

9. TRAINING IN DENGUE PROGRAMS

Bringing national dengue programs in line with an integrated, community-based prevention and control approach will require training personnel in new methods; conducting scientific congresses and seminars to exchange new information; holding meetings to promote new strategies; and presenting workshops to develop country plans of action and norms for dengue programs. These activities may be national or international in scope and should be appropriately directed toward field personnel, program directors, or research scientists.

For these activities, care must be taken to select candidates that are actively involved in the corresponding aspect of dengue control. Every event should be evaluated in order to identify those aspects that need improvement.

Training is recommended in the fields detailed below.

Clinical and Laboratory-based Surveillance, Diagnosis, and Case Management

Because the success of laboratory techniques depends on mastering scientific knowledge and specific practices, training sessions should not attempt to cover all techniques in a short time, but should focus on one technique and allow sufficient practice time before the trainee learns additional techniques.

- There should be training in the following techniques: MAC-ELISA (IgM), hemagglutination-inhibition (HI), virus isolation in cell culture, and plaque reduction neutralization test.

- Training courses for the Region's scientists and laboratory technologists should be organized whenever new methods for rapid laboratory diagnosis become available.

- Local, regional, and central level personnel will need training on completing forms, identifying reportable cases, and collecting and submitting blood samples.

- Local, regional, and central level personnel will need training on dengue, its transmission, signs/symptoms, and vector's characteristics.

- Training should be given to physicians and nurses on the clinical aspects of dengue and on the appropriate management of patients.

Vector Surveillance

- Statistical sampling methods for larval mosquito populations should be taught and used to optimize resource utilization.

- Nontraditional entomological evaluation techniques, including use of the enhanced CDC ovi-trap and backpack aspirator, should be incorporated.

Decentralization

- Workshops on redistributing responsibility and disseminating knowledge to the local level should be held at the central and regional levels.

- Courses emphasizing managerial skills should be presented at the regional level.

- Prevention and control methods using appropriate technology should be emphasized at all levels.

- Workshops emphasizing training skills should be presented at all levels to facilitate replication of courses.

Environmental Management

- Techniques in nonchemical source reduction of containers (e.g., draining, filling, puncturing, burial, and burning) should be demonstrated.

- Inspection techniques for foci amenable to source reduction (e.g., containers, tires, flower vases, rain gutters, septic tanks, junk cars) should be demonstrated.

- Design, use, and repair of individual and community potable water supply systems (e.g., individual and communal standpipes, cisterns, and drums) using appropriate technologies to insure water availability and quality, consistency of delivery, storage, and water supply protection and treatment should be covered.

- Economic theory and local practice of recycling should be discussed and reviewed. Markets for recyclable discarded containers should be developed and evaluated.

- Integrated solid waste management, including proper solid waste storage; waste collection frequency and community coverage; clean-up campaigns vs. regular solid waste pickups; and special waste collection (e.g., tires, junk cars, auto batteries) should be presented.

- Innovative sampling methods for containers (e.g., essential, nonessential, natural) should be taught.

- Environmental management at important nonresidential sites, such as seaports, airports, used tire facilities, schools, and hospitals, should be stressed.

- House design and personal protection measures to reduce mosquito biting should be reviewed.

Chemical Control

- Techniques and dosage of insecticide application should be discussed.

- Larviciding (focal) and residual (perifocal) treatment procedures should be taught and practiced.

- Space spraying techniques should be presented and evaluated.

- Safe handling of pesticides and recognition of pesticide intoxication should be emphasized.

- The importance of monitoring blood cholinesterase levels in employees working with insecticides should be stressed.

- Procedures for determining vector susceptibility to insecticides should be taught.

Emergency Control

- Training courses on the proper use and operation of space spray equipment should be conducted.

- Simulation exercises should be presented.

- International workshops should be held to evaluate emergency strategies.

Information Management

- Manual-based information (data) collection and management systems should be presented for program incorporation.

- Theory and practice of computer-based information (data) management should be provided.

- Training in the use of database and spreadsheet computer software programs (e.g., Epi Info, Excel, Lotus 1-2-3) should be provided.