

### Overview of malaria control activities and programme progress

In Suriname, malaria risk is greatest along the Marowijne River, which borders French Guiana, as well as in areas close to Brokopondo Lake in the northern-central region where *A. darlingi* is present. Malaria caused by *P. falciparum* is the most prominent infectious disease in remote areas. The total of 14 657 malaria cases reported in 2003 was similar to that reported in previous years. The outbreaks in 2003 occurred in the south of the country near the Brazilian border as well as in the eastern Marowijne region, which were associated with increased movement of people into gold-mining areas.

Malaria control is carried out mostly by the Medical Mission, an NGO primarily financed by the government. The country collaborates with Brazil, French Guiana and Guyana because of overlapping areas of transmission and cross-border migration of the labour force for the mining industry in remote areas. ITNs are being used and local ITN production is promoted.

In the first months of 2003, the National Malaria Board changed the first-line treatment policy from Q to the combination treatment ASU+MQ, resulting in increased patient adherence to treatment. Based on drug efficacy trials undertaken for the Amazon Network for Monitoring Antimalarial Drug Resistance, in 2004 the National Malaria Board adopted the use of ATM+LUM (Coartem®) as a first-line treatment. Human and material resources within the entomology unit of the MoH were strengthened. Operational research was undertaken for determining the most efficient vector control strategies.

The majority of funding for malaria control comes from nongovernmental sources. Following a successful proposal by the Medical Mission, the GFATM granted over US\$ 3 million over 2 years to start in 2005.

### 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                | 3        |
| <b>Home management of malaria</b>               | NA       |
| <b>Vector control using insecticides</b>        | Yes      |
| <b>Monitoring insecticide resistance</b>        |          |
| Number of sites currently active                |          |
| <b>Insecticide-treated mosquito nets (ITNs)</b> | Yes      |
| <b>Intermittent preventive treatment (IPT)</b>  | NA       |
| <b>Epidemic preparedness</b>                    |          |

#### Current antimalarial drug policy

|                                      | Current policy |
|--------------------------------------|----------------|
| <b>Uncomplicated malaria</b>         |                |
| <i>P. falciparum</i> (unconfirmed)   |                |
| <i>P. falciparum</i> (lab confirmed) | ATM-LUM        |
| <i>P. vivax</i>                      | CQ+PQ          |
| <b>Treatment failure</b>             | Q(7d)          |
| <b>Severe malaria</b>                |                |
| <b>Pregnancy</b>                     |                |
| Prevention                           |                |
| Treatment                            |                |

## 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   |
|--------|--------|--------|--------|--------------------------------------|-------|--------|--------|--------|--------|
| 1 608  | 1 490  | 1 404  |        | 4 704                                | 6 606 | 16 649 | 11 323 | 12 412 | 13 939 |
| 2000   | 2001   | 2002   | 2003   | Date of last report: 13 October 2004 |       |        |        |        |        |
| 13 132 | 17 074 | 13 091 | 14 657 |                                      |       |        |        |        |        |

### Reported malaria by type and quality

For most recent year

|                         |        |
|-------------------------|--------|
| Reported malaria cases  | 14 657 |
| Reported malaria deaths |        |

#### Probable or clinically diagnosed

|  |        |
|--|--------|
| Malaria cases                            |        |
| Severe (inpatient or hospitalized) cases |        |
| Malaria deaths                           |        |
| Slides taken                             | 70 670 |
| Rapid diagnostic tests (RDTs) taken      |        |

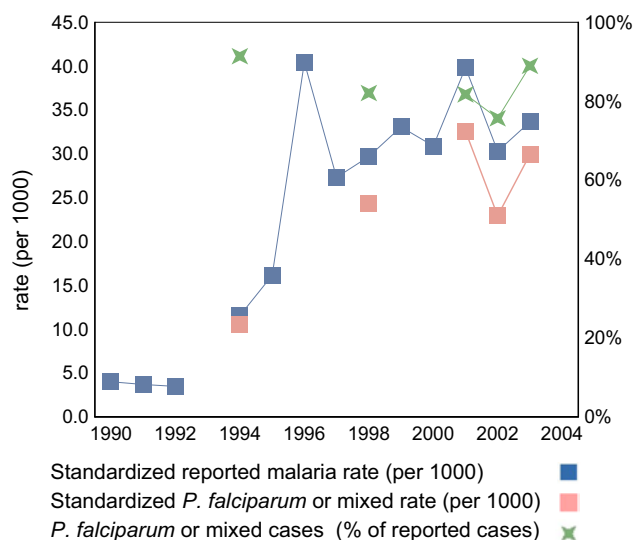
#### Laboratory confirmed

|  |        |
|--|--------|
| Malaria cases                            | 14 657 |
| <i>P. falciparum</i> or mixed            | 13 043 |
| <i>P. vivax</i>                          | 1 614  |
| 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    | 13 132 | 17 074 | 13 091 | 14 657 | 100 |

### Reported malaria cases by selected subnational area

| 2000 | 2001 | 2002 | 2003 | % |
|------|------|------|------|---|
|------|------|------|------|---|

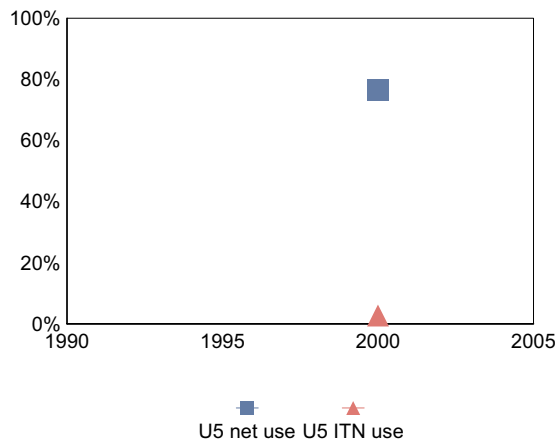
## COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

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.

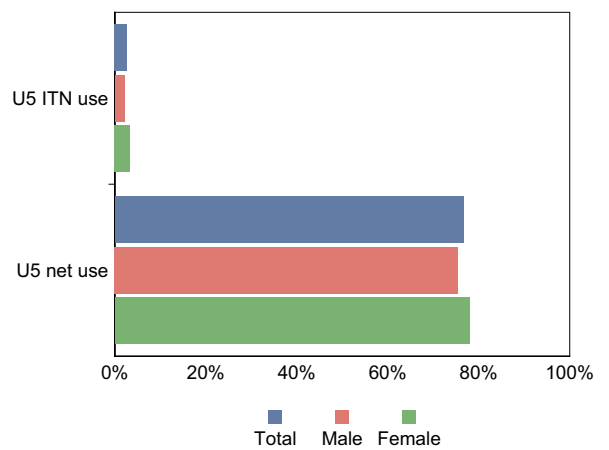
### Insecticide-treated nets

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.

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



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



#### Available national surveys

##### MICS 2000

Sample size (HHs or U5s): 498

Supporting Organization: UNICEF

Field work: Nov 1999-Apr 2000

Scale: national

## SERVICE DELIVERY AND MALARIA-RELATED COMMODITIES

### General malaria-related services delivered

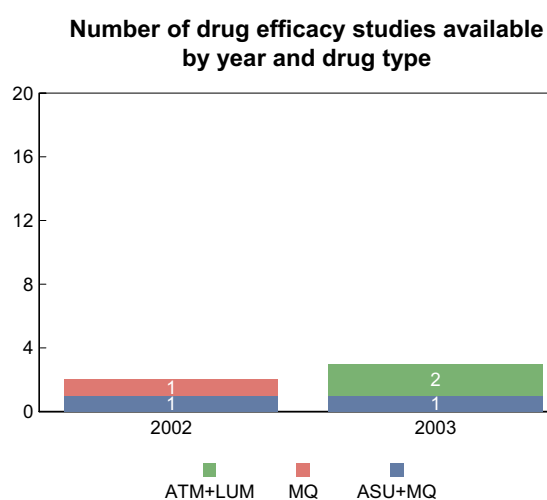
Services delivered for malaria control include numbers of nets and insecticides delivered or sold, numbers of nets (re-)treated with insecticide and numbers of households (HHs)/units sprayed during IRS campaigns. These services and service-related commodities mostly reflect core malaria control activities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

*No data is currently available.*

## 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.

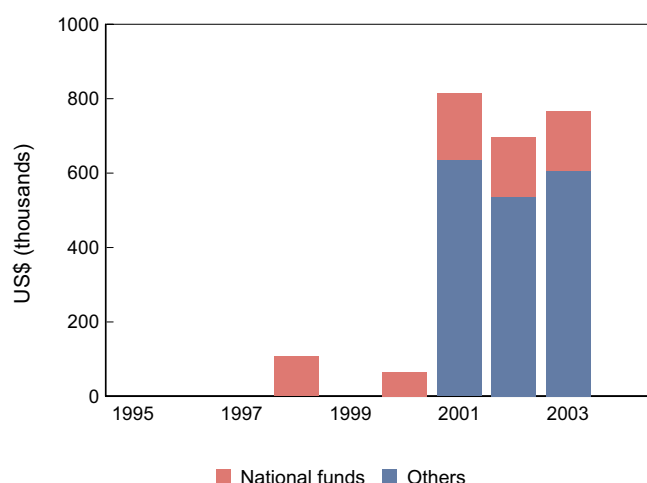
| Study years    | Number of studies | Median | Range |      | Percentile |      |
|----------------|-------------------|--------|-------|------|------------|------|
|                |                   |        | Low   | High | 25th       | 75th |
| <b>MQ</b>      |                   |        |       |      |            |      |
| 2002           | 1                 | 7.3    |       |      |            |      |
| <b>ATM+LUM</b> |                   |        |       |      |            |      |
| 2003           | 2                 | 2.0    | 1.9   | 2.0  | 1.9        | 2.0  |
| <b>ASU+MQ</b>  |                   |        |       |      |            |      |
| 2002-2003      | 2                 | 4.1    | 2.4   | 5.8  | 2.4        | 5.8  |



## 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).



|      | National funds | Others |
|------|----------------|--------|
| 1995 | -              | -      |
| 1996 | -              | -      |
| 1997 | -              | -      |
| 1998 | 106            | -      |
| 1999 | -              | -      |
| 2000 | 66             | -      |
| 2001 | 178            | 636    |
| 2002 | 161            | 536    |
| 2003 | 161            | 606    |
| 2004 | -              | -      |

### 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                | 4     | 3 043 500              | Medische Zending   | Yes    | 14-Dec-04      | 2 963 950    | 1                    | 1 084 850       | 36.6%       |

### General notes and remarks

See explanatory notes at the beginning of the section.