

Male HPV Vaccination in Pakistan: An Overlooked Preventive Strategy

Omaima Ibrahim¹

¹Department of Medicine, Dow University of Health Sciences.

¹Corresponding Author Email: <u>ibrahimomaima04@gmail.com</u>

Dear Editor,

Human papillomavirus (HPV) vaccination has been a breakthrough in cancer prevention. In Pakistan, the recent introduction of HPV vaccination for girls is a great milestone in the fight against cervical cancer. However, limiting HPV immunization to females overlooks a critical matter: HPV also has a considerable disease burden in men, including oropharyngeal, anal, and penile cancers, as well as anogenital warts [1].

A gender specific approach risks spreading HPV transmission dynamics and leaves men unprotected against vaccine-preventable malignancies. Evidence from high-income countries demonstrates that male vaccination reduces precancerous lesions, and genital warts. Importantly, it accelerates herd protection and yields equal benefits across genders. Modeling studies suggest that including boys becomes particularly impactful in settings where female vaccine uptake is suboptimal—an unfortunately common challenge in low- and middle-income countries (LMICs) such as Pakistan [2].

Pakistan's epidemiological profile underscores the urgency of a broader strategy. HPV prevalence remains substantial, with emerging data suggesting growing burdens of head and neck cancers linked to high-risk HPV genotypes. Yet, the national Expanded Program on Immunization (EPI) currently excludes boys, effectively overlooking half the at-risk population. This omission not only delays the possibility of HPV elimination but also risks embedding gender inequities into public health policy [3].

Operational feasibility is not impossible. Pakistan has a robust immunization infrastructure and extensive experience from polio eradication campaigns in reaching children through community- and school-based delivery models. The involvement of religious and community leaders, who played fundamental roles in overcoming conflict during polio efforts, can similarly cause vaccine hesitancy for HPV. WHO's authorization of a single-dose HPV schedule further enhances cost-effectiveness and feasibility, making gender-neutral vaccination more within reach than ever [4,5].

Equity and ethics demand urgent action. Restricting HPV vaccination to girls inadvertently reinforces the misconception that HPV is a "women's disease." This framing both stigmatizes women and neglects men's right to protection. A gender-neutral program would normalize vaccination, reduce stigma, and better reflect the shared responsibility of preventing sexually transmitted infections [1,6].

Pakistan stands at a decisive moment. By expanding HPV vaccination to include boys, the country can not only safeguard male health but also accelerate the collective path toward HPV elimination. This shift would align national policy with global best practices, reduce long-term cancer burden, and signal a commitment

1



to equity in preventive healthcare. Policymakers, donors, and health authorities should urgently consider a phased inclusion of boys in the EPI, coupled with surveillance, public engagement, and locally tailored cost-effectiveness analyses.

In conclusion, Male HPV vaccination is not an optional luxury—it is a public health imperative. Delaying its adoption risks avoidable morbidity, mortality, and inequity. Pakistan's HPV strategy must be recalibrated now to protect all citizens equally and to move decisively toward a cancer-free future.

Conflict of Interest: None

Ethical Consideration: None

Declaration of AI Use: This letter was drafted and revised with the assistance of an AI language model (ChatGPT, GPT-5, OpenAI) for grammar refinement, structural reorganization, and clarity enhancement. All intellectual content, interpretation, and final approval of the text are solely the responsibility of the authors.

Funding: None

REFERENCES

- 1. Giuliano AR, Palefsky JM, Goldstone S, et al. Efficacy of quadrivalent HPV vaccine against HPV infection and disease in males. *N Engl J Med*. 2011;364(5):401-411. doi:10.1056/NEJMoa0909537
- 2. Drolet M, Bénard É, Pérez N, Brisson M. Population-level impact and herd effects following the introduction of HPV vaccination programmes: updated systematic review and meta-analysis. *Lancet*. 2019;394(10197):497-509. doi:10.1016/S0140-6736(19)30298-3
- 3. International Agency for Research on Cancer (IARC). Pakistan: Human Papillomavirus and Related Cancers, Fact Sheet 2023. Lyon: IARC; 2023. Available at: https://gco.iarc.fr/today/data/factsheets/populations/586-pakistan-fact-sheets.pdf
- 4. World Health Organization. Human papillomavirus vaccines: WHO position paper, December 2022. Wkly Epidemiol Rec. 2022;97(50):645-668.
- 5. Gavi, the Vaccine Alliance. Pakistan introduces HPV vaccine into routine immunisation. Gavi News, September 2025. Available at: https://www.gavi.org/news/media-room/pakistan-introduces-hpv-vaccine
- 6. Machalek DA, Poynten M, Jin F, et al. Anal human papillomavirus infection and associated neoplastic lesions in men who have sex with men: a systematic review and meta-analysis. *Lancet Oncol*. 2012;13(5):487-500. doi:10.1016/S1470-2045(12)70080-3