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GUEST EDITORIAL

Human Papillomavirus (HPV): Ethically Expanding the Preventive Lens Beyond Gender

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Human Papillomavirus (HPV) is a significant public health issue worldwide, responsible for a wide range of diseases from benign lesions to cancer. It is the most common sexually transmitted infection globally, and more than 80% of sexually active people are likely to get infected with HPV at some point in their lives [1]. The virus has over 200 genotypes, with about 14 considered high-risk types, mainly HPV-16 and HPV-18, which cause nearly 70% of cervical cancers [2]. In Pakistan, cervical cancer remains a major problem, with an estimated 5,000 new cases diagnosed every year, often at advanced stages due to low screening rates and limited awareness among women [3,4]. While HPV has traditionally been linked to cervical cancer in women, new evidence shows its increasing impact among men. HPV infection can cause genital warts, anal cancer, and oropharyngeal cancers in men, especially with high-risk types 16 and 18. The World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) now recommend gender-neutral vaccination for both boys and girls aged 9–14 years [5,6]. Studies show that vaccinating boys not only protects them from HPV-related diseases but also boosts herd immunity, reducing how quickly the virus spreads in communities [7]. This inclusive approach is especially important in countries like Pakistan, where awareness about men's risk factors for HPV remains limited, and vaccination programs are still mainly focused on women.

Recent data show differences in HPV prevalence across provinces in Pakistan. Punjab remains the highest in HPV-positive cases, mainly due to better diagnostic access and larger population density [8]. Sindh, especially Karachi, exhibits a rising trend of HPV-related oropharyngeal lesions, while Khyber Pakhtunkhwa and Balochistan experience underreporting because of limited laboratory infrastructure [9, 10]. Gilgit-Baltistan and Azad Jammu & Kashmir (AJK) lack consistent data, highlighting the need for nationwide surveillance programs. Recent studies indicate that about 6–10% of healthy women and 3–5% of men carry high-risk HPV strains in urban Pakistan, emphasizing the need for comprehensive intervention programs [11]. Maintaining gender equity actually fulfills the moral responsibility of Protection. Providing the HPV vaccine to girls only will introduce the ethical question of justice and gender equity. Since the vaccine not only protects against cancer cervix, but many other malignancies also caused by this virus. The disease spectrum includes cervical cancer, Head and Neck Squamous Cell Carcinomas (HNSCCs), and malignancies of the vagina, vulva, anus, and penis [12]. So, limiting it for girls only implicitly gives the moral and medical responsibility for disease prevention to women only. Whereas men, who are equally affected and transmit HPV, will remain bound on the outside of this preventive framework. This will not only give rise to inequity among the genders but will also weaken the achievement of herd immunity. The exclusion of male gender from the vaccine availability will also enforce the masses to gain the opinion that women should bear the burden of such sexual health risks, even in the background of the fact that infection originates through shared behavior between the two [13].

In a society where healthcare-seeking behaviors vary significantly by gender, an unequal vaccine policy fails to address both biological and social health determinants. Considering these developments, this editorial stresses the urgent need for a comprehensive HPV prevention strategy in Pakistan that includes both genders. By including HPV vaccination for boys in current immunization programs and enhancing screening and awareness efforts, Pakistan can progress toward WHO's 2030 goal of eliminating cervical cancer and lowering HPV-related cancers across the population.

In 2024, WHO reaffirmed its call for countries to adopt gender-neutral HPV vaccination policies as part of the global effort to eliminate HPV-related cancers by 2030 [14]. The U.S. CDC's 2025 report highlighted increasing cases of HPV-related oropharyngeal cancer among young men, emphasizing the importance of early vaccination [15]. Nationally, Pakistan's Expanded Program on Immunization (EPI) has started considering pilot HPV vaccination initiatives in Punjab and Sindh, supported by Gavi and UNICEF [16]. Local media coverage in 2025 showcased renewed efforts by provincial health departments to include HPV awareness sessions in schools and universities, aiming to destigmatize vaccination and promote participation among both genders [17].

HPV-related diseases are a preventable cause of illness and death. Expanding vaccination efforts to include boys along with girls can provide significant public health gains. A comprehensive strategy that combines vaccination, screening, education, and advocacy is crucial to lowering HPV prevalence and ensuring fair health outcomes in Pakistan.

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