

## Potential of typhoid conjugate vaccines in Fiji

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 2017, there were nearly 11 million typhoid cases and more than 116,000 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. Newly licensed and World Health Organization (WHO)-prequalified typhoid conjugate vaccines (TCVs) have several advantages over earlier typhoid vaccines. They:

- provide longer-lasting protection;
- require only one dose; and
- are suitable for young children over 6 months.

These qualities will allow better protection for younger children and expanded coverage through inclusion in routine childhood immunization programs.

### WHO RECOMMENDATION

In March 2018, WHO recommended that typhoid-endemic countries introduce prequalified TCVs into routine childhood immunization programs as a single dose for infants and children over 6 months of age, accompanied by catch-up vaccination campaigns for children up to 15 years of age, where feasible. Additionally, WHO recommended prioritizing countries with a high burden of disease and/or a growing burden of drug-resistant typhoid, and in response to confirmed typhoid outbreaks.



### AN OPPORTUNITY FOR FIJI

TCVs could have a benefit in Fiji, where typhoid inflicts a public health burden. The GBD estimates that, in 2017, Fiji had:

- **414 typhoid cases** or **46 cases per 100,000 population**, 51 percent of which were among children under 15 years of age; and
- **4 typhoid deaths**, 58 percent of which were among children under 15 years of age.<sup>1</sup>

Studies also show that the rate of typhoid fever in Fiji is increasing.<sup>3</sup> In addition, typhoid likely imposes an economic burden. Analyses from other settings in the region found that families often bear a significant cost, especially for cases in young children.<sup>4</sup> Available global modeling data predict that routine TCV vaccination plus catch-up would be more cost-effective compared with routine vaccination only. Routine TCV vaccination alone is predicted to be cost-effective compared with no vaccination in many countries.

### References

1. Global Burden of Disease. *The Lancet*. 2018.
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. Thompson CN, Kama M, Acharya S, et al. Typhoid fever in Fiji: A reversible plague? *Tropical Medicine & International Health*. 2014;19(10):1284-1292.
4. Poulos C, Riewpaiboon A, Stewart JF, et al. Cost of illness due to typhoid fever in five Asian countries. *Tropical Medicine & International Health*. 2011;16(3):314-323.

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