
Upcoming dengue vaccines and WHO recommendations

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Dengue is a substantial public health concern in tropical and subtropical regions in the world with significant morbidity and mortality. The application of a vaccine with protective immunity to all four serotypes is a major health concern in this part of the world. Although numerous effects have been made, the progress to a highly effective vaccine to produce broad efficacy is yet to be achieved. Dengue vaccine development is hindered by the presence of closely related four serotypes and the immune enhancement due to partial immunity to a given serotype.

This analysis attempts to highlight the characteristics of a safe and efficacious vaccine with the latest trends in dengue vaccine development. Several candidate tetravalent live attenuated vaccines are undergoing phase III trials at present with first tetravalent dengue vaccine is already licensed in several endemic countries. Currents reports show variable efficacy of these candidate vaccines depending on the previous dengue exposure as well as the infecting dengue serotype, limiting its use to specific geographical settings. However, follow-up studies of these efficacy trials are currently ongoing, and post-licensure studies will evaluate the vaccine effectiveness and safety.