Together We Can
Take on Typhoid

Burden of Typhoid in

Zambia

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

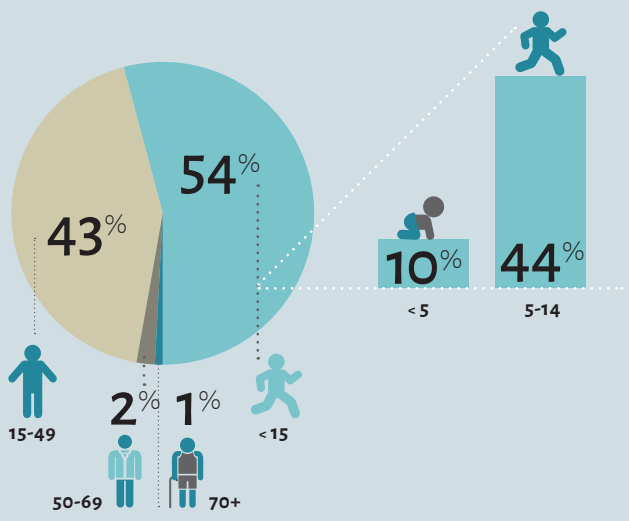
17,860 **typhoid cases** (98 cases per 100,000)

333 **typhoid deaths**

25,428 disability-adjusted **life-years lost** to typhoid[1]

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.

TYPHOID CASES IN ZAMBIA BY AGE (2019)



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

Global data show that the multidrug-resistant (MDR) H58 typhoid strain prevalence has **increased dramatically since 1992**.[2]

An outbreak in Lusaka from 2010-2012 sickened 2,040 people, of which nearly 90% were children under 15 years old. Analysis of samples from the outbreak showed the it was caused by a variant of the H58 typhoid strain.[3]

More than 80% of the isolates analyzed showed high levels of resistance to **5 of the core antimicrobials available** to treat typhoid. A few of the isolates also showed low-level resistance to ciprofloxacin, a common treatment for typhoid.[3]

As drug-resistant typhoid becomes more common, it will become more difficult to treat and **force the use of more expensive and less readily-available** treatment options.

Typhoid conjugate vaccines (TCVs) in Zambia

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. Gavi, the Vaccine Alliance support for introduction 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.[4] TCVs:

- Require **one dose**;
- Are **more effective and may be longer-lasting** than other typhoid vaccines; and
- Can be **co-administered with measles-rubella** vaccine.[5]

Let's Take on Typhoid in Zambia

- Typhoid is endemic in Zambia, with more than ***17,000*** cases per year.
- Zambia's burden of typhoid is most heavily borne by children ***under 15*** years of age.
- Data show an increase in ***drug-resistant typhoid*** in Zambia, regionally, and globally.
- ***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***.

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 Zambia.[6]

Photo: PATH/Gabe Bienczycki

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3. Hendriksen RS, Leekitcharoenphon P, Lukjancenko O, et al. Genomic signature of multidrug-resistant *Salmonella enterica* serovar Typhi isolates related to a massive outbreak in Zambia between 2010 and 2012. *Journal of Clinical Microbiology*. 2015;53:262-272.
4. 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.
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TyVAC Typhoid Vaccine Acceleration Consortium
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