



## HPV Vaccination Program

Cross-country learning and best practices.

# Consideration for HPV vaccine product choice

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COALITION to STRENGTHEN  
the HPV IMMUNIZATION  
COMMUNITY

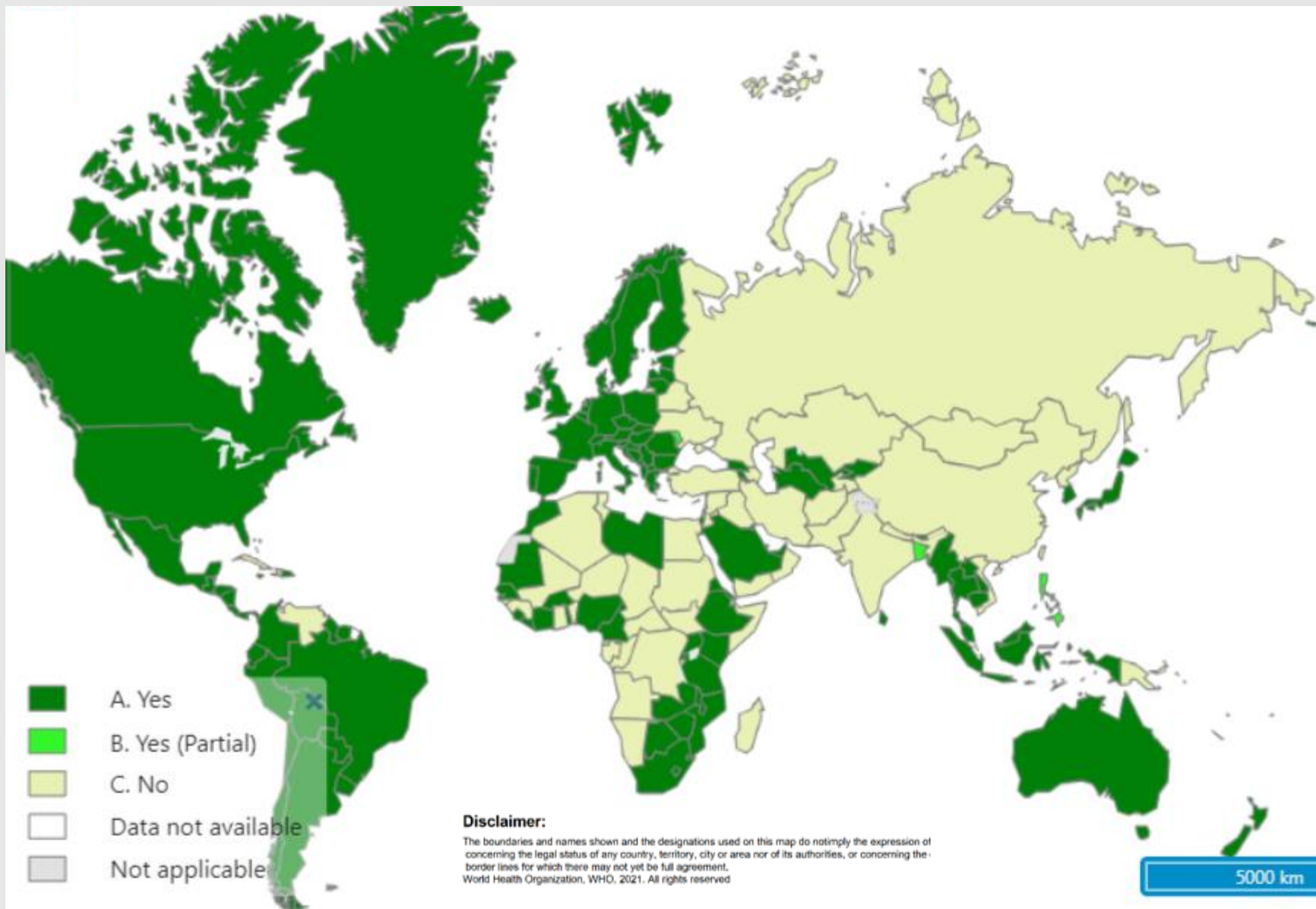
# 144 Countries introduced HPV vaccination in national programme

**144 (74%)**  
countries introduced  
HPV vaccination

**50 (26%)**  
countries did not  
introduce

**2030 Target:  
194 countries**

**Date of slide:** September 2024  
**Map production:** Immunization Vaccines  
Biologicals (IVB), World Health Organization  
**Data Source:** WHO HPV vax Intro Dashboard



# Global HPV vaccine coverage among girls substantially increased

The positive trend observed since last year was confirmed and strong increases in first and final dose global HPV coverage among girls were registered in 2023.

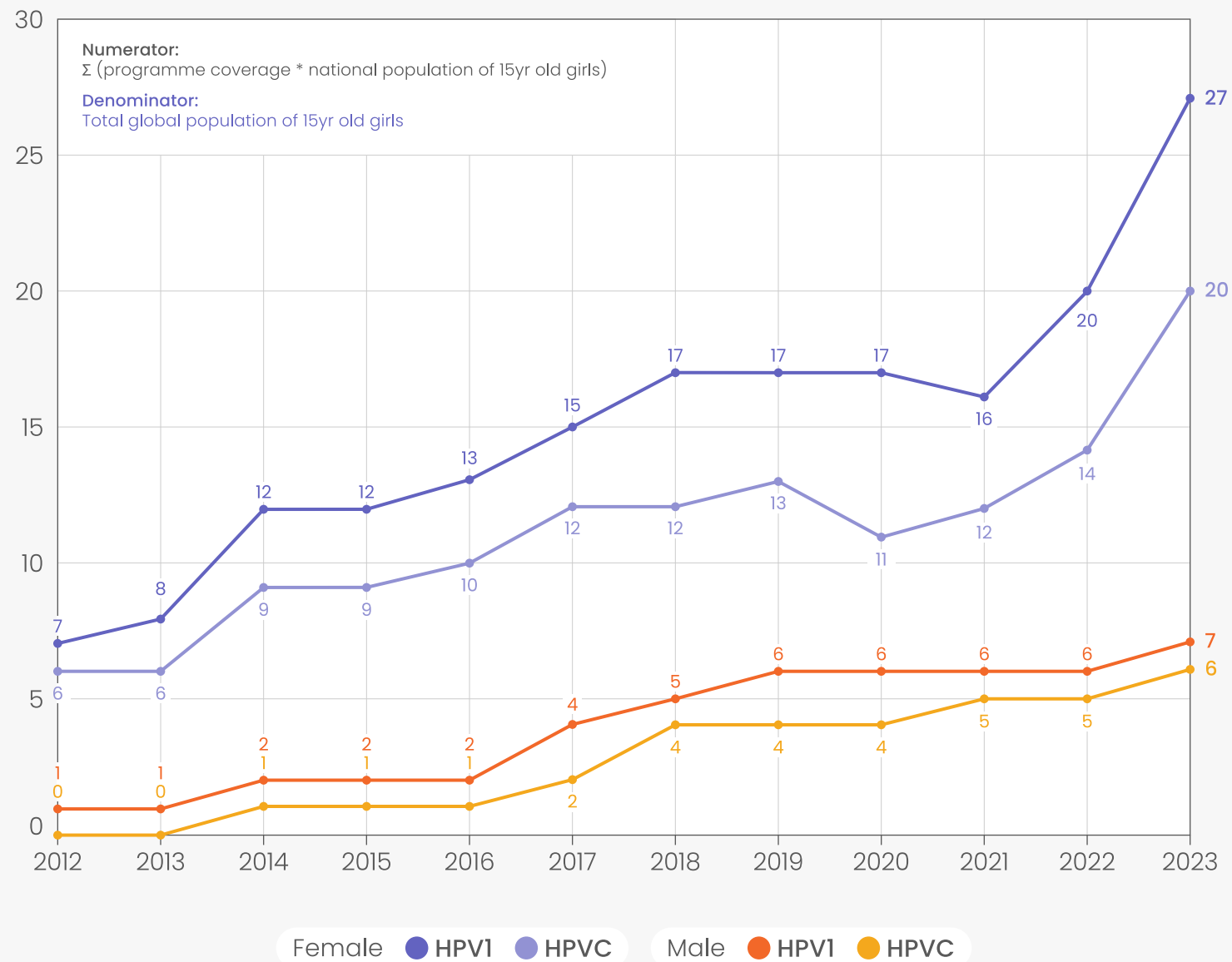
Increase in HPV coverage is driven particularly by new introductions and programme expansion combined with encouraging signs of recovery of coverage in existing programmes.

*All countries are included in global and regional calculations. Countries with HPV programmes but not reporting in 2023 are flatlined based on 2022 data.*

*Countries where HPV vaccine has not been introduced are included in the calculation of the estimate using a value of zero.*



Global HPV Vaccine Coverage (%)



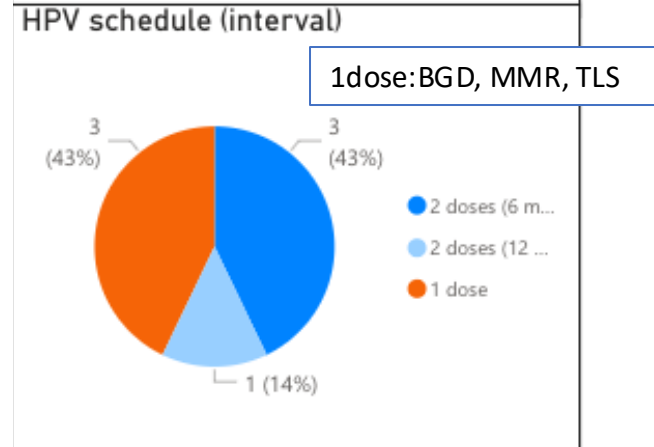
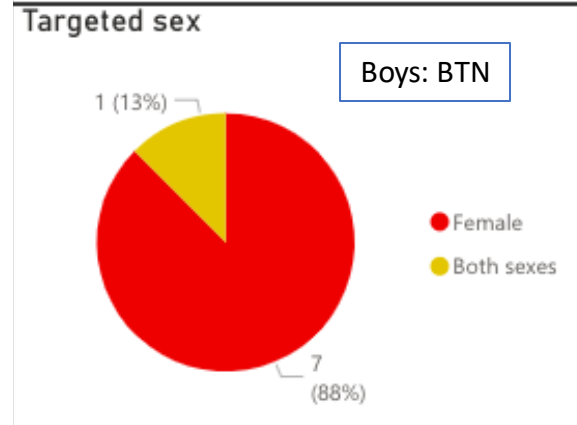
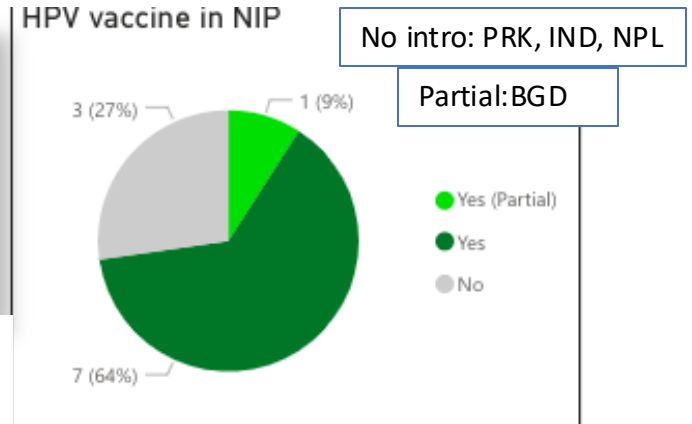
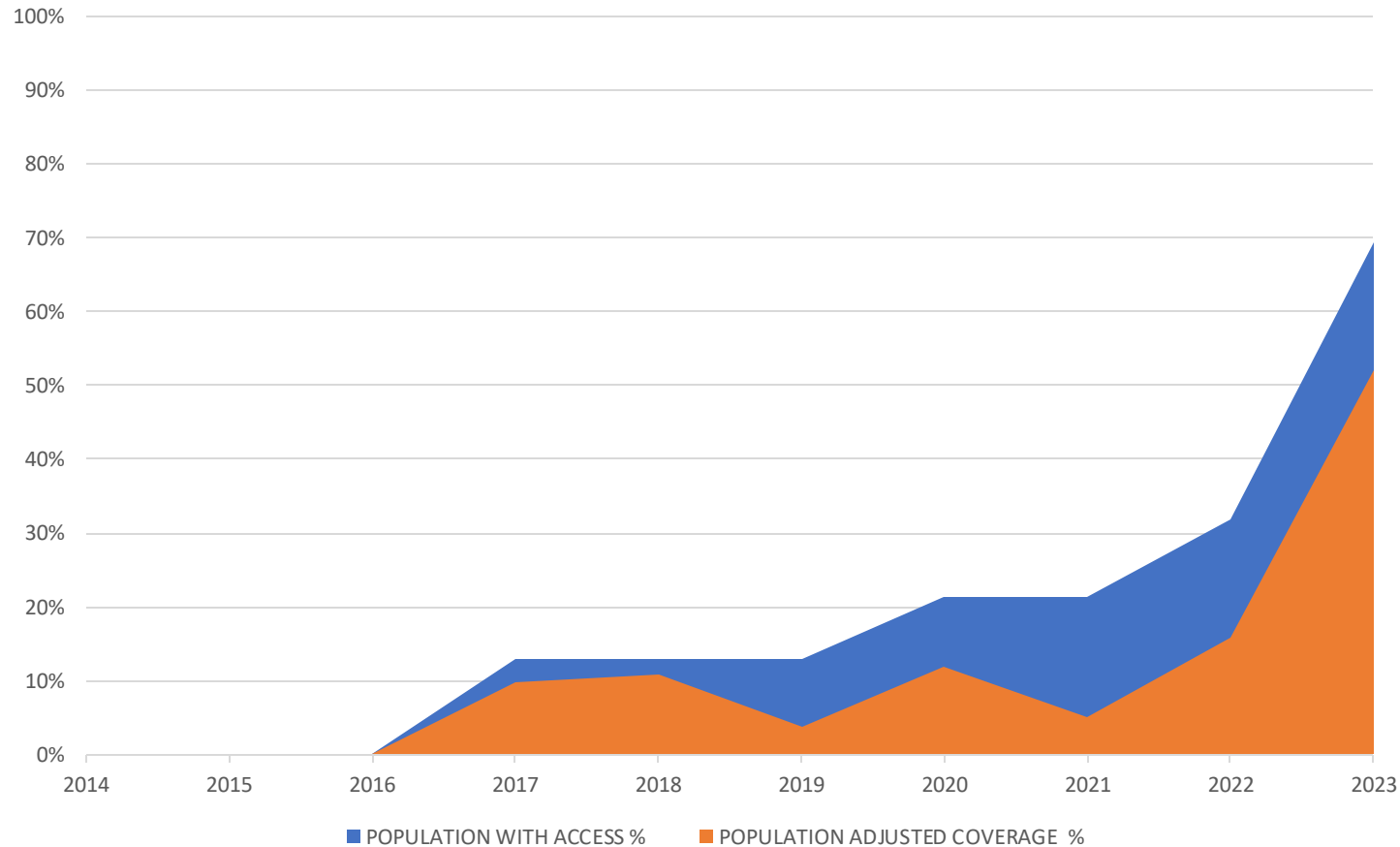
- Global Status
- WHO region
- WB income level

## Regional HPV programme status

8 out of 11 Member States have introduced HPV vaccine into NIP

16 % of girls have received at least one dose in the region

### SEAR countries except India



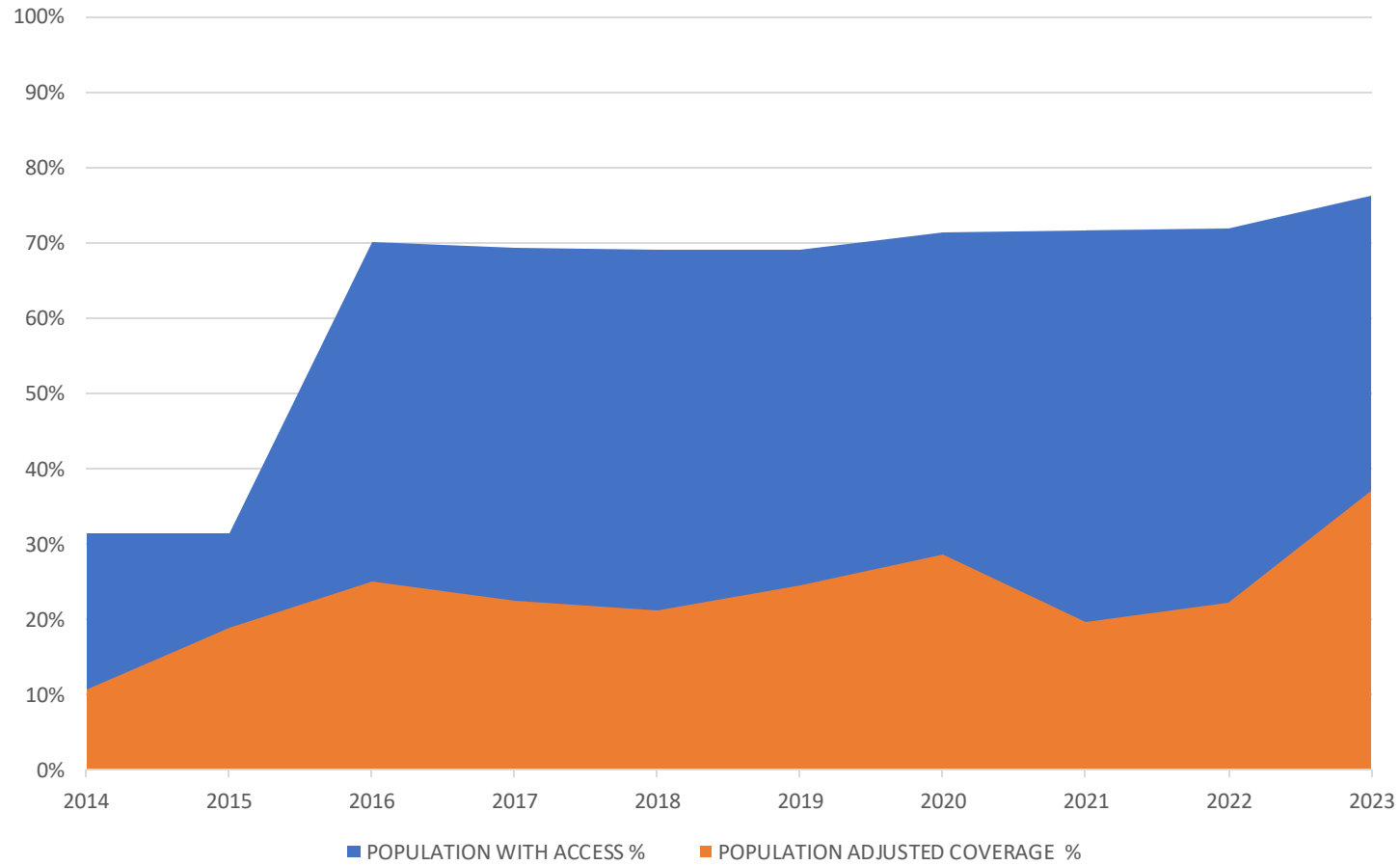
- Global Status
- WHO region
- WB income level

## Regional HPV programme status

**23** out of **27** Member States have introduced HPV vaccine into NIP

**11** % of girls have received at least one dose in the region

### WPR countries without China



### HPV vaccine in NIP

No Intro: CHN, MNG, PNG, VNM  
Partial: PHL

Status	Count	Percentage
Yes	22	81%
No	4	15%
Yes (Partial)	1	4%

### Targeted sex

Boys: AUS, NZL, NIU

Sex	Count	Percentage
Female	20	87%
Both sexes	3	13%

### HPV schedule (interval)

1dose: AUS, KHM, KIR, LAO, MYS, WSM, SLB, TON, TUV, VUT

Schedule	Count	Percentage
2 doses (6 m...)	12	55%
1 dose	10	45%

# WHO recommendations\* on HPV vaccine schedule can optimize vaccine coverage

**Primary target:** Girls 9 to 14 years of age

**Schedule** \* : 2-dose schedule from 9 to 45 years old

Alternative: 1-dose schedule for 9 to 20-year-olds

**Prioritize:** - Immunocompromised/HIV+ - 2 doses, ideally 3  
- Multi Age Catchup through 18 years at introduction

**Secondary Targets:** boys & older women/adults, if feasible and affordable

\* Contains off label recommendations

ANY NEWS FOR NEXT SAGE?



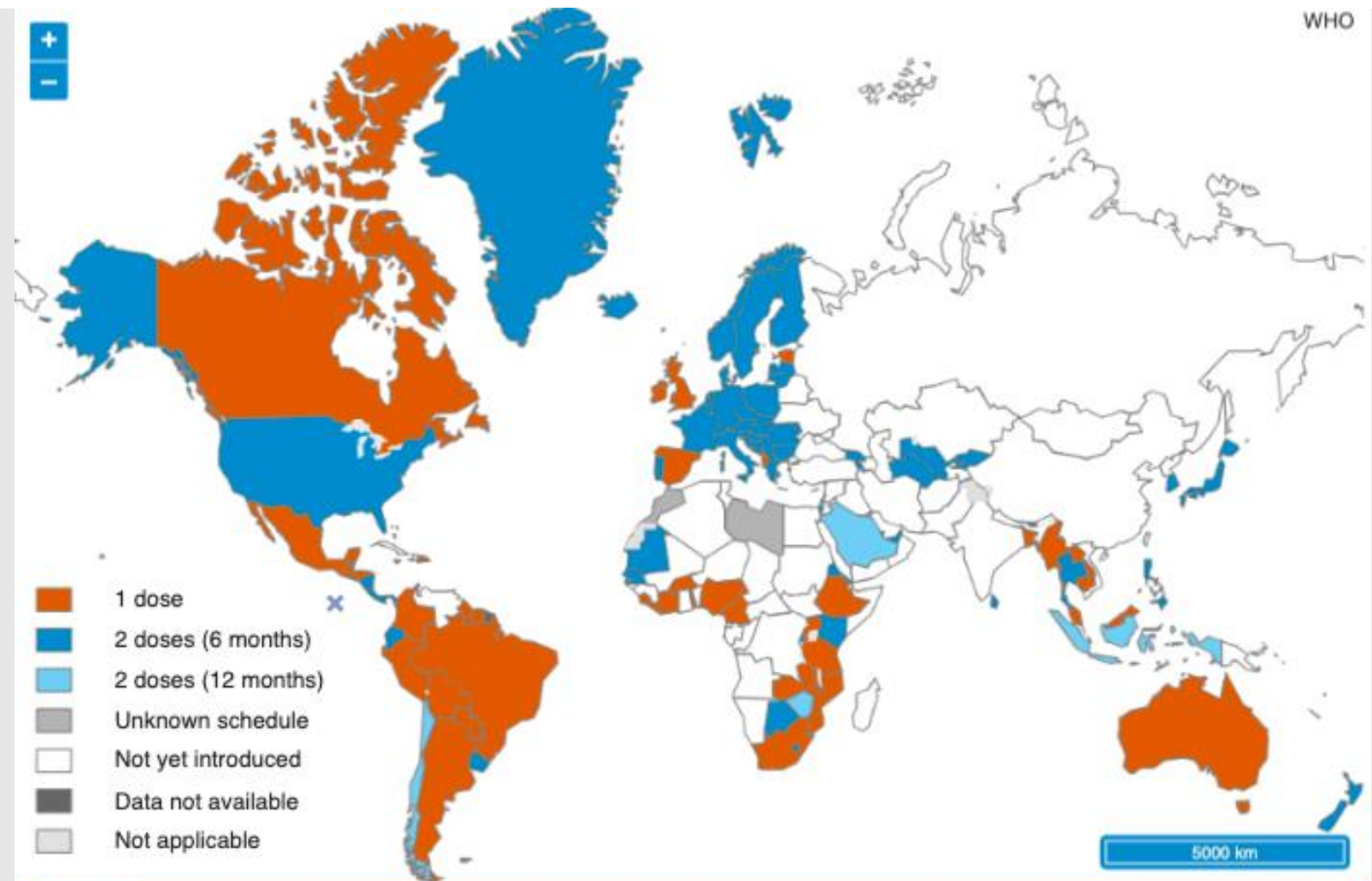
# Impact of WHO optimized schedule recommendations: 1-dose HPV vaccine schedule adopted in 58 countries (Sep 2024)

## 1-dose schedule

- HICs as well as LMICs
- Many countries adopted 1-dose up to 20 years of age (some up to 25 yr)
- Several countries widened age ranges for catch-up

## 2-dose schedule

- many HICs switched to 2-dose schedule in those 15 years and older



### Disclaimer

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be

# Supply demand balance

Supply increases in recent years have led to a **significant reduction in the risk of global shortages**. In the short-term, under the base supply scenario, access risks still exist if target populations significantly expand; in the low supply scenario this could result in shortages. In the mid-long term, excess supply will require appropriate management.

Demand Scenarios	Base Supply			Low Supply		
	Short-Term (1-3)	Mid-Term (4-6)	Long-Term (7-9)	Short-Term (1-3)	Mid-Term (4-6)	Long-Term (7-9)
1. Base (w/MACs)	Green	Green	Green	Green	Green	Green
2. Base (+ w/boys , MACs)	Yellow	Green	Green	Red	Green	Green
3. Base (+w/boys, MACs, older age catch-up)	Yellow	Green	Green	Red	Green	Green
4. 1-dose w/MACs	Green	Green	Green	Green	Green	Green
5. 1-dose w/MACs (+boys)	Green	Green	Green	Green	Green	Green

\*Single dose schedule supporting data assumed available since 2022 only for a limited number of products





# Available HPV vaccines in the market



For complete information on HPV vaccine products see:  
<https://www.who.int/publications/i/item/9789240089167>

Trade Name	Cervarix™	Gardasil®	Gardasil-9®	Cecolin®	Walrinvax®	Cervavac®
Valency	Bivalent	Quadrivalent	Nonavalent	Bivalent	Bivalent	Quadrivalent
Manufacturer	GlaxoSmithKline Biologicals (GSK) Belgium	Merck/MSD USA	Merck/MSD USA	Xiamen Innovax Biotech Co. Limited China	Walvax Biotechnolog y Co. Limited China	Serum Institute of India (SII)
HPV types included	16/18	6/11/16/18	6/11/16/18/31/33 /45/52/58	16/18	16/18	6/11/16/18
Presentation	Single dose vial (0.5ml) Two Dose vial (1.0ml)	Single dose vial (0.5ml)	Single dose vial (0.5ml)	Single dose vial (0.5ml)	Single dose vial (0.5ml)	
WHO PQ decision	2009	2009	2018	2021	2024	To be submitted
Price HIC/UMIC <sup>1</sup>	\$27 (Median)	\$39 (Median)	\$101 (Median)	---	---	---
Price PAHO RF <sup>2</sup>	-	\$ 10.48	-	\$2.9		
Price Gavi/UNICEF <sup>3</sup>	\$5.18	\$4.50	---	\$2.90	TBC	---
Data on 1-dose efficacy or immunobridging <sup>4</sup>	Yes	Yes	Yes	Yes	Immunobridging study planned	Immunobridging study ongoing since 2024

<sup>1</sup> WHO MI4A Global HPV market study 2022 <sup>2</sup> UNICEF <https://www.unicef.org/supply/documents/human-papilloma-virus-hpv-vaccine-price-data>

<sup>3</sup> PAHO Revolving fund <https://www.paho.org/en/documents/paho-revolving-fund-vaccine-prices-2022>

<sup>4</sup> WHO HPV Position Paper 2022 <https://www.who.int/publications/i/item/who-wer9750>

# Not all Products have efficacy data for 1-dose ...

## ... immunobridging pathway and status for new products

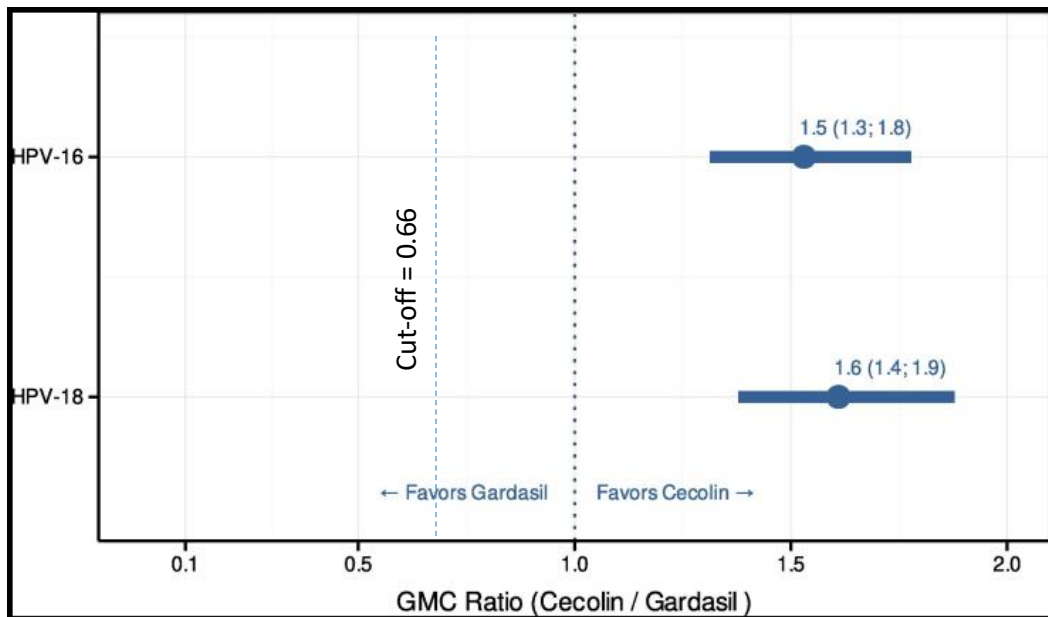
- “A single-dose schedule should be considered for those HPV vaccine products\* for which data on efficacy or immunobridging to vaccines with proven single-dose efficacy are available.” (WHO HPV Position, 2022)

\*As per Dec 2022, products for which efficacy and immunogenicity data support use in a single-dose schedule include Cervarix, Gardasil and Gardasil9.

“Immunobridging refers to evidence that 6-month (peak) and 24-month (plateau) antibody levels for a vaccine are comparable to those of vaccines with proven single-dose efficacy.”

# UPDATE: New information regarding Cecolin

Interim 6-month data Cecolin vs Gardasil immune response indicate non-inferiority at 6 months



**Fig. 3 Geometric mean concentration ratios at 6 months after Dose 1** HPV-16 and HPV-18 geometric mean concentration (GMC) ratios 6 months after Dose 1 between Cecolin 0, 6-month schedule and Gardasil 0, 6-month schedule with 95 % confidence intervals.

Source: Vaccine 2024 Apr 2;42(9):2290-2298.

doi: 10.1016/j.vaccine.2024.02.077. Epub 2024 Mar 1.

WHO reviewed 6 & 24-month data and concluded:

*GMT levels (6 & 24m) following 1 dose of Cecolin are non-inferior to immune response following 1 dose of Gardasil, a product with 1-dose efficacy data.*

As a result, **Cecolin\*** has been added to list of vaccines that can be used in 1-dose schedules (*off-label*)

Public data release of 24-month final trial data:

- IPV Conference 12-15 Nov 2024
- Article will be submitted ASAP


NITAGs in need of urgent decision making in relation to Cecolin can request PATH to present (confidential) data prior to publication of the data

\* Cecolin is WHO PQ-ed and is licensed for use in females


# UPDATE!!!

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- New update has been reflected in the **2<sup>nd</sup> edition** of WHO guidance “Considerations for HPV Vaccine Product Choice”
  1. **Cecolin** one-dose evidence is available
  2. Prequalification of **Walrinvax**



## Considerations for Human Papillomavirus (HPV) Vaccine Product Choice, second edition





# HPV resources

## [WHO HPV Vaccine Introduction & Country Coverage Dashboard](#)



This dashboard provides information about the status of HPV vaccine introduction in WHO Member States. As per the Global Strategy for Cervical Cancer Elimination, each country should introduce HPV in the national immunization schedule by 2030 and meet the target of 90% of girls fully vaccinated with HPV vaccine by age 15. Detailed information on the definition and data source of each indicator can be found in the Metadata page.

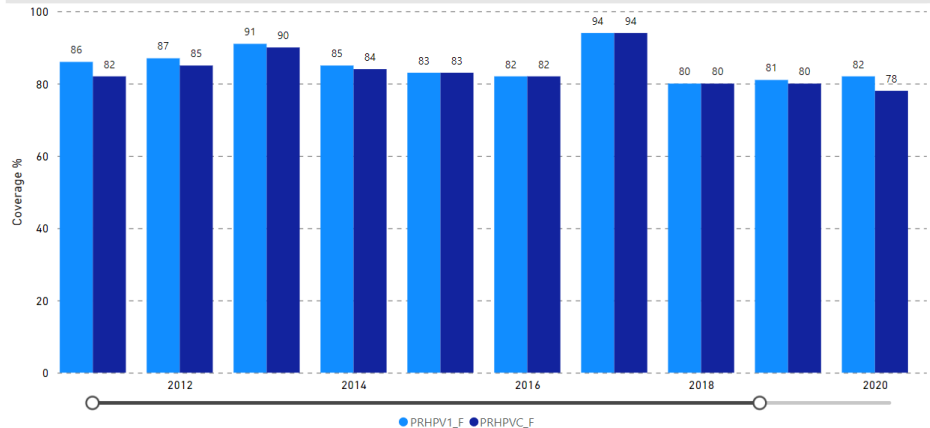


Malaysia



National schedule	Year of introduction	Delivery strategy	Targeted Age	Targeted Sex	Schedule (interval between doses)
Yes	2010	School-based	13	Female	1 dose

HPV vaccine, programme coverage in female



## HPV Vaccine Introduction Clearing House

Visit each area for related resources:



### POLICY & DECISION-MAKING

Informing national decision-making for HPV vaccine introduction



### PLANNING

Planning for HPV vaccine introduction



### FINANCING

Budgeting and financing for HPV vaccine introduction



### VACCINES & SAFETY

Characteristics, presentations and safety profiles of HPV vaccines



### COMMUNICATION

Communicating effectively using research-based approaches



### IMPLEMENTATION

Delivering HPV vaccination programmes



### MONITORING & SURVEILLANCE

Monitoring the coverage and impact of HPV vaccine programmes



### HPV PARTNERS

Links to HPV partners and resources

<https://www.who.int/immunization/hpv/en/>