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## Pneumococcal Conjugate Vaccine

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### Why in News

The **Serum Institute of India Pvt. Ltd, Pune**, has been granted permission to manufacture the **first indigenously developed Pneumonia Conjugate Vaccine (PCV) i.e. Pneumococcal Polysaccharide**.

- The permission has been granted by the **Drug Controller General of India (DCGI)**, a drug regulatory authority.
- India is planning for the nationwide rollout of PCV under **Universal Immunisation Programme (UIP)**.

### Key Points

- **Description:** PCV prevents **pneumococcal disease**.
  - **Pneumococcal disease** refers to any illness caused by **pneumococcal bacteria**.
  - The vaccine is a mix of several bacteria of the **pneumococci family**, which are known to cause **pneumonia** — hence ‘conjugate’ is included in the name of the vaccine.
    - **Conjugate vaccines** are made using a **combination of two different components**.
  - It is used for **active immunisation** against **invasive disease and pneumonia** caused by *Streptococcus pneumoniae* in **infants**.
    - In **invasive diseases** bacteria invades parts of the body like blood fluid, brain and spinal cords.
  - It is administered **intramuscularly**, i.e **injected deep into the muscles**.
  - Earlier the demand for such vaccines were provided by licensed importers since the manufacturers were all based outside India.
- **Clinical Trials:** Institute has conducted the Phase I, Phase II and Phase III clinical trials of Conjugate Vaccine in India.
  - It has also conducted clinical trials in Gambia.

## **Pneumonia**

- Pneumonia is an **acute respiratory infection** of the lungs.
- **Cause:** It doesn't have one single cause – it can develop from either **bacteria, viruses or fungi in the air.**
- **Vulnerability:**  
Children whose **immune systems are immature (i.e. newborns)** or weakened – such as by undernourishment, or diseases like HIV – are more vulnerable to pneumonia.
- **Spread:**  
Pneumonia is **contagious** and can be spread through coughing or sneezing. It can also be spread through fluids, like blood during childbirth, or from contaminated surfaces.
- **Treatment:** Pneumococcal vaccines are vaccines against the bacterium ***Streptococcus pneumoniae*.**

## **Serum Institute of India Pvt. Ltd**

- Based in Pune, Maharashtra it is the **world's largest vaccine** manufacturer by number of doses produced and sold globally.
- Vaccines manufactured by the Institute are accredited by the **World Health Organization**, and are being used in around 170 countries across the globe in their national immunization programs, saving millions of lives throughout the world.

**Source: TH**