

## ROUND TABLE 2 – SUMMARY

### CLASSICAL AND NEW APPROACHES IN EPIDEMIOLOGY

Chairman: *F. J. López-Antuñano\**  
Co-Chairman: *Philippe Brasseur\*\**

In this round table descriptive and analytical epidemiology aspects of malaria and babesiosis were discussed. The debates concentrated attention on the importance and utilization of different methods for the proper diagnosis of the disease and for characterization of diverse situations; as well as for the identification of indicators and parameters to provide a data-base for epidemiological and mathematical models capable of providing the basis to construct a health policy.

If health policy is defined as a systematic approach to the evaluation and management of the quality and quantity of health care, including both prevention and health services, the quality of health care should be measured as the structure, process, or outcome, and quality as related to utilization and cost of services. The introduction of epidemiological methods into health policy analyses will reduce costs and improve the quality of health care.

The comprehensive scope of many health programs calls for personnel (planners, educators, researchers and practitioners) trained in a wide range of health related areas. The contribution of the social science knowledge and skills to make such a training has been also explored. The growing needs for applying social science in international health human resources development and the delineation of several topical research areas (ecological, political-economical, socio-cultural and organizational), demand for new and broad-minded approaches to understand the epidemiology of malaria and babesiosis prevention and control.

It appears that if sound, permanent and integrated programmes are to be developed, so-

cial participation is to be expected, and the following steps are indispensable: (a) To conduct epidemiological research prior to and during the planning stage of local malaria and babesiosis prevention and control programs, as a function of the local health systems; (b) Feasibility studies to provide a basis for better decisions on the choice of the most adequate options for interventions for malaria and babesiosis prevention and control methods to be executed by social services, health services, veterinarian public health services and the population at risk; (c) The behavioral research to also provide the essential behavioral and attitudinal data for the initiation of a program for health information, education and promotion.

Epidemiological investigations have an important role in recognizing environmental changes affecting human and live-stock populations exposed under natural conditions. However, it is important to note that there are several methodological difficulties with epidemiological studies, such as: (a) *Lack of controls*: the observed changes in health status may be due to unknown factors which have not been properly assessed. An observed correlation between health status and a particular environment factor does not necessarily imply causality; (b) *Multiple risk factors*: it may be methodologically difficult to separate the effects of exposure to a single factor from the effects of simultaneous exposure to several other factors which also vary seasonally; (c) *Differential sensitivity*: information is rarely available on the sensitivity of the instruments used to measure the population exposed, or the conditions and situations of exposure, such as the presence of different social risk groups, general conditions of nutrition and health, concurrent exposure to other environmental situations, prevalent infections and parasitic diseases and immune response to them, exposure to diverse meteorologic factors at the time of study and others.

---

\* Panamerican Health Organization, Washington, U.S.A.

\*\* Centre Hospitalier Regional de Rouen, France.

Before the problems connected with research for determining changes in the health status of human and live-stock populations are considered, it is of paramount importance to establish the need of a system for surveillance and monitoring of the environmental and health situations. The skills needed for these studies are not usually taught to health workers but this information along with health promotion inputs is indispensable to increase our knowledge of environmental effects on human and animal health and to provide information that will contribute to an early-warning system for disease prevention and control.

In the context of the malaria situation in tropical areas of underdeveloped countries, there continues to be an urgent need to make available as widely as possible the specific diagnosis and treatment of malaria cases.

The spread of bovine babesiosis in the American region is of such proportions that in countries such as Brazil it is difficult to measure the absolute risk or incidence in spite of the serious problems related to cattle and dairy breed production. In certain areas from some countries very timorous control programmes have been developed with no demonstrable impact. There is a disreputable apathy for the development of sound and permanent babesiosis control programs in the third world countries both within the health workers of the public sector and the cattle producers of the private sector.

The current effort to implement a community-based primary health care strategy provides an opportunity for application of practical chemotherapeutic interventions in wide malaria endemic areas.

If successful, the contribution of antimalarial drugs to reducing morbidity and mortality would be substantial. Despite the results of previous studies on the delivery of malaria chemotherapy through primary health care channels, much more information is needed, and

careful evaluation of all such programs is highly important.

A historical-epidemiological evaluation of several sanitary campaigns in several countries showed that no single measure is sufficient to control malaria or babesiosis, and that future anti-malaria or anti-babesiosis campaigns need to adopt strategies that are flexible, incorporated into local health systems, and interrelated with agricultural and live-stock practices. Moreover, a certain threshold of socioeconomic development, health services infrastructure, and educational level may have to be reached for the successful application and maintenance of direct anti-malaria and anti-babesiosis measures.

Neither malaria nor babesiosis control can be achieved without the full support of the social organizations, the genuine participation of their people and the adequate local programming and evaluation of the activities of their public health services.

Health policy makers must be engaged in undertaking an epidemiological and economic analysis of the major disease problems such as malaria and babesiosis in certain developing geographical areas, evaluating the cost-effectiveness of alternative intervention strategies; designing adequate health care delivery systems, both for prevention and human/veterinarian medical care.

Further more, most developing countries lack national capacities in epidemiological and economic analyses, health technology assessment and environmental monitoring and management.

It is universally recognized that improved health in the broadest sense is a fundamental indicator of the development process. As the Nobel Laureate T.W. Schultz mentioned 10 years ago:

“... the wealth of nations has come to be predominantly the acquired abilities of people their education, experience, skills, and health”.