

The potential of typhoid conjugate vaccines in Burkina Faso

Typhoid, a serious enteric fever spread through contaminated food and water, is a substantial public health issue that disproportionately impacts children and marginalized populations in Asia and sub-Saharan Africa. The Global Burden of Disease (GBD) study estimates that, in 2016, there were nearly 12 million typhoid cases and more than 128,000 typhoid deaths worldwide.¹ Additionally, strains of drug-resistant typhoid are spreading, causing global concern.²

TYPHOID CONJUGATE VACCINES

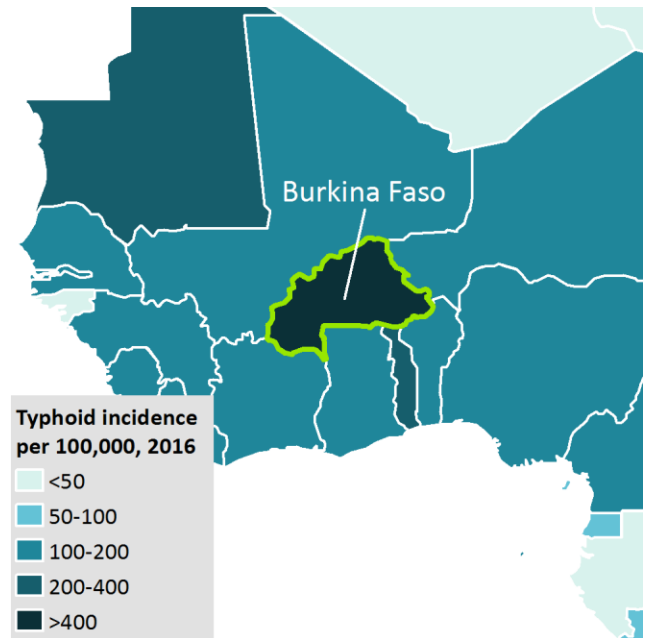
Typhoid vaccination can reduce the need for antibiotics, slow expansion of drug-resistant strains, and save lives. Newly licensed and World Health Organization (WHO)-prequalified typhoid conjugate vaccines (TCVs) have several advantages over earlier typhoid vaccines. They:

- provide longer-lasting protection;
- require only one dose; and
- are suitable for young children over 6 months.

These qualities will allow better protection for younger children and expanded coverage through routine childhood immunization programs.

WHO RECOMMENDATION AND GAVI SUPPORT

In March 2018, WHO recommended that typhoid-endemic countries introduce prequalified TCVs into routine childhood immunization programs as a single dose for infants and children over 6 months of age, accompanied by catch-up vaccination campaigns for children up to 15 years of age, where feasible. Additionally, WHO recommended prioritizing countries with a high burden of disease and/or a growing burden of drug-resistant typhoid and in response to confirmed typhoid outbreaks. Gavi, the Vaccine Alliance has earmarked US\$85 million to support the introduction of TCVs into routine immunization programs and is accepting applications for financial support, with introductions anticipated as soon as 2019.



According to GBD estimates, Burkina Faso had 405 typhoid cases per 100,000 population in 2016—the highest typhoid incidence rate in Africa and the fourth highest in the world.

AN OPPORTUNITY FOR BURKINA FASO

TCVs could have a substantial benefit in Burkina Faso, where typhoid inflicts a significant health burden. The GBD estimates that, in 2016, Burkina Faso had:

- **75,541 typhoid cases** or **405 cases per 100,000 population**, 67 percent of which were among children under 15 years of age; and
- **1,009 typhoid deaths**, 66 percent of which were among children under 15 years of age.¹

Typhoid also likely imposes an economic burden. While a cost-of-illness study in Burkina Faso is still underway, analyses from other settings in sub-Saharan Africa have found that the average cost of a typhoid case borne by families can amount to two months of family income.³ Preliminary findings from an economic analysis predict that, even in the absence of a Gavi subsidy, a catch-up campaign followed by routine vaccination with TCVs would be potentially cost-effective in Burkina Faso.⁴



Bill & Melinda Gates Foundation/Sam Reinders

Typhar-TCV® typhoid conjugate vaccine was prequalified by the World Health Organization in December 2017.



Sabin Vaccine Institute

Four-year-old Golden Kondowe was the first child in Africa to receive a vaccine as part of the TyVAC effectiveness study in Malawi, February 2018.

TyVAC STUDY IN BURKINA FASO

In order to build evidence of the effectiveness of TCVs in protecting children from typhoid, researchers with the Typhoid Vaccine Acceleration Consortium (TyVAC) are conducting four different studies in Bangladesh, Burkina Faso, Malawi, and Nepal. In Burkina Faso, TyVAC and project partners are planning to study how well TCVs produce an immune response to typhoid in children between 9 months and 2 years of age as well as the safety of the vaccine when given alone or alongside other routine childhood vaccines. While WHO already recommends TCV introduction in all typhoid-endemic countries, this additional evidence will help inform ongoing decisions about TCV vaccination in low- and middle-income countries.

REFERENCES

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Learn more and join the effort at www.takeontyphoid.org.

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