

## Potential of typhoid conjugate vaccines in Samoa

Typhoid, a serious enteric fever spread through contaminated food and water, is a substantial public health issue that disproportionately impacts children and marginalized populations in Asia and sub-Saharan Africa. The Global Burden of Disease (GBD) study estimates that, in 2019, there were more than 9 million typhoid cases and more than 110,000 typhoid deaths worldwide.<sup>1</sup> Additionally, strains of drug-resistant typhoid are spreading, causing global concern.<sup>2</sup>

### TYPHOID CONJUGATE VACCINES

Typhoid vaccination can reduce the need for antibiotics, slow expansion of drug-resistant strains, and save lives. Typhoid conjugate vaccines (TCVs) are licensed, prequalified by the World Health Organization (WHO), and have advantages over earlier typhoid vaccines. TCVs provide longer-lasting protection, require only one dose, and are safe and efficacious for children over 6 months.

Three large Phase 3 efficacy studies conducted in Bangladesh, Malawi, and Nepal showed that TCV prevented 85, 84, and 79 percent of typhoid cases in children 9 months to 16 years old, respectively. These results demonstrate that TCV is protective across diverse settings in Africa and Asia.

### WHO RECOMMENDATION

In March 2018, WHO recommended TCV as the preferred typhoid vaccine because of its improved performance and suitability for younger children. WHO recommends the introduction of TCV be prioritized in countries with the highest burden of typhoid disease or a high burden of drug-resistant typhoid. WHO encourages routine administration to be accompanied by catch-up vaccination campaigns for children up to 15 years of age, where feasible and supported by data. Several countries have already introduced TCV into their routine immunization programs including Liberia, Nepal, Pakistan, Samoa, and Zimbabwe. More than 40 million children have been vaccinated with TCV.



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### AN OPPORTUNITY FOR SAMOA

TCVs could benefit Samoa, where typhoid has been endemic since the 1960s despite economic development and improvements in water supply and sanitation. Between 53 and 193 blood-culture confirmed typhoid cases occur each year. Typhoid cases are elevated in school-age children and peak in adults. More than 90 percent of cases occur in Samoans younger than 50 years of age.<sup>3</sup>

The Government of Samoa introduced TCV in August 2021 through a vaccination campaign for all Samoans aged 1 to 45 years old. Following the campaign, TCV will be available for all children at 12 months of age through the routine immunization program.

### References

1. GBD Results Tool. Available at: <http://ghdx.healthdata.org/gbd-results-tool>.
2. Wong VK, Baker S, Pickard DJ, et al. Phylogeographical analysis of the dominant multidrug-resistant H58 clade of *Salmonella* Typhi identifies inter- and intracontinental transmission events. *Nature Genetics*. 2015;47:632-639.
3. Sikorski MJ, Desai SN, Tupua S, et al. Tenacious endemic typhoid fever in Samoa. *Clinical Infectious Diseases*. 2020;71(Suppl 2):S120-S126.

Learn more and join the effort at [www.takeontyphoid.org](http://www.takeontyphoid.org).

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