

Strengthening human development

through health and family planning

Dengue Fever and Malaria in the Tropics

Prevention and Control

Report of the Informal Consultation 18-20 October 1999 WHO HQ, Geneva



WHO/ODS/DE/99.0001
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Strengthening Implementation of the Global Strategy for Dengue Fever/ Dengue Haemorrhagic Fever Prevention and Control

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**World Health Organization
Communicable Disease Control, Prevention, and Eradication
Parasitic Diseases and Vector Control**

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Table of Contents

Executive summary	2
Introductory remarks	4
Background and purpose of the consultation	4
Global status of dengue and dengue haemorrhagic fever	5
Overview of the global strategy.....	5
Dengue and the Tropical Disease Research Programme (TDR)	6
WHO regional perspectives on implementation of the global strategy	7
Surveillance for planning and response.....	9
A. Epidemiological surveillance.....	9
B. Entomological surveillance.....	10
C. Tracking behaviour change in the community.....	11
Reducing the disease burden	12
A. Framework for disease management	12
B. Emergency response	13
Changing behaviours	14
A. Lessons from other behaviour change programmes	14
B. Building partnerships	14
Recommendations	16
A. Surveillance for planning and response	16
B. Reducing the disease burden.....	16
C. Changing behaviours and building partnerships.....	17
Annex: List of participants	19

Executive summary

Dengue fever and dengue haemorrhagic fever are becoming increasingly important public health problems in the tropics and sub-tropics. Exacerbated by urbanisation, increasing population movement, and lifestyles that contribute to the proliferation of man-made larval habitats of the mosquito vector, the worsening epidemiological trends appear likely to continue. The situation warranted an urgent review of the Global Strategy, the available tools and the partners, and to learn from and consider how relevant advances among other health and development, communications and commercial sector programmes can be applied to dengue.

The Informal Consultation on Strengthening Implementation of the Global Strategy on Dengue Fever/Dengue Haemorrhagic Fever Prevention and Control was held in Geneva from 18 to 20 October 1999. It brought together specialists and scientists with public health expertise in dengue and other related disciplines including epidemiology, clinical management, vector control, behaviour change, the Integrated Management of Childhood Illness, public-commercial sector partnerships, non-government organisations and other disease control programmes.

Developed in 1995, the Global Strategy for Prevention and Control of Dengue Fever and Dengue Haemorrhagic Fever comprises of five major components: selective integrated vector control, with community and intersectoral participation; active disease surveillance based on a strong health information system; emergency preparedness, capacity building and training; and vector control research (*Report of the Consultation on: Key Issues in Dengue Vector Control Toward the Operationalization of a Global Strategy, WHO, Geneva, 6-10 June 1995, CTD/FIL(DEN)/IC/96.1*).

In reviewing the Global Strategy, this consultation focused on three fundamental aspects: surveillance for planning and response; reducing the disease burden; and changing behaviours. The need to strengthen and standardise disease reporting systems was highlighted, using standard case definitions for dengue fever and dengue haemorrhagic fever. The utilisation of information for more effective programme planning was also seen as a critical area for improvement. It was further recommended that indicators of "behaviour change" be developed for incorporation into surveillance activities by national programmes, along with epidemiological and entomological surveillance. The proposed incorporation of this third facet to surveillance has proven successful in HIV prevention programmes, and in dengue is intended to monitor the development of participatory approaches to vector control and to management of illness.

Under the ambit of "reducing the disease burden", it was concluded that there is sufficient evidence on the reduction of dengue haemorrhagic fever case fatality rates through application of standardised clinical management practices to warrant an acceleration of capacity building and training in this field, with a view to reducing case fatality rates to less than 1%. In addition to delivery of patient care in government health facilities, there is a large but unquantified proportion of patients who receive treatment at home or from private providers. Hence, better understanding of disease recognition and initial care in the home and of treatment seeking behaviour and quality of care in the informal as well as the formal health care systems were also deemed

essential. Here, tools and approaches developed within the Integrated Management of Childhood Illness framework for improved quality of care in the home and by private providers can be applied to dengue.

The application of vector control methods, including source reduction, use of chemical larvicides and adulticides and of biological control agents is hindered by weak programme capacity, the absence of well-defined indicators and programme targets, and poor understanding of efficacy and cost-effectiveness of control measures particularly in terms of reducing transmission. A better understanding of virus transmission dynamics and the identification of transmission thresholds was seen as one of the major epidemiological and operational research challenges.

The third aspect under consideration was “behaviour change”. Dengue prevention and control programmes, particularly those with a strong social participation component, frequently adopt educational approaches, working on the premise that knowledge leads to behaviour change. However, experiences in some other public health programmes, including in HIV prevention and diarrhoeal diseases prevention and control, have demonstrated that there is poor correlation between knowledge and behaviour change. Hence, in such programmes emphasis has shifted to the development of behaviour change interventions. Their adaptation, development and application to dengue prevention and control were urged by the group.

Finally, there is a growing recognition that between them, ministries of public health and “communities”, in the traditional and restricted geographic sense of the word, need to develop strong links with other key partners for a sustainable reduction in the risk of infection and burden of disease. Again, there are precedents within other disease control programmes of partnerships within the public sector, and between the public and commercial sectors, which can meet both enterprise and public health objectives.

Introductory remarks

Dr David Heymann, Executive Director of the Communicable Diseases Cluster (CDS), opened the meeting and drew attention to the fact that while global and regional strategies for prevention and control of dengue fever and dengue haemorrhagic fever (DHF) have been in place for several years, the burden of disease continues to increase. He noted that in 1998 case reporting reached unprecedented levels. In his view, the growing political awareness of the disease and the recent incorporation of aspects of dengue prevention and control in all three departments of the cluster made the convening of the meeting a timely one.

Referring to the broad spectrum of expertise among the participants, from public health disciplines both directly and indirectly involved in the field of dengue, he expressed the hope that the interactions and guidance of the group would provide further direction and additional momentum to the international collective effort to combat this disease. While research offers the future promise of additional control tools, including a dengue vaccine, Dr Heymann stressed the need to take a pragmatic approach in response to the immediate and urgent needs of affected countries.

Dr Heymann concluded his introductory remarks by expressing appreciation to the US Agency for International Development for assistance in planning the meeting and financing the attendance of several participants.

Background and purpose of the consultation

Earlier public health gains from highly successful programmes to control the urban vector of yellow fever and dengue fever, not least in the Region of the Americas, have largely proven unsustainable. With the exception of very few countries, dengue fever and DHF today remain even more impressively uncontrolled despite high levels of expenditure by governments in many endemic countries. Indeed, 1997/1998 witnessed a global pandemic unsurpassed in scale and severity and the value for money of current investment in and approaches to dengue vector control are being called into question. As we enter the new millennium, without an available and effective vaccine, more

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