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## Dengue epidemiology and vaccine: Current status

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Dengue viruses are member of the genus *Flavivirus* within the family *Flaviviridae*. There are 4 dengue virus serotypes (type 1, 2, 3 and 4), all of which circulate globally. Most of dengue virus infections are asymptomatic. For clinical management of WHO classify dengue illness as: (1) Dengue with or without warning signs for progression towards severe dengue and (2) severe dengue. There is no specific antiviral treatment for dengue illness. Clinical management is based on supportive therapy, preliminary judicious monitoring of intravascular volume replacement. Until the recent vaccine licensure, the only approach to control and prevent transmission of dengue virus through interventions targeting for vectors. Dengue virus infection induces high titer of neutralizing antibodies, which is believed to important component of a protective immune response. Following an infection with one dengue virus serotype, protection against the infective serotype (homotypic protection) considered long lasting. Temporary cross protection is induced to other serotypes (heterotypic protection), lasting 2 years on average. One dengue has been licensed in several countries (CYD-TDV or Dengvaxia®); this is a live attenuated (recombinant) tetravalent vaccine. Other than this, 2 more vaccines are under evaluation. World Health Organization (WHO) states “countries should introduce vaccine only in geographical settings with high burden of disease (sero-prevalence should be approximately 70% and greater in defined age group)”. Dengue vaccine introduction should be a part of a comprehensive dengue control strategy, including well executed and vector control, evidence based best practices for clinical care for all patients with dengue illness and strong dengue surveillance. However, using surveillance data to monitor population impact of a vaccination program may be challenging as to year-to-year variability in dengue virus transmission may be greater than the expected vaccine impact on dengue illness.

### Biography

Kavita Diddi has completed her Post-graduation in Microbiology from AIIMS, New Delhi in India. There she was also involved in research activities related to dengue and chikungunya virus and published her work in various international and national journals. Before moving to UAE, she worked in private tertiary care hospital in India. Here in UAE, she is associated with Prime Health care group and taking care of microbiology division as well as infection control division.

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