

## Potential of typhoid conjugate vaccines in the Democratic Republic of the Congo

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. 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 strong protection for at least 4 years, require only one dose, and are safe and effective for children older than 6 months of age.

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

### WHO RECOMMENDATION AND GAVI SUPPORT

In March 2018, WHO recommended TCVs 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. Gavi, the Vaccine Alliance has provided financial support for eligible countries to introduce TCVs since 2018. Several countries have already introduced TCV into their routine immunization programs including Liberia, Malawi, Nepal, Pakistan, Samoa, and Zimbabwe. More than 56 million children have been vaccinated with TCV.



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### AN OPPORTUNITY FOR THE DRC

TCVs could have a substantial benefit in the Democratic Republic of the Congo (DRC), where typhoid inflicts a significant public health burden. DRC has experienced multiple large-scale typhoid outbreaks over the last decade, and there is evidence of a growing burden of multidrug-resistant typhoid. Between 2007 and 2017, 38 percent of all typhoid cultures collected from hospitals across DRC were multidrug-resistant.<sup>5</sup> Additionally, 72 percent of confirmed typhoid cases were in children under 10 years of age, reflecting a heavy burden among children.<sup>5</sup> Because of this evidence, DRC meets WHO criteria for priority introduction of TCV. An economic analysis predicts that, even in the absence of a Gavi subsidy, a catch-up campaign followed by routine childhood immunization with TCVs could be cost-effective in the DRC.<sup>6</sup>

### References

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