



ACHIEVEMENTS



HPV Vaccine Lessons Learnt & Recommendations

# Achievements

The introduction of human papillomavirus (HPV) vaccine has the potential to save the lives of millions of women and girls worldwide. Based on a review conducted by the London School of Hygiene & Tropical Medicine and PATH, this brief highlights findings, key lessons and recommendations relevant to the theme of **HPV vaccination achievements**.

## Findings and key lessons

### VACCINE COVERAGE

Fifty-one demonstration projects and 9 national programmes of a total of 92 HPV vaccine delivery experiences had data on final dose coverage: 55 included a school component and 5 used health facilities only, with or without outreach. Coverage was defined as the total number of girls receiving all HPV doses out of the total estimated eligible population. In general, coverage was good, with 83% of delivery experiences reporting 70% coverage or higher. No project/programme reported less than 50% coverage. Of those reporting coverage, 50 used a three-dose schedule and 10 used a two-dose schedule (revised recommendations from the World Health Organization for the two-dose schedule were released in late 2014).

Of the five projects/programmes that vaccinated in health facilities (with or without outreach), reported coverage was lower than those that included schools. One national programme that employed different strategies over a five-year period found that school-based delivery resulted in 90% coverage, compared with 73% coverage using health-facility-based delivery.



**Key lesson:** Achieving high HPV vaccine coverage is feasible in low- and middle-income countries.



**Key lesson:** Vaccine delivery strategies that included a school-based component resulted in higher coverage, compared with those that only used health facilities for vaccinations.



PATH/Scott LaMontagne

### UPTAKE AND DROPOUT

Vaccine uptake (first-dose coverage) reported by 56 delivery experiences ranged from 64% to greater than 100%. Dropout rates (proportion of initiators who did not receive all doses) were reported by 54 delivery experiences: in 31 of them, the dropout rate was 10% or less; in 19 experiences, the dropout rate was between 11% and 20%; and 5 delivery experiences reported a dropout rate between 21% and 30%.

Several factors helped with tracking doses, including vaccination registers (electronic or manual), immunisation cards, school staff involvement and reminders through health workers, churches and community forums.



**Key lesson:** Vaccination registers, immunisation cards and utilisation of community members facilitated tracking girls to ensure completion of all vaccine doses.

### FACTORS CORRELATED WITH HIGH COVERAGE

Data from 60 delivery experiences showed that factors correlated with high coverage ( $\geq 70\%$ ) included using schools as a location for vaccinations, leadership by the Expanded Programme on Immunization, planning and implementing in collaboration with education ministries and departments at national and subnational levels, and including vaccination opportunities for out-of-school and absentee girls. Other factors included comprehensive social mobilisation that deployed 'credible influencers', such as health



workers and teachers, and vaccination registers and cards. Vaccination by grade was reported to be logistically easier to implement than vaccination by age, when using schools.



**Key lesson:** Strategies that included a school-based delivery component achieve high coverage due to the ability to reach a large number of eligible girls at the same time and place. (There was little experience of health-facility-only delivery strategies.)



**Key lesson:** Involving the national immunisation programme and education sector at national and local levels during planning and implementation was critical for high coverage.



**Key lesson:** Other factors associated with high coverage included using vaccination registers and cards and social mobilisation that deployed credible influencers.



**Key lesson:** There was initial evidence that two-dose schedules were easier to implement compared with three-dose schedules.

## FACTORS CORRELATED WITH LOW COVERAGE

Among 60 delivery experiences, lower coverage was observed in some of those using only health facilities, those that did not effectively coordinate and plan vaccinations with schools, and where rumours led schools to refuse vaccination. Several delivery strategies with low coverage also noted delays in receiving funds for social mobilisation activities and vaccinations. Not providing a second opportunity for girls who missed the first dose was also noted as a factor correlated with decreased coverage.



**Key lesson:** High coverage may be harder to achieve in urban areas due to more exposure to negative media, greater mobility in the population and difficulty in enumeration compared with rural areas.

## VACCINE COVERAGE DATA COLLECTION AND REPORTING

Coverage data accuracy was variable, and only 60 of 92 delivery experiences described how they recorded and reported data. Some reported the number of girls vaccinated out of the target population, while others only reported a percentage. Estimates of the target population were variable and influenced by a wide range of data sources. How well health workers, teachers and parents understood vaccination eligibility criteria also influenced the quality and accuracy of coverage data.

Seventeen delivery experiences in 13 countries reported coverage data from population-based surveys. These were considered to be more accurate and reliable measures of HPV vaccine coverage, and were used to validate estimates from administrative data.

Data collection was reported to be challenging due to the unique target population, the need to track multiple doses for each girl, a lack of standardized forms and harmonization with routine vaccination forms, and difficulties in accurately recording age. Variable requirements by donors for grade-specific and age-specific coverage data also presented challenges.



**Key lesson:** Data collection and achieving data accuracy posed challenges for most countries, based on a range of factors specific to HPV vaccination.



## Recommendations

Based on country experience, decision-makers wanting to increase coverage for future HPV vaccination programmes should:

1. **Conduct joint planning with the national immunisation programme and education sector at national and local levels well in advance of vaccine launch.** This will ensure well-coordinated activities and more accurate data on the target population.
2. **Distribute funds early for planning, mobilisation and implementation activities.** Delays negatively affect coverage.
3. **Offer vaccination in schools because it is likely to maximize** Ensure that vaccination opportunities are in place for absentee and out-of-school girls.
4. **Clearly define eligibility criteria for efficient delivery in schools.** Grade-based eligibility criteria are easier to implement but can be challenging to use when calculating coverage. Age-based eligibility criteria facilitate enumeration and coverage calculations but can be more disruptive in schools.
5. **Engage teachers, community health workers and the wider community to identify out-of-school or absentee girls and track girls between doses.** Community involvement increases uptake and completion of all doses.
6. **Carefully monitor and evaluate coverage, including target numbers, doses delivered and age of the girl.** These are important in order to understand whether approaches are effective or changes are needed during the project/programme.



PATH/Le Thi Nga

**About this project:** Since 2007, countries have been gaining knowledge about how best to deliver HPV vaccines through demonstration projects and national introductions. To aid decision-makers, the London School of Hygiene & Tropical Medicine and PATH conducted a review of HPV vaccine delivery experience in 46 low- and middle-income countries. These activities represent 12 national programmes and 66 demonstration projects – some of which implemented multiple delivery strategies – resulting in 92 distinct vaccine delivery experiences.

Additional topic summaries address preparation, delivery, communications, sustainability, value and pitfalls. Find those briefs and more information at [www.rho.org/HPVlessons](http://www.rho.org/HPVlessons).