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HPV Vaccination in South Asia: Progress, Challenges, and the Path Forward

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Introduction

Human papillomavirus (HPV) is a leading cause of cervical cancer, a major public health issue worldwide. In South Asia—which includes India, Bangladesh, Nepal, Bhutan, Sri Lanka, Pakistan, Afghanistan, and the Maldives—the burden of cervical cancer is particularly high. This is largely due to limited screening initiatives, low vaccination coverage, and health system disparities. This article offers a comprehensive overview of the current status of HPV vaccination across South Asia, highlighting recent advancements, ongoing challenges, and strategic recommendations for enhancing vaccine uptake.

Cervical Cancer Burden in South Asia

According to the World Health Organization (WHO), South Asia contributes significantly to the global cervical cancer burden:

- **India:** ~127,000 new cases annually
- **Bangladesh:** ~8,068 new cases
- **Nepal:** ~2,824 new cases
- **Sri Lanka:** ~1,451 new cases
- **Pakistan:** ~6,108 new cases

These figures underscore the critical need for robust prevention strategies, particularly the widespread implementation of HPV vaccination.

HPV Vaccination: Country-wise Overview

Bangladesh

In **December 2024**, Bangladesh completed the final phase of a nationwide HPV vaccination campaign across all divisions, including Barisal, Chittagong, Khulna, Mymensingh, Rajshahi, Sylhet, and Rangpur. Approximately **5.6 million adolescent girls aged 10–14** were vaccinated, achieving a remarkable **93%**

coverage. The campaign effectively targeted both **in-school and out-of-school girls**, ensuring equity in access.

The HPV vaccine has now been integrated into Bangladesh's **routine immunization program**, focusing on **Grade 5 girls and 10-year-old girls not enrolled in school**.

India

As of **May 2025**, India is actively working to include the HPV vaccine in its **National Immunization Programme (NIP)**. Despite launching its indigenous vaccine **Cervavac** in 2022—an initiative expected to improve affordability and supply—nationwide coverage remains **below 6%**. Policy efforts are currently underway to establish a uniform rollout.

Sri Lanka

Sri Lanka introduced the HPV vaccine into its **National Immunization Programme in 2017**, targeting girls aged 10–14. Delivered primarily through **school-based programs**, the country has built one of South Asia's most effective vaccination frameworks. As of **May 2025**, Sri Lanka maintains a national coverage rate of approximately **82%**.

Nepal

Nepal has made significant progress in HPV vaccination. Following earlier pilot initiatives supported by **GAVI [Global Alliance for Vaccines and Immunization]**, the vaccine is now being administered nationwide as part of the government's strategy to reduce cervical cancer incidence. The program has shown encouraging results, particularly in urban and semi-urban areas.

Pakistan

As of **May 2025**, Pakistan has yet to incorporate the HPV vaccine into its **national immunization schedule**. While small-scale pilot programs have been conducted and policy-level discussions are ongoing, a countrywide rollout remains pending due to **political, financial, and awareness-related barriers**.

Other South Asian Countries

- **Bhutan:** A regional leader with consistent **>90% coverage** through successful school-based vaccination programs.
- **Maldives:** Recent government-led initiatives show promise for achieving high coverage in the near future.
- **Afghanistan:** Faces serious challenges such as conflict, poor health infrastructure, and limited public awareness, hindering vaccination efforts.

Key Challenges in HPV Vaccine Implementation

1. **Limited Awareness:** Many communities lack knowledge about HPV and its link to cervical cancer.
2. **Cultural and Religious Misconceptions:** Fears around promoting early sexual activity deter vaccine acceptance.
3. **High Vaccine Costs:** Although costs have historically been a barrier, locally produced vaccines like India's **Cervavac** are shifting the landscape.
4. **Weak Healthcare Infrastructure:** Rural and underserved areas often lack the logistics for mass immunization.
5. **Policy Gaps and Political Will:** Delayed policy adoption and insufficient government prioritization remain major bottlenecks.

Recent Successes and Positive Developments

- **Bangladesh:** Achieved 93% coverage through inclusive, division-wide campaigns.
- **India:** Introduction of **Cervavac** is a significant milestone, expected to increase coverage.
- **Nepal:** Successful transition from pilot projects to national rollout.
- **Bhutan:** Continues to serve as a regional exemplar with sustained high coverage.
- **GAVI Support:** Instrumental in supporting demonstration programs in Nepal, Bangladesh, and Pakistan.

Recommendations for Advancing HPV Vaccination in South Asia

- **Develop and Strengthen National Policies:** Formalize HPV vaccine inclusion in immunization programs across all countries.
- **Community Engagement:** Involve educators, religious leaders, and healthcare professionals to build trust and improve outreach.
- **Public Awareness Campaigns:** Dispel myths through targeted educational initiatives, especially in rural areas.
- **Affordable Vaccine Access:** Encourage public-private partnerships and leverage local manufacturing to reduce costs.
- **School-Based Delivery Models:** Proven to be highly effective; should be replicated across the region.
- **Monitoring and Evaluation:** Invest in data systems to track coverage, identify gaps, and inform policy decisions.

Conclusion

HPV vaccination presents a transformative opportunity to reduce cervical cancer incidence across South Asia. While countries like Bangladesh, Bhutan, Nepal, and Sri Lanka have made commendable progress, others such as India and Pakistan face persistent challenges. Accelerating progress toward WHO's 2030 goal of eliminating cervical cancer as a public health problem will require **political commitment, sustained funding, community awareness, and regional collaboration**.

References

1. World Health Organization. (2022). *Cervical Cancer Country Profiles*. <https://www.who.int>
2. International Agency for Research on Cancer (IARC). *GLOBOCAN 2020*. <https://gco.iarc.fr/today>
3. GAVI, the Vaccine Alliance. *HPV Vaccine Programs*. <https://www.gavi.org>
4. PATH. (2023). *HPV Vaccination in South Asia: Lessons from Demonstration Programs*.
5. Indian Council of Medical Research. (2023). *Cervavac and Indigenous Vaccine Production*.
6. Ministry of Health and Family Welfare, Bangladesh. (2024). *National HPV Campaign Reports*.
7. Ministry of Health, Sri Lanka. (2025). *Immunization Program Data*.
8. Ministry of Health and Population, Nepal. (2025). *HPV Vaccine Implementation Update*.