Current DF / DHF Prevention and Control Programme in the Philippines

By

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Abstract

Dengue haemorrhagic fever was first recorded in the Philippines in 1953(1) and was made a notifiable disease in 1958. Sporadic dengue outbreaks occurred in some areas of the country until the 1980s, and, since then dengue has maintained its endemicity in all regions of the country(2).

In 1993, the National Dengue Prevention and Control Programme was formulated and piloted in two regions of the country, namely, Region 7 in the Visayas and the National Capital Region in Luzon with a five-year medium-term plan. It is envisioned to extend the programme nationwide by 1998. Highlights of the Dengue Prevention and Control Programme include its goal, objectives, strategies, support system, programme policies, guiding principles, programme status and future actions. This programme lays emphasis on an effective integrated vector control approach which is community-based and managed, planned and sustained by the community itself.

The dengue epidemiology in the Philippines describes the pattern of dengue occurrence in the country and how it can contribute to information exchange among endemic countries, not only in Asia but the whole world.

Introduction

The dengue problem in the Philippines has been confronting the country since 1953 when haemorrhagic fever was reported for the first time in this part of Asia. From then on, sporadic cases of dengue have been reported in several parts of the country and control measures were instituted as necessary.
Development of DF / DHF Control Programme

It was in 1993 when the Communicable Disease Control Service, as mandated by Executive Order 119, formulated the National Dengue Prevention and Control Programme for the control of DF/DHF.

Being a low budget programme – US$16 million in 1993; US$1.6 million in 1997 – it was implemented in only two regions of the country, namely, Region 7 and the National Capital Region (NCR) which were high incidence regions.

Programme goal
To reduce the morbidity and mortality rates of dengue infection to a level wherein it will no longer be a public health problem.

Programme objectives
General objectives: To prevent and control the transmission of dengue virus and obtain reduction by 90% by the end of a 15-year period.

Specific objectives
(1) To create a dengue technical working group;
(2) To develop an integrated vector control approach for prevention and control;
(3) To develop capability on diagnosis and management;
(4) To intensify health education/IEC activities, and
(5) To operationalize an effective surveillance system and to develop a dengue epidemic contingency plan for emergency response.

Key programme strategies
(1) Integrated vector control approach – A combination of several approaches directed towards container management and source reduction. This is through a combination of health education, environmental sanitation and community mobilization.
(2) Case diagnosis, management and reporting – Immediate reporting to nearest health authority of cases on suspicion and clinical diagnosis.
(3) Surveillance – Due to administrative constraints, fever surveillance and, to some extent, vector surveillance is only feasible.

Support systems
(1) Training – Training of coordinators and field implementors, including orientation meetings of key leaders of community, is one of the key elements of this new programme.
(2) Health education – Long-term control and prevention is based on properly informed community that understands and practices dengue prevention and control measures at their own capability level. This will facilitate participation of the community and
Programme Implementation

The programme is being implemented in two prioritized regions of the country since 1993. These are: Region 7 composed of four island provinces, and the National Capital Region composed of four districts with eight cities and nine municipalities.

All the regional dengue coordinators, regional entomologists/designates, some sanitary engineers and health education and promotion officers have been trained. Orientation meetings were conducted for key leaders in some selected municipalities and cities in support of a community-based programme.

Information materials in the form of VHS and Beta tapes, leaflets and posters were prepared, translated and reproduced in 16 local/regional dialects. Special information materials like flyers, dengue advisories, dengue alert bulletins and billboards are issued and distributed before the rainy season as a proactive step to prevent the disease. The visual, audio and print media are being utilized for this purpose.

Guidelines and protocols have been issued as standards for programme implementation, e.g. Guidelines for the prevention and control of dengue haemorrhagic fever; Guidelines in the organization of the ‘Little Dengue Brigade’, and Protocol on Aedes survey/surveillance.

Laboratory support has been given to pilot areas to enable them to routinely perform platelet and hematocrit determination, while rural health units...
were given paediatric cuffs for standardized tourniquet test.

Hospitals in the pilot areas have been augmented with medicines like IVF and analgesics and plasma expanders as well as chemicals for emergency outbreak control are in place at the regional health office and pilot areas.

Collaboration between GOs and NGOs has been established. A special programme was launched last year which was called "Tepok Lamok Dengue Sapok" (Kill the mosquito, Knock out Dengue) – 4 o’clock Habit, as per an Administrative Order of the President, H.E. Mr Fidel V. Ramos. All government and private agencies and the citizenry are required to observe the 4 o’clock habit, whereby every 4 o’clock in the afternoon, everyone has to search and destroy or eliminate breeding places of mosquitoes in homes, offices and the environment. This 4 o’clock habit can be practised at one’s own convenience if necessary. A memorandum of agreement with several government agencies for this purpose was effected. These agencies include: the Department of Health, Department of Interior and Local Government, Department of Education, Culture and Sports, Department of Environment and Natural Resources, Department of Social Welfare and Development, Department of Public Works and Highways, the Philippine Information Agency, National Disaster Coordinating Council, and the Metro Manila Development Authority.

Nongovernmental agencies and organizations were also asked to collaborate, too. These included religious groups, socio-civic groups like Rotary Club International, Media groups, academia and people’s organizations. This special programme will be a national initiative organized every year to lead the country in its fight against DF/DHF.

Successful NGO collaboration is exemplified by Rotary Club International District 3810 awarded by the Rotary Foundation for Health, Hunger and Humanity Grant (3-H Grant). It is a $500 000 grant awarded for the Philippines and Colombia. It focuses on information campaign and community participation and mobilization to prevent and control epidemic dengue haemorrhagic fever. It is envisioned to be a model programme for Rotary International to expand it globally.

Historical account of DF / DHF

In the Philippines dengue haemorrhagic fever was recognized for the first time in 1953, and made a notifiable disease in 1958 and reclassified as DEN/DHF. During 1966, a severe epidemic was recorded in the Metro Manila area with a morbidity rate of 28/100 000 and mortality rate of 0.7/100 000.

Dengue has now become endemic all over the country where it occurs sporadically and sometimes in epidemic form (see Figure).

The country is experiencing a more-than-three-times increase in the average five-year morbidity rate of 12.12 per 100 000 population during 1989-1993\(^{(3)}\) as compared to the five-year average of 3.84 per 100 000 in 1984-1988. The five-year average in 1984-1988 was actually double than that of the 1979-1983 average which
was 1.54 per 100 000. This also shows that DHF cases are on the increase and dengue is becoming one of the major public health problems that should be addressed.

**Age and sex distribution.** The most commonly affected are the under 15-year-olds, with the 0-9 year age group leading both in morbidity and mortality. There is no significant difference in sex distribution, although males are slightly more affected (51% males and 49% females).

**Geographical distribution.** All 16 regions of the country are endemic for dengue. The regions with the highest morbidity and mortality are region Nos. 7, 8, 11, 10, 12, 6, and NCR.

**Seasonal distribution.** The pattern of occurrence in relation to the months of year is variable, although the increase in incidence usually occurs one-to-two months after the start of the rainy season. Hence, an increase in dengue cases can be expected starting from July or August up to December. There is, therefore, a strong correlation between rainfall and dengue incidence. Dengue is common during the rainy season and is usually at its peak two months following the rainfall.

**Vector.** Two vectors have been identified to be responsible for dengue: *Aedes aegypti* and *Aedes albopictus*\(^4\). *Ae. aegypti* is predominantly urban, while *A. albopictus* is a rural vector. The former breeds in artificial containers, usually domestic containers, while the latter breeds in natural containers.

**Agent.** All four serotypes of dengue virus, namely DENs-1,2,3 and 4, are
present in the Philippines, although the most predominant are DENs- 1, 2 and 3.

Case fatality rate. The case fatality rate (CFR) ranges from 1 to 4%.

References


