

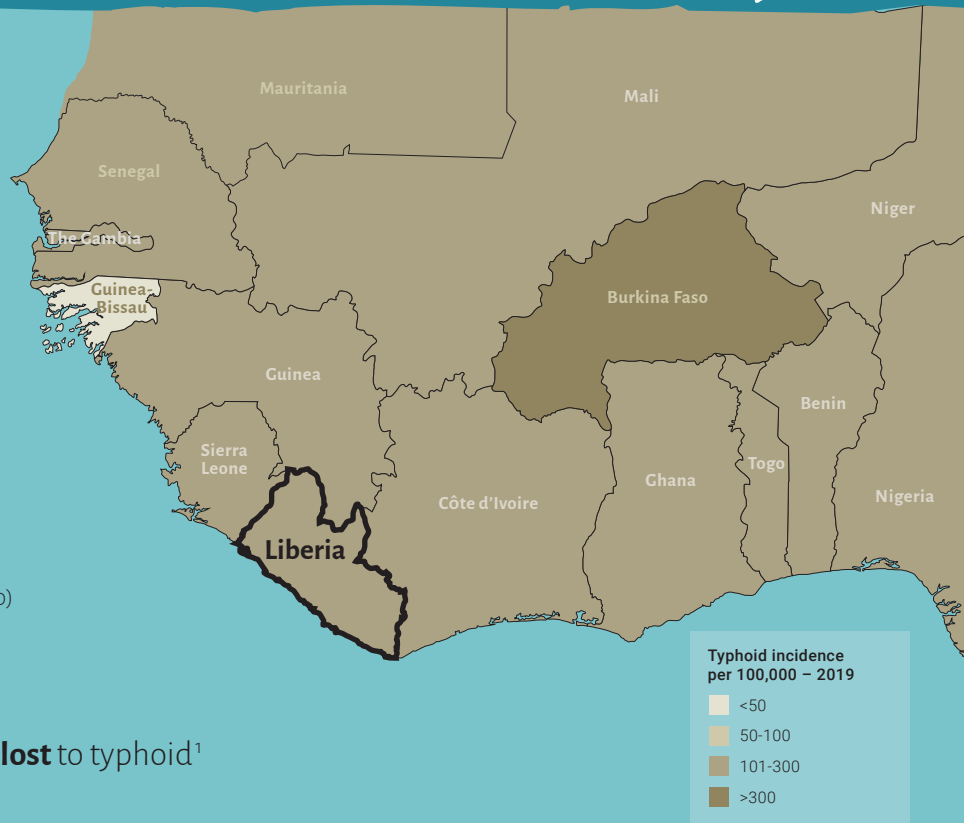
Burden of Typhoid in **Liberia**

Liberia is a typhoid-endemic country. The Global Burden of Disease study estimated that, in 2019, Liberia experienced at least:

5,836 typhoid cases (121 cases per 100,000)

83 typhoid deaths

6,290 disability-adjusted life-years lost to typhoid¹



Drug-resistant typhoid strains are a growing problem across the globe, putting Liberia at risk.



Global data show that the multidrug-resistant (MDR) H58 typhoid strain prevalence has **increased dramatically** since 1992.²



The MDR H58 strain has been found in other West African countries. **Diseases such as typhoid do not respect borders**, and as drug-resistant typhoid becomes more common, it could spread to Liberia.



Drug-resistant typhoid is more difficult to treat and forces the use of more expensive and less readily-available treatment options.

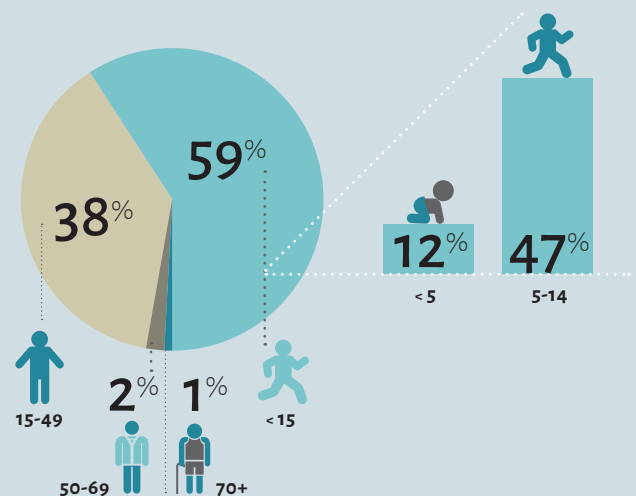
The Government of Liberia prioritized child health and introduced typhoid conjugate vaccine (TCV) into the routine immunization program in 2021. Liberia

vaccinated more than 1.5 million children during the catch-up campaign and currently offers TCV to all children at 9 months old.



Most typhoid cases in Liberia occur in children **younger than 15 years old.**

TYPHOID CASES IN LIBERIA BY AGE (2019)



Typhoid conjugate vaccines in Liberia

The World Health Organization (WHO) recommends the introduction of prequalified TCVs be prioritized in countries with a high burden of typhoid disease or a high burden of drug-resistant typhoid. **Liberia became the first country in Africa to introduce TCV into its routine childhood immunization program in 2021 with support from Gavi, the Vaccine Alliance.**

Prequalified TCVs are highly effective and safe for children as young as 6 months of age. Recent data from Malawi show TCV is safe and 84% effective in preventing typhoid.³ TCVs:



Require **one dose**;



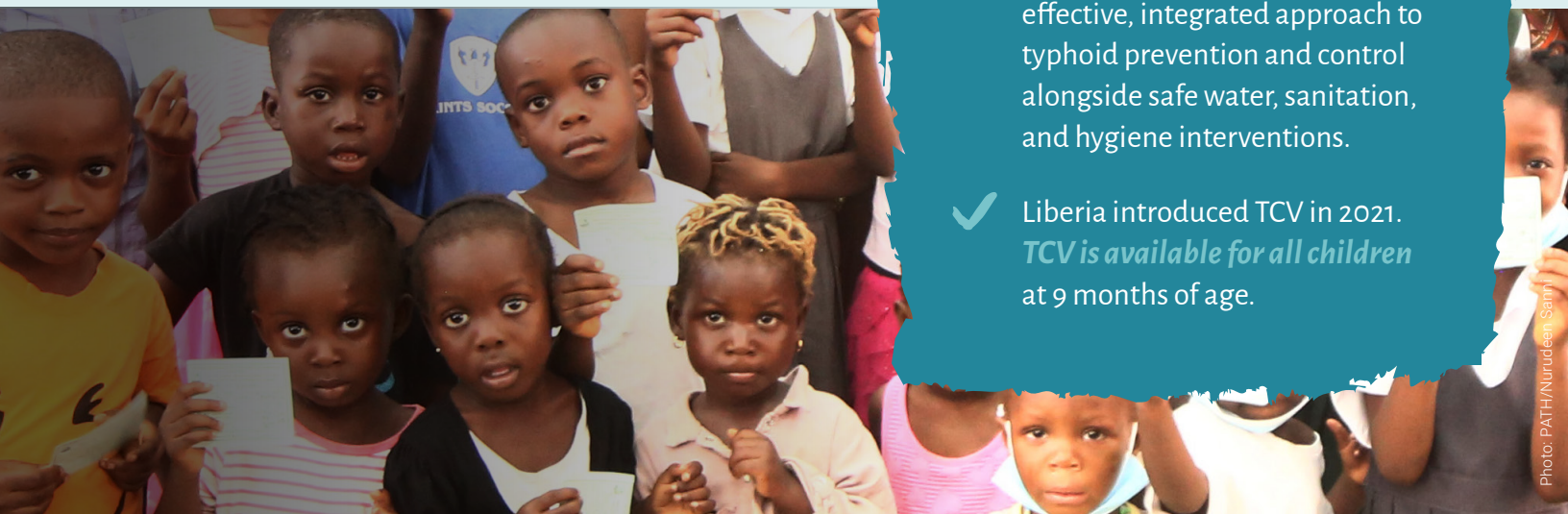
Are **more effective and may be longer-lasting** than other typhoid vaccines; and



Can be **co-administered with measles-rubella and yellow fever vaccines.**⁴

Let's Take on Typhoid in Liberia

- ✓ Typhoid is endemic in Liberia, with more than **5,800** cases per year.
- ✓ Liberia's burden of typhoid is most heavily borne by children **younger than 15** years of age.
- ✓ Data show a global increase in drug-resistant typhoid, **which could spread to Liberia.**
- ✓ **TCVs** are safe, effective, and WHO-recommended for routine immunization as part of a cost-effective, integrated approach to typhoid prevention and control alongside safe water, sanitation, and hygiene interventions.
- ✓ Liberia introduced TCV in 2021. **TCV is available for all children** at 9 months of age.



1. Institute for Health Metrics and Evaluation. Global Burden of Disease. 2019. Accessed via: 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(6):632-639.
3. Patel PD, Patel P, Liang Y, et al. Safety and efficacy of a typhoid conjugate vaccine in Malawian children. *New England Journal of Medicine*. 2021;385(12):1104-1115.
4. Sirima SB, Ouedraogo A, Barry N, et al. Safety and immunogenicity of Vi-typhoid conjugate vaccine co-administration with routine 9-month vaccination in Burkina Faso: A randomized controlled phase 2 trial. *International Journal of Infectious Diseases*. 2021;108:465-472.