



Overview of Human Papilloma Virus (HPV) programmatic implications & supply

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HPV in-focus

Why vaccinate against cervical cancer?

While **mostly preventable**, HPV is the **4th most common form of cancer** among women worldwide and claimed the lives of 300,000 women in 2018.

HPV vaccination is the **key strategy** to achieve the goal of **Global Cervical Cancer Elimination by 2030**.



Downward trend in HPV vaccine coverage continued: HPV coverage down by >15% since 2019

HPV vaccines have been introduced in 116 countries that represent a third of the global population of girls.

HPV vaccine coverage is on downwards trend reflecting COVID-19 pandemic effects. Only 12% of girls are fully protected.

Currently a third of the world's population of girls 9-14 years of age live in countries that provide the HPV vaccine.

Globally, the mean coverage HPV programmes achieve is 55% for the first and 44% for the last dose of HPV.

This low coverage combined with the large population that lacks access to HPV vaccines results in a very low global coverage of 12%.

The number of countries providing male vaccination has increased to 42.



* Source: WUENIC 2021 data. Please note 2022 data is expected in July 2023.

HPV Vaccine coverage decreased in 2021 in L&MIC

Coverage is on a downward trend in L&MIC while HIC keep showing resilience

Urgent action is required to improve HPV vaccine coverage and vaccinate missed cohorts of girls

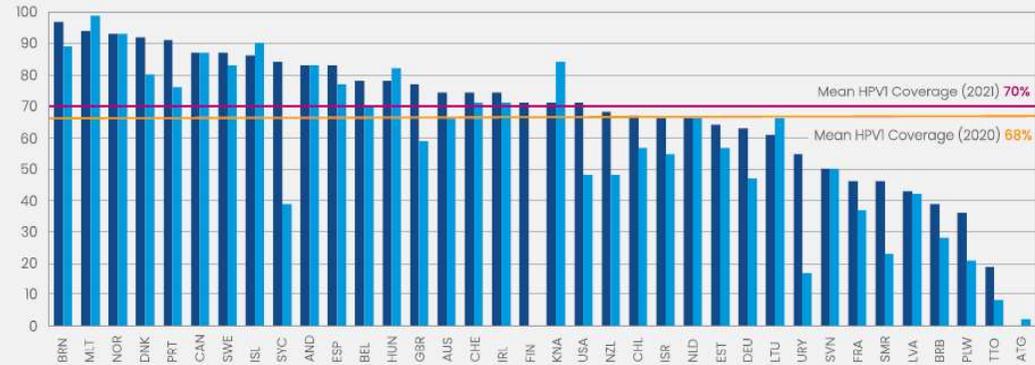
In L&MIC mean first (46%) and final dose (33%) coverage declined further in 2021. HIC showed modest improvements.

Dropout continues to be a specific challenge for HPV vaccination programmes, particularly in L&MIC.

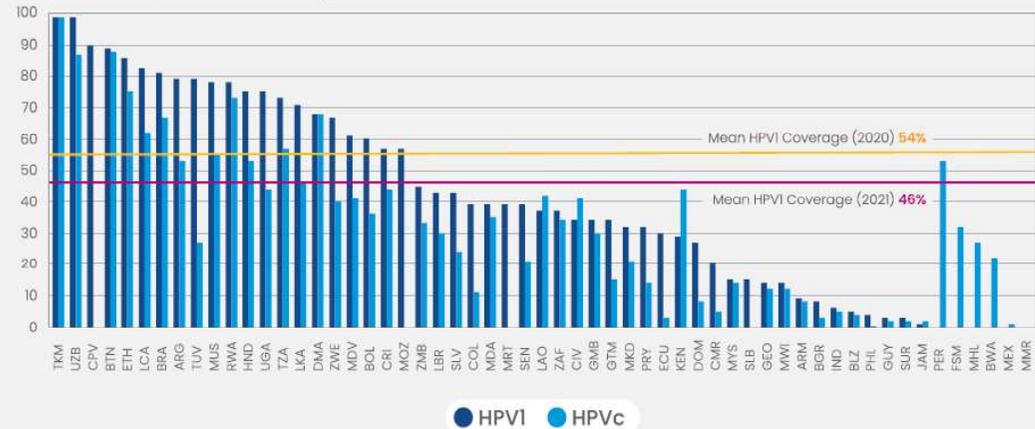
COVID-19 pandemic continued to affect performance of HPV programme in L&MICs through school closures, delayed vaccination rounds but also product stockouts.



HIC Programme Coverage



L&MIC Programme Coverage



* 2022 WUENIC data available July 2023

Opportunities for revitalizing HPV programme

What does this look like?



SAGE recommends updating dose **schedules for HPV** as follows:

- **One or two-dose schedule** for the primary target of girls aged **9-14**
- **One or two-dose schedule** for young women aged **15-20**
- Two doses with a 6-month interval for women **older than 21**.



Objectives

Secure **uninterrupted supply** to meet routine demand and enable introductions in MICs

Achieve lower prices that are **affordable** to MICs and increase transparency of prices secured for MICs

Gain information and enable entry of pipeline manufacturers to contribute to the creation of a **healthy market with multiple suppliers**.

Focus Countries

MICs that have not yet adopted new vaccines (HPV, PCV and Rota) in their routine immunization programs.

MICs that have introduced new vaccines and are procuring the vaccine through UNICEF.

Self-procuring MICs that have introduced new vaccines but have sought UNICEF's support due to concerns regarding the sustainability of their programmes.

Procurement Planning

When countries procure through UNICEF, the following key information are required for planning purposes:

**1**

Decision-making: How does this work in your country? What barriers exist for introduction of HPV, PCV & Rota (NITAG recommendations), including product preference? Will a 2-dose or 1-dose strategy be utilized?

**2**

Target population: What is the target population? Girls only or gender-neutral strategy? Target ages. Routine and/or Multi-Age Cohort (MAC)? What is the demand forecast (multi-year preferred)?

**3**

Funding mechanism & procurement modality: What funding mechanism and procurement modality will your country be using?

**4**

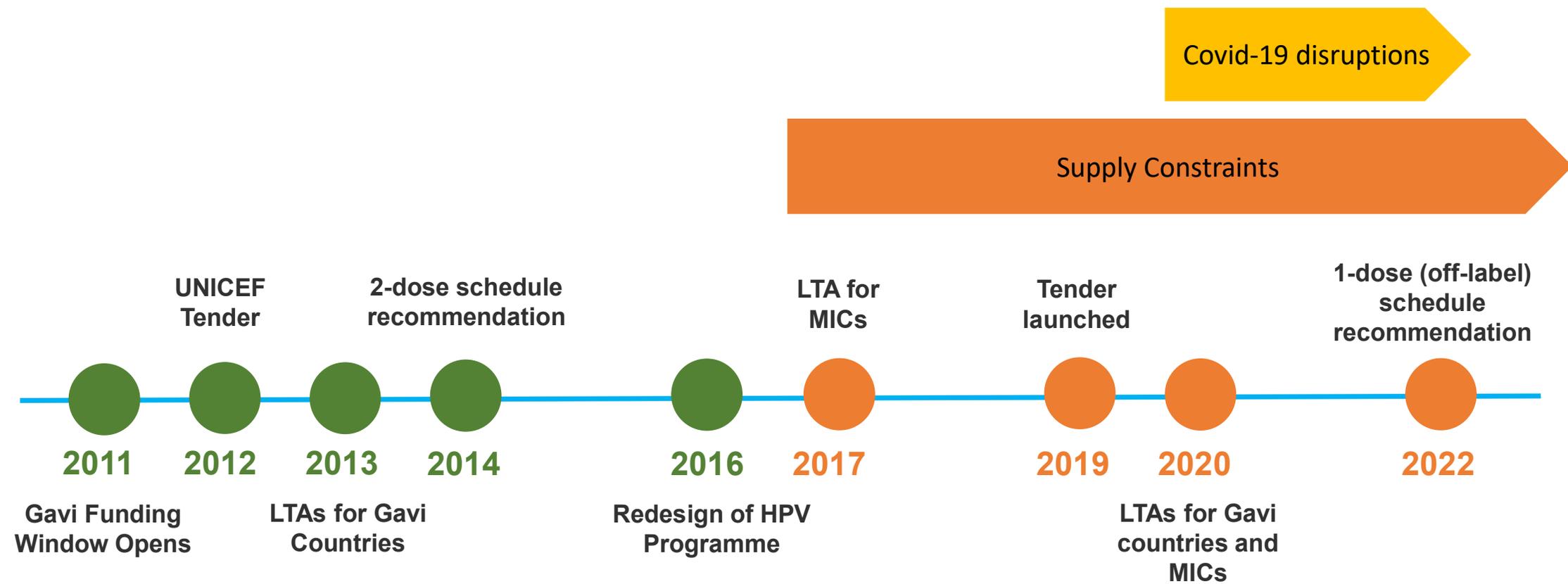
Planning/budgeting: What is the capacity of your country to support multi-year commitments? What is the budgeting cycle?

**5**

Planned introduction: When do you plan to introduce the vaccine?



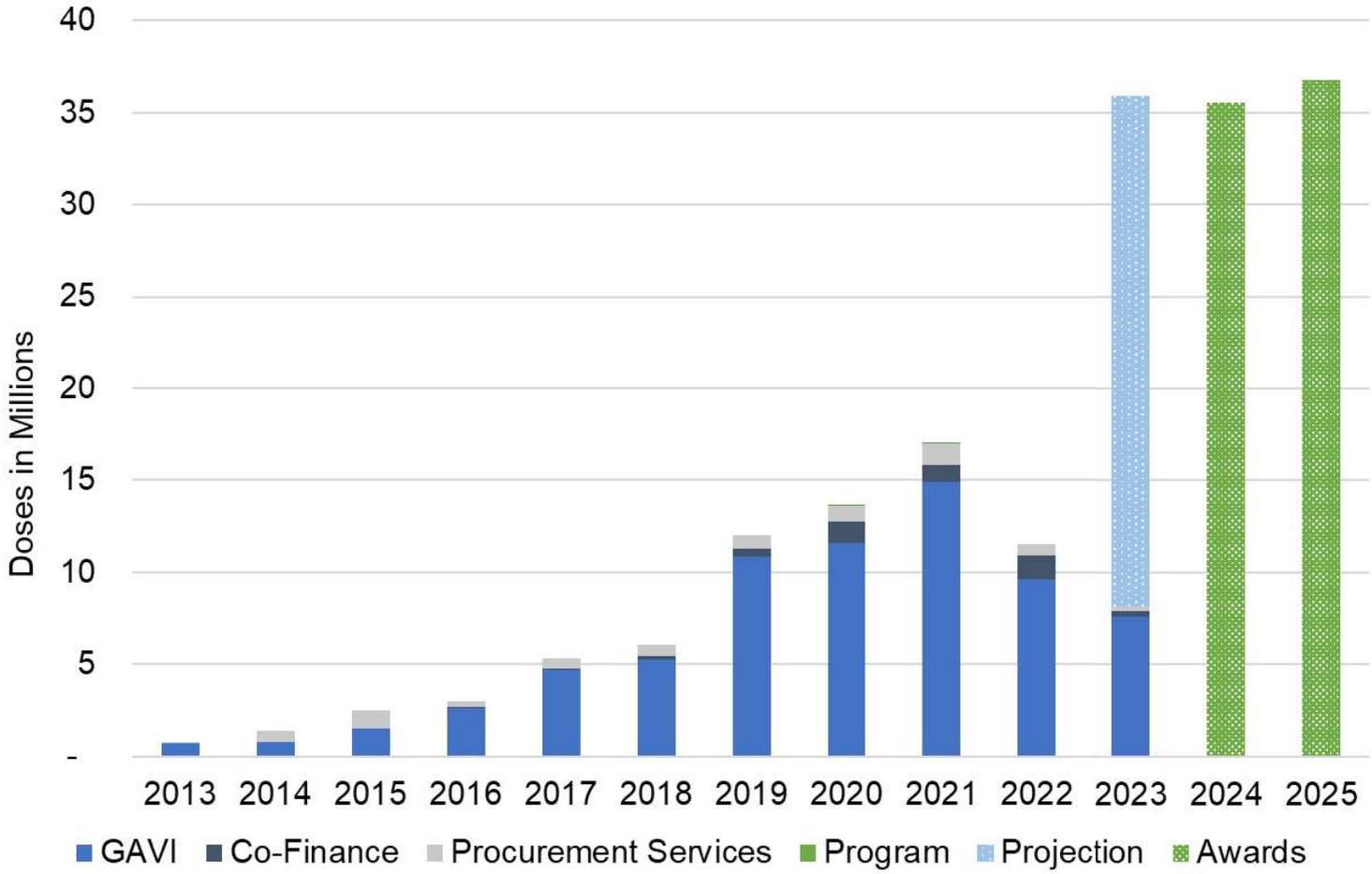
HPV market evolution



Manufacturer	Type	WHO PQ	Formulation	Vial	Shelf Life	VVM	Cold Chain Volume
GlaxoSmithKline (Belgium)	Bivalent	2009	Liquid	1 dose	60 months	Type 30	9.7 cm ³
		2009	Liquid	2 dose	60 months	Type 30	4.8 cm ³
Merck, Sharpe & Dohme (USA)	Tetravalent	2009	Liquid	1 dose	36 months	Type 30	15.0 cm ³
	Nonavalent	2018	Liquid	1 dose	36 months	Type 30	15.1 cm ³
Xiamen Innovax (China)	Bivalent	2021	Liquid	1 dose	36 months	Type 14	14.29 cm ³

➤ GSK and MSD have prefilled syringe presentations (not WHO prequalified)

UNICEF's Historical Procurement and Supply Outlook



Global supply is improving and anticipated to meet demand depending on product preference.

UNICEF LTAs for MICs

- Merck
- GSK
- Xiamen Innovax (LTA for LMICs and potential for MICs if demand warrants)

Tiered pricing based on manufacturers' pricing policies. Price ranges from \$10.25 to \$26.75 per dose.



Decline in coverage

With the pandemic, there has been a significant decrease in HPV coverage since 2019 due to school closures, delayed vaccination, but also product stockouts. In 2021, there was a further decrease in coverage, with dropout continuing to be a specific challenge for HPV vaccination programmes, particularly in L&MIC.



Fiscal space

Challenges around maintaining sustainable financing for vaccine introductions.



Price & demand

Given the uncertainty around long term forecast and low competition in the market, overall price remains high.



Vaccine Manufacturing

There remain supply constraints in the market and until further products are pre-qualified, this will continue.

WITH KEY OPPORTUNITIES >>

New products are in the pipeline/under development

Switching to a one-dose schedule

Multi-year commitments

- While there currently are still **supply constraints**, there are also **opportunities** with products in the pipeline/under development.
- With SAGE review of the **efficacy** of the one-dose, WHO has recommended consideration of **HPV one-dose schedule**, to support countries to reach a higher vaccination coverage.
- Single-dose has the advantages of simplifying **vaccine implementation**, decreasing **costs**, and improving **demand** and **acceptance**.
- Accurate forecasting is critical for multiple reasons, including ensuring **appropriate budgeting**, ensuring **coverage**, engaging suppliers for **multi-year commitments** (and potentially lower prices), as well as supporting the overall **market health** (i.e. ensuring accurate supply availability).

Resources for procurement decisions

UNICEF Market Notes: <https://www.unicef.org/supply/market-notes-and-updates>

UNICEF Vaccine Pricing Data: <https://www.unicef.org/supply/vaccines-pricing-data>

WHO Global Vaccine Market Studies: <https://www.who.int/teams/immunization-vaccines-and-biologicals/vaccine-access/mi4a/mi4a-market-studies>



Questions and Discussion