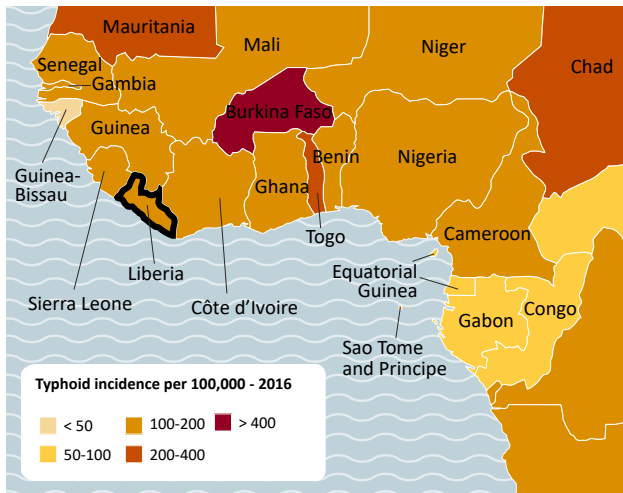
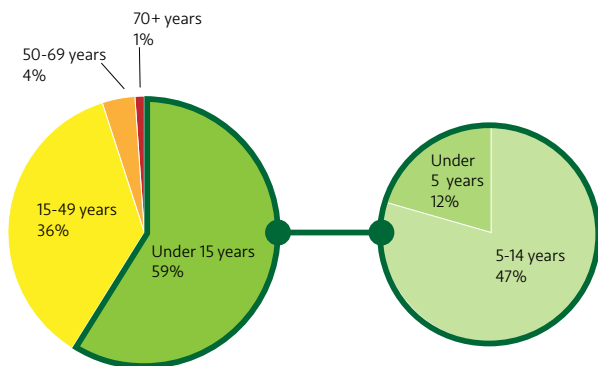


## Burden of typhoid in Liberia



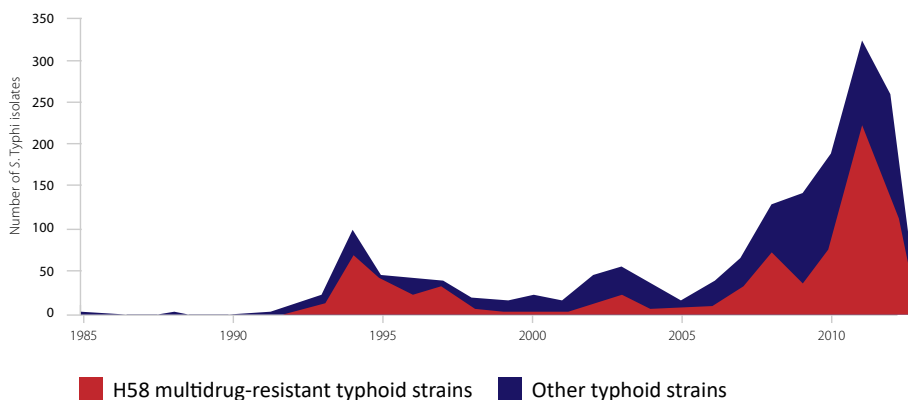
**Liberia is a typhoid-endemic country, with more than 7,400 cases estimated per year.<sup>1</sup>**

- 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.
- It is estimated that, in 2016, there were at least:
  - » 7,401 typhoid cases (160 cases per 100,000);
  - » 84 typhoid deaths; and
  - » 5,906 disability-adjusted life-years lost to typhoid.<sup>1</sup>



**Most typhoid cases in Liberia occur in children under 15 years old.**

- An estimated 59% of typhoid cases and 58% of typhoid deaths occur in children under 15 years of age.<sup>1</sup>



**Drug-resistant typhoid strains are a growing problem across the globe, putting Liberia at risk.**

- Global data show that the multidrug-resistant (MDR) H58 typhoid strain prevalence has increased dramatically since 1992.<sup>2</sup>
- The MDR H58 strain has been found in other West African countries.
- Without adequate prevention measures such as vaccination, Liberia could be at risk for outbreaks.

1. Institute for Health Metrics and Evaluation. Global Burden of Disease. 2017. Accessed via: [ghdx.healthdata.org/gbd-results-tool](http://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.

# Typhoid conjugate vaccines and Liberia

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



**Typbar-TCV, the first WHO-prequalified typhoid conjugate vaccine (TCV), is highly effective and safe for children as young as 6 months of age,<sup>3</sup> and:**

- Only requires one dose;
- May be more effective and longer-lasting than older typhoid vaccines; and
- Can be co-administered with measles vaccine.



**Preliminary findings from an economic analysis predict that, even in the absence of a Gavi subsidy, a catch-up campaign followed by routine immunization with TCV could be potentially cost-effective in Liberia.<sup>4</sup>**

## Let's take on typhoid in Liberia:

- Typhoid is endemic in Liberia, with more than 7,400 cases per year nationwide.
- Liberia's burden of typhoid is most heavily borne by children under 15 years of age.
- Data show a global increase in drug-resistant typhoid, which could cause outbreaks in Liberia.
- 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.

3. 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):2472-2480.

4. Bilcke J, et al. Setting global performance standards for a cost-effective typhoid conjugate vaccine strategy; modelling study. *In prep*.