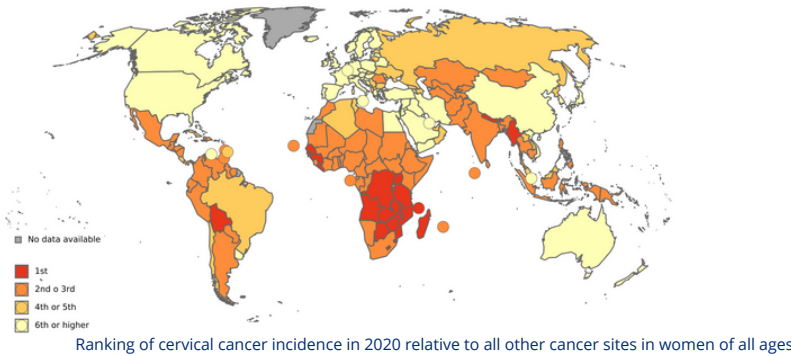


HPV Dosing Recommendations and Implications

Why are HPV vaccines so critical for cervical cancer control?

- 99% of cervical cancer cases are linked to the human papillomavirus (HPV). Cervical cancer is one of the most prevalent cancers in the world.
- 85%+ of the global burden of HPV-related cervical cancer affects women in low- and middle-income countries.



What does the evidence say about HPV vaccine dosing schedules?

- Studies have looked at 1, 2, and 3-dose schedules
- Efficacy trials have found that the efficacy of 1, 2, or 3 doses was the same after 10 years.
- Immunogenicity studies have found that a single dose is non-inferior to two or three doses.

What are the implications of each dosing schedule?

	2-dose schedule	1-dose schedule
Programmatic	Provides more opportunities for adolescent health integration	Fewer HCWs needed to vaccinate, less cold chain space required
Duration of protection	30 years of protection	10 years confirmed, additional studies ongoing to identify longer duration of protection times
Cost effectiveness	Averts long-term treatment costs for cervical cancer	Fewer doses needed, modeled to be cost-effective to prevent cervical cancer

How have the WHO recommendations on dosing changed?

WHO recommends 1 or 2 doses in 9-14 and 15-20 year old girls. This is an off-label recommendation.

	Primary age group	2017 WHO recommendations	2022 WHO recommendations
Vaccination schedule	9-14 years	2-dose schedule	Either a 1-dose or 2-dose schedule can be used
	15-20 years	3-dose schedule	Either a 1-dose or 2-dose schedule can be used
	>21 years	3-dose schedule	2-dose schedule can be used
	Immunocompromised	3-dose schedule	At least 2 doses, but ideally 3 doses, if programmatically feasible

Summary of Available Data for Single Dose

The table below provides a summary of several key trials that examined the immunogenicity and effectiveness of a single dose vaccine. These findings were used to formulate the WHO recommendations.

Vaccines	Trial/ Country	Age at vaccination	Results
Immunogenicity			
2vHPV and 9vHPV	DoRIS/ Tanzania	Girls aged 9-14 years	No difference between dose groups or vaccines. Seropositivity and GMCs were non-inferior in the 1-dose groups compared with 2 or 3 doses.
4vHPV	India IARC/ India	Girls aged 10-18 years	Antibody titres to HPV 16/18 from 1 dose were inferior, but 1-dose recipients were still seropositive for HPV 16/18.
2vHPV vs control	CVT/ Costa Rica	Young women aged 18-25 years	Stable antibody levels through 11 years post-vaccination in all dose groups. Levels at least 10-fold above unvaccinated.
Efficacy			
2vHPV vs. 9vHPV	KEN SHE Kenya	Girls aged 15-20 years	Found high vaccine efficacy with 1 dose of HPV. Vaccine efficacy for 9vHPV was similar to that of 2vHPV.
4vHPV	India IARC/ India	Girls aged 10-18 years	Efficacy was similar at ten years, whether 1, 2 or 3 doses.

*Studies with impact/effectiveness and immunogenicity results are forthcoming. Table will be updated when results are available.

Additional Resources

- [Current WHO recommendations](#)
- [PATH One Dose Consortium Resources](#)
- [Coalition to Strengthen the HPV Immunization Community](#)



COALITION to STRENGTHEN
the **HPV IMMUNIZATION**
COMMUNITY