

Published: October 14, 2014 01:50 IST | Updated: October 14, 2014 01:50 IST

A multi-sectoral approach to dengue control

Poonam Khetrapal Singh



MESSAGE IN A BOX: "Dengue control can never be achieved or sustained without community empowerment and ownership." Picture *The Hindu* shows the Dabbawalas of Mumbai spreading the message of dengue prevention and control. Photo: Paul Noronha

Rapid urbanisation, globalisation, consumerism, poor solid waste and water management and increasing population movement have created new habitats for mosquito breeding

Dengue fever is rearing its ugly head again in India with new cases of infections and even deaths being reported from different States. The world's fastest growing vector-borne disease, dengue sees an estimated 50-100 million cases being reported annually in over 100 endemic countries. Ever since its detection in the early 1950s, there has been a 30-fold increase in dengue incidence. Almost half of the world's population is currently considered at risk of contracting dengue. The Southeast Asia region contributes to more than half of the global burden of the disease. About 52 per cent of the world's population at risk resides in this region. Dengue is endemic in 10 of the 11 member states, and India, Indonesia, Myanmar, Sri Lanka and Thailand are among the 30 most endemic countries in the world. More than 4, 00, 000 cases of dengue were reported in this region in 2013.

The good news is that deaths due to dengue have been brought down substantially. This is because of greater awareness among treating physicians on the proper use of World Health Organization protocols in providing care to dengue patients. This is also attributed to increased knowledge among communities to seek early treatment for symptoms that resemble those of dengue.

Increase in number of cases

However, an area of concern is that the number of cases has been increasing year after year. To understand it, we need to comprehend and keep pace with the changing epidemiology of dengue, especially the multiple ecological factors that influence its spread. Being a vector-borne disease, ever-increasing numbers and varieties of mosquito-breeding habitats are being created with rapid and poorly planned urbanisation, globalisation, consumerism, poor solid waste and water management, and increasing population movement without adequate measures to prevent vector breeding. Climate change is also influencing ecology that encourages vector breeding.

The outbreak of dengue, like other vector-borne diseases, is determined by socio-economic factors that include reduced access to health services, housing, sanitation, water supplies and poverty. Efficient, effective and sustainable prevention and control of vector-borne diseases requires not only the application of biomedical tools, but interventions to address these factors as well.

“About 52 per cent of the world's population at risk

The accumulation of modern non-biodegradable products such as automobile tyres, plastic containers and tin products provides a conducive environment for prolific breeding of *Aedes aegypti* and *Aedes albopictus* vectors of dengue. Hence, effective and sustainable prevention and control of dengue requires interventions that address these factors in an integrated and multi-sectoral manner.

The health ministers of the Southeast Asia region, in their recent meeting in

resides in the Southeast Asia region”

September 2014, adopted the Dhaka Declaration on Vector-borne Diseases. The Declaration encourages a “whole of government” approach against diseases such as dengue. This was in recognition of the importance of a multi-sectoral approach to addressing dengue outbreaks and in order to advocate utmost need for Health in All Policies – an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts, in order to improve population health and health equity. The theme

of World Health Day 2014 focused on vector-borne diseases to acknowledge their public health importance, raise global awareness and increase commitment on controlling them.

Community empowerment

Global evidence conclusively shows that dengue control can never be achieved or sustained without community empowerment and ownership. Unfortunately, there is lack of awareness on the role of vectors in the community and the vital contributions that they can make to prevent dengue by mitigating vector breeding in their respective surroundings. Even the best public health systems in the world will not accomplish the desired task of containing dengue without the active participation of communities in this endeavour. Communities must work with public health authorities in preventing accumulation of material where water gets stored, allowing mosquitoes to breed. A simple preventive step is to protect oneself from mosquito bites by wearing clothes that cover the body completely. This can help in cutting short the transmission of this infection.

For many infectious diseases, good vaccines are available. Extensive research is on to develop a safe, efficacious and affordable vaccine against dengue too. WHO has been supporting these research and development efforts. A few candidate vaccines are now in advanced stages of clinical trials. We look forward to their early availability to public health systems in developing countries.

Till vaccines become available, dengue-control activities have to be a synergy of sound public health actions. This must include integrated vector management and active participation of individuals, families and communities in reducing the sources where mosquitoes breed. The battle against the disease can be won only through concerted actions by all.

(Poonam Khetrapal Singh is Regional Director, Southeast Asia region, WHO.)

Keywords: [Dengue fever](#), [vector-borne diseases](#), [dengue control](#), [disease control measures](#), [viral diseases](#), [public health systems](#)