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 preparation.

Findings and key lessons

DECISION-MAKING AND LEADERSHIP
In the review, the 40 countries with data about decision-making were largely motivated to implement HPV vaccine programmes based on high national cervical cancer burdens, availability of free vaccines and/or financing support and reports of successful implementation in other countries. Political will was key to ensure interest and support at the national, regional and local level during the preparation phase. Interview data indicated that some decision-makers perceived no need for a demonstration project. In most countries, the ministry of health was the lead institutional decision-maker, although leadership within the ministry of health varied and included a range of departments, such as the national immunization programme, noncommunicable diseases and reproductive health. The ministry of education was regularly cited as critical for success when schools were used as a delivery venue. For national programmes in particular, a close relationship with the ministry of finance was identified as critical.

Key lesson: Timely intersectoral planning and coordination – across health, education and finance (particularly for national programmes) – was critical to successful implementation and sustainability.

NATIONAL AND LOCAL PLANNING
Thirty-three of 46 countries described forming planning or interagency coordination committees at both national and subnational levels. Subnational committees were generally responsible for microplanning and requesting funds that were then forwarded to the national committee for approval and oversight. Countries reported that the most effective microplanning efforts included involvement of various sectors, including teachers, school authorities and health representatives at the local level.

Key lesson: Cooperation between local representatives from the health and education sectors facilitated effective microplanning.

INTEGRATION WITH NATIONAL IMMUNISATION PROGRAMMES
HPV vaccination was frequently delivered through the national immunisation programme and shared the same structures and resources, including staff and logistical capacity. Processes were also similar across microplanning, communication, social mobilisation, training and logistics. A number of projects/programmes indicated that planning, social mobilisation and supervision processes for the newly introduced HPV vaccine required more intense resource mobilisation and preparation than for other vaccines.

Key lesson: Where the national immunisation programme led HPV vaccine demonstration projects, integration with routine activities was generally strong, and existing human resources and infrastructure were used to deliver the HPV vaccine.
STAFF CAPACITY, TRAINING, REMUNERATION AND WORKLOAD

Health workers who delivered routine vaccinations were also responsible for HPV vaccination. Among 29 delivery experiences with human resource data, the most common vaccination team size was three to four persons, comprising two health workers, one mobiliser and one teacher.

Among the 30 countries with information on staff training, 26 used a ‘cascade’ training and supervision model. Initial training was provided to the national immunisation team. National team members then trained district representatives, who subsequently trained frontline staff. Four countries used a supervisory approach in which national-level staff supervised staff at the provincial/district levels and district staff supervised health workers.

Training content covered all aspects of routine immunizations with HPV-specific topics such as target population, vaccination schedule, consents and adverse event monitoring. One country reported an alternative approach to training and developed a successful distance-learning module to train health professionals and teachers. Another country integrated HPV content with training for a measles campaign. Training duration varied from less than a day to three days.

The impact on staff workload varied depending on delivery strategy and planning approaches. Among 20 countries with data on the impact of HPV vaccine activity on routine health service provision, 10 countries (7 demonstration projects and 3 national programmes) reported no impact, and 5 of these put mitigation strategies in place, such as additional temporary staff, prior to delivery. The other 10 countries (8 demonstration projects and 2 national programmes) reported that other routine services were affected, at least temporarily.

Twenty-nine of 32 projects/programmes with remuneration data used allowances to pay health workers for outreach or other activities outside the health facility, typically at standard government rates. This strategy posed a challenge in demonstration projects that were not integrated with routine activities. Several countries indicated that making HPV vaccination part of routine activities might reduce allowance payments.

Key lesson: The ‘cascade’ approach was the most common method of training and supervising staff. Carefully supervised training proved critical to preparing vaccination teams.

Key lesson: When HPV vaccination training was combined with training for another vaccine, inadequate emphasis on each vaccine compromised its quality.

Key lesson: Staff and supervisor allowances and transport to schools tended to be expensive; these costs were considered a key consideration for ongoing sustainability.

VACCINE MANAGEMENT

Transportation data from 49 experiences in 35 countries, including national programmes and over half of demonstration projects, indicated that routine immunisation programme systems were used to transport HPV vaccine. In some projects, assumptions that HPV vaccine would be transported with other vaccines proved problematic when the demonstration project did not align with quarterly vaccine delivery schedules and separate transport for HPV vaccines had to be arranged.

Key lesson: Coordinating transportation of HPV vaccines with routine vaccines reduced logistical challenges and costs.
## Recommendations

Based on country experience, decision-makers preparing for future HPV vaccine programmes should:

1. **Ensure that the national-level planning process includes leadership and endorsement from the ministry of health, ministry of education and – particularly for national programmes – the ministry of finance.** Allow at least nine months in most cases for decision-making and planning at national and subnational levels.

2. **Make certain that the national immunisation programme feels ownership of HPV vaccination and is actively involved in each phase.** This support and participation in planning and implementation are critical for effective delivery.

3. **Conduct a human resources capacity assessment to determine vaccination team size.** Team size will depend on the number and size of schools in the catchment area and organisation of other outreach activities.

4. **Ensure adequate supervision when adding HPV vaccination to health workers’ training and workload.** Integrating HPV supervision with other routine oversight can decrease costs.

5. **Carefully consider whether and how to allocate allowances during planning.** Integrating HPV activities with other outreach and school health programmes so that allowances are shared can help to minimize costs.

6. **Plan HPV vaccine management closely and well in advance with the broader national immunisation system.** Transporting HPV vaccine with other routine vaccines maximizes cost efficiencies.

7. **Conduct training at least two months before delivery and include all involved teachers and health workers, not only those delivering the HPV vaccine.** Allowing adequate time between training and delivery improves community response to credible influencers.

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*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 communications, delivery, achievements, sustainability, value and pitfalls. Find those briefs and more information at www.rho.org/HPVlessons.