Editorial

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Why We Should Push for Typhoid Vaccination?

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Typhoid fever remains one of the most persistent public health threats in South Asia and other developing regions of the world. Despite major advances in hygiene, sanitation, and healthcare access, typhoid continues to affect millions every year, causing suffering, loss of productivity, and preventable deaths. At a time when antibiotic resistance is rising and diseases are becoming harder to treat, vaccination stands out as one of the most powerful tools we have. It is time we renewed our collective effort to promote and ensure universal typhoid vaccination, particularly in high-risk countries like Bangladesh.

A Preventable but Deadly Disease

Typhoid fever is caused by Salmonella enterica serotype Typhi, a bacterium that spreads through contaminated food, water, or contact with an infected person. The infection targets the intestinal tract and bloodstream, leading to high fever, abdominal pain, weakness and loss of appetite. In severe cases, it can cause intestinal bleeding or perforation, leading to life-threatening complications.

According to the World Health Organization (WHO) typhoid affects an estimated 9–12 million people globally every year, and causes over 100,000 deaths. Most of these occur in low- and middle-income countries in Asia and Africa. Bangladesh, India and Pakistan remain major hotspots due to dense population, variable sanitation, and challenges in ensuring safe water and food handling practices. What is particularly tragic is that typhoid is entirely preventable, and yet it continues to claim lives every year.

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The Changing Face of Typhoid: Antibiotic Resistance

Until a few decades ago, typhoid could be effectively treated with antibiotics such as chloramphenicol, ampicillin, and cotrimoxazole. However, widespread and often inappropriate antibiotic use has led to the emergence of Multidrug-Resistant (MDR) and Extensively Drug-Resistant (XDR) strains of Salmonella typhi. In recent years, cases resistant to even the last-line antibiotics have been reported from South Asia, including Bangladesh.

This growing resistance crisis means that typhoid infections are now more difficult, more expensive, and slower to treat. Hospital stays are longer, complications are more frequent and mortality risk rises. In this context, preventing infection through vaccination is far safer and more cost-effective than relying on treatment after infection.

The Role of Vaccination

Typhoid vaccination is not new, but modern vaccines have made it more practical and reliable. The most effective option today is the Typhoid Conjugate Vaccine (TCV). Unlike older vaccines that offered protection for only two to three years, TCV provides long-lasting immunity (up to 10 years) and can be given to children as young as 6 months. This is particularly important because children represent the most vulnerable group in typhoid-endemic countries.

The WHO recommends a single dose of TCV as part of the routine immunization schedule in all endemic countries. Several nations, including Pakistan and Nepal, have already introduced it successfully in their national immunization programs, with strong evidence showing dramatic reductions in typhoid cases and hospital admissions.

Why Bangladesh Should Intensify Vaccination Efforts

Bangladesh has made commendable progress in child immunization and infectious disease control. However, typhoid continues to circulate widely, especially in urban slums and areas with poor sanitation. Seasonal outbreaks occur during the monsoon, when flooding and contamination of water sources are common. Schoolchildren are often affected, missing classes and sometimes requiring hospitalization.

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Given this context, a strong national push for typhoid vaccination can save thousands of lives and prevent needless illness. Incorporating TCV into the Expanded Programme on Immunization (EPI) for all children could be a game-changing step. For travelers, healthcare workers and food handlers, booster doses can further strengthen community protection.

Benefits Beyond Disease Prevention

Vaccination against typhoid does more than just protect individuals. It also contributes to herd immunity, reducing the overall circulation of the bacteria in the community. Fewer infections mean fewer antibiotics used and that, in turn, slows the spread of drug resistance. Vaccination campaigns also help raise awareness about hygiene, food safety, and clean water, reinforcing broader public health goals.

From an economic perspective, typhoid vaccination is highly cost-effective. Treating a single hospitalized patient can cost many times more than providing preventive immunization. For low-income families, avoiding even one episode of severe illness can make a major difference in financial stability.

Safety and Public Confidence

Modern typhoid vaccines are safe and well-tolerated. The most common side effects are mild, slight fever or soreness at the injection site and they usually resolve within a day or two. In large-scale immunization drives across South Asia, no significant safety concerns have been reported. Still, public confidence is key. Transparent communication, health education, and strong advocacy from medical professionals can ensure that parents and communities fully understand the benefits of vaccination.

The Way Forward

To eliminate typhoid as a public health threat, vaccination must be paired with improvements in water, sanitation and hygiene (The "WASH" strategy). Clean drinking water, proper handwashing and safe food handling remain vital defenses. But in the meantime, while infrastructure continues to improve, vaccination offers immediate and reliable protection.

Health authorities, schools and media outlets all have a role to play. Public awareness campaigns should encourage parents to vaccinate their children and remind adults, especially food workers and healthcare personnel to keep their immunization status up to date. Policymakers should allocate sufficient budget and logistical support to integrate TCV into national immunization programs without delay.

Typhoid is an ancient disease, but it still thrives where water and sanitation challenges persist. We now have in our hands an effective tool to prevent it: the typhoid conjugate vaccine. As antibiotic resistance continues to rise, prevention is not just an option, it is a necessity. Pushing for widespread typhoid vaccination is a public health investment that saves lives, protects communities and secures a healthier future for generations to come.

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