

Burden of Typhoid in

Burkina Faso

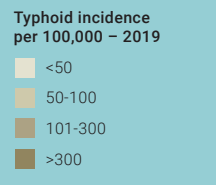
Burkina Faso is a typhoid-endemic country. The Global Burden of Disease 2019 study estimated that Burkina Faso experienced at least:

80,672 typhoid cases (356 cases per 100,000)

1,530 typhoid deaths

122,944 disability-adjusted **life-years lost** to typhoid¹

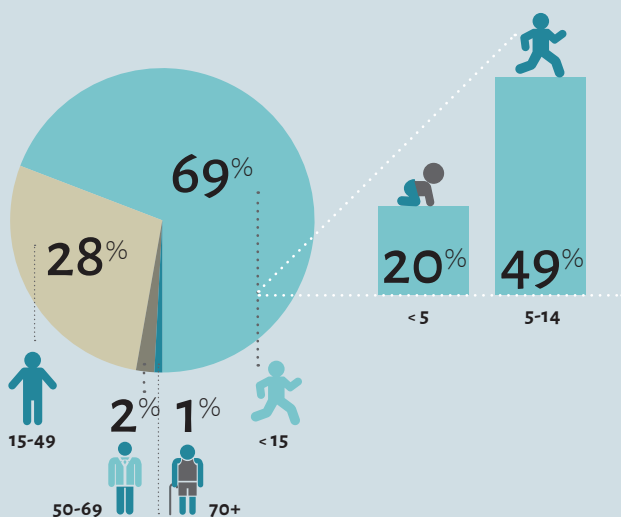
While typhoid is rarely fatal, the recovery is long and difficult. The disease steals time, money, and productivity from those infected and their families and is associated with numerous long-term complications.



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

Photo: Groupe de Recherche Action en Santé

TYPHOID CASES IN BURKINA FASO BY AGE (2019)



Drug-resistant typhoid strains are a growing problem regionally and across the globe.



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



While drug-resistant typhoid has not been isolated in Burkina Faso³, it has been found in other West African countries, including Ghana⁴. Additionally, Burkina Faso has documented MDR for other *Salmonella* infections that are treated with the same antibiotics as typhoid⁵, **raising the concern that drug-resistant typhoid could evolve.**



Diseases such as typhoid do not respect borders, and as drug-resistant typhoid becomes more common, **it will likely spread to Burkina Faso.**



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

Typhoid conjugate vaccines (TCVs) in Burkina Faso

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, yellow fever, and meningococcal A 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 Burkina Faso.⁹

Let's Take on Typhoid in Burkina Faso

- ✓ Typhoid is endemic in Burkina Faso, with more than **80,000** cases per year.
- ✓ Burkina Faso'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 Burkina Faso.
- ✓ **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**.

Photo: Groupe de Recherche Action en Santé

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. Al-Emran HM, Eibach D, Krumkamp R, et al. A multicountry molecular analysis of *Salmonella enterica* Serovar Typhi with reduced susceptibility to ciprofloxacin in sub-Saharan Africa. *Clinical Infectious Diseases*. 2016;62(Suppl 1):S42-S46.
4. 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.
5. Demele R, Konate A, Soulama I, et al. Prevalence of multidrug-resistant *Salmonella enterica* and associated factors among under five children with diarrhea in rural Burkina Faso. *Clinical Biotechnology and Microbiology*. 2018;3(1):566-576.
6. 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.
7. 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.
8. 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.
9. 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.