

Editorial

HPV Vaccination and Adolescent Health: Addressing Parental Concerns

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HPV Virus and Cervical Cancer

Human Papillomavirus (HPV) presents a formidable global health challenge, with cervical cancer emerging as a primary concern. Cervical cancer is preventable and curable if diagnosed at an early stage and treated promptly and adequately. It ranks as the fourth most common cancer among women worldwide, with approximately 604,000 new cases reported in 2020. Tragically, out of the estimated 342,000 deaths caused by cervical cancer that year, around 90% occurred in low- and middle-income countries.¹ India faces a substantial cervical cancer burden, ranking third globally in prevalence. According to GLOBOCAN 2020, cervical cancer accounts for 18.3% of all cancer cases, with a total of 123,907 reported incidents. It is also the second leading cause of death, with a mortality rate of 9.1%.² It was estimated that globally, 91% of HPV-related cancers in women were cervical cancers. The serotypes HPV 16, 18, and 52 account for 74% of cases, while the serotypes HPV 45, 31, 33, 52, and 58 account for 6%, 4%, 4%, 3%, and 2% of cervical cancer cases, respectively.³

Importance of HPV Vaccination

Cervical cancer disproportionately affects low- and middle-income countries where access to screening and treatment is limited. In recognition of this pressing challenge, WHO in 2018, undertook the resolution to eliminate cervical cancer as a public health problem. Subsequently, in 2020, a historic resolution (Resolution WHA73.2) was passed by the World Health Assembly and a global strategy was adopted to accelerate the elimination of cervical cancer as a public health problem and to meet its associated goals and targets for the period 2020–2030.⁴

The most effective way to prevent cervical cancer is by getting vaccinated against HPV. A meta-regression analysis across 195 countries observed it to be highly cost-effective and recommended introducing and expanding it among other countries.⁵ This is recommended for both females and males before they become sexually active, and it should be administered between the ages of 9 and 14 years.¹ The first vaccine was commercially available in 2006, with currently six prophylactic HPV

vaccines being licensed.³ The widespread implementation of HPV vaccination holds great potential for significantly reducing cervical cancer cases worldwide.

Each country should meet the 90–70–90 (HPV vaccination coverage (90%), screening coverage (70%), and access to treatment (90%)) targets to eliminate cervical cancer by 2030 (Immunisation Agenda 2030).⁶

Why is Adolescents' Health Important?

Human development from birth to adulthood is a long, dynamic process wherein adolescence is a stage marked by significant physical, cognitive, and emotional changes. Concurrently, this period involves indulgence in risk-taking behaviour and exploration of sexuality. Therefore, improving the health and well-being of adolescents is paramount for our future.⁷ However, delivering preventive healthcare services to adolescents presents a considerable challenge. Therefore, expanding immunisation services beyond infants into adolescence is a possible platform for the health sector to connect with this age group. Vaccination across the life course is also envisaged in the Global Immunisation Agenda 2030.⁸

Common Parental Concerns & Easing HPV Vaccine Hesitancy

The global progress of HPV vaccination introduction and coverage is a matter of concern. As of March 2022, 117 countries had introduced the HPV vaccine in their national immunisation programmes, representing only one-third of the global population of girls and 40% of the global burden of cervical cancer. In 2020, the estimated global coverage with a second dose in girls was only 13%.⁹ Apart from low coverage, there is an important issue of low acceptance due to the stigma surrounding the HPV vaccine, associating it with sexual activity and promiscuity. Parents also believe that the *“child is too young and the vaccine will promote sex”*.¹⁰ Awareness amongst adolescents regarding the HPV vaccine is limited and they are shy to discuss it.¹¹ Moreover, various factors contribute to the hesitancy, such as concerns regarding the safety and cost of the vaccine, lack of awareness, vaccine-related information deficits, health beliefs/ family decisional processes, and the perception of not considering themselves at risk.¹²

Therefore, addressing these concerns requires a comprehensive approach, including:

- Developing clear and timely communication protocols to provide accurate information about the vaccine
- Engaging with communities and building trust to dispel misconceptions
- Acknowledging and addressing parental concerns about its safety and efficacy
- Offering culturally sensitive approaches to vaccine delivery

- Empowering adolescents with knowledge about HPV and the vaccine

Success Stories

While global HPV vaccine coverage remains suboptimal, some countries have successfully integrated the vaccine into their national immunisation schedules. The reasons behind their success are high political commitment as shown by the Ministry of Health (Malawi); effective comprehensive community sensitisation using multiple modalities, including local media, well in advance of vaccination days, adopted by Bolivia; and choosing appropriate delivery platforms such as school-based vaccine delivery and testing health facility-based delivery with outreach to schools and communities, as seen in Tanzania.¹³

In India, efforts have been initiated to introduce the HPV vaccine, with the introduction of bivalent and quadrivalent vaccines licensed in India in 2008, followed by HPV vaccination demonstration projects in Andhra Pradesh and Gujarat in 2009. Subsequently in 2016 and 2017, the Delhi & Punjab Governments also initiated HPV vaccination drives in a few districts but later discontinued them. Recently, in September 2022, the Serum Institute of India (SII) launched Cervavac, India's first indigenously made HPV vaccine.¹⁴

However, in 2018, Sikkim successfully introduced vaccination drives which are carried out in schools in the state, achieving more than 95% of HPV vaccination coverage among targeted girls for both doses via two campaigns.¹⁵ The success of Sikkim's model of HPV vaccination can be attributed to several key factors, including strong political commitment, bottom-up microplanning, high-level oversight, meticulous operational planning, distribution of teachers' guidebook on HPV, adequate vaccine supply and sustainability, exceptional collaboration between health and education sectors at all levels, ownership of the programme by the education department, and robust advocacy and social mobilisation strategies.¹⁶

Conclusion

To achieve the WHO's goal of 90% HPV vaccination coverage by 2030, India must prioritise addressing stigma, misconceptions, and lack of understanding surrounding the vaccine. Public health initiatives should focus on organising cancer awareness camps and comprehensive educational efforts. Understanding the sociocultural perspectives and contextual realities of the target audience is essential for successful vaccine implementation. By empowering parents and communities with accurate information and fostering trust, India can pave the way for nationwide HPV vaccination and make significant progress toward eliminating cervical cancer.

Conflict of Interest: None

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