Together We Can
Take on Typhoid

Potential of typhoid conjugate vaccines in Kenya

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 2021, there were more than 7 million typhoid cases and more than 93,000 typhoid deaths worldwide.[1] Additionally, strains of drug-resistant typhoid are spreading, causing global concern.[2]

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 64 million children have been vaccinated with TCV.

PATH/Eric Becker

AN OPPORTUNITY FOR KENYA

TCVs could have a substantial benefit in Kenya, where typhoid inflicts a significant public health burden. The GBD study estimates that, in 2021, Kenya had:

- **109,194 typhoid cases** or **218 cases per 100,000 population**, 60 percent of which were among children younger than 15 years of age; and
- **1,607 typhoid deaths**, 63 percent of which were among children younger than 15 years of age.[1]

Typhoid likely also imposes an economic burden in Kenya. While costs of illness have not yet been evaluated for Kenya, a recent analysis from Malawi found that typhoid can be economically catastrophic for families, sometimes costing more than a family's total monthly income.[3] An economic analysis predicts that, even in the absence of a Gavi subsidy, a catch-up campaign followed by routine childhood immunization with TCVs would potentially be cost-effective in Kenya.[4]

References

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3. Limani F, Smith C, Wachepa R, et al. Estimating the economic burden of typhoid in children and adults in Blantyre, Malawi: A costing cohort study. *PLOS ONE*. 2022;17(11):e0277419.
4. Bilcke J, et al. Cost-effectiveness of routine and campaign use of typhoid Vi-conjugate vaccine in Gavi-eligible countries: a modelling study. *The Lancet Infectious Diseases*. 2019;19(7):P728-739.

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