

# SOUTH AFRICA

Malaria is present in the three northern provinces of South Africa bordering Mozambique and Swaziland, with seasonal transmission during October–April. Only 4% of the population is at high risk of malaria and 6% at low risk, while 90% live in malaria-free areas. Almost all cases are caused by *P. falciparum*. Confirmed malaria cases have decreased from an annual average of 36 360 during 2000–2005 to 6072 cases in 2009 (83% reduction). Reported malaria deaths fell from 127 to 45 (65% decline) in the same period. The programme implemented IRS as its principal vector control intervention, protecting about 4 million people per year (78% coverage). South Africa was the first country in the African Region to introduce ACT in early 2001. The programme delivered 10 500 treatment courses of ACT in 2009, enough to treat all malaria cases. Historical data on funding were not provided; in 2009 US\$ 200 000 was contributed by UN agencies and NGOs.

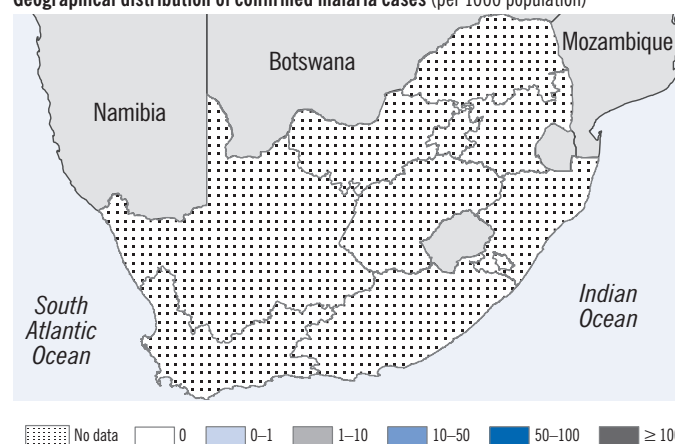
## I. EPIDEMIOLOGICAL PROFILE

### Population and epidemiological profile

Population (in thousands)*	2009	%
All ages	50 110	
< 5 years	5 175	10
Rural	19 435	39
Population by malaria endemicity (in thousands)	2009	%
High transmission ( $\geq 1$ case per 1000 population)	2 045	4
Low transmission (0–1 cases per 1000 population)	3 068	6
Malaria-free (0 cases)	44 997	90
Vector and parasite species		
Major <i>Anopheles</i> species	<i>arabiensis</i>	
Major <i>Plasmodium</i> species	<i>falciparum</i>	

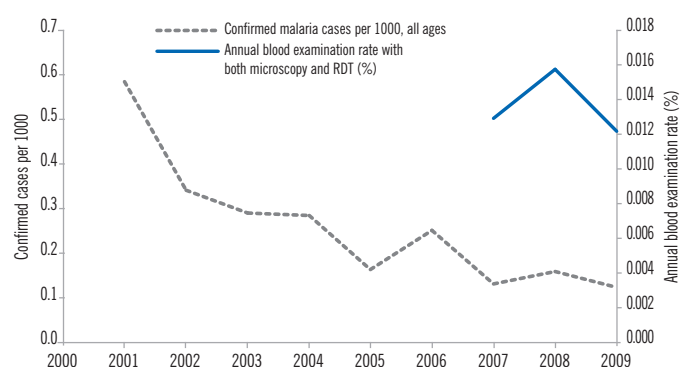
\* UN Population Division estimates

Geographical distribution of confirmed malaria cases (per 1000 population)

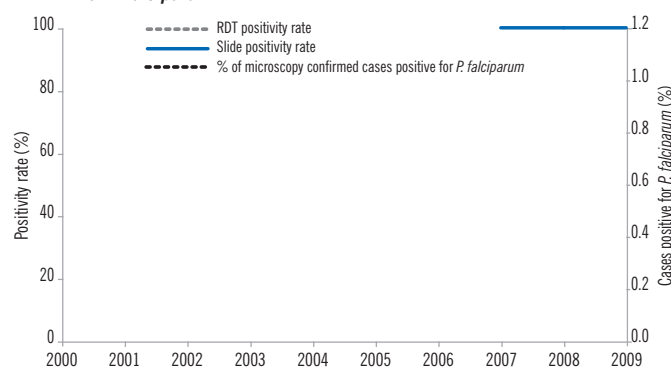


### Trends in malaria morbidity and mortality

#### Confirmed malaria cases, per 1000 and annual blood examination rate



#### Malaria test positivity rate and % of microscopy confirmed cases positive for *P. falciparum*

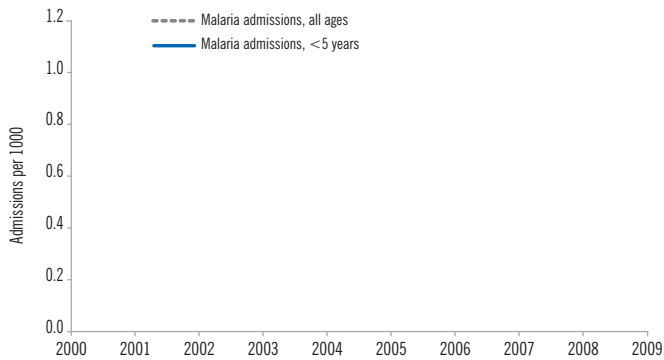


Year	All ages									< 5 years		
	All-cause outpatient consultations	Suspected cases (tested + probable)	Probable cases (not tested)	Total cases tested (microscopy + RDT)	Total confirmed cases (microscopy + RDT)	Malaria cases (confirmed + probable)	Examined by microscopy	Microscopy positive <i>P. falciparum</i>	Examined by RDT	RDT positive	All-cause outpatient consultations	Malaria cases (confirmed + probable)
2000		64 624	64 624			64 624						2 422
2001		26 506	0		26 506	26 506		26 506				1 738
2002		15 649	0		15 649	15 649		15 649				1 151
2003		13 459	0		13 459	13 459		13 459				885
2004		13 399	0		13 399	13 399		13 399				671
2005		7 755	0		7 755	7 755		7 755				424
2006		14 456	2 358		12 098	14 456		12 098				754
2007		6 327	0	6 327	6 327	6 327	6 327	6 327				441
2008		7 796	0	7 796	7 796	7 796	7 796	7 796				524
2009		6 072	0	6 072	6 072	6 072	6 072	6 072				485

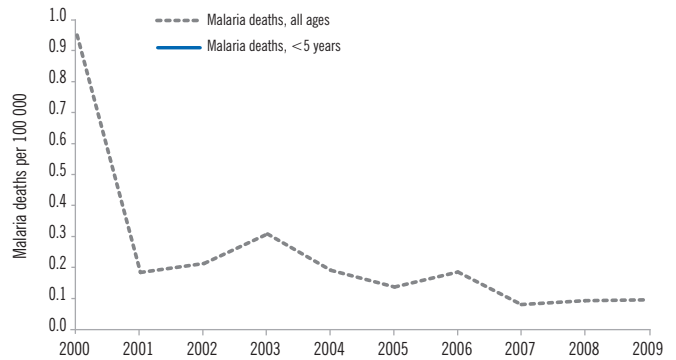
Note: Reporting completeness of outpatient health facilities (%) in 2009: 100%

## I. EPIDEMIOLOGICAL PROFILE (continued)

Reported malaria admissions, per 1000 population



Reported malaria deaths, per 100 000 population



Year	Admissions		<5 years	
	All-cause admissions	Malaria admissions	All-cause admissions	Malaria admissions
2000				
2001				
2002				
2003				
2004				
2005				
2006				
2007				
2008				
2009				

Year	Deaths		<5 years	
	All-cause deaths	Malaria deaths	All-cause deaths	Malaria deaths
2000		424		
2001		81		
2002		96		
2003		142		
2004		88		
2005		63		
2006		87		
2007		37		
2008		43		
2009		45		

## II. INTERVENTION POLICIES AND STRATEGIES

Intervention	WHO-RECOMMENDED POLICIES / STRATEGIES	YES or NO	Year adopted	OTHER POLICY / STRATEGY	YES or NO	Year adopted
Insecticide-treated nets (ITN)	ITNs/LLINs are distributed free of charge	–	–	ITNs/LLINs are distributed through antenatal clinics	–	–
	ITNs/LLINs are distributed to all age groups	–	–	ITNs/LLINs are distributed through EPI clinics	–	–
				ITNs/LLINs are distributed through mass campaigns to < 5 only	–	–
Indoor residual spraying (IRS)	IRS is recommended by malaria control programme	YES	–	IRS is only used to prevent and control epidemics	YES	1930
	DDT is used for IRS	YES	1945	Where IRS is conducted, ITNs are also applied	–	–
				Insecticide resistance monitoring is undertaken	YES	1997
Intermittent preventive treatment (IPT)	IPT is used to prevent malaria during pregnancy	–	–			
Case management	Patients of all ages should receive diagnostic tests	YES	–	Malaria diagnosis is free of charge in the public sector	YES	1997
	RDTs are used at community level	–	–	ACT is delivered by community agents	–	–
	ACT is free of charge for all age groups in the public sector	YES	–	Therapeutic efficacy monitoring is undertaken	–	–
	Pre-referral treatment with parenteral quinine or artemisinin derivatives or artesunate suppositories is provided	–	–			
	Oral artemisinin-based monotherapies are not registered	–	–			

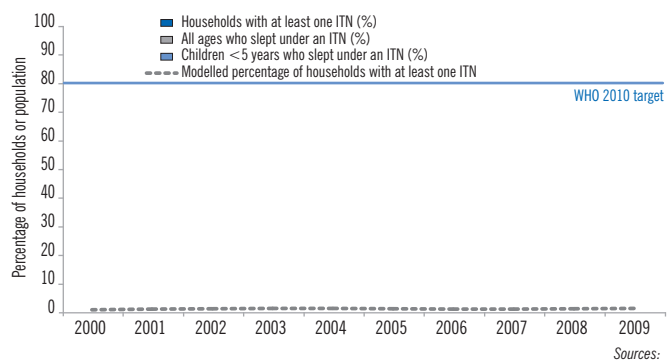
Antimalarial policy	Type of medicine	Year adopted
First-line treatment of <i>P. falciparum</i> (unconfirmed)	AL	2001
First-line treatment of <i>P. falciparum</i> (confirmed)	AL	2001
Treatment failure of <i>P. falciparum</i>	QN	2001
Treatment of severe malaria	QN	2001
Treatment of <i>P. vivax</i>	–	–

Therapeutic efficacy studies (percentage of clinical and parasitological failure)

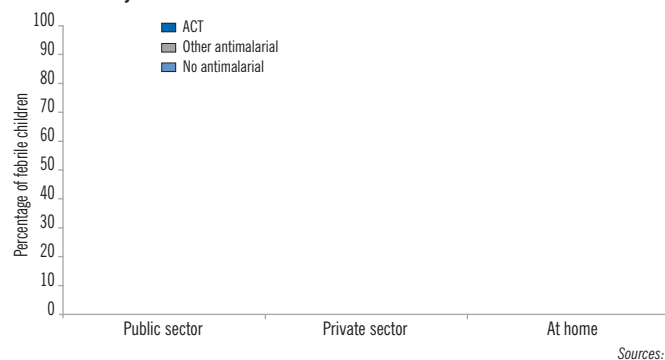
Name of first-line antimalarial medicine	Study year	No. of studies	Failure rate			Follow-up	Remarks
			Minimum	Median	Maximum		
Artemether-lumefantrine (AL)	2002–2007	3	0.0	0.0	5.2	28 days	

### III. IMPLEMENTING MALARIA CONTROL

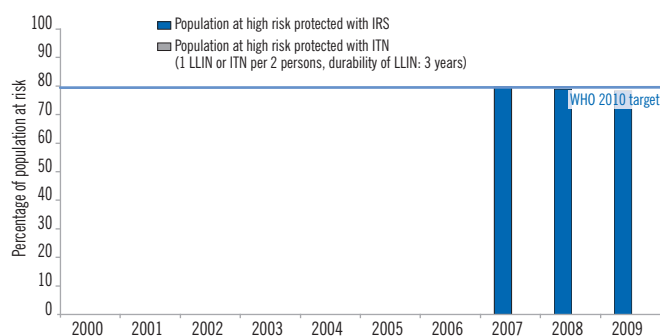
#### Coverage with ITNs from survey or model data



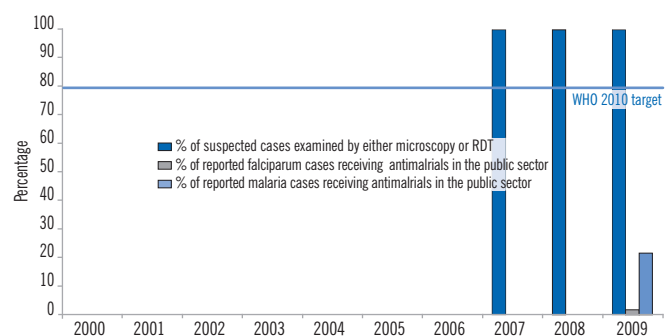
#### Source of treatment for febrile children and antimalarial received from survey data



#### Coverage with IRS and ITNs from programme data



#### Access to effective treatment from programme data: percentage of cases tested and number of ACT courses delivered relative to cases



#### Preventive interventions: programme and survey data

Year	No. of ITNs and/or LLINs delivered	No. of people protected by IRS	Pregnant women who slept under any net (%)	Pregnant women who slept under an ITN (%)
2000	0			
2001	0			
2002	0			
2003	0			
2004	0	4		
2005	0	4		
2006	0	4		
2007	0	4 000 000		
2008	0	4 000 000		
2009	0	4 000 000		

Survey sources:

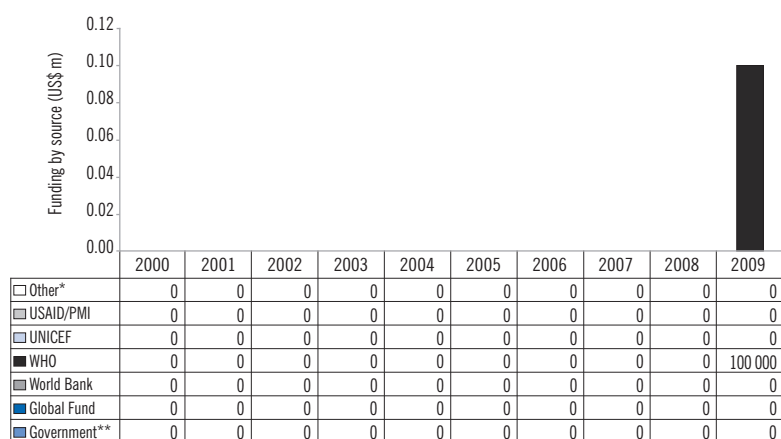
#### Diagnostics and treatment courses: programme and survey data

No. of RDTs delivered	No. of first-line treatment courses delivered	No. of ACT treatment courses delivered	Febrile children < 5 years (%)	Febrile children < 5 years treated in public health facility (%)
403 325	10 500	10 500		

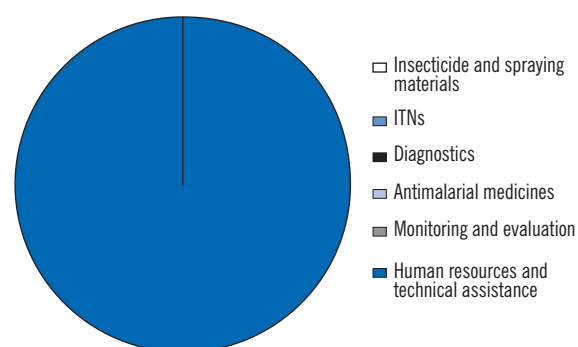
Survey sources:

### IV. FINANCING MALARIA CONTROL

#### Governmental and external financing



#### Breakdown of expenditure by intervention in 2009



\* Bilaterals: DFID, JICA; and EU, UN agencies, etc.

\*\* Governmental expenditure may not include costs at sub-national level and costs related to health systems, human resources, etc.