

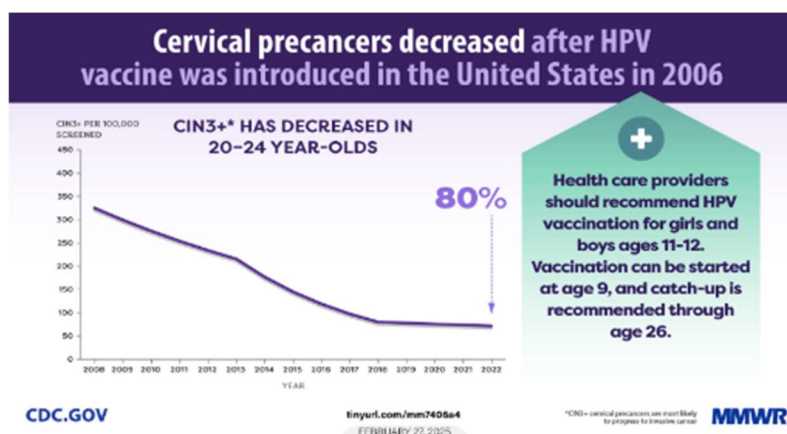
HPV Vaccine Research Summary

NJAAP Adolescent Health Committee

Updated epidemiology of cervical cancer – the HPV-IMPACT monitoring study

Gargano JW, Stefanos R, Dahl RM, et al. Trends in Cervical Precancers Identified Through Population-Based Surveillance — Human Papillomavirus Vaccine Impact Monitoring Project, Five Sites, United States, 2008–2022. *MMWR Morb Mortal Wkly Rep* 2025;74:96–101. DOI: <http://dx.doi.org/10.15585/mmwr.mm7406a4>

In a study of Human Papillomavirus Vaccine Impact Monitoring Project (HPV-IMPACT) five US sites have been monitoring the impact of HPV vaccination. The CDC reports that from 2008–2022 during an era of increasing HPV vaccination coverage, among women aged 20–24 years who were screened, cervical precancers decreased 79% and high-grade precancers decreased 80%. Among screened women aged 25–29 years, CIN3+ incidence decreased 37%.



Real World Effectiveness of HPV vaccine – earlier is better

Kjaer SK, Dehlendorff C, Belmonte F, Baandrup, et. al. Real-World Effectiveness of Human Papillomavirus Vaccination Against Cervical Cancer. *J Natl Cancer Inst*. 2021. <https://pubmed.ncbi.nlm.nih.gov/33876216/>

This cohort nationwide registry study from Denmark from women aged 17–30 women vaccinated at ages 16 years and younger or 17–19 years, the IRRs (Incidence rate ratios) of cervical cancer were 0.14 (95% CI = 0.04 to 0.53) and 0.32 (95% CI= 0.08 to 1.28), respectively, compared with unvaccinated women. For women aged 20–30 at vaccination, the incidence rate was only slightly decreased. The authors emphasize that the lack of immediate effect in the older group points to the importance of early age at vaccination.

Evidence for sustained protection of HPV vaccine against cervical cancer

Wu S, Deng Y, Lepp T, Ask L S, Sparen P, Clements M et al. Extended follow-up of invasive cervical cancer risk after quadrivalent HPV vaccination: nationwide, register based study *BMJ* 2026; 392 :e087326 doi:10.1136/bmj-2025-087326

This nationwide register-based cohort study in Sweden looked at 926,362 girls and women born in 1985–1992 followed for up to 18 years comparing diagnosis of cervical cancer in those vaccinated or not against HPV. Incidence rates comparisons at different time intervals since vaccination showed the Incident rate ratio of 0.21 in women vaccinated before age 17 overall and sustained after 13–15 years post vaccination. The protection offered by HPV vaccination did not show any evidence of waning over the period of follow-up.

Importance of state-level policies

Chenxi Jiang, Philip S Rosenberg, Jessica Star, et al. State-level progress in reducing cervical cancer incidence among US young women between the pre- and post-human papillomavirus vaccination eras, JNCI: Journal of the National Cancer Institute, 2026;, djag051. <https://doi.org/10.1093/jnci/djag051>

Nationwide, cervical cancer incidence rates declined by 27% during the vaccination era from 2016–2021 as compared to the prevaccination era of 2000–2005. However, there were marked differences between states with higher vaccination rates in states aligning with greater reductions in cervical cancer. Every 10% increase in vaccination rates was associated with an 11.5% reduction in the relative risk.

Other cancers prevented with HPV vaccination

Zeitouni J, Osazuwa-Peters N, Dundar Y et al. Two decades of the HPV vaccine: its promise, progress, prospects, projections, and posterity. The Lancet Regional Health – Americas, 2025; 51

It has been estimated that 80% of oropharyngeal cancers are associated with HPV, the rate of which is much higher in males than in females. The quadravalent vaccine is considered the gold standard in preventing HPV related cancers and received an indication for the prevention of oropharyngeal cancer in 2020. This article highlights the impact that HPV vaccine has had and what more cancer reduction it can accomplish by implementing more widely.