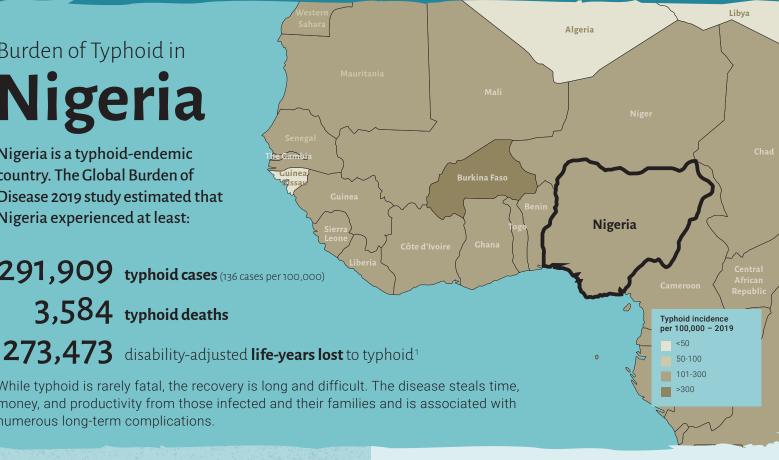
Burden of Typhoid in

Nigeria

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

291,909 typhoid cases (136 cases per 100,000) 3,584 typhoid deaths

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 Nigeria occur in children younger than 15 years old.

TYPHOID CASES IN NIGERIA BY AGE (2019)



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



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



An analysis of typhoid samples from Lagos found that more than 80% of these samples were MDR. Increasing rates of fluoroguinolone and cephalosporin resistance were seen as well.3



Another study of typhoid cases in children younger than 5 years old in Kano and the Federal Capital Territory found that 40% were MDR.4



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 Nigeria

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. TCVs:



Are highly effective and safe for children as young as **6 months** of age;



Require a **single dose** to prevent 79-85% of typhoid cases in children;⁵



Offer strong protection for **at least 4 years**; and



Can be **co-administered** with measles-rubella and yellow fever vaccines.⁶

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 Nigeria.⁷

Let's Take on Typhoid in Nigeria

- Typhoid is endemic in Nigeria, with more than **290,000** cases per year.
- Nigeria's burden of typhoid is most heavily borne by children younger than 15 years of age.
- Data show an increase

 in drug-resistant typhoid in
 Nigeria, regionally, and globally.
- TCVs are safe, effective, and WHO-recommended for routine immunization as part of a costeffective, integrated approach to typhoid prevention and control alongside safe water, sanitation, and hygiene interventions.
- Gavi support for TCV introduction is available now.
- 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. Akinyemi KO, Oyefolu AOB, Mutiu WB, et al. Typhoid fever: Tracking the trend in Nigeria. The American Journal of Tropical Medicine and Hygiene. 2018;99(Suppl 3):41-47...
- 4. Obaro SK, Hassan-Hanga F, Olateju EK, et al. Salmonella bacteremia among children in Central and Northwest Nigeria, 2008-2015. Clinical Infectious Diseases. 2015;61(Suppl 4):S325-S331.
- 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 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.
- 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



