TAG RECOMMENDATIONS FOR DENGUE

Pan-American Health Organization (PAHO), 2024

PAHO
Pan American Health Organization
World Health Organization
Americas Region

Contents

2011 Recommendations

- PAHO's ProVac Initiative should continue to support national level decision-making through the use of economic evaluations grounded in local data, when available, for the future introduction of dengue vaccines. PAHO should work in coordination with other initiatives, such as the Dengue Vaccine Initiative (DVI).
- The PAHO Secretariat should review surveillance systems to ensure that they can inform vaccination policies and allow vaccination impact monitoring.

2013 Recommendations

- TAG recognizes PAHO's work toward the harmonization of dengue surveillance systems across countries in the Americas and recommends that all countries contribute and participate in this effort.
- PAHO should support national regulatory authorities in defining harmonized regulatory pathways for the licensure of dengue vaccines.
- TAG considers important that, once licensed, dengue vaccine is not only made available to larger countries in the Region but also to smaller countries, if they so choose.
- TAG recognizes that several institutions in countries of the Americas, beyond Canada and the United States, have made great contributions to the development of new vaccines but still represent largely untapped potential. International efforts should be undertaken to strengthen and coordinate research in vaccine development across the Americas.

2015 Recommendations

- TAG recommends that the countries swiftly implement an integrated approach to reduce dengue transmission, providing training on diagnosis and clinical case management, emphasizing vector control, and improving awareness so that people know how to protect themselves and their communities from mosquitoes as stated in the World Health Assembly Resolution (2015).
- While the burden of dengue in the Americas is significant, TAG notes there is insufficient evidence to make a recommendation on vaccine introduction at this time. TAG is committed to evaluating timely new evidence as it becomes available and countries should do the same over the coming months in their own national decision- making processes.
- In coordination with other initiatives, PAHO's ProVac Initiative should support national level decision-making regarding dengue prevention and control, through the use of economic evaluations grounded in local data.

2016 Recommendations

- Given the conditions for the use of the CYD-TDV and the lack of evidence on some aspects of safety and effectiveness, PAHO's TAG reaffirms the prior recommendation made in July 2015 and does not recommend the introduction of the dengue vaccine into routine national immunization programs at this time.
- Countries should strengthen surveillance in order to better understand dengue disease burden. This is especially important in the context of outbreaks of vector-borne diseases like Zika and Chikungunya.

2023 Recommendations

- PAHO notes the recent recommendation from the WHO Strategic Advisory Group of Experts (SAGE) on Immunization for countries to consider the use of the Dengue Tetravalent Vaccine (Live, Attenuated) TAK-003 for children aged 6 to 16 years who live in settings with high dengue disease burden and high transmission intensity. In the Phase 3 vaccine trial, the vaccine efficacy (VE) of TAK-003 over 5 years was 61% (95% CI [56.0, 65.8]) against virologically confirmed dengue (VCD) and 84% (95% CI [77.8, 88.6]) against dengue-related hospitalizations. However, significant gaps regarding the safety and effectiveness of this vaccine against dengue virus type 3 and type 4 in baseline seronegative persons remain.

- PAHO notes that the current definition of a setting "with high dengue disease burden and high transmission intensity" relies on age-specific high quality seroprevalence or incidence data for the target population, which is not readily available in countries of the Americas and would not be feasible to collect pre-vaccination.

- Given the above considerations, PAHO does not recommend that countries implement countrywide immunization programs with the TAK-003 vaccine at this time. Also, the availability of TAK-003 vaccine doses for the Americas in 2024 and 2025 is limited.

- PAHO urges Takeda to undertake a Phase 4 vaccine trial to address information gaps, particularly with respect to the safety and effectiveness of the TAK-003 vaccine against dengue virus type 3 and 4 in baseline seronegative persons.

- PAHO recognizes that some countries in the Americas may wish to introduce the TAK-003 vaccine in specific subnational geographical areas where there is documented evidence of a "high dengue disease burden and high transmission intensity." PAHO supports the SAGE's recommendation on the introduction of the TAK-003 vaccine in these settings, provided that careful steps are taken to ensure evaluation and follow-up of the safety and effectiveness of the vaccine, and that the communities and healthcare providers involved are fully informed of the potential benefits and risks and

support the use of the vaccine.

- Any introduction of the TAK-003 vaccine should be considered a pilot and be accompanied by a robust Phase 4 post-marketing study that:
  - Uses age-specific seroprevalence data or other age-specific markers of transmission intensity to identify the geographical areas with high dengue transmission intensity where the TAK-003 vaccine introduction may be considered.
  - Includes pre-vaccination serology to allow further evaluation of vaccine effectiveness and safety in baseline seronegative individuals, particularly against dengue virus type 3 and 4.

- Before advancing with the pilot introduction and Phase 4 post-marketing study, countries should ensure that the following elements are in place and reinforced:
  - Robust dengue surveillance systems to allow the identification of suspected dengue cases and monitor disease transmission at a subnational level.
  - Robust safety surveillance systems to detect and respond to events supposedly attributable to vaccination or immunization (ESAVI).
  - Other strategies essential for the control of dengue and other mosquito-borne diseases – such as vector control, environmental care, strengthening the diagnostic capacity of laboratories, improving surveillance, and training health personnel in dengue care.
  - A clear and effective communication campaign that describes the risks and benefits of this vaccine, the importance of maintaining other public health measures to curb transmission and provides realistic expectations of the impact of TAK-003.

- Member States considering the pilot introduction of the TAK-003 vaccine in children and adolescents should weigh the resources and opportunity costs given the need to ensure catch-up of unvaccinated children, as well as the need to recover and sustain high coverage of all current vaccines.

- Countries that do not have a vaccination platform for adolescents (created for the administration of the vaccine against HPV, pertussis, or

meningococcus) should not consider the introduction of the TAK-003 vaccine at this time. The lack of data on coadministration of these vaccines with TAK-003 constitutes a barrier to its administration in adolescents. The introduction of the vaccine in other age groups must be based on robust epidemiological data about the burden of disease, strength of infection, hospitalization, and other indicators that demonstrate that they are high-risk populations. In these cases, it should be considered that immunogenicity data (immunobridging studies) and safety – but not efficacy – data exist for persons from 17 to 60 years of age.