

National Introduction of HPV Vaccination in Low- and Middle-Income Countries: Lessons Learned from Formal Post-Introduction Evaluations



As of November 2020, 59 low- and middle-income countries (LMICs) are providing HPV vaccine to eligible girls between the ages of 9 and 14 years of age through schools, health facilities, and outreach sessions in communities. Previous research by the London School of Hygiene and Tropical Medicine (LSHTM) and PATH documented success factors and barriers experienced during 60 HPV pilot or demonstration programs in 46 LMICs. Whether national introduction of HPV vaccines in LMICs have experienced the same success factors and barriers have yet to be collated across countries.

Table 1: Overview of secondary data from HPV post-introduction evaluation (PIE) reports from 17 LMICs.

WHO regional office	Europe	Africa	South-East Asia	Western Pacific
	5	7	4	1
World Bank 2019 income group	LIC	LMIC	UMIC	HIC*
	4	6	6	1
Scale of introduction	National phase		Sub-national phase	
	13		4	
Gavi status	Gavi		Non-Gavi	
	10		7	
Vaccine eligibility	Single age cohort		Multi-age cohort	
	10		7	
Primary vaccination location	School	Health facility	Outreach site	
	12	4	1	
Introduction year	2009 to 2019			

*Classified as UMIC during year of introduction

Study overview

To better understand the success factors and barriers to introducing the HPV vaccine at a national scale, PATH, in collaboration with the World Health Organization (WHO), undertook a cross sectional descriptive study of secondary data from HPV post-introduction evaluation (PIE) reports from a mix of 17 LMICs. Using a standardized form, planning and implementation data were extracted for 18 programmatic areas documented in countries' PIE reports.

Programmatic areas:

- Vaccination strategy
- Planning
- Enabling environment
- Delays in planning phase
- Training program
- Training materials
- Trainee knowledge & Appreciation
- Communication / Social mobilization
- Management of community concerns
- Consent process
- Community knowledge
- Vaccine delivery
- Coverage disparities
- Out-of-school girls
- Drop-out
- Reporting & Data management
- Supervision
- Financing

For each programmatic area, the country was categorized as “success,” “average,” or “challenge” using the following criteria:

Success: PIE’s description of subtheme notes a smooth process and includes all necessary aspects of that programmatic area; PIE does not describe any delays or difficulties.

Average: PIE’s description of subtheme notes a smooth process with only a few difficulties; difficulties noted did not greatly impede implementation and/or coverage.

Challenge: PIE notes multiple difficulties within the subtheme; PIE narrative describes the area as impeding implementation and/or coverage.

Patterns in programmatic performance were analyzed to identify common success factors and barriers and any apparent relationship to the two-dose HPV vaccine coverage reported for the introduction year.

HPV vaccination as a multifaceted system

There was wide a diversity of experiences with countries that reported their national introduction of HPV vaccination. No single pattern of success elements or program challenges could be identified. Planning, creating a positive enabling environment, and training were more frequently assessed as successful based on the predefined criteria. Countries more frequently reported challenges with coverage disparities, financing, and delays in planning.

There was no direct correlation between success factors and high coverage. Countries with high coverage in their introduction year still reported challenges, and low-coverage countries still reported successes. There were multiple ways in which countries achieved high coverage, highlighting a variety of country contexts and vaccination strategies that resulted in successful introduction of HPV vaccines.

Common success factors

- ✓ Strong political commitment
- ✓ Thoughtful integration with existent school-based health programs*
- ✓ Coordination between Ministry of Health and Ministry of Education at national and local levels
- ✓ Timely planning and detailed microplanning
- ✓ Refresher trainings prior to second dose*
- ✓ Advocacy via highly visible channels (e.g., launch events, radio/TV shows, First Lady)*
- ✓ Training of healthcare workers and teachers to answer questions and combat rumors
- ✓ Timely distributions of vaccines and funds to local levels

**Denotes new lesson from national HPV introduction*

Common barriers to success

- ! Poor microplanning
- ! Poor coordination between government sectors and partners
- ! Failure to train/orient ALL pertinent actors
- ! Lack of refresher trainings *
- ! Lack of buy-in from healthcare workers
- ! Poor management (and anticipation of) widely circulating rumors / vaccine hesitancy. Poorly developed crisis communication plans and insufficient training on communicating vaccine safety
- ! Limited range of communications activities
- ! Funding challenges, including delays in distribution of funds and budget shortages
- ! Poor timing of vaccination sessions during rainy seasons or school holidays*

Among these 17 LMICs that introduced HPV vaccine nationally, the success factors and barriers confirm and reinforce lessons learned from initial introductions, pilots and demonstration programs that have been described in the literature.¹ High level advocacy, deliberate integration with any existing school health platform, and refresher trainings for health workers prior to administration of the second dose were noteworthy new lessons from these evaluations. Importantly, these findings also confirm the HPV introduction guidelines from WHO², which outline similar advice to countries for successful program elements. Countries that are planning or considering a future introduction of HPV vaccines are well-placed to achieve success by incorporating these lessons for what works and avoiding what does not work in their own HPV introduction plans.

References

1. London School of Hygiene & Tropical Medicine, PATH. HPV Vaccine Lessons Learnt. Seattle: PATH; 2016. Available at <https://www.path.org/resources/hpv-lessons-learnt/>.
2. World Health Organization. Guide to Introducing HPV Vaccine into National Immunization Programmes. Geneva: WHO; 2016. Available at <http://apps.who.int/iris/bitstream/handle/10665/253123/9789241549769-eng.pdf;jsessionid=2BFF2E029D80831128488FE706CEAA9E?sequence=1>.