



## Expanding Cervical Cancer Prevention Initiatives

This editorial is based on [“How Indian women can rid themselves of cervical cancer”](#) which was published in Indian Express on 16/01/2024. The article discusses the positive reception of the Cervical Cancer vaccine initiative, emphasising the need for high-quality treatment, preventive measures, and palliative care to complement this development.

**For Prelims:** [Cervical Cancer](#), Population Based Cancer Registries (PBCRs), National Centre for Disease Informatics and Research, [Indian Council of Medical Research \(ICMR\)](#), [Sustainable Development Goals\(SDGs\)](#), [Universal Immunisation Programme \(UIP\)](#), [Human Papillomavirus \(HPV\)](#).

**For Mains:** Rising Cases of Different forms of Cancer in India and its impact on Health Sector.

The Government of India intends to initiate a three-phase vaccination drive against [Human Papillomavirus \(HPV\)](#) for girls aged 9-14, aiming to mitigate the risk of [cervical cancer](#). The vaccine also offers protection against the HPV strains that cause cancer of the anus, vagina and oropharynx. Additionally, it also protects against the HPV strains that are responsible for genital warts. The Serum Institute of India in 2023 had launched an indigenous HPV vaccine known as CERVAVAC.

### What is Cervical Cancer?

#### ▪ About:

- Cervical cancer develops in a woman's cervix. It is the 4th most common type of cancer among women, globally.
- Almost all cervical cancer cases (99%) are linked to infection with high-risk Human Papillomavirus (HPV), an extremely common virus transmitted through sexual contact.

#### ▪ Types of Strain:

- Persistent infections with certain high-risk [HPV strains](#) lead to nearly 85% of all cervical cancers.
- At least 14 HPV types have been identified as oncogenic (potential to cause cancer).
  - Among these, HPV types 16 and 18, considered to be the most oncogenic, have been found to be responsible for about 70% of all cervical cancer cases globally.

#### ▪ Causes:

##### ◦ Barriers to Early Detection:

- Lack of awareness, fear, and absence of early symptoms contribute to advanced-stage detection, resulting in high mortality rates.
- Women not being screened and seeking over-the-counter drugs as the first point of contact are major challenges.

##### ◦ Lack of Access to Formal Health Care:

- A study in Andhra Pradesh revealed that 68% of patients first sought traditional healers, and only 3% had received HPV vaccination.

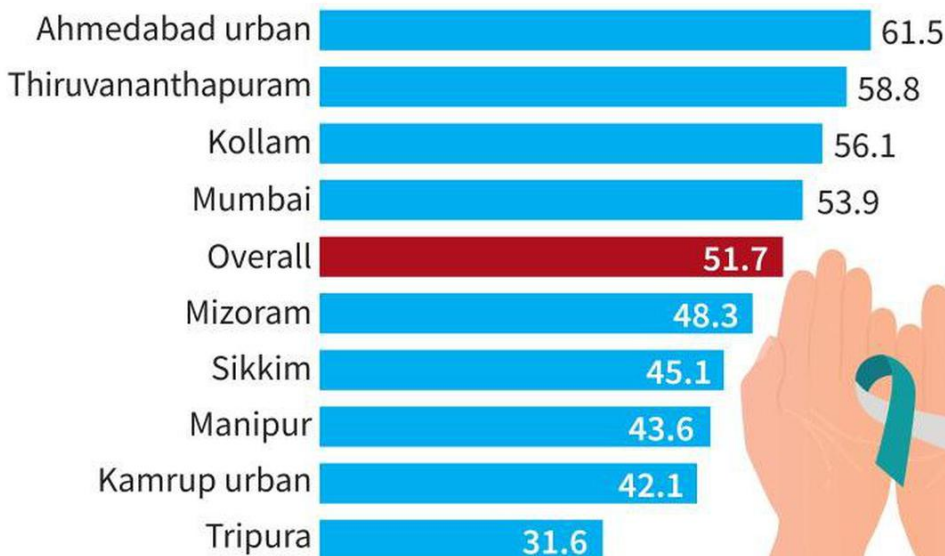
- Telangana anticipates a 28% increase in cancer cases, posing challenges in cancer care delivery.

#### ▪ India's Status:

- Cervical cancer is the second-most common cancer among women in India, mostly affecting the middle-aged.
- With 1,23,907 new cases and 77,348 deaths in the year 2022, **India contributed to one-fifth of the global burden.**

## // Survival rates

The chart shows the survival rate (%) for cervical cancer across the 11 Population Based Cancer Registries (PBCRs)



### What is CERVAVAC?

#### ▪ About:

- CERVAVAC is India's first indigenously developed quadrivalent human papillomavirus (qHPV) vaccine that is said to be effective against four strains of the virus - Type 6, Type 11, Type 16 and Type 18.
  - A quadrivalent vaccine is a vaccine that works by stimulating an immune response against four different antigens, such as four different viruses or other microorganisms.
- CERVAVAC is based on VLP (Virus-Like Particles), similar to the [Hepatitis B](#) vaccination.

#### ▪ Significance:

- After the **Drug Controller General of India's (DGCI)** approval, it enabled the government to procure vaccines in bulk in order to vaccinate around 50 million girls in the respective age group.
  - The vaccine is extremely effective only when it's administered before the first sexual intercourse.
- It has a significant potential to eliminate cervical cancer and it would be helpful if it will be included under [Universal Immunisation Programme \(UIP\)](#) vaccination efforts and offered at a lower cost than existing vaccinations.

#### ▪ Global Scenario:

- Existing two vaccines licensed globally are available in India — a quadrivalent vaccine (**Gardasil**, from Merck) and a bivalent vaccine (**Cervarix**, from GlaxoSmithKline) and are costly and **none of them are included in the national immunisation program.**

### What are the Government Initiatives Related to Cancer Treatment?

- [National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke](#)
- [National Cancer Grid](#)
- [National Cancer Awareness Day](#)
- [HPV Vaccine](#)

## What Steps Can be Taken to Eliminate Cervical Cancer?

- **HPV Vaccination:**
  - Persistent high-risk HPV infection, along with factors like low socioeconomic conditions and smoking, leads to cervical cancer.
    - Early detection through HPV vaccination, screening, and timely treatment can prevent and cure the disease.
- **Opportunity for Early Detection and Treatment:**
  - Cervical cancer has a 10–15 year pre-invasive phase, offering a window for early detection and outpatient treatment.
    - Early-stage management yields a cure rate exceeding 93%, highlighting the importance of timely interventions.
- **Elimination Potential of Cervical Cancer:**
  - Cervical cancer is the only non-communicable disease with the potential for elimination, aligning with the Sustainable Development Goal 3.4.
  - The [World Health Organisation \(WHO\)](#) sets targets for cervical cancer elimination, including 90% vaccination of girls by 15, 70% screening at 35 and 45, and 90% treatment for pre-cancer and cancer cases, aiming for fewer than four cases per 100,000 women.
    - It emphasises simple, scalable interventions like HPV vaccination, screening, and early diagnosis.
- **Government Initiatives for Cancer Screening:**
  - The Government of India implements cancer screening, including visual tests and HPV tests, in primary health centres.
  - Evidence-based management algorithms guide treatment, and indigenous kits and vaccines aid resource-scarce settings.
- **Role of Technological Advancements:**
  - Innovations like single-dose HPV vaccination, self-sampling for HPV testing, and [Artificial Intelligence \(AI\)](#) technologies enhance cervical cancer prevention.
    - These developments, along with increased HPV vaccine uptake, hold promise for resource-limited settings.
- **Urgent Need for Population-Level Awareness and Strategies:**
  - Addressing cervical cancer requires increasing awareness, promoting HPV vaccine uptake, overcoming hesitancy, implementing age-appropriate screening, and strengthening pre-cancer treatment processes.
    - Partnerships and capacity building are essential for success.
- **Comprehensive Approach to Strengthen Cervical Cancer Care:**
  - Consistent efforts are needed for accurate diagnosis, strengthened cancer registries, reduced financial burden, and robust health systems.
  - Connecting all care pathways, incorporating digital technologies, and fostering collaborations are vital for the successful elimination of cervical cancer.

## Conclusion

The alarming statistics of new cases and deaths highlight the urgent need for preventive measures. Early detection through screening and HPV vaccination presents a crucial opportunity, with a high cure rate when managed at early stages. The proposed targets by the WHO, coupled with government initiatives, provide a roadmap for comprehensive intervention. To achieve success, sustained efforts are required, including awareness campaigns, vaccine promotion, emphasising collaboration and innovative approaches to eliminate cervical cancer.

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**Drishti Mains Question:**

Discuss the significance of including the cervical cancer vaccine in the universal immunisation program, addressing challenges, and the role of HPV vaccination in India's public health strategy.

**UPSC Civil Services Examination, Previous Year Question (PYQ)**

**Q1. 'Mission Indradhanush' launched by the Government of India pertains to (2016)**

- (a) Immunization of children and pregnant women
- (b) Construction of smart cities across the country
- (c) India's own search for the Earth-like planets in outer space
- (d) New Educational Policy

**Ans: (a)**

**Q2. Consider the following statements: (2010)**

1. The Taxus tree is naturally found in the Himalayas.
2. The Taxus tree is listed in the Red Data Book.
3. A drug called "taxol" is obtained from Taxus trees and is effective against Parkinson's disease.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**Ans: (b)**