

## Overview of malaria control activities and programme progress

Malaria, one of the major causes of poverty and low productivity, is hyperendemic and accounts for more than 44% of reported outpatient visits and an estimated 22% of under-5 mortality in Ghana. Of infections detected by blood slide examination, *P. falciparum* accounts for about 90%, *P. malariae* for 9.9% and *P. ovale* for 0.1%. Of malaria cases reported at outpatient visits in public health facilities, 36–40% are typically in children under 5 years of age. Reported malaria cases represent only a small fraction of the actual number of malaria episodes in the population because the majority of people with symptomatic infections are treated at home and are not reported.

The Ghanaian RBM Partnership emphasizes strengthening health services in general and making effective prevention and treatment strategies more widely available. Ghana's malaria control strategy, which has been adopted by the RBM Partnership, involves multisectoral and intersectoral partnerships working together on an agreed plan with the goal of reducing death and illness caused by malaria by 50% by 2010.

Progress was recently made in improving access to prompt and effective treatment, supply of ITNs and using IPT with SP. Based on evidence from drug efficacy studies, Ghana has recently changed from CQ to ASU+AQ for treatment of uncomplicated malaria. Several collaborative ITN campaigns were conducted with RBM partners including WHO, UNICEF, NetMark and bilateral agencies. In collaboration with ExxonMobil Ghana Ltd, an ITN voucher programme was launched in 2004 targeting pregnant women in the Greater Accra and Kumasi metropolitan areas. This project resulted in over 76 000 vouchers redeemed for ITNs in ExxonMobil fueling shops. IPT for pregnant women was initiated in 20 districts, including training for health staff, with funds from the GFATM. On Africa Malaria Day 25 April 2005, Ghana launched a wide-scale ITN voucher programme and used high-impact media and advocacy pieces to raise awareness about malaria at community level.

Financial support to implement all of the activities of the strategic plan is not currently in place. The GFATM has committed over US\$ 23 million in two grants and started disbursement in 2003. The NMCP did not provide information on routine programme finances.

### National malaria policy and strategy environment

#### National malaria strategy overview for 2003

	Strategy
<b>Treatment and Diagnosis Guidelines</b>	Yes
Published/updated in	2004
<b>Monitoring antimalarial drug resistance</b>	Yes
Number of sites currently active	6
<b>Home management of malaria</b>	Yes
<b>Vector control using insecticides</b>	
<b>Monitoring insecticide resistance</b>	
Number of sites currently active	
<b>Insecticide-treated mosquito nets (ITNs)</b>	Yes
<b>Intermittent preventive treatment (IPT)</b>	Yes
<b>Epidemic preparedness</b>	

#### Current antimalarial drug policy

	Current policy
<b>Uncomplicated malaria</b>	
<i>P. falciparum</i> (unconfirmed)	ASU+AQ*
<i>P. falciparum</i> (lab confirmed)	ASU+AQ*
<i>P. vivax</i>	
<b>Treatment failure</b>	Q(7d)
<b>Severe malaria</b>	Q(7d)
<b>Pregnancy</b>	
Prevention	SP (IPT)
Treatment	Q or ASU+AQ (2nd & 3rd trimester)

## 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
1 438 713	1 372 771	1 446 947	1 697 109	1 672 709	1 928 316	2 189 860	2 227 762	1 745 214	2 895 079
2000	2001	2002	2003	Date of last report: 30 November 2004					
3 349 528	3 383 025	2 830 784	3 552 869						

### Reported malaria by type and quality

For most recent year

Reported malaria cases	3 552 869
Reported malaria deaths	3 245

#### Probable or clinically diagnosed

Malaria cases	3 552 869
Severe (inpatient or hospitalized) cases	478 960
Malaria deaths	3 245

Slides taken  
Rapid diagnostic tests (RDTs) taken

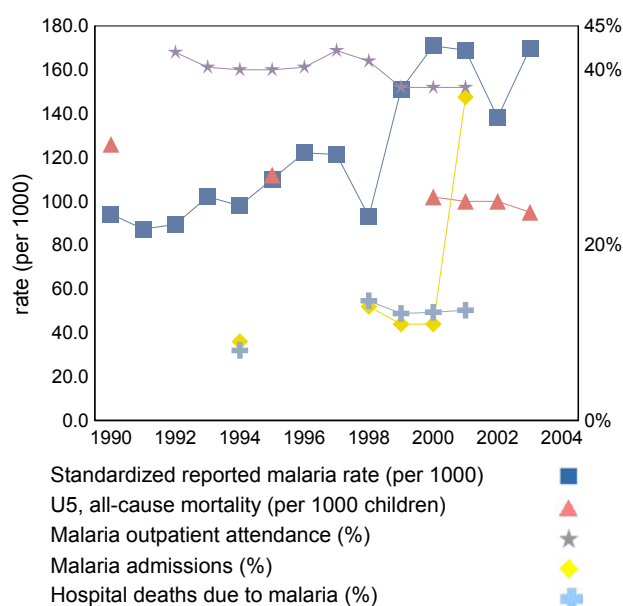
#### Laboratory confirmed

Malaria cases	478 960
<i>P. falciparum</i> or mixed	
<i>P. vivax</i>	
Severe (inpatient or hospitalized) cases	
Malaria deaths	

#### Investigations

Imported cases

Estimated reporting completeness (%)



### Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	3 349 528	3 383 025	2 830 784	3 552 869	100
Age	<5 years	1 303 685	1 316 724	966 923	1 421 148	40
	5> years	2 045 845	2 066 303	1 863 861	2 131 721	60

### Reported malaria cases by selected subnational area

10 areas	2000	2001	2002	2003	%
Ashanti				774 641	22
Brong Ahafo				575 480	16
Greater Accra				414 881	12
Volta				332 875	9
Eastern				298 056	8
Northern				291 496	8
Central				257 533	7
Upper East				250 888	7
Western				226 623	6
Upper West				130 396	4

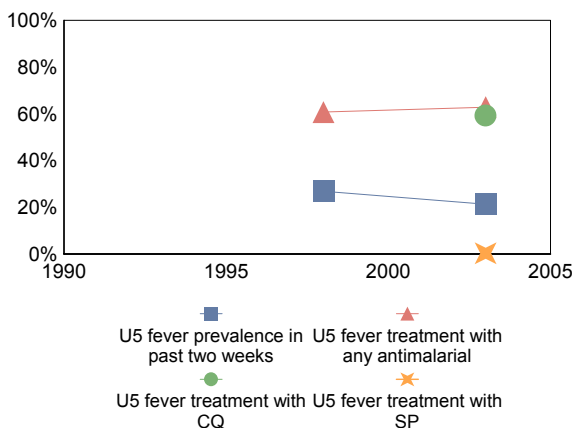
## COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

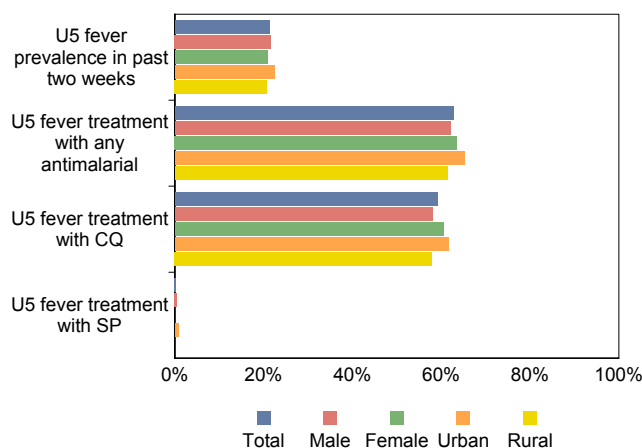
### Fever prevalence and treatment with antimalarials

Prompt access to effective treatment is one of the key interventions promoted by RBM. Information presented below is from household surveys on fever prevalence and reported treatment of fever with antimalarials among children under 5 years of age (U5) within the previous 2 weeks.

**Trend in fever prevalence and antimalarial coverage estimates from national surveys**



**Estimate of fever prevalence and treatment with antimalarials from most recent national survey**



#### Available national surveys

##### DHS 2003

Sample size (U5s): 3 340

Field work: Aug-Oct 2003

Scale: national

Supporting organization: Macro DHS

##### DHS 1998-99

Sample size (U5s): 2 948

Field work: Nov 1998-Feb 1999

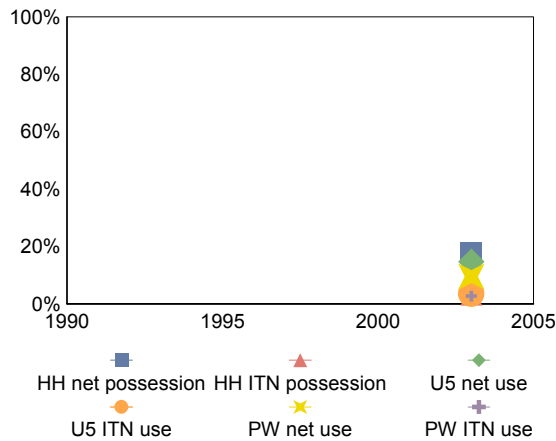
Scale: national

Supporting organization: Macro DHS

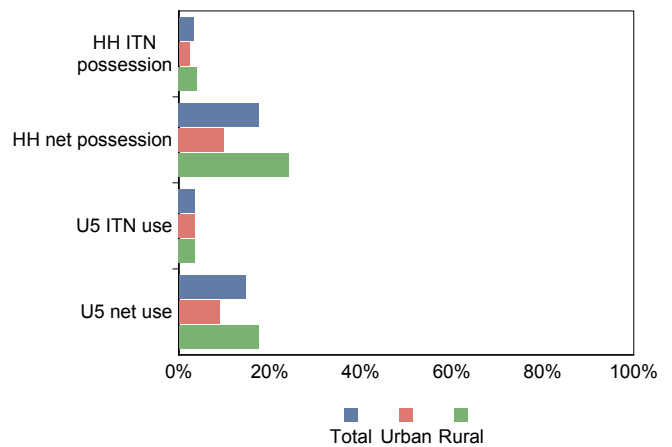
## Insecticide-treated nets

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.

**Trend in mosquito net coverage estimates from national surveys**



**Estimates of ITN coverage from most recent national survey**



### Available national surveys

#### DHS 2003

Sample size (HHs or U5s): 6 251  
Field work: Aug-Oct 2003  
Scale: national

Supporting Organization: Macro DHS

### Available subnational surveys

#### Grabowsky, et al. 2003

Sample size (HHs or U5s): 254  
Field work: May 2003  
Scale: 1 district: Lawra

Supporting Organization: MoH, Rotarians Against Malaria, the Rotary Foundation, ExxonMobil, the World Bank

#### RBM 2001

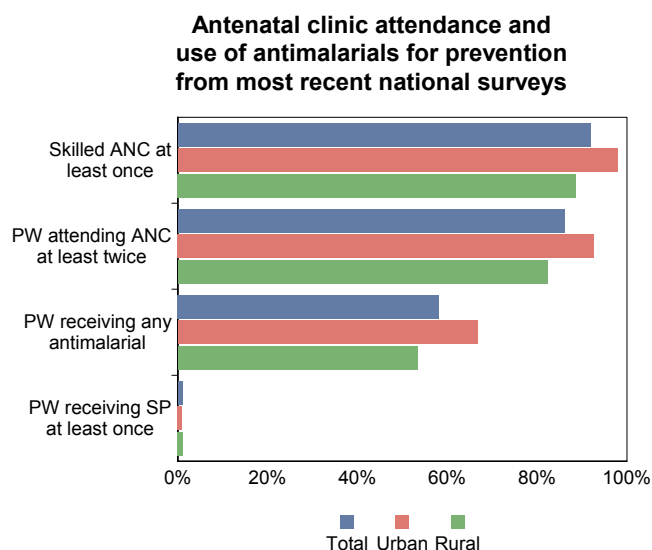
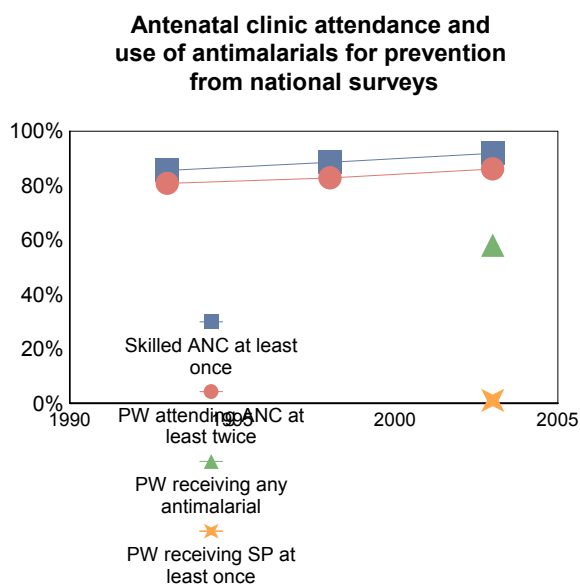
Sample size (HHs or U5s): 1 059  
Field work:

Supporting Organization: WHO/AFRO

Scale: 5 districts: Nzema East, Hohoe, Atebubu, Asante-Akim North, Kassena-Nankana

## Intermittent preventive treatment during pregnancy

RBM promotes IPT with SP in countries with areas of stable malaria transmission as one of its key prevention strategies for pregnant women (PW). However, few surveys have assessed the coverage of IPT among pregnant women. Data below represent available household survey results in which indicators related to monitoring IPT have been assessed. The level of skilled antenatal attendance and the percentage of women attending antenatal clinics (ANC) at least twice are presented as a background for which improvements in IPT can be achieved.



### Available national surveys

#### DHS 2003

Sample size (PW): 2 645      Supporting organization: Macro DHS  
 Field work: Aug-Oct 2003  
 Scale: national

#### DHS 1998-99

Sample size (PW): 1 927      Supporting organization: Macro DHS  
 Field work: Nov 1998-Feb 1999  
 Scale: national

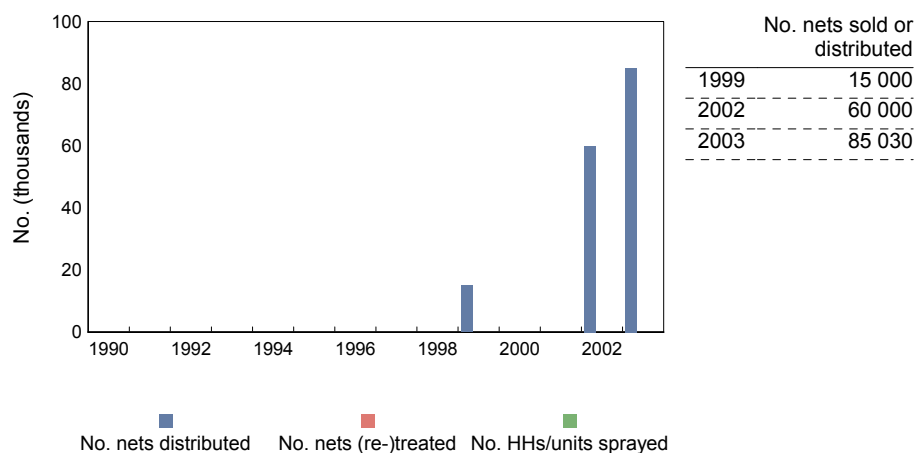
#### DHS 1993-94

Sample size (PW): 2 204      Supporting organization: Macro DHS  
 Field work: Sep 1993-Jan 1994  
 Scale: national

## SERVICE DELIVERY AND MALARIA-RELATED COMMODITIES

### General malaria-related services delivered

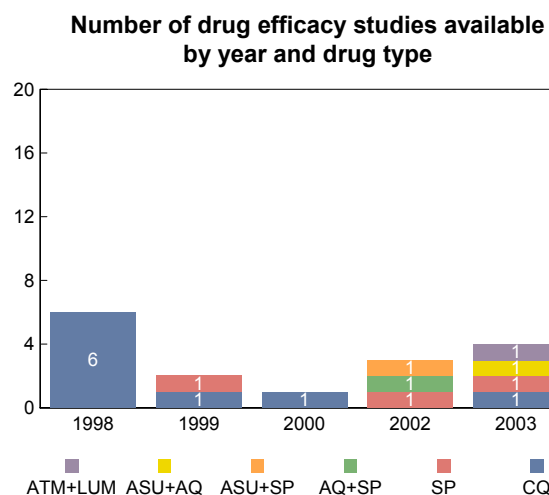
Services delivered for malaria control include numbers of nets and insecticides delivered or sold, numbers of nets (re-)treated with insecticide and numbers of households (HHs)/units sprayed during IRS campaigns. These services and service-related commodities mostly reflect core malaria control activities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

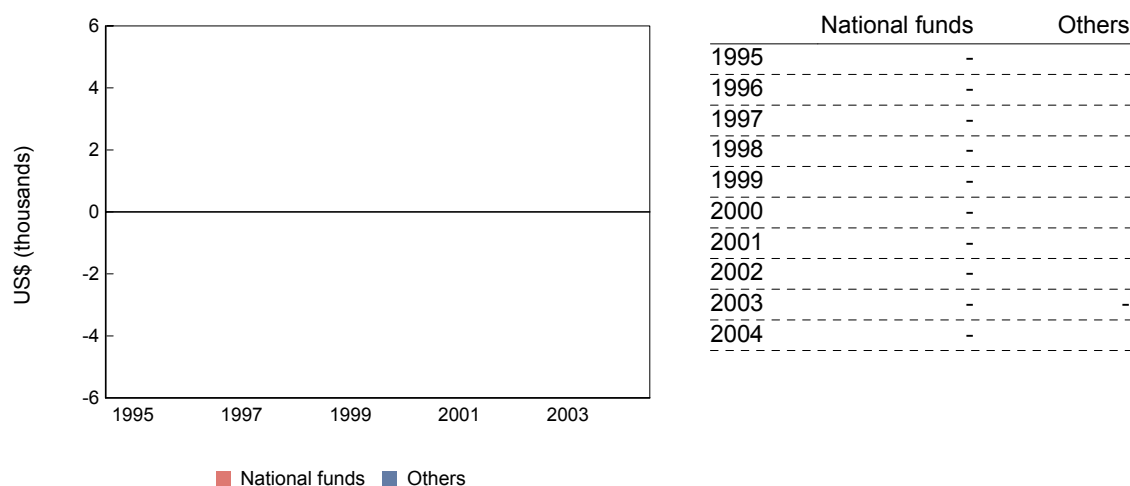
Study years	Number of studies	Median	Range		Percentile	
			Low	High	25th	75th
<b>CQ</b>						
1998-2003	9	23.2	9.0	31.3	15.8	29.7
<b>SP</b>						
1998-2003	3	3.0	0.0	5.2	0.0	5.2
<b>AQ+SP</b>						
2002	1	1.4				
<b>ATM+LUM</b>						
2003	1	0.0				
<b>ASU+AQ</b>						
2003	1	0.0				
<b>ASU+SP</b>						
2002	1	0.8				



## 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).



### 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.

Approved proposals			Grant agreements and disbursements (as of 13 January 2005)						
Source	Round	Total year 1-2 budgets	Principal recipient	Signed	Signature date	Grant amount	No. of disbursements	Total disbursed	% disbursed
CCM	2	4 596 111	<b>MoH</b>	Yes	03-Jul-03	4 596 111	3	2 921 110	63.6%
CCM	4	18 561 367		No			-		

### General notes and remarks

See explanatory notes at the beginning of the section.

\* policy adopted, not presently being deployed, implementation process ongoing