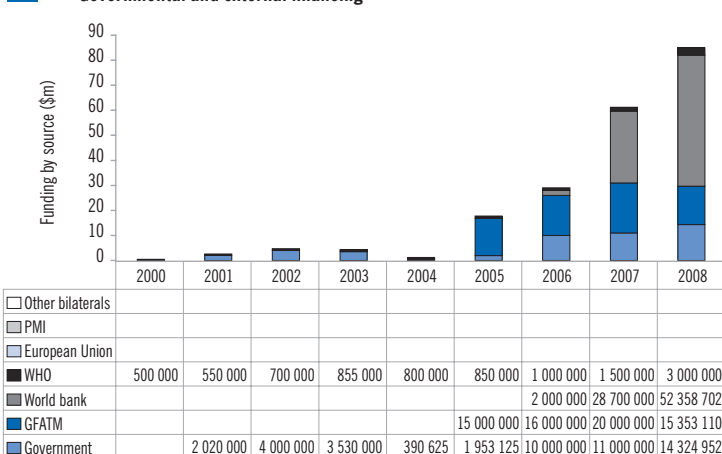
Access to effective treatment: programme data



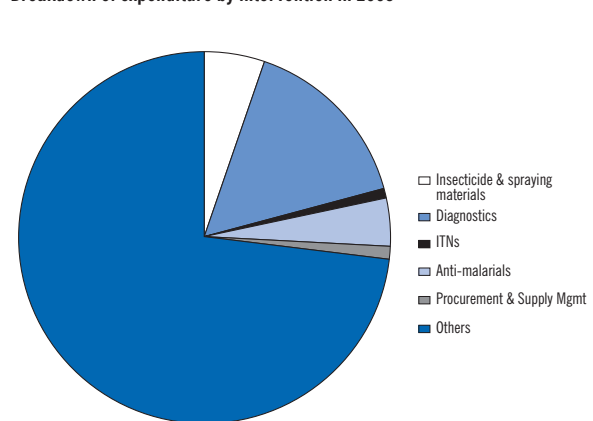
Year	Pregnant women who slept under any net (%)	Pregnant women who slept under an ITN (%)	Children < 5 years with fever (%)	Febrile children < 5 years who sought treatment in HF (%)	Number of households protected by IRS	Number of people protected by IRS	Number of ITNs and/or LLINs	Number of 1st-line treatment courses received	Number of ACT treatment courses received
2000									
2001							200 000	2 253 519	
2002							218 900	2 605 381	
2003	5	1	—	—			917 964	2 608 479	
2004							4 324 230	3 310 229	726
2005							5 086 934	3 532 108	100 000
2006					900	4 500	8 853 589	8 512 480	8 000 000
2007			—	—	600	3 000	3 225 594	13 019 950	13 000 000
2008			—	—			6 700 000	12 000 000	12 000 000

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 2003, DHS 2008
Treatment	DHS 2003, DHS 2008
Use of health services	DHS 2003