Malaria databases: general considerations

Data on malaria for the years 1996, 1997, 1998 have been collected by the malaria programs in each of the six countries in collaboration. On behalf of this collaboration the data have been collated regionally in 1999, under the auspices of SEAMEO TROPMED, by the Department of Tropical Hygiene, Faculty of Tropical Medicine, Mahidol University. The respective databases remain the property of the health ministry of each country but have been contributed freely for the purpose of building the regional perspective.

The SEAMEO TROPMED Network is comprised of 10 countries in Southeast Asia, including Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam. It is a regional network that has close cooperation with China and so acts appropriately as a coordinating mechanism.
The data for the 3-year period comprise total reported malaria cases, malaria incidence, laboratory confirmed malaria cases, malaria parasite species, malaria mortality. There are differences among the six countries in the methodology of case data handling.

Thus, some countries routinely report only laboratory-confirmed cases,. others rely to a greater or lesser extent on clinical diagnosis with partial coverage by microscopic and/or dipstick diagnosis. Some centers in all countries report confirmed cases rapidly followed by specific drug therapy, other smaller, more remote centers make blood smears and send these varying distances for definitive diagnosis, so that the time lag may be considerable before institution of the most appropriate therapy. Much depends on the location of the patient, the communications and transport systems, as well as on the availability and training of the requisite human resources and on heterogeneity of case definition.

For these reasons the strategy followed in bringing together national data from the six countries is to report the malaria data in several different formats:

1 . Total reported malaria cases per year for each of the 3 years: this refers to the sum of confirmed cases and cases which have been reported as malaria on the basis of clinical criteria only.

2. Malaria incidence (total reported cases) i.e. total cases per 1,000 population for each of the 3 years.

3. Malaria incidence (confirmed cases per 1,000 population) for the most recent year (1998) for which all countries have sufficient data: laboratory confirmation is by microscopy or by dipstick.

As intimated in the Introduction, these are cumulative yearly malaria data.

In the case of Lao PDR, the number of reported cases for 1996 refers to confirmed cases only, whereas those reported for 1997 and 1998 include both laboratory confirmed and clinically defined cases. In the cases of China and Thailand, the reported cases for all three years represent confirmed cases only.

These data are mapped separately using the regional map software with data input at the unit area level designated for each country. This approach permits rapid viewing of the patterns in the region as a whole and at the national and subnational level. For more micro level dissection the data must be entered at levels below the designated administrative unit area: in some countries this micro level entry is available and has already been utilized for special purposes.

It should be emphasized that these data are collected from the public health sector. Patient numbers in the public health sector probably represent underestimates of true case numbers. In addition in each country many patients are managed by the private sector or undergo self-treatment. While the exact numbers are unknown it is expected that the proportion managed in this manner may be quite large. These cases generally are not reported to the public sector unless the patients subsequently seek assistance therefrom as a result of failed response to treatment. This means that real case numbers are greater than those compiled by the public health sector: some limited surveys in particular geographical areas of some of the six countries support this conclusion. Thus these data represent minimal figures.

Data sources: All malaria data were contributed by the malaria programs of the health ministries of the 6 countries.