Update/Le point

Global malaria control*

WHO Malaria Unit[1]

The four basic elements in the global malaria control strategy are described. The objectives of this strategy are to prevent mortality and to reduce morbidity and social and economic loss due to disease through the progressive improvement and strengthening of local and national capabilities. The strategy does not propose a single solution but gives broad lines of approach to achieving a common aim. The approaches are to be adapted by the countries concerned according to the structures of their health systems and existing control operations, their resources, and a realistic assessment of the control needs and risk factors.

Introduction

The time has come for a renewed attack on malaria. Every year, malaria causes clinical illness, often very severe, in over 100 million people and over 1 million people die from it. It threatens 2200 million persons, about 40% of the world's population, undermining the health and welfare of women and families, endangering the survival of their children, debilitating the active population, and straining both countries' and people's scarce resources.

Yet, malaria is a curable disease, not an inevitable burden. The vastly expanded knowledge of the disease and its control acquired over the years provides the basis for launching a new global initiative for malaria control. Malaria can be curbed with the present tools by the local health systems, as has been shown by some countries.

In most endemic countries, the goal of malaria control will be to prevent malaria mortality and to reduce morbidity and the socioeconomic losses provoked by this disease. The goal in malaria-free areas is to maintain that freedom.

Success in achieving these goals depends on political support from the highest level. It also depends on a change in emphasis from highly prescriptive, centralized control programmes to flexible, cost-effective and sustainable programmes adapted to local conditions and responding to local capacities for assessing malaria situations and selecting appropriate control measures to reduce or prevent the disease problem in the community rather than to concentrate on reducing parasite rates in the population, as was too often the case in the past.

In some countries, the development of disease-oriented malaria control programmes has started, but in others too little is being done, or malaria control programmes persist with inefficient practices based on eradication principles. In the great majority of countries, eradication is not a realistic goal.

Malaria control is not the isolated concern of the health worker. It is everybody's business, and everyone should contribute. It requires the partnership of community members and the involvement of those engaged in education, the environment in general, and water supply, sanitation and community development in particular. Malaria control must be an integral part of national health development and health concerns must be an integral part of national development programmes in general.

This community-based action must be sustained and supported by intersectoral collaboration at district, national and international levels, by monitoring, training and evaluation and by operational and basic research. Local appraisal and action need global support. The time has come for governments and the international community to make a commitment to control the disease by developing the manpower, by investing the necessary resources and by reorientating programmes where necessary, and to tackle the problem in a cost-effective and sustainable way. It is expected that this global strategy will promote pro-

* This article is based on an unpublished WHO document (CTD/MAL/EXP/92.3), which was prepared for the Ministerial Conference on Malaria, Amsterdam, 26–27 October 1992. The full document is available, on request, from Malaria Unit, Division of Control of Tropical Diseases, World Health Organization, 1211 Geneva 27, Switzerland. A French translation of this article will appear in a future issue of the *Bulletin*.

[1] Requests for reprints should be sent to Malaria Unit, World Health Organization, 1211 Geneva 27, Switzerland.

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gress towards achieving the goal. Once this strategy is implemented, better and more efficient use of resources can be effected and over time will be seen to achieve the ultimate objective of malaria control: the prevention of death and reduction of suffering from malaria disease.

Control strategy

Since malaria varies throughout the world no single prescription can be made for the control of malaria in all countries. On the contrary, each country's circumstances will influence the organization of practicable programmes to identify local problems and priorities and to design and implement appropriate interventions. The key is in competent local action.

The goal of malaria control is to prevent mortality and reduce morbidity and social and economic losses, through the progressive improvement and strengthening of local and national capabilities.

The four basic technical elements of the strategy are:

- to provide early diagnosis and prompt treatment;
- to plan and implement selective and sustainable preventive measures, including vector control;
- to detect early epidemics, contain or prevent them; and
- to strengthen local capacities in basic and applied research to permit and promote the regular assessment of a country's malaria situation, in particular the ecological, social and economic determinants of the disease.

For effective implementation of this global strategy it is necessary that:

— there be sustained political commitment from all levels and sectors of government;

— malaria control be an integral part of health systems, and that it be coordinated with relevant development programmes in non-health sectors;

— communities be full partners in malaria control activities; and

— adequate human and financial resources be mobilized.

Given the paucity of resources in countries in Category I,[a] the priority in these areas should now be to focus on the good management of malarial disease as the foundation for developing malaria control programmes through the general health services.

[a] The countries of the world affected by malaria today can be classified with respect to malaria control priorities into two major categories: those which did not come within the global malaria eradication programme's efforts to end the transmission of infection (Category I), and those which did (mainly in Asia and the Americas) and in which large-scale programmes of house-spraying with insecticides have been in operation since the 1950s or 1960s (Category II).

Most countries of the first category are in Africa south of the Sahara. In these countries 275 million persons are infected out of a total population of 500 million, with an annual total of over 100 million clinical cases of disease and over 1 million deaths. These figures account for 80% of the cases of malarial disease in the world. Some of the most severe malaria epidemics in recent years have taken place in highland areas in Africa, the most serious being the epidemic that claimed about 25 000 lives in Madagascar in 1988.

Table 1: **Priorities for strengthening of malaria control programmes**

Structural component	Category I countries	Category II countries
Funding	Needs substantial increase, but within overall health planning.	Modest investments can lead to better cost-effectiveness and long-term savings.
Collaboration with general health services	Implementation mainly through general health services. Disease management may need to be extended beyond coverage of existing formal health services.	Programme capabilities should be used for strengthening general health services for taking full responsibility for disease management.
Epidemiological information system	Must be strengthened, initially by use of hospital and sentinel data. Local analysis of data by general health services needed.	Must be based on general health services data. Must be used dynamically for targeting Intervention.
Special services for vector control	May need to be established in some countries with risk of epidemics. Special technical, managerial and logistical support needed if impregnated nets will be used.	Need to be trimmed, and better managed. Improved targeting of activities needed. In some areas, impregnated nets should be adopted instead of house spraying.
Intersectoral collaboration	Requires technical strengthening of control programmes, involvement of relevant sectors in plannings, increasing awareness in different sectors, and high-level political commitment.	
Staff	Increase in number. Training in epidemiology, management, operational research.	Increase in ratio of qualified professional to medium and unskilled staff.

In countries in Category II,[a] disease prevention activities, which include vector control, need better targeting to provide effective and sustainable protection to the population. Most of these programmes are in urgent need of reorientation and restructuring; disease management must receive renewed emphasis and become an integral part of the work of the general health services.

In both categories of countries, a number of situations of special risk occur, sometimes threatening specific population groups, sometimes leading to epidemics. These demand particular attention.

An outline of the main points to be considered for strengthening malaria control programmes is given in Table 1.

Annex

World Declaration on the Control of Malaria

The Ministerial Conference on Malaria, meeting in Amsterdam this twenty-seventh day of October in the year Nineteen-hundred-and-ninety-two,

Expressing the urgent need for commitment to malaria control by all governments, all health and development workers, and the world community,

Hereby makes the following declaration:

I

The Conference recognizes that malaria constitutes a major threat to health and blocks the path to economic development for individuals, communities and nations. Almost half the world's population is at risk from this disease, which causes over 100 million clinical cases and over one million deaths each year.

II

While over 80% of malaria cases and deaths occur in Africa, malaria is a problem in every region of the world. It affects young and old. Children are particularly at risk, malaria being one of the major killers of children in tropical Africa, taking the life of one out of 20 children before the age of five years. The disease also causes anaemia in children and pregnant women and increases their vulnerability to other diseases. It afflicts the poor and underprivileged most severely, sapping productivity and causing chronic ill health. The social and economic impact is staggering.

III

Social, political and economic changes all contribute to the worsening malaria problem, particularly through population movements and ecological disturbances. Non-immune populations entering malaria-endemic zones within the frontiers of economic development are paying an exorbitant price because they suffer disease and disability.

IV

Construction and environmental change brought about by development often create environments favourable for malaria transmission, exacerbating existing problems and opening the way for devastating epidemics in areas which were previously malaria-free, leading to many deaths and profound impoverishment of communities.

V

The spread of drug resistance is making malaria treatment more complicated, often requiring newer drugs that may be more expensive or more toxic than chloroquine. These characteristics place higher priority on personal and community action to protect people against mosquito bites and actually reduce the efficacy of malaria drug prophylaxis.

VI

Despite these problems, the situation can and must be controlled with the tools now available. We have learnt that the key to success is to apply the right strategies in the right place at the right time, and to apply the appropriate strategies on a sustained basis. In most endemic countries, the goal will be to prevent malaria mortality and to reduce morbidity and the social and economic losses provoked by this disease through the progressive improvement and strengthening of local and national capabilities. The challenge will be especially great in the least developed countries, where international solidarity will be required for sustained support.

VII

We, recognizing the above:

- endorse the Global Malaria Control Strategy, acknowledging the need to focus upon strengthening local and national capabilities and to adapt it to specific country circumstances;
- support the four technical elements of this strategy:
  - — to provide early diagnosis and prompt treatment;
  - — to plan and implement selective and sustainable preventive measures, including vector control;
  - — to detect early epidemics, contain or prevent them; and
  - — to strengthen local capacities in basic and applied research to permit and promote the regular assessment of a country's malaria situation, in particular the ecological, social and economic determinants of the disease;

• support decentralized structures of programme management in which those closest to the problem are delegated to employ available resources most appropriately;

• accept the crucial role of a core group of national specialists in defining and evolving national strategies and in implementing effective systems of training and supervision and of health education which incorporate them. These systems are needed to assure that new knowledge, especially that derived from operational research and from routine monitoring and evaluation, is continuously made available to those in the best position to utilize it;

• know that the problem of malaria will continue to evolve, and know that malaria control strategies must also evolve. We support the need for continuous research and development, including basic research to develop better tools for malaria control and applied research to permit the optimal use of existing resources under the widely varying conditions in which malaria flourishes. We recognize that there is need for far more extensive support for science in the service of the social sectors, to ensure that it is put to work for all mankind.

VIII

We commit ourselves and our countries to control malaria, and

• will review our current efforts, acknowledging that better use of existing resources is possible, and will identify the unmet needs in order to mobilize any additional resources required to expand current activities;

• will plan for malaria control as an essential component of health development and will incorporate health development as an essential component of national development. We know that the potential for development projects to spread malaria and other tropical diseases can far exceed the ability of the health and social sectors to take remedial action. Health measures must be incorporated in such projects if they are to contribute positively to social and economic development for the communities concerned;

• will involve communities as partners in our efforts, as well as the sectors concerned with education, water resources, sanitation, agriculture and development; and

• will implement malaria control in the context of primary health care, seeing it as an opportunity to strengthen health and social infrastructures and to promote the fundamental right of all populations affected by malaria to have access to early diagnosis and appropriate treatment.

IX

While recognizing the primary responsibility of affected countries to take the actions essential for malaria control, we draw attention to the fact that the problem is often greatest in the very countries or areas which can least affort to take action. Recognizing also that external support will inevitably be limited in time and directed at building up self-reliance within a reasonable period, we call upon international development partners, including the United Nations system, bilateral agencies, and non-governmental organizations to increase their support to malaria control efforts, contributing their resources so as to strengthen sustainable national malaria control plans in accordance with the global strategy and to increase support to research that will lead to new malaria control tools, including vaccines. We base this call on grounds of social justice and equity as well as on the conviction that such support will contribute specifically to social and economic development and to alleviating world poverty.

X

We call on the World Health Organization, in fulfilment of its constitutional function as the coordinating authority on international health work, to exercise leadership in providing support for national implementation of this global strategy.

Professeur Pascal Lissouba, Président de la République du Congo, Président de la Conférence ministérielle sur le Paludisme

Dr Eusebio del Cid, Minister of Health of Guatemala, Vice-President of the Ministerial Conference on Malaria

Dr M. Adhyatma, Minister of Health of Indonesia, Vice-President of the Ministerial Conference on Malaria

Dr Ali Bin Mohamed Bin Moosa, Minister of Health of Oman, Vice-President of the Ministerial Conference on Malaria

Mrs Hilda Lini, Minister of Health of Vanuatu, Vice-President of the Ministerial Conference on Malaria