



Mandate and Supplication of Typhoid Vaccine in Pakistan

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Dear Editor-in-Chief

With the failure of antibiotics and success story of chicken pox eradication, stakeholders are now intensifying their efforts towards primary prevention. The best example of this specific protection against disease, is immunization. Vaccine initiative credit goes to Edward Jenner (1798). The Expanded Programme on Immunization (EPI) was launched in Pakistan (1978) by the exertion of World Health Organization (1).

EPI has the vision to cover all vaccine preventable diseases (VPDs). In the beginning, EPI concentrated on females of child bearing age, to prevent the infants from tetanus. Later on focus shifted broadly towards tuberculosis, poliomyelitis, diphtheria, pertussis and measles. Hepatitis B vaccines are combined with diphtheria, tetanus and pertussis as a tetra-valent vaccine in 2006 (2). Hib vaccine had incorporated further into it in 2008 as penta-valent vaccine. In 2012, pneumococcal vaccine (PCV) was included in routine immunization for under two year old children. In 2015, inactivated polio vaccine (IPV) was introduced in EPI schedule of Pakistan. Rota virus vaccine became the 10th vaccine in EPI-regime in 2017 (3). Now, there is a mandate to embrace 11th vaccine for typhoid prevention as early as possible. Globally, two types of typhoid vaccines are available. The oral form is live attenuated vaccine in enteric coated capsules. Injectable form is intramuscular capsular polysaccharide vaccine. Unfortunately, neither vaccines are cov-

ered in EPI in Pakistan. So, currently not available free of cost (4).

Outbreak of extended drug resistance (XDR) typhoid is emerging threat in Pakistan. Typhoid fever is becoming resistant to different available antibiotics. Some cases only sensitive to imipenem now. Treatment cost is inflating day by day. Hospital stay is increasing. Evidence showed that more than 4000 cases have been prevailing in Karachi and Hyderabad only. Among them 78% cases were under ten year's old children (5). In the starting of 2018, local health department was sensitized. Emergency campaign was launched and end result shown that the anti-typhoid vaccine was efficacious and safe. There was no any adverse events after immunization (AEFI) has been observed among 99.58% children who have received injectable vaccine (6).

Therefore, it is highly recommended to include anti-typhoid vaccine in the immunization programme of Pakistan formally. For these efforts global community willingness and participation is highly warranted. This will decrease the unnecessary disease burden and improve the health of children in Pakistan.

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References

1. Gross CP, Sepkowitz KA (1998). The myth of the medical breakthrough: smallpox, vaccination, and Jenner reconsidered. *Int J Infect Dis*,3:54–60.
2. National EPI policy and strategic guidelines. Islamabad, Ministry of Health, Expanded Programme on Immunization. 2015.
3. Expanded Programme on Immunization. 2018. Typhoid: EPI. Available at: <http://www.epi.gov.pk/>. Accessed January 2, 2019
4. Bhutta ZA, Rosario Capeding M, Bavdekar A (2014). Immunogenicity and safety of the Vi-CRM197 conjugate vaccine against typhoid fever in adults, children, and infants in south and Southeast Asia: results from two randomised, observer-blind, age de-escalation, phase 2 trials. *Lancet Infect Dis*, 14: 119–129.
5. World Health Organization, 2016. Typhoid: WHO. Available at: <http://www.who.int/immunization/diseases/typhoid/en/>. Accessed December 10, 2018.
6. Aga Khan University, 2018. Typhoid Vaccine: AKUH. Available at: <http://www.aku.edu/>. Accessed December 28, 2018.