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Study indicates need for introduction of typhoid conjugate vaccines in endemic countries

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Major typhoid fever surveillance study conducted in sub-Saharan Africa



There is a high burden of typhoid fever in sub-Saharan African countries, according to a new study published in The Lancet Global Health. This high burden combined with the threat of typhoid strains resistant to antibiotic treatment calls for stronger prevention strategies, including the use and implementation of typhoid conjugate vaccines (TCVs) in endemic settings along with improvements in access to safe water, sanitation, and hygiene.

The findings from this 4-year study, the Severe Typhoid in Africa (SETA) programme, offers new typhoid fever burden estimates from six countries: Burkina Faso, Democratic Republic of the Congo (DRC), Ethiopia, Ghana, Madagascar, and Nigeria, with four countries recording more than 100 cases for every 100,000 person-years of observation, which is considered a high burden.

The highest incidence of typhoid was found in DRC with 315 cases per 100,000 people while children between 2-14 years of age were shown to be at highest risk across all 25 study sites.

There are an estimated 12.5 to 16.3 million cases of typhoid every year with 140,000 deaths. However, with generic symptoms such as fever, fatigue, and abdominal pain, and the need for blood culture sampling to make a definitive diagnosis, it is difficult for governments to capture the true burden of typhoid in their countries.

In addition to disease incidence, this study also showed that the emergence of antimicrobial resistance (AMR) in*Salmonella* Typhi, the bacteria that causes typhoid fever, has led to more reliance beyond the traditional first line of antibiotic treatment. If left untreated, severe cases of the disease can lead to intestinal perforation and even death. This suggests that prevention through vaccination may play a critical role in not only protecting against typhoid fever but reducing the spread of drug-resistant strains of the bacteria.

There are two TCVs with prequalification (PQ) by the World Health Organization (WHO) and available through Gavi, the Vaccine Alliance. In February 2024, Korea-based International Vaccine Institute (IVI) and SK bioscience announced that a third TCV, SKYTyphoid, also achieved WHO PQ, paving the way for public procurement and increasing the global supply.