

Dengue incurs annual cost of \$950 mn to SE Asia

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Philippines: The economic burden churned by mosquito borne disease, dengue, is costing upto \$950 million to south east Asian countries every year and the countries are in desperate stage to step up policy priorities, accelerate disease control strategies and have fast access to dengue vaccine as soon they are launched in the market, expectedly by early 2016.

Dr. Donald S Shepard, professor at Brandeis University, who has been closely studying dengue in south east Asia region mentioned that though developing and developed nations in the region face a huge burden of cost incurred by dengue every year but there has been no slowdown in the cases being reported.

In conversation with BioSpectrum Asia during ASEAN Dengue Day held on June 15 in Angeles city, Philippines, Dr. Shepard commented, "even developed nation like Singapore is facing the challenge of controlling the instances of dengue and collective tools are needed to eliminate dengue, like many countries have done for polio. We are hoping that a vaccine is available soon to curb the cost on economy."

Cases of dengue has been rising due to lack of any vaccine available in market, irregular control measure, lack of awareness to keep check on dengue bearing mosquitoes and movements of dengue affected population that can transmit the disease even in geographies where dengue has not been a threat.

Commenting on the complexity of dengue virus that has been challenging to crackdown, Dr. Shepard mentioned that two viruses that cause dengue include *Aedes aegypti* and *Aedes albopictus*. One of the techniques to control the spread of dengue virus is changing the genetic formulation of the mosquito itself. However, having dengue vaccine on shelf would be the most effective method of controlling and eliminating dengue.

Research groups and pharmaceutical companies have found it difficult to develop a dengue vaccine for the last 20 years as there are four distinct but closely related serotypes of the virus that cause dengue (DEN-1, DEN-2, DEN-3 and DEN-4) and it has been scientifically challenging to develop one vaccine that works against all the virus. WHO mentions that recovery from infection by one serotype provides immunity against that particular serotype, however, cross-immunity to the other serotypes after recovery is only partial and temporary. Subsequent infections by other serotypes increase the risk of developing severe

dengue.

So far, Sanofi Pasteur is the only company that has successfully achieved positive result in Ph III trial of a dengue vaccine candidate.