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



# Acknowledgments

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# Outline

1. Background and Objectives
2. Methods
3. Results
4. Summary

# Background

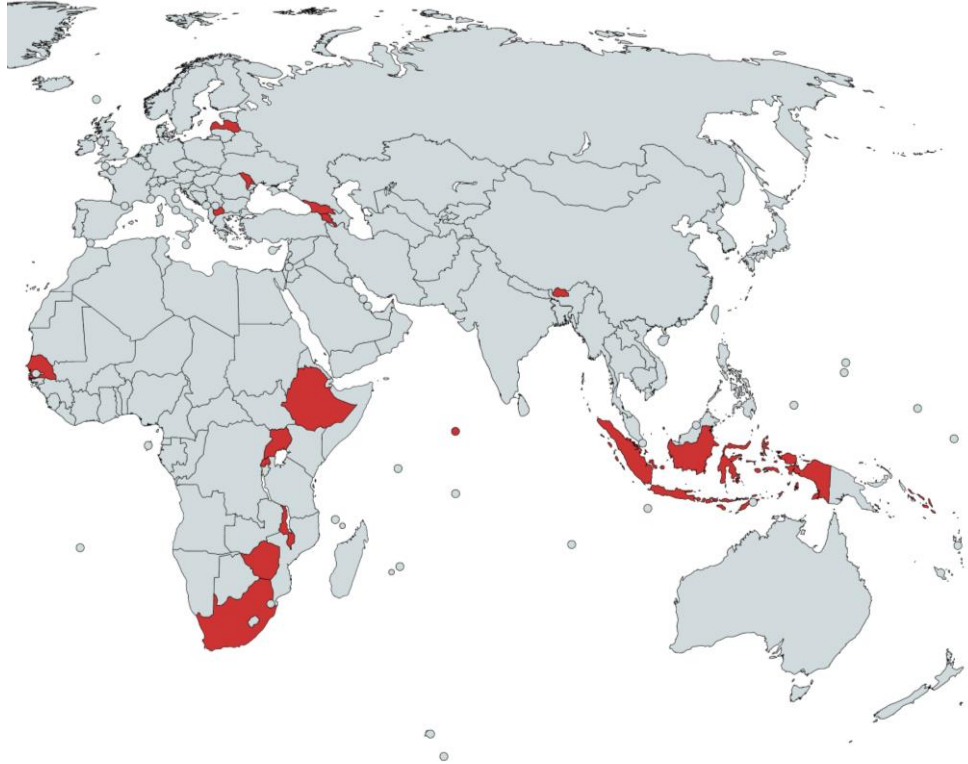
- ❖ As of November 2020, 59 low- and middle-income countries (LMICs) are providing HPV vaccine to eligible girls between the ages of 9 and 14 years of age through schools, health facilities, and outreach sessions in communities.
- ❖ Previous research by the London School of Hygiene and Tropical Medicine (LSHTM) and PATH documented success factors and barriers experienced during 66 pilot or demonstration programs in 46 LMICs.
- ❖ Whether national introduction of HPV vaccines in LMICs have experienced the same success factors and barriers has yet to be collated across countries.

# Objectives

1. To collate, synthesize, and summarize the success factors and barriers in introducing HPV vaccine at national scale via analysis of post-introduction evaluation (PIE) reports of 17 diverse low-, lower-middle-, and upper-middle-income countries.
2. To assess the application of the PIE methodological framework across 17 diverse low-, lower-middle-, and upper-middle- income countries.

# Methods

1. Countries included as study population
2. Data sources and extraction based on standardized questionnaire
3. Data synthesis and adjudication
4. Categorization of coverage data



Armenia\*, Bhutan, Ethiopia, Georgia\*, Indonesia\*, Latvia, Malawi, Maldives, Moldova, North Macedonia, Rwanda, Senegal, Sikkim state (India)\*, Solomon Islands, South Africa, Uganda, Zimbabwe

\* Subnational introductions, not representative of the entire country.

# 1. Countries

<b>Region</b>	<b>EURO</b>	<b>AFRO</b>	<b>SEARO</b>	<b>WPRO</b>
	5	7	4	1
<b>WB 2019 Income Group</b>	<b>LIC</b>	<b>LMIC</b>	<b>UMIC</b>	<b>HIC†</b>
	4	6	6	1
<b>Scale of Introduction</b>	<b>National</b>		<b>Sub-national phase</b>	
	13		4	
<b>Gavi</b>	<b>Gavi</b>		<b>non-Gavi</b>	
	10		7	
<b>Vaccine Eligibility</b>	<b>Single age cohort</b>		<b>Multi-age cohort</b>	
	10		7	
<b>Primary Vaccination Location</b>	<b>School</b>	<b>Health facility</b>		<b>Outreach session</b>
	12	4		1
<b>Introduction Year</b>	<b>2009</b>		<b>to</b>	<b>2019</b>

† Classified as UMIC during HPV introduction year.

## 2. Data Sources

### **17 PIE reports**

- 3 country reports evaluated multiple vaccines.

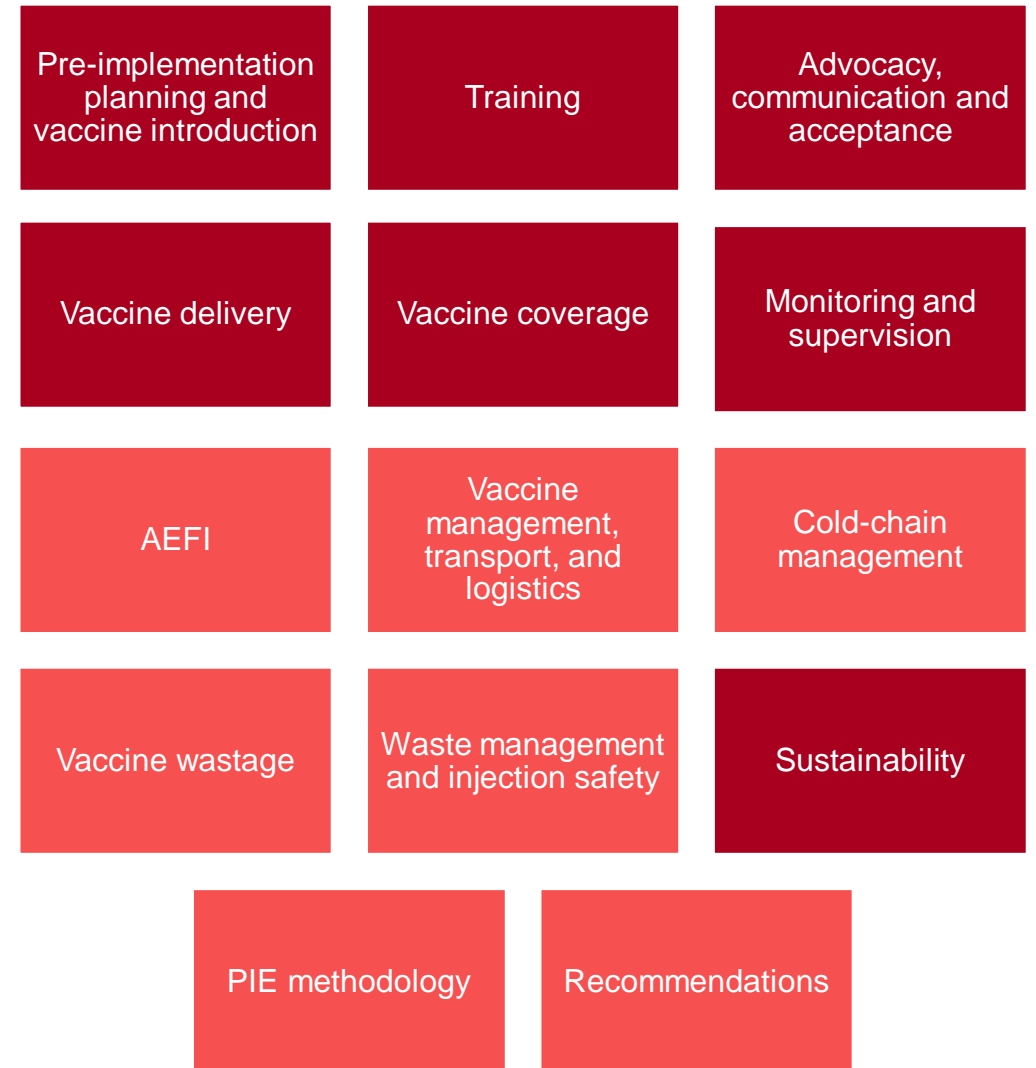
### **Additional documents used to complement data from PIEs**

- 2 country slide deck presentations of PIE results.
- 1 country HPV introduction communication strategy review.
- 2 country HPV introduction knowledge and feasibility reports (CDC).



## 2. Data Extraction Themes

- ❖ Developed standardized data extraction tool based on WHO HPV Vaccine PIE Tool (2014) and LSHTM/PATH HPV Vaccine Lessons Learnt Project (2016).
- ❖ PIE methodology and recommendation themes added.
- ❖ Report text extracted per specific questions, checked by secondary extractor.



*Darker colored boxes represent program areas with unique considerations for HPV vaccines.*

## 2. Data Extraction Subthemes

<p><b>Pre-implementation planning and vaccine introduction</b></p>	<p><b>Training</b></p>	<p><b>Advocacy, communication and acceptance</b></p>	<p><b>Vaccine delivery</b></p>	<p><b>Vaccine coverage</b></p>	<p><b>Monitoring and supervision</b></p>
<ul style="list-style-type: none"> <li>• Vaccine strategy</li> <li>• Planning</li> <li>• Enabling environment</li> <li>• Delays in planning phase</li> </ul>	<ul style="list-style-type: none"> <li>• Training program</li> <li>• Training materials</li> <li>• Trainee knowledge and appreciation</li> </ul>	<ul style="list-style-type: none"> <li>• Communication / social mobilization</li> <li>• Community concerns and management</li> <li>• Consent</li> <li>• Community knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccine delivery</li> </ul>	<ul style="list-style-type: none"> <li>• Coverage disparities</li> <li>• Out-of-school girls</li> <li>• Drop-out</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting and data management</li> <li>• Supervision</li> </ul>
<p><b>AEFI</b></p>	<p><b>Vaccine management, transport, and logistics</b></p>	<p><b>Cold-chain management</b></p>	<p><b>Vaccine wastage</b></p>	<p><b>Waste management and injection safety</b></p>	<p><b>Sustainability</b></p>
<ul style="list-style-type: none"> <li>• AEFI</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccine stock and management</li> <li>• Transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Cold-chain management</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccine wastage</li> </ul>	<ul style="list-style-type: none"> <li>• Waste management and injection safety</li> </ul>	<ul style="list-style-type: none"> <li>• Financing</li> <li>• Sustainability</li> </ul>

*Darker colored boxes represent program areas with unique considerations for HPV vaccines and were the focus for data synthesis.*

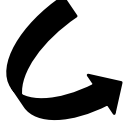
# 3. Data Synthesis

- ❖ For each of the 25 subthemes, extracted data was analyzed and each country was categorized as having had “success,” “average,” or “challenge” in that programmatic area\*.
  - 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.
- ❖ Recommendations given in the PIE for each subtheme were also taken into consideration when making the assessment of success/average/challenge.
- ❖ Analysis and assessment done by two data extractors and adjudicated by two additional researchers when discrepancies occurred.
- ❖ Composite tabulations were done to calculate the percent success/average/challenge experienced by each country across 18 subthemes of interest (*darker colored boxes on slide 10*).

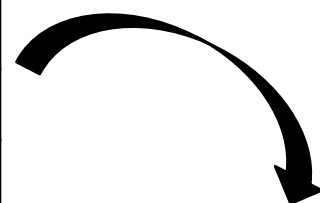
\*Note: some countries for which data was missing or limited were given categorizations of “no data” for certain programmatic areas.

# 3. Score Calculation Example #1

Coverage Data	Vaccination Strategy	Planning	Enabling Environment	Delays in Planning Phase	Training Program	Training Materials	Trainee Knowledge & Appreciation	Communication / Social Mobilization	Community Concerns & Management	Consent	Community Knowledge	Vaccine Delivery	Coverage Disparities	Out-of-School Girls	Drop-out	Reporting & Data Management	Supervisions	Financing
89%	Average	Average	Success	No Data	Success	Average	Success	Success	Average	No Data	No Data	Average	Success	Challenge	Average	Average	Success	No Data



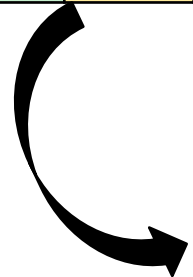
Success	Average	Challenge	No Data
Success	Average	Total = 1 1/14 = 0.07	No Data
Success	Average		No Data
Success	Average		No Data
Success	Average		No Data
Success	Average	Total = 4	
Success	Average	18 - 4 = 14	
Total = 6			
6/14 = 0.43			
	Average		
	Total = 7		
	7/14 = 0.5		



HPV Coverage (Intro Year)	% Success	% Average	% Challenge	Total
89%	43%	50%	7%	100%

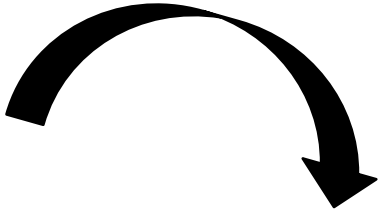
# 3. Score Calculation Example #2

88%	Average	Success	Success	Average	Success	Average	Average	Success	Success	Challenge	Success	Challenge	Success	Challenge	Average	Success	Average	Challenge
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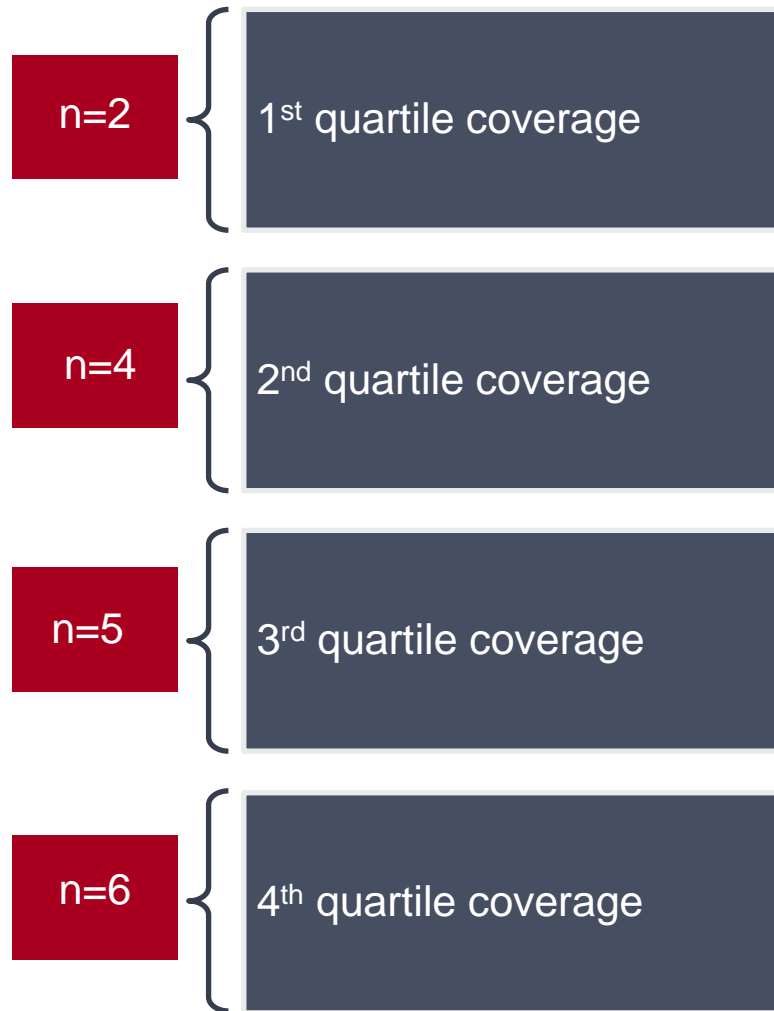
Success	Average	Challenge
Success	Average	Challenge
Success	Average	Challenge
Success	Average	Challenge
Success	Average	Total = 4
Success	Average	4/18 = 0.22
Success	Total = 6	
Success	6/18 = 0.33	
Success		

Total = 8  
8/18 = 0.44



HPV Coverage (Intro Year)	% Success	% Average	% Challenge	Total
88%	44%	33%	22%	100%

## 4. Categorization of HPV Vaccination Coverage



$$\text{HPV1} = \frac{\# \text{ of individuals vaccinated with dose 1}}{\text{total target population}}$$

$$\text{HPVc} = \frac{\# \text{ of individuals vaccinated with final dose}}{\text{total target population}}$$

- ❖ PIE coverage data is incomplete due to timing of some PIEs.
- ❖ Majority of PIEs note difficulty in calculating coverage at local/regional levels.
- ❖ PIE coverage data, in some instances, varies from WHO HPV coverage data due to either sub-national phase or different method of calculating denominator.
- ❖ **For this review, WHO HPVc data for year of introduction was the outcome indicator of interest.**
- ❖ Coverage quartiles: 0-24%, 25-49%, 50-74%, 75-100%.

# Results

- ❖ Heat maps of high-level findings for success/average/challenge assessment of 18 subthemes and HPV coverage data by country.
- ❖ Composite tabulations of programmatic success and challenges compared to coverage data.
- ❖ Performance themes by coverage quartile.
- ❖ Summaries and considerations by programmatic area.

# High-Level Findings

Coverage Data	Vaccination Strategy	Planning	Enabling Environment	Delays in Planning Phase	Training Program	Training Materials	Trainee Knowledge & Appreciation	Communication / Social Mobilization	Community Concerns & Management	Consent	Community Knowledge	Vaccine Delivery	Coverage Disparities	Out-of-School Girls	Drop-out	Reporting & Data Management	Supervisions	Financing
2%	Average	No Data	Challenge	Challenge	Average	Success	Average	Average	Challenge	Challenge	No Data	Average	Challenge	No Data	No Data	Average	Average	Challenge
11%	Average	Challenge	Average	Success	Average	Success	Average	Challenge	Average	Challenge	Average	Average	Challenge	No Data	No Data	Success	Average	No Data
25%	Success	Average	Success	Success	Success	Average	Average	Success	Success	Average	Average	Average	Average	Average	Average	Average	Average	Average
30%	Average	Challenge	Average	Challenge	Challenge	Success	Challenge	Challenge	Average	Average	Challenge	Challenge	Challenge	Challenge	Challenge	Average	Average	Challenge
33%	Average	Average	Success	Average	Challenge	Average	Challenge	Success	Success	Challenge	Challenge	Success	Challenge	No Data	No Data	Success	Average	Average
43%	Success	Success	Average	Success	Success	Success	Average	Success	Average	Average	No Data	Success	Challenge	No Data	No Data	Challenge	Average	Challenge
65%	Average	Success	Success	Challenge	Success	Challenge	Challenge	Average	Success	Success	No Data	Average	Challenge	Challenge	No Data	Average	Challenge	Average
66%	Average	Challenge	Challenge	Challenge	Challenge	No Data	Average	Challenge	Challenge	Average	No Data	Success	Challenge	No Data	Success	Challenge	Challenge	Average
67%	Success	Success	Success	Challenge	Success	Success	Success	Average	Success	No Data	Success	Average	Success	Average	No Data	Challenge	Success	Challenge
67%	Success	Success	No Data	Challenge	Challenge	Success	Average	Average	Challenge	Challenge	Average	Average	Challenge	Challenge	No Data	Challenge	Challenge	Average
70%	Average	Success	Success	Success	Average	No Data	Average	Success	Success	No Data	Success	Average	Success	Success	Average	Success	Success	Average
88%	Average	Success	Success	Average	Success	Average	Average	Success	Success	Challenge	Success	Challenge	Success	Challenge	Average	Success	Average	Challenge
88%	Challenge	Average	Success	Success	No Data	No Data	No Data	Average	Success	No Data	No Data	Average	No Data	Challenge	No Data	Average	Success	No Data
88%	Average	Success	Success	Success	Average	Success	No Data	Challenge	Success	Success	No Data	Success	Success	No Data	No Data	No Data	Challenge	No Data
89%	Average	Average	Success	No Data	Success	Average	Success	Success	Average	No Data	No Data	Average	Success	Challenge	Average	Average	Success	No Data
93%	Average	Success	Success	Challenge	Average	Average	Average	Average	Challenge	Challenge	Average	Average	Challenge	Challenge	Success	Success	Success	Challenge
95%	Success	Success	Success	Challenge	Success	Success	Average	Success	Success	Average	Success	Success	Success	Average	Success	Success	Success	Average



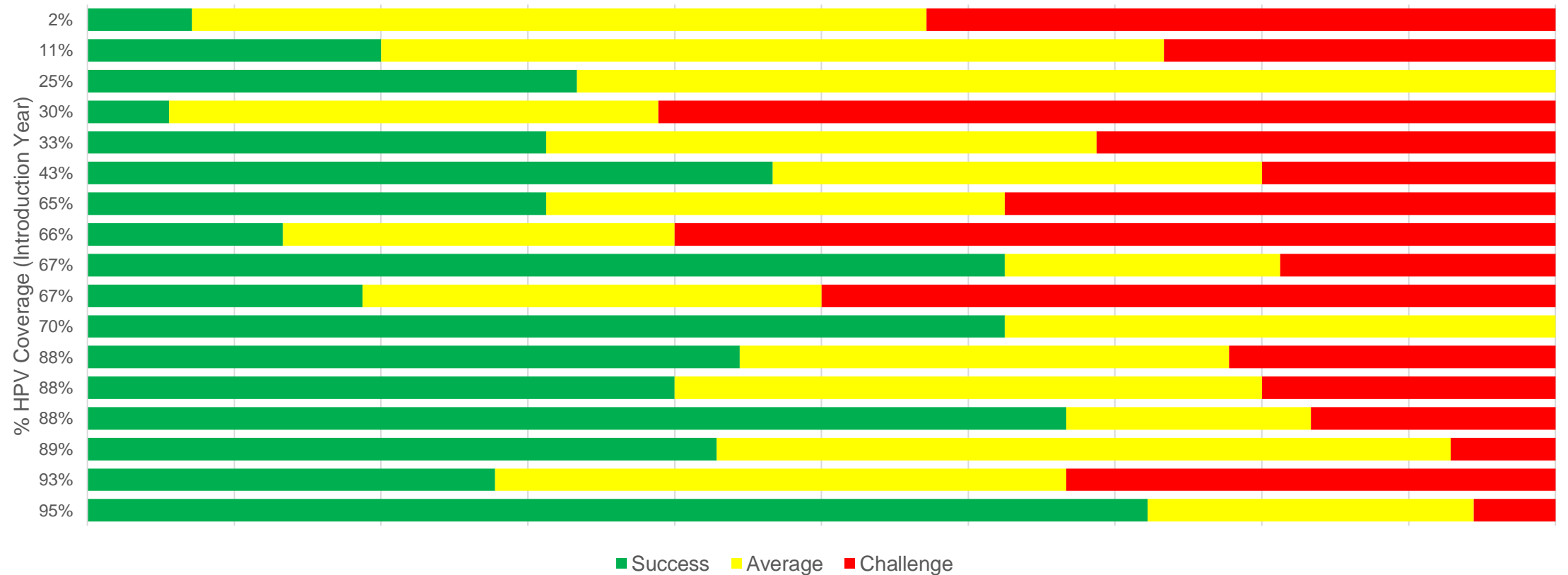
# Patterns in HPV Vaccination Coverage and Programmatic Performance – One Way of Looking at the Relationship

HPV Coverage (Intro Year)	% Success	% Average	% Challenge
2%	7%	50%	43%
11%	20%	53%	27%
25%	33%	67%	0%
30%	6%	33%	61%
33%	31%	38%	31%
43%	47%	33%	20%
65%	31%	31%	38%
66%	13%	27%	60%
67%	63%	19%	19%
67%*	19%	31%	50%
70%	63%	38%	0%
88%	44%	33%	22%
88%	40%	40%	20%
88%*	67%	17%	17%
89%	43%	50%	7%
93%**	28%	39%	33%
95%**	72%	22%	6%

\*WHO HPV1 data; introduction in late 2019 and coverage data not yet available.

\*\*HPVc data extracted from PIE; WHO data artificially low or not available due to a sub-national phase.

# Patterns of Programmatic Performance and HPV Vaccination Coverage – A Second Perspective



# Patterns of Programmatic Performance in Low and Low-Medium Coverage Quartiles

Coverage Data	Vaccination Strategy	Planning	Enabling Environment	Delays in Planning Phase	Training Program	Training Materials	Trainee Knowledge & Appreciation	Communication / Social Mobilization	Community Concerns & Management	Consent	Community Knowledge	Vaccine Delivery	Coverage Disparities	Out-of-School Girls	Drop-out	Reporting & Data Management	Supervisions	Financing
2%	Average	No Data	Challenge	Challenge	Average	Success	Average	Average	Challenge	Challenge	No Data	Average	Challenge	No Data	No Data	Average	Average	Challenge
11%	Average	Challenge	Average	Success	Average	Success	Average	Challenge	Average	Challenge	Average	Average	Challenge	No Data	No Data	Success	Average	No Data
25%	Success	Average	Success	Success	Success	Average	Average	Success	Success	Average	Average	Average	Average	Average	Average	Average	Average	Average
30%	Average	Challenge	Average	Challenge	Challenge	Success	Challenge	Challenge	Average	Average	Challenge	Challenge	Challenge	Challenge	Challenge	Average	Average	Challenge
33%	Average	Average	Success	Average	Challenge	Average	Challenge	Success	Success	Challenge	Challenge	Success	Challenge	No Data	No Data	Success	Average	Average
43%	Success	Success	Average	Success	Success	Success	Average	Success	Average	Average	No Data	Success	Challenge	No Data	No Data	Challenge	Average	Challenge

- ❖ Higher frequency of poor microplanning.
- ❖ Limited coordination reported between sectors.
- ❖ Training often excluded key actors and trainees frequently expressed desire for more training on how to address parents' concerns.
- ❖ PIE surveys show poor community knowledge about vaccine, highlighting suboptimal communications.
- ❖ Rumors and community concerns circulated widely in all 6 countries; countries in the low coverage quartile struggled to manage these rumors more than those in the low-medium coverage quartile.
- ❖ Greater variety in coverage across immunization sites; greater number of pockets of low coverage.
- ❖ Funding constraints often invoked as reason for suboptimal preparation and implementation during HPV introduction.

# Patterns of Programmatic Performance in Medium-High Coverage Quartile

Coverage Data	Vaccination Strategy	Planning	Enabling Environment	Delays in Planning Phase	Training Program	Training Materials	Trainee Knowledge & Appreciation	Communication / Social Mobilization	Community Concerns & Management	Consent	Community Knowledge	Vaccine Delivery	Coverage Disparities	Out-of-School Girls	Drop-out	Reporting & Data Management	Supervisions	Financing
65%	Average	Success	Success	Challenge	Success	Challenge	Challenge	Average	Success	Success	No Data	Average	Challenge	Challenge	No Data	Average	Challenge	Average
66%	Average	Challenge	Challenge	Challenge	Challenge	No Data	Average	Challenge	Challenge	Average	No Data	Success	Challenge	No Data	Success	Challenge	Challenge	Average
67%	Success	Success	Success	Challenge	Success	Success	Success	Average	Success	No Data	Success	Average	Success	Average	No Data	Challenge	Success	Challenge
67%	Success	Success	No Data	Challenge	Challenge	Success	Average	Average	Challenge	Challenge	Average	Average	Challenge	Challenge	No Data	Challenge	Challenge	Average
70%	Average	Success	Success	Success	Average	No Data	Average	Success	Success	No Data	Success	Average	Success	Success	Average	Success	Success	Average

- ❖ Microplanning frequently occurred at all levels.
- ❖ PIs report good collaboration between the Ministry of Health (MoH), Ministry of Education (MoE), and other relevant sectors.
- ❖ HPV vaccine launch events highlighted as a successful strategy for awareness raising.
- ❖ Some, but few, community concerns; crisis communication plans were well developed, and hesitancy generally subsided.
- ❖ Delays in planning phases, particularly with regards to funding, were invoked as reasons for logistical issues with vaccine implementation.
- ❖ Lack of refresher trainings frequently highlighted as a cause of challenges during dose-2 delivery.
- ❖ Higher frequency of challenges in reporting and supervisions, including infrequent/rare supervisions, poor distribution of materials, and gaps in healthcare workers' knowledge of reporting tools.

# Patterns of Programmatic Performance in High Coverage Quartile

Coverage Data	Vaccination Strategy	Planning	Enabling Environment	Delays in Planning Phase	Training Program	Training Materials	Trainee Knowledge & Appreciation	Communication / Social Mobilization	Community Concerns & Management	Consent	Community Knowledge	Vaccine Delivery	Coverage Disparities	Out-of-School Girls	Drop-out	Reporting & Data Management	Supervisions	Financing
88%	Average	Success	Success	Average	Success	Average	Average	Success	Success	Challenge	Success	Challenge	Success	Challenge	Average	Success	Average	Challenge
88%	Challenge	Average	Success	Success	No Data	No Data	No Data	Average	Success	No Data	No Data	Average	No Data	Challenge	No Data	Average	Success	No Data
88%	Average	Success	Success	Success	Average	Success	No Data	Challenge	Success	Success	No Data	Success	Success	No Data	No Data	No Data	Challenge	No Data
89%	Average	Average	Success	No Data	Success	Average	Success	Success	Average	No Data	No Data	Average	Success	Challenge	Average	Average	Success	No Data
93%	Average	Success	Success	Challenge	Average	Average	Average	Average	Challenge	Challenge	Average	Average	Challenge	Challenge	Success	Success	Success	Challenge
95%	Success	Success	Success	Challenge	Success	Success	Average	Success	Success	Average	Success	Success	Success	Average	Success	Success	Success	Average

- ❖ All school-based strategies, often integrated with existing structures.
- ❖ PIEs report strong coordination between MoH and MoE, across levels.
- ❖ Good microplanning occurred.
- ❖ Strong political commitment often invoked as key for successful planning and building support.
- ❖ All key actors trained (health and education sectors).
- ❖ Some delays in vaccine procurement noted but generally not invoked as reason for low coverage or delayed vaccine delivery.
- ❖ Greater efforts to conduct refresher trainings.
- ❖ Wide range of communication channels / activities.
- ❖ Generally fewer rumors and community concerns.
- ❖ Good coverage reporting and minimal pockets of low coverage; no glaring “missed populations.”

# A Few Outliers

Coverage Data	Vaccination Strategy	Planning	Enabling Environment	Delays in Planning Phase	Training Program	Training Materials	Trainee Knowledge & Appreciation	Communication / Social Mobilization	Community Concerns & Management	Consent	Community Knowledge	Vaccine Delivery	Coverage Disparities	Out-of-School Girls	Drop-out	Reporting & Data Management	Supervisions	Financing
25%	Success	Average	Success	Success	Success	Average	Average	Success	Success	Average	Average	Average	Average	Average	Average	Average	Average	Average
66%	Average	Challenge	Challenge	Challenge	Challenge	No Data	Average	Challenge	Challenge	Average	No Data	Success	Challenge	No Data	Success	Challenge	Challenge	Average
70%	Average	Success	Success	Success	Average	No Data	Average	Success	Success	No Data	Success	Average	Success	Success	Average	Success	Success	Average
93%	Average	Success	Success	Challenge	Average	Average	Average	Average	Challenge	Challenge	Average	Average	Challenge	Challenge	Success	Success	Success	Challenge

# Key Areas Impacting Implementation

Planning

Enabling Environment

Training

Communications and community concerns management

Vaccine delivery

Coverage equity

Reporting and supervision

Financing

# Planning

## Success Factors

- ❖ Coordination between health and education sectors at all levels.
- ❖ Detailed microplanning.
- ❖ Early planning.

## Common Themes

- ❖ Delays in planning phase occurred in most countries, irrespective of coverage achieved.
- ❖ Poor planning (detailed plans, microplanning activities, stakeholder coordination) experienced more frequently in low- and low-medium coverage countries.

## Barriers to Success

- ❖ Poorly developed introduction plans, especially at local levels.
- ❖ Lack of coordination between stakeholders.
- ❖ Unclear or changing eligibility criteria.
- ❖ Integration with other programs can be logistically challenging.
- ❖ Delayed vaccine procurement and/or delayed distribution of funds, vaccines, and materials can affect coverage.



# Enabling Environment

## Success Factors

- ❖ Strong political commitment.
- ❖ Buy-in from all stakeholders and good coordination among ministries and partners.
- ❖ Preexisting trust in vaccination programs / school-based health program.

## Barriers to Success

- ❖ Public expression of concerns about vaccine introduction by medical associations.
- ❖ Anti-vaccine sentiment circulating among population.
- ❖ Poor political commitment / leadership.

## Common Themes

- ❖ Greatest number of countries categorized as “success” within a programmatic category.
- ❖ All countries who experienced challenges in enabling environment in bottom half of coverage.

# Training

## Success Factors

- ❖ All pertinent actors trained in advance of vaccine introduction.
- ❖ Inclusion of microplanning and communication techniques for addressing vaccine hesitancy in trainings.
- ❖ Refresher trainings prior to second dose.

## Common Themes

- ❖ Majority of countries did not struggle to develop or distribute training materials.
- ❖ Knowledge retention among trained individuals frequently “average,” further supporting need for refresher trainings.

## Barriers to Success

- ❖ Failure to adequately train/sensitize all pertinent actors, especially school staff and relevant healthcare specialists (e.g. gynecologists).
- ❖ Combining training with trainings on other vaccines resulted in less time spent on HPV.
- ❖ Lack of training on addressing vaccine hesitancy.
- ❖ No refresher trainings combined with high staff turnover resulted in suboptimal dose 2 rollout.

# Communications & Community Concerns Management

## Success Factors

- ❖ Advocacy via highly visible channels (e.g. launch events, radio and tv talk shows, political leaders).
- ❖ Wide variety of communication activities.
- ❖ Launch events at national and local levels.
- ❖ Timely implementation of crisis communication plan.

## Barriers to Success

- ❖ Poor management (and anticipation of) widely circulating rumors / vaccine hesitancy.
- ❖ Poorly developed crisis communication plan.
- ❖ Local level actors unprepared to address parents' concerns about vaccine safety.
- ❖ Failure to engage community leaders.

## Common Themes

- ❖ For those low coverage countries with challenges in communications / community concern management, PIE frequently invokes the resulting vaccine hesitancy as a driver of low coverage.
- ❖ Countries whose PIEs reported good knowledge about the HPV vaccine among community members were in the upper half of coverage.

# Vaccine Delivery

## Success Factors

- ❖ Strong microplanning, including delineation of roles between sectors, plans for mop-ups, and plans for identifying/reaching out-of-school girls.
- ❖ Timely distribution of funds/materials and good vaccine stock management.

## Barriers to Success

- ❖ Confusion surrounding eligibility criteria or verification requirements led to vaccination of non-eligible girls or missed girls.
- ❖ Inadequate or delayed funding at local level.
- ❖ Poor timing of vaccination sessions (e.g. school holidays, rainy season).
- ❖ Staffing shortages (or strikes).
- ❖ Time consuming methods of tracking girls (e.g. phone calls).

## Common Themes

- ❖ Few countries categorized as “challenge” in this category suggesting generally smooth vaccine deliveries. Indication of strength of EPI programs.
- ❖ Management of the consent process proved challenging in countries across coverage quartiles and in some cases caused delays in vaccine delivery.

# Considerations for School-based Strategies

- ❖ Coordination between MoH and MoE at all levels.
- ❖ Consider strengths of current school-based programs (if existent) to determine method of integration.
- ❖ Timing of vaccination sessions (e.g. rainy season, school holidays).
- ❖ Need to train/orient school personnel, especially on communications.
- ❖ Need for clear eligibility criteria.
- ❖ Use of community health workers, mass media, and communications materials to target out-of-school girls.



# Coverage Equity

## Success Factors

- ❖ Monitoring throughout vaccine introduction to identify pockets of low coverage and address issues.
- ❖ Clear eligibility criteria and use of lists of eligible girls by healthcare workers to calculate and track coverage.

## Barriers to Success

- ❖ Pockets of vaccine hesitancy due to poor communications and engagement of local leaders.
- ❖ Failure to adequately plan for non-school vaccination sessions.

## Common Themes

- ❖ Having pockets of unvaccinated girls (e.g. private schools, religious group, geographical area) correlated with low coverage.
- ❖ Challenge to reach out-of-school girls. Those countries which noted concrete plans to reach girls still struggled to track the success of these measures.
- ❖ Lack of data on drop-out – largely due to timing of many PIE reports.

# Reporting & Supervision

## Success Factors

- ❖ Updated reporting tools distributed in timely manner.
- ❖ Personnel trained on reporting tools.
- ❖ Use of vaccinations cards to track dose completion.
- ❖ Regular supervisions used as opportunities to address issues observed.

## Barriers to Success

- ❖ Suboptimal integration of HPV reporting into country's reporting systems.
- ❖ Lack of knowledge among healthcare workers about data reporting and coverage calculation.
- ❖ Irregular supervisions.
- ❖ Inadequate written documentation of supervisions.

## Common Theme

- ❖ Challenges with reporting and supervisions largely occurred in medium coverage countries, suggesting that it is not a factor driving failure may prevent reaching high coverage levels.

# Financing

## Success Factors

- ❖ Timely disbursement of funds to local levels.
- ❖ Capitalizing on existing structures for vaccine delivery to reduce transportation costs.

## Barriers to Success

- ❖ Delayed funding.
- ❖ Unanticipated travel and printing costs born by local levels.
- ❖ Inadequate funds devoted to communications / social mobilization.

## Common Themes

- ❖ No one country categorized as “success” in financing.
- ❖ Financing delays or shortages invoked as reasons for suboptimal implementation, but introductions still occurred despite funding constraints.



# Summary: HPV Vaccine Introduction is a Story of Diversity

- ❖ No one formula for success / failure.
  - ❖ Success or failure in specific programmatic areas did not translate directly into high or low coverage.
- ❖ Multiple paths to high coverage.
  - ❖ Having a higher number of programmatic areas categorized as successful, regardless of which they were, tended to result in higher coverage.
- ❖ Despite general association of increasing successes in programmatic areas with increasing coverage, persistent outliers.
- ❖ High coverage countries still reported challenges and low coverage countries still reported successes.
- ❖ Country contexts were diverse as were their vaccination strategies.
- ❖ HPV vaccine introduction is a multifaceted system of interrelated programmatic areas that need to be well planned, well coordinated, and well executed.

# Relationship of Findings with Existing Evidence

- ❖ Confirmation of findings from LSHTM/PATH review of HPV demonstration projects.
  - Overlap in many of the identified success factors and barriers.
- ❖ Findings in line with WHO HPV introduction guidelines.
  - Countries following the programmatic guidelines are generally seeing success in those areas, reconfirming the guidelines.

# Common Facilitators and Barriers of Success

- ☑ Strong political commitment.
- ☑ Thoughtful integration with existent school-based health programs. \*
- ☑ Coordination between MoH and MoE 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 and talk shows, first lady). \*
- ☑ Training of healthcare workers and teachers to answer questions and combat rumors.
- ☑ Timely distributions of vaccines and funds to local levels.
- ⚠ 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.

\* Indicates new findings

# Key Take Home Messages

- ❖ It is never just one thing that guarantees high or low HPV vaccination coverage in the introduction year.
- ❖ Variability in strategies and multitude of programmatic elements make it difficult to proscribe only one formula for success.
- ❖ Shifting profile of challenges between low and high coverage countries.
- ❖ Need to start planning process early for vaccine procurement and delivery, securing and distributing funds, health & education sector coordination, microplanning, etc.
- ❖ Well-crafted and clear communications, buy-in from healthcare workers, and rumor management are all important to decrease vaccine hesitancy.

# Limitations of Study

- ❖ Secondary data extracted from HPV PIE reports; not direct analysis of interviews conducted during the HPV PIE.
- ❖ There were missing or incomplete data across a number of different programmatic areas and from a number of countries.
- ❖ Limited time for the analysis resulted in no formal interrogation of the qualitative data in the HPV PIE reports using inductive and deductive procedures and software common for qualitative data analysis.
- ❖ Only countries who conducted an HPV PIE and provided a copy of their HPV PIE report were included in the study.

# Thank you

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