

Overview of malaria control activities and programme progress

The Malaria Eradication Programme was launched in Peninsular Malaysia in 1967. This was replaced by the Malaria Control Programme in 1980 and was extended to Sabah and Sarawak in 1986. In 1993, malaria control was further focused in the centre of Peninsular Malaysia where the borders of the three states of Kelantan, Pahang and Perak merge and where the population is made up of the aboriginal Orang Asli. In 1995, the primary health-care approach to malaria control was adopted. In 1996, Sabah started its Five-Year Action Plan for malaria control, which demonstrated great success. Other areas of current concern are the contribution of about 25% of malaria morbidity by foreigners and the evidence of drug resistance, albeit accompanied by decreasing morbidity.

The primary control strategies include: (i) early diagnosis and prompt and effective treatment; (ii) strengthening management and supervision; (iii) capacity building through training; (iv) operational research and improvement of local operations; (v) maintaining surveillance to prevent and monitor outbreaks and facilitate their control; (vi) selective and sustained vector control through indoor residual spraying and use of ITNs; (vii) community involvement, integration with other public health activities and collaborative and synchronized operations—for example, for geographical areas with common borders.

The improvement in the malaria situation in the state of Sabah deserves special mention. In 1995, Sabah was responsible for 84.2% of the malaria burden, which by 2003 was reduced to 27.9%. It is hoped the present decline in malaria cases will continue, which will largely contribute to a decline in the country as a whole. However, the disease will become more confined to the rural population living in less accessible and hilly forested hinterland with inadequate transportation and communication facilities. Thus, more concerted efforts are required to reduce the malaria incidence in these areas. Long-term infrastructure development, socioeconomic improvement and programmes in which the communities actively participate are needed to roll back malaria further in these areas.

The use of ITNs is being expanded as it is believed to have significantly contributed to the reduction of malaria cases. In vivo *P. falciparum* resistance to first-line drugs has been continuously monitored since 2003. Increased surveillance and screening are carried out to prevent introduction and transmission by foreigners with the help of their employees, although illegal immigrant workers still pose a problem.

National malaria policy and strategy environment

National malaria strategy overview for 2003

| | Strategy |
|---|----------|
| Treatment and Diagnosis Guidelines | Yes |
| Published/updated in | 1993 |
| Monitoring antimalarial drug resistance | Yes |
| Number of sites currently active | 18 |
| Home management of malaria | NA |
| Vector control using insecticides | Yes |
| Monitoring insecticide resistance | Yes |
| Number of sites currently active | 14 |
| Insecticide-treated mosquito nets (ITNs) | Yes |
| Intermittent preventive treatment (IPT) | NA |
| Epidemic preparedness | Yes |

Current antimalarial drug policy

| | Current policy |
|--------------------------------------|------------------------------|
| Uncomplicated malaria | |
| <i>P. falciparum</i> (unconfirmed) | all confirmed |
| <i>P. falciparum</i> (lab confirmed) | CQ/SP/CQ+SP(day3) +/- PQ(3d) |
| <i>P. vivax</i> | CQ+PQ(14d) |
| Treatment failure | Q(7)+T(7) or MQ |
| Severe malaria | Q(7d) |
| Pregnancy | |
| Prevention | CQ weekly |
| Treatment | Q(7d) |

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 |
|--------|--------|--------|--------|--------------------------------------|--------|--------|--------|--------|--------|
| 50 500 | 39 189 | 36 853 | 39 890 | 58 958 | 59 208 | 52 060 | 26 651 | 13 491 | 11 106 |
| 2000 | 2001 | 2002 | 2003 | Date of last report: 13 January 2005 | | | | | |
| 12 705 | 12 780 | 11 019 | 6 338 | | | | | | |

Reported malaria by type and quality

For most recent year

| | |
|-------------------------|-------|
| Reported malaria cases | 6 338 |
| Reported malaria deaths | 21 |

Probable or clinically diagnosed

Malaria cases
Severe (inpatient or hospitalized) cases
Malaria deaths
Slides taken
Rapid diagnostic tests (RDTs) taken

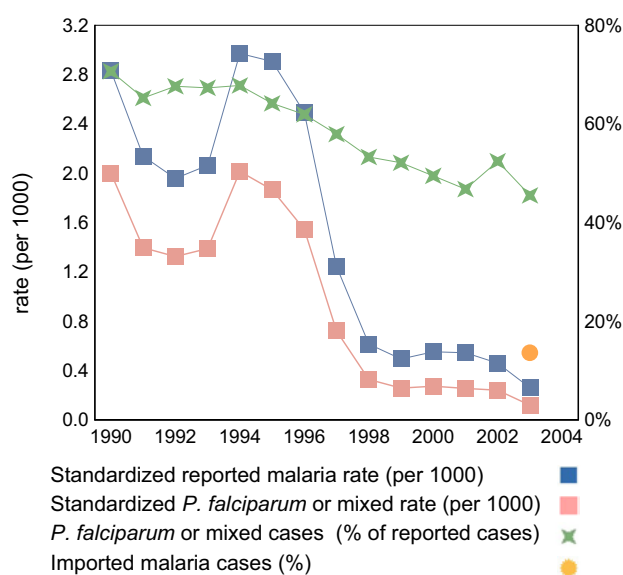
Laboratory confirmed

Malaria cases 6 338
P. falciparum or mixed 2 884
P. vivax 3 127
Severe (inpatient or hospitalized) cases 421
Malaria deaths 21

Investigations

Imported cases 861

Estimated reporting completeness (%) 100



Reported malaria cases by age and gender

| Group | Subgroup | 2000 | 2001 | 2002 | 2003 | % |
|--------|----------|--------|--------|--------|-------|-----|
| | Total | 12 705 | 12 780 | 11 019 | 6 338 | 100 |
| Gender | Male | 8 633 | 8 817 | 7 527 | 4 483 | 71 |
| | Female | 4 072 | 3 963 | 3 492 | 1 855 | 29 |
| Age | <5 years | 1 795 | 1 723 | 1 486 | 607 | 10 |
| | 5> years | 10 910 | 11 057 | 9 533 | 5 731 | 90 |

Reported malaria cases by selected subnational area

| 15 of 15 areas | 2000 | 2001 | 2002 | 2003 | % |
|------------------|-------|-------|-------|-------|----|
| Sarawak | 3 011 | 3 145 | 2 496 | 2 615 | 41 |
| Sabah | 5 776 | 6 050 | 5 096 | 1 770 | 28 |
| Pahang | 1 301 | 1 544 | 1 563 | 850 | 13 |
| Johor | 710 | 671 | 579 | 284 | 4 |
| Perak | 852 | 470 | 280 | 276 | 4 |
| Selangor | 271 | 172 | 159 | 119 | 2 |
| Pulau Pinang | 209 | 197 | 76 | 106 | 2 |
| Kelantan | 386 | 184 | 333 | 99 | 2 |
| Kedah | 12 | 26 | 82 | 92 | 1 |
| Terengganu | 94 | 76 | 140 | 47 | 1 |
| Negeri Sembilan | 37 | 205 | 180 | 45 | 1 |
| W.P.Kuala Lumpur | 27 | 20 | 15 | 20 | <1 |
| W.P.Labuan | | | | 7 | <1 |
| Melaka | 18 | 15 | 16 | 7 | <1 |
| Perlis | 1 | 5 | 4 | 1 | <1 |

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.

Insecticide-treated nets

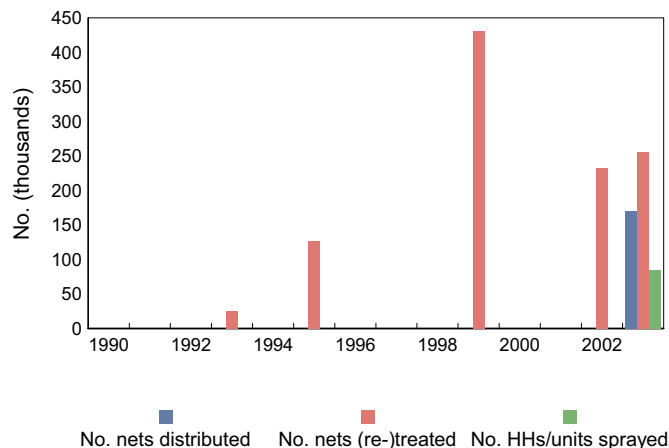
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data below represent available household survey results in which household possession and use of nets and ITNs have been assessed.

No survey-based estimates of mosquito net or ITN coverage are currently available.

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.

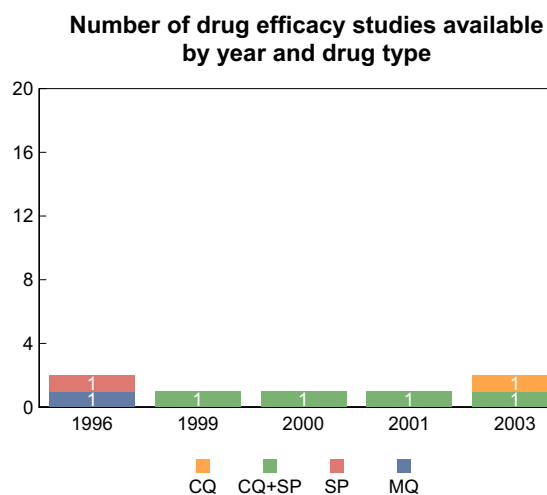


| | No. HHs/units sprayed | No. nets (re-) treated | No. nets sold or distributed |
|------|-----------------------|------------------------|------------------------------|
| 1993 | - | 25 469 | - |
| 1995 | - | 127 351 | - |
| 1999 | - | 431 648 | - |
| 2002 | - | 232 005 | - |
| 2003 | 85 339 | 255 911 | 170 000 |

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.

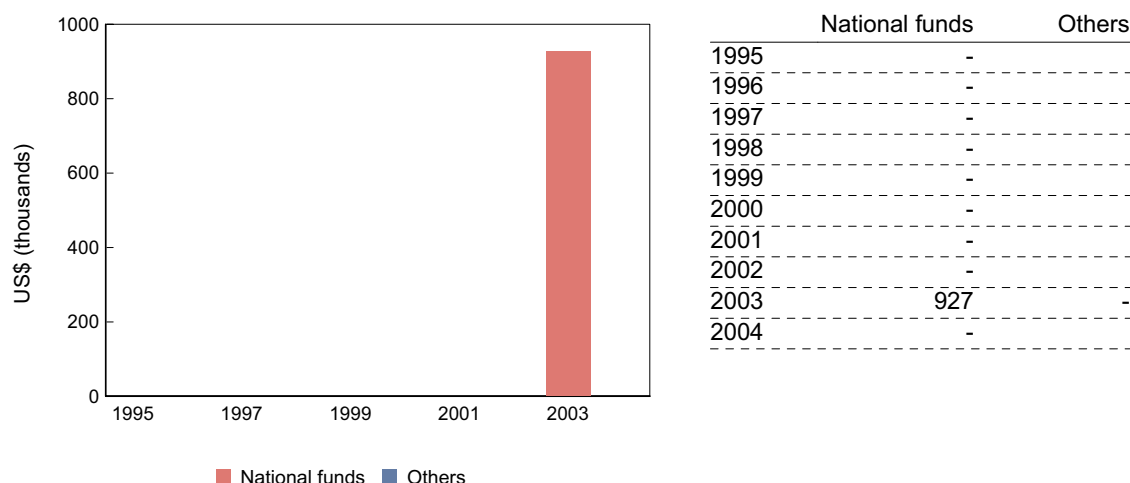
| Study years | Number of studies | Median | Range | | Percentile | |
|--------------|-------------------|--------|-------|------|------------|------|
| | | | Low | High | 25th | 75th |
| CQ | | | | | | |
| 2003 | 1 | 45.2 | | | | |
| SP | | | | | | |
| 1996 | 1 | 29.4 | | | | |
| MQ | | | | | | |
| 1996 | 1 | 0.0 | | | | |
| CQ+SP | | | | | | |
| 1999-2003 | 4 | 47.6 | 31.3 | 62.5 | 37.5 | 57.0 |



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.

No funding was approved for malaria control by the GFATM.

General notes and remarks

See explanatory notes at the beginning of the section.