Together We Can
Take on Typhoid

The potential of typhoid conjugate vaccines in Malawi

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,[3] 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 Burkina Faso, Kenya, Liberia, Malawi, Nepal, Pakistan, Samoa, and Zimbabwe. More than 90 million children have been vaccinated with TCV globally.

According to the STRATAA study, Malawi has a typhoid incidence rate of 444 cases per 100,000 population per year.

AN OPPORTUNITY FOR MALAWI

The TCVs now in Malawi's routine immunization system are projected to have a substantial benefit in Malawi, where typhoid inflicts a significant health burden. A large typhoid surveillance study called the Strategic Typhoid Alliance across Africa and Asia (STRATAA) was conducted in Blantyre and estimated a rate of 444 typhoid cases per 100,000 people per year. The bacteria that cause typhoid, *S.* Typhi, was the primary cause of blood-stream infection in people with fever in the surveillance study. Additionally, children 5-9 years old had the highest typhoid incidence rate of all age groups in the study.[4] Malawi has also seen a significant increase in multidrug-

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A Health Surveillance Assistant prepares a dose of TCV in Mchinji during the integrated vaccine campaign Malawi, 2023.

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Students at Mitole Primary School receive TCV during the integrated campaign in May 2023.

resistant typhoid since 2011, resulting in a sharp rise in overall typhoid incidence starting in 2013.[5]

Typhoid also imposes an economic burden. A recent analysis from Malawi found that typhoid can be economically catastrophic for families, sometimes costing more than a family's total monthly income.[6] 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 Malawi.[7]

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