

Burden of Typhoid in

Myanmar

Myanmar is a typhoid-endemic country. The Global Burden of Disease study estimated that, in 2017, there were at least:

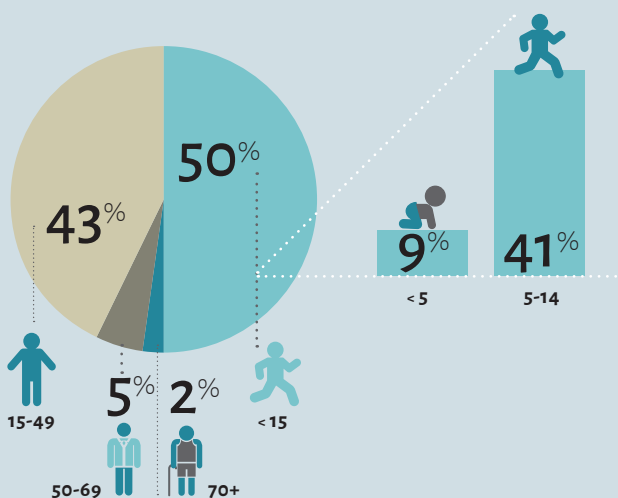
- 121,360** typhoid cases (230 cases per 100,000)
- 1,596** typhoid deaths
- 111,717** disability-adjusted **life-years lost** to typhoid¹

A separate study of blood culture-confirmed typhoid surveillance in Yangon hospitals estimated an annual typhoid incidence of 391 cases per 100,000 adolescents and adults in the Yangon area.²



Half of the typhoid cases in Myanmar occur in children younger than 15 years old.

TYPHOID CASES IN MYANMAR BY AGE (2017)



While typhoid is rarely fatal, the recovery is long and difficult. The disease takes time, money, and productivity from those infected and their families and is associated with numerous long-term complications. Drug-resistant typhoid strains are a growing problem regionally and across the globe.



While limited data on drug-resistant typhoid infections in Myanmar are available, studies in Yangon have found a **high prevalence of resistance to first-line antibiotics** in other bacterial infections.³



Additionally, an abundance of studies have found an **alarming rate of drug resistant-typhoid both globally and in neighboring countries in Southeast Asia**.⁴ In a typhoid outbreak near the Thai/Myanmar border, 100% of cases were found to be multidrug-resistant.⁵



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

Typhoid conjugate vaccines in Myanmar

Typbar-TCV[®] is a newly licensed and World Health Organization (WHO)-prequalified and recommended tool for typhoid prevention in endemic areas. **Gavi, the Vaccine Alliance support for introduction is available now.**

Typbar-TCV is highly effective and safe for children as young as 6 months of age,⁶ and:



Only requires **one dose**;



May be **more effective and longer-lasting** than other previous typhoid vaccines; and



Can be **co-administered with measles-containing** vaccine.

A recent modeling analysis shows that in Myanmar, a catch-up campaign up to 15 years of age followed by routine immunization is the preferred strategy and likely cost effective with support from Gavi, the Vaccine Alliance.*⁷

*At a willingness to pay threshold of \$100 or more to avert one disability-adjusted life-year.

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3. Myan TO, Prasad N, Thinn KK, et al. Bloodstream infections at a tertiary referral hospital in Yangon, Myanmar. *Tropical Medicine & Hygiene*. 2014;108(11):692-698.
4. Britto CD, Wong VK, Dougan G, Pollard AJ. A systematic review of antimicrobial resistance in *Salmonella enterica* serovar Typhi, the etiological agent of typhoid. *PLoS Neglected Tropical Diseases*. 2018;12(10):e006779.
5. Swaddiwudhipong W and Kanlayanaphotporn J. A common-source water-borne outbreak of multi-drug-resistant typhoid fever in a rural Thai community. *Journal of the Medical Association of Thailand*. 2001;84:1513-1517.
6. Jin C, Gibani MM, Moore M, et al. Efficacy and immunogenicity of a Vi-tetanus toxoid conjugate vaccine in the prevention of typhoid fever using a controlled human infection model of *Salmonella* Typhi: a randomized control, phase 2b trial. *The Lancet*. 2017;390(10111):2472-2487.
7. Blicke J, Antillon M, Pieters Z, et al. Cost-effectiveness of routine and campaign use of typhoid Vi-conjugate vaccine in Gavi-eligible countries: A modelling study. *The Lancet Infectious Diseases*. Early Online Publication.

Let's Take on Typhoid in Myanmar

- ✓ Typhoid is endemic in Myanmar, with more than **121,000** cases per year.
- ✓ Half of Myanmar's typhoid burden is borne by children **younger than 15** years of age.
- ✓ Data show an increase in **drug-resistant typhoid** globally, which could spread to Myanmar.
- ✓ **A new TCV** is 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**.