

WHO recommends use of first typhoid conjugate vaccine

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The World Health Organization (WHO) recommends the introduction of typhoid conjugate vaccine (TCV) for infants and children over six months of age in typhoid-endemic countries. This new policy will help ensure access to typhoid vaccination in communities most impacted by the disease, which is responsible for nearly 12 million infections and between 128,000 and 161,000 deaths a year.

WHO issued these recommendations following a review of evidence on TCVs by WHO's Strategic Advisory Group of Experts (SAGE) on Immunization in October 2017. The group considered data on [vaccine](#) safety, efficacy, feasibility, and affordability, as well as growing rates of drug-resistant typhoid. Based on these discussions, SAGE recommended TCVs for children over the age of six months. These recommendations were accepted and reported in the WHO updated position paper on typhoid vaccines in the Weekly Epidemiological Report published on March 30, 2018.

"Studies have shown that the typhoid conjugate vaccine is safe, effective, and can provide protection for infants and children under two years of age, unlike the previously available typhoid vaccines," said Dr. Adwoa Bentsi-Enchill, medical officer of the Department of Immunization, Vaccines and Biologicals at WHO. "The recommendation for the typhoid conjugate vaccine to be included in routine immunization programs will help pave the way for national authorities to introduce this vaccine in countries where they are needed most."

The updated WHO position paper emphasizes the importance of using typhoid vaccines to control endemic and epidemic typhoid, and recommends that typhoid-endemic countries introduce TCV in a single dose for infants and children over the age of six months. Where feasible, vaccine introduction should be accompanied by catch-up vaccination campaigns for children up to 15 years of age in endemic countries. Additionally, the position paper recommended prioritizing TCV introduction in countries with the highest burden of disease or a growing burden of drug-resistant typhoid. TCV was also recommended as a response to confirmed typhoid outbreaks and for specific groups of people at high risk or with high transmission potential, including travelers from non-endemic to endemic areas.

Compared to earlier typhoid vaccines, TCV provides longer-lasting protection, requires fewer doses and is suitable for children under two years of age. These advantages allow delivery through routine infant immunization programs and better protection of young children.

"Vaccines are one of the best investments we can make to give every child a healthy start and this WHO recommendation is an important step toward our goal of addressing the high burden of typhoid in children. For too long, typhoid, which invariably affects the world's poorest communities, has been neglected in efforts to improve global health," said Dr. Anita Zaidi, director of the Vaccine Development and Surveillance, and Enteric and Diarrheal Diseases teams at the Bill & Melinda Gates Foundation. "With this new vaccine, countries will finally be able to protect millions of children who are most vulnerable to this deadly disease."

Expanding coverage of TCV through routine immunization would reduce disease incidence and potentially decrease the need for antibiotics - two priorities of the effort to stem the development and spread of drug-resistant typhoid. WHO highlighted TCV as a critical tool to slow further

emergence of drug-resistant typhoid strains and ultimately save lives.

"Typhoid fever is a familiar public health problem in many developing countries where rapid urbanization and an alarming increase of multidrug-resistant typhoid are creating an urgent need to focus on prevention," said Dr. Kathy Neuzil, director of the Center for Vaccine Development at the University of Maryland School of Medicine. "These WHO recommendations are a vital step to delivering TCVs to those who need them most and relieving the pressure on public health systems tasked with treating drug-resistant strains."

The first TCV, Typbar-TCV, achieved WHO prequalification in December 2017, a critical step allowing WHO, the United Nations Children's Fund, and other United Nations procurement agencies to purchase the vaccine. Prequalification also serves as an endorsement of quality, efficacy, and safety for countries interested in adopting the vaccine. It enables eligible countries to receive funding assistance from Gavi, the Vaccine Alliance, which recently approved US\$ 85 million to support the introduction of TCVs. Gavi-supported countries can now apply; introduction of the vaccine is anticipated by mid-2019.

"The typhoid conjugate vaccine will not only save lives, but also bolster the fight against anti-microbial drug-resistance," said Dr. Seth Berkley, CEO of Gavi, the Vaccine Alliance. "Expanding vaccine coverage will play an important role in reducing illnesses and deaths from typhoid. Gavi is looking forward to working with countries to support the introduction of this safe and effective vaccine."

Typhoid disproportionately impacts young children and marginalized populations in much of Asia, sub-Saharan Africa, and parts of Latin America and the Middle East that often have outdated, inadequate, or unsafe water and sanitation systems. With supportive global and financial policies in place, typhoid vaccines, in addition to water,

sanitation, and hygiene interventions, can reach those who need them most and reduce the burden of typhoid fever.

"With the release of this revised position paper and the opportunity for countries to apply for Gavi support of TCV introduction, we now have the global policy in place to roll out TCVs," said Dr. Denise Garrett, director of the Coalition against Typhoid and vice president of Typhoid Programs at the Sabin Vaccine Institute. "Effectively preventing [typhoid](#) and the suffering it causes is a reality within our reach."

Provided by Sabin Vaccine Institute

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