

Burden of Typhoid in

Sierra Leone

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

10,039 typhoid cases (121 cases per 100,000)

175 typhoid deaths

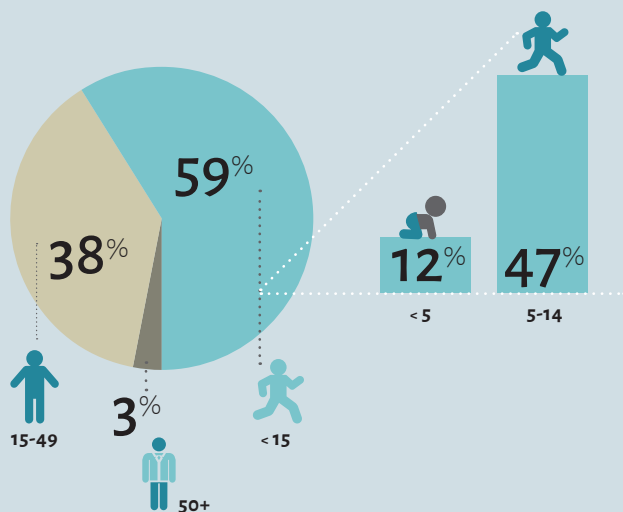
13,734 disability-adjusted **life-years lost** to typhoid¹

While typhoid is rarely fatal, the recovery is long and difficult. The disease steals time, money, and productivity from those infected and their families and is associated with numerous long-term complications.



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

TYPHOID CASES IN SIERRA LEONE BY AGE (2019)



The risk of typhoid may be increasing in Sierra Leone.



Global data show that multidrug-resistant (MDR) typhoid prevalence has **increased dramatically since 1992**.²



While **drug-resistant typhoid** has not been isolated in Sierra Leone, it has been found in other West African countries, including Ghana.³



Diseases such as typhoid can easily cross borders, and as drug-resistant typhoid becomes more common, it has the potential to spread to Sierra Leone. **Drug-resistant typhoid is more difficult to treat** and forces the use of more expensive and less readily-available treatment options.



More than a third of the population does not have access to basic drinking water services, and more than **80% lack access to basic sanitation services**.⁴ This drastically increases typhoid risks.

Typhoid conjugate vaccines (TCVs) in Sierra Leone

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. Support for introduction from Gavi, the Vaccine Alliance is available now.

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.⁶ 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.^{7,8}

Findings from an economic analysis predict that, even in the absence of a Gavi subsidy, a **catch-up campaign with TCV could be cost-effective in Sierra Leone.**⁷

Let's Take on Typhoid in Sierra Leone

- ✓ Typhoid is endemic in Sierra Leone, with more than **10,000** cases per year.
- ✓ Sierra Leone'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 Sierra Leone.
- ✓ **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.
- ✓ **Gavi support** for TCV introduction is available **now**.

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3. Park SE, Pham DT, Boinett C, et al. The phylogeography and incidence of multi-drug resistant typhoid fever in sub-Saharan Africa. *Nature Communications*. 2018;9(1):5094.
4. Sustainable Development Report. Sierra Leone. 2020. Available at: <https://dashboards.sdgindex.org/profiles/sierra-leone/indicators>.
5. 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.
6. Sirima SB, Ouedraogo A, Barry N, et al. Safety and immunogenicity of co-administration of meningococcal type A and measles-rubella vaccines with typhoid conjugate vaccine in children aged 15-23 months in Burkina Faso. *International Journal of Infectious Diseases*. 2021;102:517-526.
7. Bilcke J, Antillón M, Pieters Z, et al. Cost-effectiveness of routine and campaign use of typhoid Vi-conjugate vaccine in Gavi-eligible countries: A modelling study. *Lancet Infectious Disease*. 2019;19(7):728-739