4.6. Guyana

Malaria has been a major public health problem in Guyana, notably in regions one, seven, eight and nine, from 1986 to the present. *P. falciparum* causes severe morbidity and mortality and continues to be the dominant species. The number of foci of intense all-year malaria transmission has increased due to various reasons. However, increased mining and logging activities in these regions, identified as part of the government's program of structural adjustment to sustain social and economic development of the country, have been the major causes.

The average number of malaria cases in Guyana annually between 1991 and 1998 was approximately 48,805. The government's efforts in 1999 and 2000 were directed at reducing and stabilizing the exceptionally high endemicity. Simultaneously, efforts were directed at preventing the reintroduction of malaria to previously malaria-free areas such as the coastlands, where 85% of Guyana's population resides. In order to achieve this, a new drug schedule was introduced in the latter-half of 1999 to treat *P. vivax* and *P. falciparum* malaria cases.

The high incidence of malaria has resulted in the following serious health problems:

- *P. falciparum* has become firmly established in previously eradicated areas and amongst a very mobile, widely scattered mining and logging population with little or no immunity.

- *P. falciparum* malaria is now firmly established within the indigenous as well as within other populations inhabiting the interior. The present make-shift or rudimentary habitations of these groups offer few walls for the spraying of residual insecticide and therefore increase host-vector contact and infection.

- In the affected areas *P. falciparum* is resistant to Chloroquine and may also be resistant to Fansidar.

- A larger number of patients who were given the standard 14-day radical treatment against *Plasmodium vivax* have tested positive after rechecks. This may indicate a lack of sensitivity to either or both Chloroquine and Primaquine.

- Non-compliance or interrupted treatment of established drug regimens, especially of the 14-day radical treatment against *P. vivax,* is high and leads to incomplete clinical and parasitological cure, oftentimes also resulting in a relapse of the disease. Similar findings are also evident for *P. falciparum*. Both conditions of non-compliance and interrupted treatment favor the development and stabilization of drug sensitivity i.e. resistance.

- *A. darlingi* is a primary vector is both very effective and efficient in malaria transmission. In addition, it is also a sylvan species (living independent of man in the forest).

- Mining and logging operators having access to foreign exchange, purchase antimalarials and use them indiscriminately to suppress symptoms. This practice not only compounds the difficulties of parasitological diagnosis by health service workers, but also eventually enhances the problem of stable resistance.

- Campsites for both mining and logging are situated in remote, often uninhabited, forested areas. Accessing these areas is a dangerous task due to their location.

The following points were also highlighted:

- At the beginning of the 1990s, the API was very high. In 1999 the areas with medium or high risk had an API of 206.31 confirmed cases per 1000 people.
- Before the *Roll Back Malaria* Initiative, Guyana had undertaken activities to increase the diagnostic and treatment network.
- Vector control is currently based on the use of DDT. The principal vector, *A. darlingi,* is susceptible to the insecticide.
- The malaria program is part of the Primary Health Care Program. Although its structure is vertical, it counts on integration with local levels of governance as well as community participation. The central level is responsible for providing norms and regulations.
- The country has 200 microscopists and each community has personnel working with malaria.
- Seventy percent of the malaria cases come from the border areas with Brazil and Venezuela: regions eight and nine, in the southern and western parts of the country.
- There is a large number of gold miners from Brazil working in the areas mentioned above. It is estimated that a decrease of 50% in the number of malaria cases could be achieved if efforts could be concentrated on this group and in these regions of the country.
- In 1999, the number of cases was 37% less then the previous year. In 2000 the number is anticipated to be between 24-25 thousand cases
- Of the cases reported, those with confirmed diagnosis receive treatment.