

Typbar TCV Vaccine

April 29, 2020

Context: Pakistan becomes first country to launch new typhoid conjugate vaccine (TCV)

- Pakistan introduced TCV in its national immunisation program against extensively drug-resistant (XDR) typhoid outbreak.
- The Typbar TCV vaccine was recommended by WHO's Strategic Advisory Group of Experts on Immunization (WHO-SAGE) in December 2017. WHO prequalified the vaccine in January 2018.
- The new vaccines have been provided by Gavi, the Vaccine Alliance, to the Pakistani government free of cost.
- India-made vaccine Typbar TCV- Bharat Biotech
- Typhoid is a serious illness caused by *Salmonella Typhi*, and is spread through contaminated food and water.
- Two other typhoid vaccines – polysaccharide typhoid vaccine and live, weakened typhoid vaccine – are already used commercially. But the efficacy of the vaccines to protect against typhoid is lower than the conjugate vaccine

Conjugate vaccine

- Vaccines are used to prevent diseases by invoking an immune response to an antigen (the foreign part of a bacteria or virus that the immune system recognizes).
- Attenuated or dead version of a bacteria or virus is used in the vaccine, so that the immune system can recognize the antigen later in life.
- Antigen of some bacteria does not elicit a strong response from the immune system, so a vaccination against this weak antigen would not protect the person later in life.
- Conjugate vaccine is one in which the antigen (which is

a polysaccharide in this case) is chemically linked to a carrier protein.

- Conjugate vaccines combine the weak antigen with a strong antigen as a carrier so that the immune system has a stronger response to the weak antigen.

GAVI

- GAVI is a global health partnership of public and private sector organizations dedicated to “immunisation for all”.
- It is supported by many organisations like Bill & Melinda Gates Foundation, the WHO, the World Bank, UNICEF