

**DRAFT RECOMMENDATIONS
OF THE SUB-COMMITTEES
OF THE INTERNATIONAL CONFERENCE ON DENGUE
HAEMORRHAGIC FEVER AND
NATIONAL BRAIN STORMING SESSIONS ON DENGUE
HELD AT NIV, PUNE, 7-8 FEBRUARY 1994**

GROUP I: CLINICAL GROUP

- (1) Basic guidelines encompassing symptoms/signs for the clinical diagnosis DF/DHS/DSS should be distributed by WHO.
- (2) The Medical Council of India should be requested to send guidelines to medical schools to lay more stress on teaching DF and its sequelae at undergraduate/postgraduate levels.
- (3) Laymen must be made aware of the disease through video films and other media, such as the press.
- (4) The ICMR should take up the matter of continuing medical education in different medical institutions and writing to medical bodies such as the Association of Physicians of India.
- (5) Practitioners should be made aware of the differential diagnosis of DF in any child with fever without catarrh and with flushed face. Treatment with antibiotics may not be instituted unless indicated.
- (6) In suspected cases of dengue/DHF, a peripheral smear should be taken and examined for platelet status and malaria parasites.
- (7) A tourniquet test must be done in all suspected cases of DF/DHS/DSS. It is quite informative and simple to perform.
- (8) A flow chart for treating DF/DHS/DSS must be made available in all hospitals and primary health centres giving ORT, avoiding

early and unnecessary IV fluids. Avoidance of vasopressins must be stressed.

- (9) Physicians are to be advised to avoid drugs such as aspirin, ibuprofen, steroids and heparin, in febrile patients where dengue is suspected.
- (10) Minimum diagnostic facilities (at least HAI) must be available in all medical schools. Antigens must be supplied through a central source.
- (11) Multicentred research must be encouraged so as to enhance knowledge on DF/DHS/DSS.

GROUP II: SURVEILLANCE

- (1) DF/DHF should be made a notifiable disease:
 - NICD should take up the matter with the authorities in this respect.
 - WHO case definitions should be used.
 - Existing reporting networks should be used.
 - Each State should define areas of surveillance.
- (2) Each State should have laboratory diagnosis capability with:
 - NIV as the reference centre.

- other laboratories as surveillance centres.
 - IgM capture ELISA employed as the test of choice.
 - quality assurance/proficiency testing coordinated by NIV.
- (3) WHO should be requested to assist with reagents and training.
 - (4) Outbreak investigation should be linked to surveillance :
 - NICD should prepare guidelines.
 - States should organize investigation teams.
 - (5) Training for outbreak investigation, surveillance/treatment should be instituted as early as possible.

GROUP III: EPIDEMIOLOGY AND RESEARCH

There are a number of sources of support for research in India. They include the Indian Council of Medical Research (ICMR), the Department of Science and Technology (DST), the Council of Scientific and Industrial Research (CSIR), and the Department of Biotechnology (DBT). The ICMR funds clinical and epidemiological research; DST and CSIR fund basic research which supports the scientific and industrial infrastructure, and DBT supports biotechnology research, which is product-oriented.

In view of these funding sources, the group recommends the following:

- (1) Improve Indian research capacity. There is an urgent need to develop and standardize research tests and research reagents. This in turn requires the training of scientists and designation and strengthening of the existing training centres. WHO collaborating centres can assist in standardizing research test systems in India with those of the international scientific community.
- (2) Collaborative research. Research test protocols and reagents can best be

developed through high quality research projects that have reagent production and training as components.

- (3) Clinical research. There are four collaborative research studies on DF/DHF for which clinical facilities should be established with a virology laboratory.

- (4) Epidemiological research. Several sites should be selected where prospective epidemiological studies on DF/DHF can be established.

Both clinical and epidemiological studies will generate research specimens that will require characterization and contribute to virological, immunological and pathogenesis research.

- (5) Basic pathogenesis research should also be supported to contribute to clinical pathogenesis studies on humans.

To strengthen scientific decision-makers, a scientific symposium on DHF/DSS should be held with proceedings published in India.

In order to strengthen prevention and control strategies for dengue, reports on the clinical burden of DHF/DSS should be published in the media. Also, a video might be prepared describing clinical features, treatment and vector control for the benefit of clinicians and public health workers.

GROUP IV: VECTOR SURVEILLANCE

- (1) A Nationwide vector surveillance system, based on existing institutions, should establish, map and publish the present distribution of *Aedes aegypti*, which should be used to restrict its spread to new areas.
- (2) Ecological factors which encourage the increase or decrease of vector population densities should be investigated.
- (3) An institute or agency should be designated to maintain a database of *Aedes aegypti*, including its distribution, population densities, insecticide resistance and vectorial incrimination. Information gathered through investigations such as those

described under items 1 and 2 should also be included in the database.

- (4) To ensure uniform reporting and understanding, the indices used in determining and reporting vector levels and adult densities should be standardized.

GROUP V: VECTOR CONTROL

- (1) Every effort should be made to increase the awareness of decision-makers at national, state and municipal levels of the importance of *Aedes*-transmitted disease, including the public health and economic impact, in order to ensure support for establishing permanent vector control services.
- (2) Vector control must be based on intersectoral collaboration and such cooperation should be ensured from the very beginning.
- (3) Seventy-two entomological zonal units have existed in India in addition to the State and Central entomological components. These must be oriented towards *Aedes*

surveillance and control. Where professional staff positions are unfilled, replacements must be urgently recruited.

- (4) Equipment, insecticides and transport should be available on a stand-by basis at the state level for immediate use in vector control should an epidemic occur.
- (5) Uniform legislation specifically related to *Aedes* control should be enacted in all municipalities. Equally, legislation should be enacted which would prevent the creation of breeding sites for *Aedes aegypti*.
- (6) Community awareness of the importance of *A. aegypti* and the community's role in its control is essential. Health education should be used to increase the awareness of the community to the importance of the vector and its control.
- (7) Many aspects of the bionomics and control of the vector are yet unknown. Research on vector biology and vector control through chemical, biological, genetic and molecular methods should be supported.