

HPV Vaccination and LGBTQ Populations: A Critical Public Health Imperative

Running Title: HPV Vaccination and LGBTQ Populations

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Abstract: Human papillomavirus (HPV) remains the most common sexually transmitted infection worldwide, with significant oncogenic potential. While global HPV vaccination campaigns have predominantly focused on cisgender females, growing evidence highlights disproportionately higher risks among LGBTQ populations, particularly men who have sex with men (MSM), transgender individuals, and lesbian and bisexual women. Despite this, vaccine uptake among these groups remains suboptimal due to systemic, structural, and informational barriers. This underscores the need for inclusive, equity-based public health policies that prioritize HPV vaccination for LGBTQ individuals. Gender-neutral vaccination policies, culturally competent healthcare provision, and community-based interventions are essential to achieving effective HPV control and cancer prevention. Addressing these gaps is crucial and necessary.

Keywords: High-risk groups, Human papillomavirus, LGBTQ, Vaccination.

Introduction

Human papillomavirus (HPV) affects over 80% of sexually active individuals at some point in their lives and is responsible for a wide range of malignancies, including cervical, anal, penile, vulvar, vaginal, and oropharyngeal cancers [1]. Vaccines such as Gardasil and Cervarix offer protection against the most oncogenic strains of HPV and have the potential to significantly

reduce HPV prevalence if administered widely [2]. However, most vaccination programs continue to target cisgender adolescent girls, leaving out significant segments of the population, including LGBTQ individuals, who remain at high risk.

Men who have sex with men (MSM), particularly those living with HIV, exhibit alarmingly high rates of anal HPV infection and anal cancer. The prevalence of anal HPV infection among HIV-positive MSM exceeds 90%, and the incidence of anal cancer in this group is more than 100 times higher than in the general male population [3]. Transgender women engaging in receptive anal intercourse and transgender men with retained cervixes are also at risk for HPV-related malignancies [4].

Lesbian and bisexual women are often wrongly perceived to be at negligible risk. However, HPV can be transmitted through genital contact, shared sex toys, and past heterosexual interactions. These women are frequently under-screened and under-vaccinated, partly due to misinformation or lack of provider awareness [5].

Barriers to Vaccination

HPV vaccination among LGBTQ individuals is hindered by a confluence of barriers. First, public health messaging has historically been gendered, focusing exclusively on girls and cervical cancer prevention. This excludes individuals who do not identify as female or are not perceived as part of the traditional target group [6]. Consequently, many LGBTQ individuals may not perceive the vaccine as relevant to their health.

Second, healthcare discrimination and stigma remain significant obstacles. LGBTQ individuals frequently report experiencing insensitive or discriminatory care, which leads to delayed or avoided interactions with the healthcare system, including missed opportunities for HPV vaccination [7]. Many providers are

insufficiently trained in LGBTQ health issues and fail to recommend the vaccine appropriately [8].

Additionally, LGBTQ youth often face structural barriers such as homelessness, lack of health insurance, and estrangement from families, all of which reduce access to preventive healthcare services like HPV vaccination [9].

A Roadmap for Inclusion

To bridge this gap, public health systems must adopt inclusive, evidence-based interventions:

1. ***Gender-Neutral Vaccination Policies:*** Countries with gender-neutral vaccination programs have demonstrated reductions in HPV prevalence and associated cancers across all genders [10]. Universal vaccination removes stigma and simplifies program implementation.

2. ***Targeted and Inclusive Public Messaging:*** Health promotion campaigns must explicitly address LGBTQ audiences, clearly stating that HPV affects all genders and sexual orientations. Community partnerships can help design messages that resonate.

3. ***Training Healthcare Providers:*** Medical professionals should be equipped with training in culturally competent LGBTQ healthcare. Clinical guidelines must emphasize the need to offer HPV vaccination to MSM, transgender individuals, and others in the LGBTQ spectrum [11].

4. ***Integration with Gender Affirming Care:*** HPV vaccination should be seamlessly integrated into gender-affirming care services for transgender individuals, respecting patients' identities

and ensuring continuity of preventive care [12].

5. *Community-Led Initiatives:* Partnering with LGBTQ organizations to offer vaccines in affirming, low-barrier environments can improve access and trust. School-based and community health programs are effective avenues, especially for at-risk youth.

6. *Research and Data Collection:* More robust data on HPV burden, vaccine coverage, and outcomes in LGBTQ populations are needed to inform tailored interventions and secure sustainable funding [13].

Conclusion

HPV-related disease continues to pose a significant threat to LGBTQ individuals, particularly MSM and transgender populations. The continued exclusion of these groups from vaccination efforts represents a glaring public health oversight. As global health agencies strive toward eliminating cervical and other HPV-related cancers, inclusion must be the cornerstone of progress. HPV vaccination for LGBTQ populations is not merely an epidemiological necessity; it is a matter of health equity and human dignity. This is not a future priority; it is the need of the hour.

Ethical Approvals

None

Conflict of Interest

None

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